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1892-3.

NEW SOUTH WALES.

VOTES

AND

PROCEEDINGS

OF THE

LEGISLATIVE ASSEMBLY

DURING THE SESSION

OF

1892-3,

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.

IN EIGHT VOLUMES.

VOL. V.

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1892–3.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

VOTES AND PROCEEDINGS.

SESSION 1892-3.

(IN EIGHT VOLUMES.)

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1892.

NEW SOUTH WALES.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

(ANNUAL REPORT OF RAILWAY COMMISSIONERS, YEAR ENDING 30TH JUNE, 1892.)

Presented to Parliament, pursuant to Act 51 Vic. No. 35.

Offices of the Railway Commissioners of New South Wales,
Sydney, 22nd August, 1892.

TO THE HONORABLE THE MINISTER OF RAILWAYS,—

SIR,

In accordance with the provisions of the 45th clause of the Railways Act of 1888, 51 Vic. No. 35, we have the honor to present, for the information of Parliament, our Annual Report upon the working of the Railways and Tramways for the year ending June 30th, 1892.

GENERAL REMARKS.

In accordance with our usual practice we have recently inspected the whole of the Railway lines and works, and have to report that the property has been considerably improved during the past year out of working expenses.

The traffic on the Railways increased very satisfactorily up to the end of February, the increase at that date being £145,069; the general depression at present affecting the Colonies then began to make itself felt upon the business of the Railways, and the year closed with an increase of £132,875 only.

The Tramway traffic although checked in its growth has not been so seriously affected by the depression as the Railway traffic has been.

The general money result for the year may be stated shortly as follows:—

Total traffic, Railways and Tramways	£3,412,386
Total expenditure, Railways and Tramways	2,162,843
Net return after paying working expenses...	£1,249,543

being an increase in net profit over last year of £53,322, and making an accumulated increase in net profits paid into the Treasury during the past four years of £1,255,923.

From this sum must be deducted £75,000, the first instalment towards paying off the £1,000,000 vote under Act 53 Vic. No. 24, for reconstruction and improvement of rolling-stock and permanent-way, which fell due on the 31st December last; after deducting this sum the Treasury will still have received £1,180,923 increased net earnings during the past four years. The

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The following tables will show the progress and result of the Railway and Tramway working for the seven years prior to our taking office, and for the period we have had the administration of the property :—

RAILWAYS.

Year.	Length of Line opened.	TOTAL EARNINGS.	ACCUMULATED INCREASES. TOTAL EARNINGS.	NET EARNINGS after paying Working Expenses.	NET EARNINGS.	Capital expended on Lines open.
	Miles.	£		£		£
1882	1,268	1,701,016		763,661		15,843,616
1883	1,320	1,934,694		751,220		16,905,014
1884	1,618	2,089,749		786,010		20,080,138
1885	1,782	2,178,172	INCREASE ON 1882 TRAFFIC, £2,668,164.	717,555	ACCUMULATED DECREASE ON 1882 RESULT, £141,656.	21,831,276
1886	1,889	2,163,803		668,577		24,071,454
1887	2,036	2,212,718		732,375		26,632,122
1888	2,114	2,295,124		764,573		27,722,748
1889	2,171	2,538,477		903,875		29,839,167
1890	2,182	2,633,086	INCREASE ON 1888 TRAFFIC, £2,072,784.	967,251	ACCUMULATED INCREASE ON 1888 RESULT, £1,148,928.	30,555,123
1891	2,182	2,974,421		1,143,050		31,768,617
1892	2,185	3,107,296		1,193,044		33,312,608

Camden and Sans Souci Tramways included in this statement.

TRAMWAYS.

Year.	Length of Line.	TOTAL EARNINGS.	ACCUMULATED INCREASES. TOTAL EARNINGS.	NET EARNINGS after paying Working Expenses.	NET EARNINGS.
	Miles.	£		£	
1882	22	126,202		23,066	
1883	25	130,699		11,822	
1884	27½	219,042		4,775	
1885	27½	223,340	INCREASE ON 1882 TRAFFIC, £569,046.	15,345	ACCUMULATED DECREASE ON 1882 RESULT, £52,281.
1886	29	230,410		23,957	
1887	38½	225,343		12,893	
1888	38½	236,519		17,323	
1889	38½	243,563		21,723	
1890	39½	268,962	INCREASE ON 1888 TRAFFIC. £164,389.	44,889	ACCUMULATED INCREASE ON 1888 RESULT, £106,995.
1891	42½	292,850		53,171	
1892	48	305,090		56,499	

The progress of the Railways and Tramways since 1888 will be clearly seen from the following statement, the general result being that the gross earnings on the Railways have increased by 35·39 per cent., and the net earnings by 56·04 per cent. With respect to the Tramways, the gross earnings show an increase of 28·99 per cent., and the net earnings 226·15 per cent.

Percentage of Increase on the Gross and Net Earnings of Year 1892 over 1888.

RAILWAYS.

Traffic.	1892.	1888.	Increase.	Increase.
	£	£	£	Per cent.
Gross earnings	3,107,296	2,295,124	812,172	35·39
Net earnings	1,193,044	764,573	428,471	56·04

TRAMWAYS.

Traffic.	1892.	1888.	Increase.	Increase.
	£	£	£	Per cent.
Gross earnings	305,090	236,519	68,571	28·99
Net earnings	56,499	17,323	39,176	226·15

THE WOOL TRAFFIC DURING THE FORTHCOMING SEASON.

From a statement supplied by Mr. Bruce, the Chief Inspector of Stock, it would appear that a total of 57,671,160 sheep and lambs were shorn in 1891, and that 61,831,416 have been returned as being depastured in the Colony on the 1st January, 1892. The drought in the far Western district, and the ravages of the rabbits, will, it is feared, materially affect the wool traffic from the Cobar, Nyngan, and Bourke districts. Generally, however, the weight of wool to be carried on the Railways during the coming season may be expected to equal last year's business.

RAILWAYS.

The length of the line open for traffic on the 30th of June was 2,185 miles, a short line of about 3 miles having been opened during the year between the Railway station and Yass.

The line from Nyngan to Cobar, a distance of 81 miles, was opened for traffic on the 1st of July, making a total of 2,266 miles now open, and it is expected that the following lines will be brought into use during the forthcoming year:—

	Mileage.		
Culcairn to Corowa	47½	... † estimated cost,	£188,765
Kiama to Nowra	22½	... † ,,	381,390
Molong to Parkes and Forbes	72¾	... † ,,	397,410
Milson's Point Extension	2¾	... † ,,	247,500
	145½		£1,215,065

The following lines are also under construction:—

* Lismore to The Tweed	62½	... † estimated cost,	£867,350
Cootamundra to Temora	39	... † ,,	140,000
Marrickville to Burwood Road	5	... † ,,	90,250
	106½		£1,097,600

The

* The first and second sections may be opened for traffic during the forthcoming year.

† Estimated cost does not include the charges under the head of Land and Compensation, and Rolling Stock and Appliances, which cannot at present be obtained.

The cost of the lines open for traffic on the 30th of June amounted to £33,312,608.

To meet this expenditure £28,373,464 has been raised by the issue of debentures, the balance having been provided out of the general funds of the Colony and by Treasury bills.

Debentures of the value of £1,182,275 have been finally paid off.

The total cost of the lines upon which interest has to be paid, after deducting debentures finally paid off, is £32,130,333.

The revenue derived from working the lines during the year was £3,107,296, and the expenses amounted to £1,914,252, or 61·60 per cent. of the gross revenue, leaving a net revenue of £1,193,044 towards paying interest upon capital, or a return of 3·58 per cent. upon the total cost of the railways open for traffic.

The details of the revenue and working expenditure will be found in the Appendices, Nos. 3 to 6.

The increase in revenue amounted to £132,875.

The coaching traffic contributed £12,194 of the total increase.

The revenue derived from goods, minerals, and live stock traffic increased by £120,681, of which wool contributed £46,478, live stock £54,413, coal £15,720, hay, straw, and chaff £1,573; and miscellaneous traffic £8,466; general merchandise, however, showed a decrease of £5,969.

The quantity of wool carried amounted to 661,893 bales, an increase of 72,348 bales over the previous year.

The train miles run were 8,356,096, being a decrease of 54,325.

The earnings per train mile show satisfactory results, every mile run having earned 7s. 5¼d. as compared with 7s. 1d. in the preceding year. The expenditure per train mile has increased from 4s. 4¼d. to 4s. 7d., leaving a net earning of 2s. 10¼d., as against 2s. 8¾d. last year, and 2s. 3½d. in 1888, being an increased net profit since 1888 of 6¾d. per train mile.

The following table, giving the earnings per mile of Railway open, gross and net earnings per train mile, and the total and net earnings for all lines for the past eight years, shows the steady improvement in the net value of the property :—

Year.	Year ending	Average miles open.	Per Mile open.		Train Miles.	Per Train Mile.		Total Earnings.	
			Gross Earnings.	Net Earnings.		Gross Earnings.	Net Earnings.	Gross.	Net.
			£	£		s. d.	s. d.	£	£
1885 ...	Dec..	1,603½	1,307	431	6,638,399	6 6½	2 1¾	2,178,172	717,555
1886 ...	,,	1,790	1,207	373	6,479,265	6 8	2 0¾	2,163,803	668,577
1887 ...	,,	1,936½	1,141	388	6,472,107	6 9¾	2 3¾	2,212,718	752,375
1888 ...	June..	2,044	1,123	374	6,689,313	6 10¼	2 3½	2,295,124	764,573
1889 ...	June..	2,128	1,193	425	7,641,769	6 7¾	2 4¼	2,538,477	903,875
1890 ...	,,	2,177	1,210	444	8,008,826	6 6¾	2 5	2,633,086	967,251
1891 ...	,,	2,182	1,363	524	8,410,421	7 1	2 8¾	2,974,421	1,143,050
1892 ...	,,	2,182½	1,423	546	8,356,096	7 5¾	2 10¼	3,107,296	1,193,044

Camden and Suns Souci Tramways included in this statement.

The traffic during the heavy pressure in November, December, and January last was carried on under considerable difficulties owing to the supply of locomotive power being unequal to the requirements, but since that date a large number of the engines ordered have been supplied, and the forthcoming season's traffic will be adequately provided for in this respect.

The more powerful class of engines introduced (both English and American) is materially assisting the working; practically all the heavy Express and Mail trains are now worked by one engine instead of two as formerly, and the loads of the Goods trains have also been materially increased in many instances. As bearing upon this subject, which is of so great importance in connection with these Railways, we give below an extract from a statement made by the Chief Commissioner before the Royal Commission on the Baldwin Engines.

"The New South Wales Railways are most exceptional in their "character, having been constructed with an enormous proportion of steep "gradients, the worst grades being on the trunk lines, and so situated that "the whole volume of traffic has to pass over them. The only way (now "that the traffic is increasing so rapidly) to stave off a great amount of "duplication work, is to introduce more powerful engines, and so, by taking "much longer trains at a better uniform speed, enable the bulk of the "single lines to carry satisfactorily for some time to come the traffic which "could not otherwise be carried with the old class of motive power and "system of short trains without grave delays and inconveniences.

"Grades, New South Wales Lines.

"When the duplication works in hand are completed we shall only "have 150 miles of double line in existence (8½ miles being quadrupled); "whereas in the sister colony of Victoria, with its far easier grades, 297 miles "of double and quadrupled lines exist. The difficulties surrounding the "working of the New South Wales Railways, having more than 2,000 miles "of single line and exceptionally sharp curves—the steepest grades being also "on the main lines within a short distance of Sydney—will be readily under-"stood when I state that there are 629 miles of grades, varying from 1 in 30 "to 1 in 75, in the following proportions:—

Gradient.	As originally constructed.		Total.		As improved by Deviations since 1888.		Total.	
	m.	ch.	m.	ch.	m.	ch.	m.	ch.
1 in 30 to 1 in 33	25	20	...		24	54	...	
1 in 34 to 1 in 40	165	25	190	45	165	25	189	79
1 in 41 to 1 in 50	183	60	374	25	183	9	373	8
1 in 51 to 1 in 60	112	12	486	37	109	6	482	14
1 in 61 to 1 in 75	144	59	631	16	146	60	628	74
Totals	631	16			628	74		

"The Western Line, for instance, is a more difficult line to work than "any of the Alpine railways, the ruling grade, radius of curves, and frequent "loss of elevation, which has to be regained, being all against the Railways "of this Colony. The table and diagram [*Appendix* B] which I place before "you illustrates clearly the relative positions of the various lines in question.

Railway.	Portion of Line shown on Diagram.				Portion of Line not shown on Diagram.	
	Length of Incline. (Miles).	Rise. (Feet).	Maximum Grade. Ascending.	Sharpest Curve. (Chains).	Remarks.	Maximum Grade Ascending.
Brenner	22·25	2,586	1—40	14·16	Rises Nil	
Mont Cenis, North	24·75	2,637	1—33·3	17·0	Do do	
Mont Cenis, South	25·25	2,793	1—33·3	24·0	Do 13 feet in 3¼ miles	1—1,000
St. Gothard	18·5	2,100	1—38·5	14 to 15	Do 126 feet in 4¼ miles	1—172
New South Wales (West)	20·5	3,248	1—30	8	Do 323 feet in 23 miles	1—33
New South Wales (South)	15·5	1,477	1—30	16	Do 322 feet in 23 miles	1—30
					Do 890 feet in 71 miles	1—44
New South Wales (North)	30·0	2,105	1—40	12	Falls to Zero from foot of incline in 17 miles	1—50

Particulars as to Alpine Railways taken from a paper by Mr. L. F. Vernon Harcourt.—Vol. 95, *Minutes of Institution of Civil Engineers.*

"I would also like to illustrate the difficulty of our working by a "reference to the diagram [*Appendix* A], which shows clearly our maximum "altitude and frequent loss of elevation in reaching that grade. The worst "of the Alpine routes has curves of 14 and 15 chains, but on the Western "Line of New South Wales we are burdened with frequent reverse curves "of 8 chains.

Traffic over the Blue Mountains.

"The amount of traffic which has to be passed over the Blue "Mountains on busy occasions will be seen from the attached diagram "[*Appendix* C] which I have had prepared, showing the trains that passed "over the single line with ruling gradients of 1 in 30 and 1 in 33, and frequent "8-chain curves on a recent night which came under my personal notice. "Several of these trains were heavy trains drawn by the powerful engines, "and had these not been in use additional trains would have been required "to have conveyed the traffic. As many as 196 waggons of live stock, in "addition to the ordinary goods and passenger traffic, have been moved in one "day from the Western Line to Sydney (Homebush). This additional traffic "has to be worked over a length of nearly 500 miles of single lines, and for "nearly 250 miles of the journey with grades ruling the load of 1 in 40, 1 in "30 and 33. Until these Baldwin engines were brought here, over the "latter section of the journey short trains of 15 wagons only could be hauled "by one engine; it will therefore be seen what a great disturbing and difficult "element had to be dealt with, and any improved method for working the "traffic in fewer trains was much to be desired. The live stock traffic is also "growing very rapidly."

We regret to record the occurrence of two serious accidents during the past year. The first was on the Northern line, near Bluff Rock, on the 26th April last, by which one person was killed, and three slightly injured. This was a collision between

between two sections of a train, and arose from a breach of the regulations on the part of the driver of the second portion.

The second accident occurred on the following day, on the Western line, near Tarana, in consequence of the breaking of a rail whilst the train was travelling in a rock cutting. Nine deaths resulted from the disaster, and eleven persons were injured. As the accident was of so serious a nature, the Board we appointed to inquire into the circumstances, had upon it two gentlemen entirely unconnected with the railway service, Mr. Wm. Cruickshank, M. Inst. M.I., and Mr. J. E. F. Coyle, M. Inst. C.E.; Mr. W. T. Foxlee, M. Inst. C.E., Engineer-in-Chief for Existing Lines, being associated with them.

The following is an extract from their report:—

"We have no hesitation in stating that the road is in good order, "the ballasting and sleepers being all that could be desired, and, from the "evidence of the various witnesses it will be seen that, for some miles on "each side of where the accident took place, the road has recently been "lifted and reballasted, and is in much better condition at the present time "than it has been for years.

"We examined the broken rails minutely, and are of opinion that the "primary cause of the accident was the fracture of the rail marked A. Its "section is exceptionally coarse, slaggy, and decidedly crystalline, with an "almost entire absence of fibre. There is also an undoubted 'flaw' in the "bottom flange, which, from its appearance has, in our judgment, been of "comparatively recent development. It is a Park Gate rail, made in 1869, "but how long it has been down, or the actual amount of work it has done, "there is no evidence to show, but it may be stated that it has only lost 1½ lb. "per yard in weight. It was placed in its present position in January last, "when it was turned, but it is not known where it came from * *

"There is no doubt that the breaking of the rail was due to defective "material, but the flaw in the bottom flange was so situated that it could not "be seen, and that no human foresight could have prevented what was, in "our judgment, a pure accident * * * * *

"From the exceptional amount of brake-power on the train, and "especially on the type of engine which was attached when the accident "occurred, it will be seen from the evidence that this power so promptly "applied by the driver probably saved the train from being totally wrecked, "and certainly minimised the loss of life."

The verdict of the Coroner's jury was to the effect that "the deceased met "with their death by the result of an accident on the Great Western Railway at "1·50 a.m. on Wednesday, April 27, the accident being caused by a break in a "rail, in which there was a flaw, and that there is no evidence before us of neglect "on the part of any of the officials."

The verdict was practically one of "Accidental death," which freed the department from any legal liability, but as the majority of those affected were pecuniarily in poor circumstances, we felt that the sad event called for some consideration, and, therefore, with the consent of the Minister, a compassionate allowance was given to those who were injured, as well as to the representatives of the deceased persons in those instances where such allowance was called for.

SAFETY APPLIANCES.

The following return will show the progress made in extending the absolute block system of working and the interlocking of points and signals:—

RETURN showing number of Miles of Line open for Traffic, number of Miles worked under **Absolute Block System**, also Number and Percentage of Places which have or have not **Points and Signals Interlocked.**

Date to end of—	Number of Miles of Line open for Traffic.				Number of Miles of Line on which the Traffic is worked under the Absolute Block System.			Number and Percentage of Places which have or have not Points and Signals Interlocked.				
								Number of Places.			Percentage.	
	Quadruple.	Double.	Single.	Total.	Quadruple and Double.	Single.	Total.	Interlocked.	Not Interlocked.	Total.	Interlocked.	Not Interlocked.
October, 1888	...	71½	2,042½	2,114	28	...	28	104	318	422	24·63	75·36
July, 1890	...	78	2,103	2,181	72½	189½	262	176	294	470	37·45	62·55
July, 1891	...	124	2,058½	2,182½	118½	207½	326¼	234	262	496	47·17	52·83
July, 1892	8½	143	2,115	2,266	149	507½	656½	257	248	505	50·89	49·11
August, 1892	8½	143	2,115	2,266	149	605½	754½	260	245	505	51·40	48·60

The work of interlocking the points and signals has not made so much progress on existing lines during the past year as we could have wished, in consequence of the necessity for economy owing to so much new work being in hand in connection with the duplications, &c. As these latter works are now completed, and this subject is of so much importance in ensuring safety, we propose to ask the Government to move Parliament for a vote for extending safety appliances of various kinds during the forthcoming year.

The introduction of Tyer's tablet, and Webb and Thompson's electric staff instruments, for working the traffic over the single lines, has been attended with most satisfactory results.

583 miles of line are now worked under this system, and before the 31st December it is expected that an additional length of 373 miles will be added.

The fitting up of the goods stock with the Westinghouse Automatic Quick Acting Freight Brake is progressing, 600 live stock trucks having been fitted with the brake or pipe, and eighty-six goods waggons with the brake. We hope that in six months all the live stock vehicles will be supplied with this great security.

RATES.

On the 1st August, 1891, a new system of conveyance of stamped parcels by passenger trains at largely reduced rates (the rates being divided into four groups for the whole of the colony) was brought into operation. The arrangement has proved a considerable boon, the number of parcels carried having largely increased, whilst the revenue has only decreased by about £3,000 in eleven months. We expect, therefore, very shortly to draw a largely increased revenue from this source of traffic.

In order that the rates charged for the various classes of goods traffic may be readily grasped, we have had prepared the following return, showing the rate per ton per mile charged for the most important groups of traffic. It will be observed that

that the average rate per mile for all traffic is 1·63d.; the rates, however, for agricultural produce, coal, and miscellaneous traffic, 81 per cent. of the whole weight dealt with, vary from ·46d. to ·93d. per ton per mile. These rates will, we think, be considered very reasonable when the heavy grades and sparsely settled country the lines run through are considered.

Tons Mileage for Year ending 31st December, 1891.

Description of Traffic.	Total Tons carried.	Total Miles carried.	Average Number of miles each class of traffic carried per ton.	Gross Earnings, exclusive of terminals.	Revenue per ton per Mile.	Percentage tonnage of each class bears to the whole tonnage.
			average miles.	£	D.	per cent.
Coal and Shale	2,673,378	46,882,655	17½	148,299	0·76	61·28
Firewood	176,790	4,734,019	26¾	21,709	1·10	4·06
Grain and Flour	198,491	22,130,334	111½	61,521	0·66	4·55
Hay, Straw, and Chaff ...	64,967	10,024,149	154¼	19,797	0·46	1·49
*Miscellaneous and A class	581,010	29,968,182	46⅔	104,625	0·93	13·32
Wool	111,797	30,282,222	270¾	314,151	2·49	2·56
Live Stock	128,211	34,650,831	270¼	267,661	1·85	2·94
General Merchandise, and other traffic not classified	427,589	65,119,272	152⅓	701,757	2·58	9·80
Total	4,362,233	240,791,664	55½	1,639,520	Average 1·63	100

* Miscellaneous traffic consists of timber, lime, manures, fruit, vegetables, hides, tobacco leaf, bricks, gravel, drain-pipes, tiles, and traffic of a similar nature.

The following table will show the extent to which the rates have been reduced since 1879.

RETURN showing Mileage per Ton and Earnings per Ton per Mile of Goods Traffic carried during the years ending 31st December, 1879, 1883, and 1891, exclusive of terminals.

	Coal and Shale.			Firewood.			Grain and Flour.			Hay, Straw, and Chaff.		
	1879.	1883.	1891.	1879.	1883.	1891.	1879.	1883.	1891.	1879.	1883.	1891.
Tons carried ...	1,039,099	1,596,408	2,673,378	112,171	160,662	176,790	36,249	65,736	198,491	23,467	35,119	64,967
Miles carried ...	14,212,533	25,363,800	46,882,655	3,009,030	4,349,344	4,734,019	3,611,407	7,756,269	22,130,334	743,679	2,712,396	10,024,149
Average miles per ton.	13·68	15·88	17·53	26·82	27·07	26·77	99·63	117·99	111·49	33·10	77·23	154·29
Gross Earnings	£ 74,371	125,730	148,299	15,781	22,618	21,709	10,150	33,066	61,521	6,825	15,251	19,797
Earnings per ton per mile.	d. 1·25	d. 1·19	d. 0·76	d. 1·26	d. 1·25	d. 1·10	d. 1·27	d. 1·02	d. 0·66	d. 2·20	d. 1·35	d. 0·46

	Wool.			Live Stock.			General Merchandise, and other Traffic not included in other groups.		
	1879.	1883.	1891.	1879.	1883.	1891.	1879.	1883.	1891.
Tons carried	31,773	66,887	111,797	27,805	68,059	128,211	451,251	875,571	1,008,599
Miles carried	5,283,838	15,184,040	30,282,222	3,726,176	13,224,154	34,650,831	36,862,450	86,374,184	92,087,454
Average miles per ton	166·30	227·01	270·86	134·01	194·30	270·26	81·68	98·65	91·30
Gross Earnings	£ 61,875	156,763	314,151	45,816	154,960	267,661	408,687	762,817	606,382
Earnings per ton per mile	d. 2·81	d. 2·47	d. 2·49	d. 2·90	d. 2·81	d. 1·85	d. 2·66	d. 2·12	d. 2·10

COMPARISON OF PASSENGER FARES.

As comments have been made at various times regarding the Suburban Passenger Fares, we give below some comparisons between the fares in force between Sydney and some of its Suburban Stations, and London and its Suburbs by various Companies' Lines, from which it will be seen that, although our wages and other expenses are much in excess of similar charges in England, the fares on the New South Wales Lines are, generally speaking, much lower than into and out of London.

	Railways.	Stations.	Single.			Return.		
			1st.	2nd.	Parly. (3rd Class.)	1st.	2nd.	Parly. (3rd Class.)
			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
3 MILES.	London and North-Western... ...	Kilburn... ...	0 6	0 4	0 3	0 9	0 6	0 5
	Great Northern	Stroud Green ...	0 6	0 4	0 3	0 9	0 7	0 6
	Midland	Upper Holloway	0 6	...	0 3	0 9	...	0 6
	Great Eastern...	Hackney Downs	0 6	0 4	0 3	0 8	0 6	0 5
	London and South-Western	Queen's Road ...	0 5	0 3	0 2	0 8	0 6	0 3
	London, Brighton, and South Coast...	New Cross ...	0 8	0 5	0 3	1 0	0 8	0 6
	South Eastern...	Spa Road ...	0 8	0 6	0 4	0 10	0 8	0 6
	New South Wales	**Petersham ...**	**0 4**	**0 3**	...	**0 7**	**0 5**	...
5 MILES.	London and North-Western... ...	Willesden ...	0 9	0 6	0 5	1 0	0 10	0 8
	Great Northern	Wood Green ...	0 10	0 8	0 5	1 3	1 1	0 10
	Midland	Child's Hill ...	0 9	...	0 5	1 2	...	0 8
	Great Eastern...	Hamford Hill ...	0 8	0 6	0 5	0 11	0 8	0 6
	London and South-Western	Wandsworth ...	0 8	0 6	0 4	1 0	0 9	0 6
	London, Brighton, and South Coast...	Honor Oak Park	0 10	0 8	0 5	1 4	1 0	0 8
	London, Chatham, and Dover ...	Dulwich... ...	0 9	0 7	0 5	1 0	0 10	0 8
	South Eastern...	Deptford ...	1 0	0 9	0 6	1 6	1 2	0 9
	New South Wales	**Ashfield ...**	**0 6**	**0 5**	...	**0 9**	**0 7**	...
7 MILES.	Great Northern	Alexandra Palace	0 11	0 9	0 6	1 4	1 2	0 11
	Great Western	Hanwell ...	1 4	1 0	0 8	2 0	1 6	1 4
	Midland	Hendon... ...	1 0	...	0 7	1 8	...	1 0
	Great Eastern	Park	0 10	0 8	0 6	1 3	0 11	0 9
	London and South-Western... ...	Shepherd's Bush	0 8	0 6	0 4	1 0	0 9	0 6
	London, Brighton, and South Coast...	Penge	1 0	0 9	0 6	1 6	1 0	0 10
	London, Chatham, and Dover ...	Penge	1 0	0 9	0 6	1 6	1 0	0 10
	South-Eastern	Blackheath ...	1 3	1 0	0 6	1 10	1 4	1 0
	New South Wales	**Strathfield ...**	**0 8**	**0 6**	...	**1 0**	**0 9**	...
10 MILES.	Great Northern	Totteridge ...	1 4	1 0	0 9	2 3	1 9	1 6
	Great Eastern...	Chadwell Heath	1 6	1 2	0 10	2 3	1 8	1 3
	London and South-Western	Coombe-Malden	1 9	1 2	0 9½	2 0	1 6	1 4
	London, Brighton, and South Coast...	West Croydon ...	1 6	1 2	0 10	2 6	1 9	1 3
	London, Chatham, and Dover ...	Shortlands ...	1 5	1 1	0 8	2 0	1 6	1 3
	South-Eastern...	Shortlands ...	1 5	1 1	0 8	2 0	1 6	1 3
	New South Wales	**Rookwood ...**	**1 0**	**0 8**	...	**1 6**	**1 0**	...
13 MILES.	London and North-Western ...	Pinner	2 0	1 3	1 0	3 0	2 2	1 7
	Great Northern	Potter's Bar ...	2 2	1 6	1 0	3 7	2 6	2 0
	Great Western	West Drayton ...	2 5	1 9	1 1	3 9	2 6	2 2
	Great Eastern...	Chigwell Lane ...	2 5	1 9	1 1½	3 6	2 4	1 9
	London and South-Western	Ewell	2 0	1 6	1 0½	2 6	2 3	2 0
	London, Brighton, and South Coast...	Wallington ...	1 9	1 4	1 1	2 8	2 3	1 10
	South-Eastern...	West Wickham	1 9	1 4	0 11½	2 6	2 0	1 9
	New South Wales	**Granville ...**	**1 4**	**0 10**	...	**2 0**	**1 3**	...
15 MILES.	Midland	Radlett	2 0	...	1 3	4 0	...	2 6
	Great Eastern...	Theydon Bois ...	2 8	1 11	1 3½	3 9	2 11	1 11
	London and South-Western	Hampton Court	2 0	1 6	1 2½	2 9	2 0	1 10
	London, Brighton, and South Coast	Belmont ...	2 3	1 9	1 2	2 10	2 6	2 0
	London, Chatham, and Dover ...	St. Mary's Cray	2 6	2 0	1 0	3 6	2 6	1 10
	South-Eastern...	Crayford ...	2 9	2 3	1 3½	4 6	3 4	2 5
	New South Wales	**Westmead ...**	**1 6**	**0 11**	...	**2 3**	**1 5**	...
20 MILES.	London and North-Western... ...	Brickett Wood...	2 8	2 0	1 7	5 0	3 6	2 10
	Great Western	Staines	3 3	2 3	1 7	5 0	3 6	3 2
	Midland	St. Alban ...	2 8	...	1 7½	5 4	...	3 3
	Great Eastern...	Shenfield ...	3 10	2 9	1 8	5 6	4 1	3 0
	London, Brighton, and South Coast	Ashstead ...	2 6	2 0	1 4	3 6	2 9	2 6
	London, Chatham, and Dover ...	Eynsford ...	3 8	2 9	1 6	5 6	4 3	2 10
	New South Wales	**Seven Hills ...**	**2 0**	**1 2**	...	**3 0**	**1 9**	...

English fares obtained at the end of 1888.

OPENING OF NEW LINES AND THEIR EFFECT UPON THE TRAFFIC.

Appended hereto (pages 69 to 80) will be found returns showing the earnings and expenses in connection with a number of outlying lines in the Colony for the year ending the 31st December last. It will be seen from these returns that the net result for the year was as under :—

Line.	Length.	Capital Cost.	Working Expenses.	Interest on Capital.	Total Earnings.	Loss on Working Expenses and Interest.
	Miles.	£	£	£	£	£
Sydney and Kiama	70	2,152,610	116,159	76,341	137,550	53,950
Junee to Hay	167	1,034,072	35,833	41,362	54,603	22,592
Narrandera to Jerilderie ...	65	424,143	8,544	16,965	9,138	16,371
Wallerawang to Mudgee ...	85	1,035,021	28,596	41,250	34,600	35,246
Cootamundra to Gundagai ...	34	248,611	6,987	8,701	6,818	8,870
Goulburn to Cooma	127½	1,456,991	29,897	50,994	34,676	46,215
Orange to Molong	22	282,976	6,663	9,904	7,851	8,716
Hornsby to St. Leonards ...	11	215,146	5,074	7,530	2,543	10,061
Armidale to Jennings... ...	132	1,533,068	38,164	60,683	35,480	63,367
Murrumburrah to Blayney ...	112	1,135,592	43,142	39,745	36,845	46,042
Total	825½	9,518,230	319,059	352,475	360,104	311,430
						Profit on working.
Werris Creek to Narrabri ...	97	649,681	27,249	25,966	54,122	907
Dubbo to Bourke	225	1,602,001	74,491	63,979	175,817	37,347

It is satisfactory to note that the lines from Dubbo to Bourke and Werris Creek to Narrabri have ceased to be a burden upon the general system.

The above list of unprofitable lines, with a capital on construction account of £9,518,230, represents a considerable burden upon the rest of the property, which practically has to bear the whole of the interest on the 9½ millions. The Cobar line which has just been opened, and the lines now under construction, represent an addition of 332 miles to the mileage, and a new capital of about £2,650,000, which will be also added to the burden to be borne by the rest of the undertaking. It will, therefore, be seen how absolutely necessary it is to proceed cautiously with the authorization of any additional lines until some of the present unprofitable sections are able to pay for themselves.

We would also again draw attention to our previous recommendations, that part of the proceeds of the sale of Crown lands enhanced in value by the construction of these lines should be used for the construction of the lines, and by this means keep down the capital account. Land revenues in the Colony of Victoria to the extent of 2¾ millions of money have been applied in this way.

ACCOMMODATION

ACCOMMODATION FOR THE TRAFFIC AND CONDITION OF LINES AND ROLLING STOCK.

Considerable improvements have been effected during the past year in the facilities for conducting the traffic.

The Outward Goods Shed and Woolshed at Darling Harbour and the Produce Shed at Redfern have proved of great service to the public, and have also enabled the business of the Department to be conducted more satisfactorily and economically.

The additional line to Picton and from Ryde to Hornsby has been opened for traffic, and the quadrupled lines to Flemington, on the Suburban line, have also been brought into use.

These works being completed provide four lines along the Suburban Section, a distance of 8½ miles, and completes a double line for traffic out of Sydney as under :—

South Coast Line to Waterfall	...	...	24 miles.
Main Southern Line to Picton	...	...	53 ,,
Main Western Line to Penrith	...	...	34 ,,
North Coast Line to Hornsby	...	...	21 ,,

The marshalling and exchange sidings at Clyde have been completed and brought into use, and are affording much relief to the working.

The improvement of grades at Manoa, near Dubbo, and some of the curves on the Blue Mountains, and the grade of 1 in 33 against the traffic coming towards Sydney at Wentworth Falls, have been completed.

These facilities will enable the traffic to be conducted during the coming year more efficiently and at less cost.

The improvement of the 1 in 33 grades north of Singleton, and the work of cutting out the Lapstone Hill Zigzag, will, we hope, be shortly completed.

The work of raising the level of the line between East Maitland and High-street, Maitland, so as to avoid interruption to the railway traffic when the Hunter River is in flood, has been completed.

A large expenditure has again been incurred upon the locomotive stock in consequence of the excessive strain put upon it during the last heavy traffic season, but we can now look forward for more satisfactory results from this department, owing to the recent increase of equipment.

The carriage stock is in good order, and the wagon stock has been greatly improved.

STAFF.

A considerable increase in pay has been granted to the staff during the year, the total amount granted to the wages staff since October, 1888, amounting to a sum of about £127,662 per annum.

The salaried staff, station officers, night officers, clerks, and the lower ranks in various grades in all departments, have also received advances to the extent of £37,963 per annum during period from October, 1888, to 30 June, 1892.

The cost of the holidays given to the staff during the past year amounts to £74,821.

The

The Appendices to the Report will give complete information regarding the railway traffic and expenses, and the Reports of the Chief Mechanical Engineer and the Engineer-in-Chief for Existing Lines will give details regarding the condition of the rolling stock and lines.

Diagrams are also attached showing graphically the most interesting features of the working of the Department.

RESULTS OF THE WORKING.

RAILWAYS.

Year ending 30 June, 1892, compared with 1891 and 1888.

Particulars.	1892.	1891.	1888.
Total spent in construction and equipment	£33,312,608	31,768,617	27,722,748
Total Debentures finally paid off	£1,182,275	1,139,175	1,017,875
Total cost of construction and equipment, less Debentures paid off	£32,130,333	30,629,442	26,704,873
Total cost per mile open for traffic...	£15,246	14,559	13,114
Total mileage open for traffic	2,185	2,182	2,114
Average miles opened for the year	2,182½	2,182	2,044
Gross revenue	£3,107,296	2,974,421	2,295,124
Working expenditure	£1,914,252	1,831,371	1,530,551
NET PROFIT ON WORKING ... ... (After paying Working Expenses).	**£1,193,044**	**1,143,050**	**764,573**
Percentage of working expenses to revenue	%61·60	61·57	66·69
Earnings per average mile open	£1,423	1,363	1,122
Expenditure per average mile open...	£877	839	748
Gross earnings per train mile	89·25d.	84·38d.	82·34d.
Expenses per train mile	54·98d.	52·26d.	54·91d.
NET PROFIT PER TRAIN MILE ... ... (After paying Working Expenses).	**34·27d.**	**32·62d.**	**27·43d.**
Number of passenger journeys	19,918,916	19,037,760	15,174,115
Goods tonnage	4,151,483	3,686,998	3,331,671
Live-stock tonnage	145,230	115,851	68,101
Train mileage...	8,356,096	8,410,421	6,689,313
Locomotives, Number of	489	439	428
Passenger Stock, Number of	1,054	1,023	1,039
Goods Stock, Number of	10,455	9,940	8,833

TRAMWAYS.

On the 30th of June, 1891, 42½ miles were open for traffic. The following sections have been opened during the year :—

		m. chs.
Aug. 25, 1891	Redfern to Moore Park *via* Cleveland-street ...	1 6
Sept. 23, 1891	Ashfield to Enfield	1 79
Dec. 24, 1891	Railway Bridge, Newtown, to Railway Bridge, St. Peters	0 59
May 2, 1892	Forest Lodge to Balmain	1 58

Making a total of 48 miles.

The cost of the lines open for traffic is £1,099,659.

A sum of £975,000 has been raised by the issue of Debentures to the amount of £1,000,000, and the balance has been provided out of the general funds of the Colony.

The working of the Tramways during the year has been satisfactory, the interest on the total outlay, after paying working expenses, being 5·28 per cent. The financial result would have been better had not several new lines been opened which do not yet pay their way.

The working of the Tramway Lines in sections is as under :—

City and Suburban Lines.

(*Length*—37 *miles.*)

The gross revenue for the year was £279,321, and the expenses amounted to £229,145 or 82·04 per cent. of the Revenue, as against 81·92 per cent. last year, and 92·38 per cent. in 1888, leaving a net result of £50,176 towards paying interest upon the capital.

The cost of the City and Suburban Section is £932,907, and the net return gives 5·54 per cent. upon the capital invested, as against 5·74 per cent. in the preceding year, and 2·27 per cent. in 1888.

The following is a comparative Summary of the general results :—

	1892.	1891.	1888.
Gross Revenue	£279,321 ...	270,365 ...	221,060
Working Expenses	£229,145 ...	221,505 ...	204,227
Net Profit	£50,176 ...	48,860 ...	16,833
Passenger Fares collected ...	No. 65,299,063 ...	No. 62,676,636 ...	No. 51,563,197
Miles run	1,613,443 ...	1,553,048 ...	1,246,543
Earnings per mile run ...	41·55d. ...	41·78d. ...	42·56d.
Expenses per mile run ...	34·09d. ...	34·23d. ...	39·32d.
Net profit per mile run ...	7·46d. ...	7·55d. ...	3·24d.

Ashfield to Enfield.

The construction and equipment cost is £15,485; revenue, £950; working expenses, £1,507, showing a loss of £557 in connection with the actual working, without taking interest on capital and equipment into consideration. The tram miles run were 18,046. The earnings per tram mile were 12·63d., expenditure, 20·04d., and the loss on working, 7·41d.

North

North Shore Cable Line.

Length—1½ *miles.*

The revenue amounts to £11,123, expenses £7,902; net profit, £3,221.

The total cost of the line and its equipment is £75,368, and upon this sum the net profits give 4·27 per cent., as against 3·67 per cent. in 1891 and 0·58 per cent. in 1888.

The tram miles run were 73,648, an increase of 5,961 over last year.

The total fares collected amounted to 2,666,400, being an increase of 201,120.

Newcastle to Plattsburg.

(*Length*—7½ *miles.*)

The construction and equipment cost is £75,899; revenue, £13,696; working expenses, £10,037; net profit, £3,659; giving a return on the capital invested of 4·82 per cent., against 2·18 per cent. last year, and 0·12 per cent. in 1888. The tram miles run were 117,924, an increase of 8,581. The earnings per tram mile were 27·88d., expenditure, 20·43d., and net profit, 7·45d.

Condition of Existing Lines.

The lines generally are in fair running order, but as indicated in last year's report a great proportion of the original lines require relaying, and in some parts wood-blocking. During the past year a sum of £13,851 in excess of the previous year's expenditure under this head was incurred, and this work will have to be continued for some time.

The renewal of the wood-blocking is a heavy burden, practically costing at the rate of £6,400 per mile in excess of what would be necessary with ordinary renewing of the rails and sleepers.

Accommodation for the Traffic.

We drew attention in our annual report last year to the necessity for action to be taken with regard to the relief of the Bridge-street Yard, either by coming to a decision regarding the extension of the railway into the City, or by providing a cable tram service between the present station at Redfern and the Circular Quay, but we regret that no action has yet been taken. This question is a most urgent one, both in the direction of giving necessary relief to the existing lines, and also to provide a more efficient service for the railway passengers.

Summary showing the principal items of interest in the Tramway transactions for the year ending the 30th of June, 1892; and, for the purposes of comparison, the figures for the years 1888 and 1891 are shown :—

TOTAL TRAMWAYS.

	1892.	1891.	1888.
Total Debentures issued and outstanding	£1,000,000	£1,000,000	£1,000,000
Amount added to Capital Account for the year	95,447	70,598	67,929
Total spent in Construction and Equipment	1,099,659	1,004,212	877,244
Total cost per mile open for traffic	22,909	23,628	22,786
Total mileage open	48	42½	38½
Gross Revenue	305,090	292,850	236,519
Working Expenditure	248,591	239,679	219,196
Profit on working	56,499	53,171	17,323
PERCENTAGE OF PROFIT TO CAPITAL INVESTED ...	5·28	5·32	1·98

CITY

CITY AND SUBURBAN LINES.

Total cost of Construction and Equipment	£932,907	£857,455	£742,555
Gross Revenue	279,321	270,365	221,060
Working Expenditure	229,145	221,505	204,227
Profit on working	50,176	48,860	16,833
Percentage, Working cost to Revenue	82·04	81·92	92·38
Total mileage open	37	33½	29½
PERCENTAGE OF PROFIT TO CAPITAL INVESTED ...	**5·54**	**5·74**	**2·27**

NORTH SHORE CABLE TRAMWAY.

Total cost of Construction and Equipment	£75,368	£74,343	£71,519
Gross Revenue	11,123	10,333	7,248
Working Expenditure	7,902	7,603	6,833
Profit on Working	3,221	2,730	415
Percentage, Working Cost to Revenue	71·04	73·58	94·26
Total mileage open	1½	1½	1½
PERCENTAGE OF PROFIT TO CAPITAL INVESTED ...	**4·27**	**3·67**	**0·58**

NEWCASTLE TO PLATTSBURG.

Total cost of Construction and Equipment	£75,899	£72,414	£63,170
Gross Revenue	13,696	12,152	8,211
Working Expenditure	10,037	10,571	8,136
Profit on Working	3,659	1,581	75
Percentage, Working Cost to Revenue	73·28	89·99	99·08
Total mileage open	7½	7½	7½
PERCENTAGE OF PROFIT TO CAPITAL INVESTED ...	**4·82**	**2·16**	**0·12**

ASHFIELD TO ENFIELD.

	1892.
Total Cost of Construction and Equipment	£15,485
Gross Revenue	950
Working Expenditure and Interest on Capital	1,925
Percentage, Working Cost to Revenue	158·63
Total mileage open	2
LOSS ON WORKING	**£975**

We have the honor to be,

Sir,

Your most obedient Servants,

E. M. G. EDDY, Chief Commissioner.

W. M. FEHON,
CHARLES OLIVER, } Commissioners.

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APPENDIX I.

New South Wales Government Railways.

Office of Engineer-in-Chief for Existing Lines, 26th July, 1892.

Sir,

I have the honor to report that the whole of the lines and works have been well maintained during the year.

The heavy rains which occurred in the early part of the year over the Southern and Western Systems caused much inconvenience and additional expense.

During the past year 46 miles 48½ chains have been relaid, and about 245 miles 70½ chains lifted and reballasted, and the Permanent-way generally has been considerably improved.

The work of renewing the fencing has been pushed forward, the total length completed during the year being 53 miles 30½ chains, and considerable repairs have been made to station buildings and bridges.

Duplication Works.

The works in connection with the quadruplication of the Suburban Line, between Redfern and Flemington, a total distance of 8 miles 3½ chains, which was let in five contracts, have been satisfactorily completed, the last section having been opened for traffic on the 3rd instant.

The duplication of the Southern Line between Granville and Picton, a distance of 38 miles 20 chains, including the alteration of grades at Glen Lee and Spaniards' Hill, has been completed and brought into use.

The widening of the line between Mittagong and Bowral Tunnel, a total distance of 1 mile 64 chains, was opened for traffic on the 6th of November last.

The additional line between Ryde and Hornsby, the distance being 7 miles 65 chains, was completed and opened for traffic on the 7th of March.

General Works.

The whole of the works in connection with the sorting sidings at Clyde and the new flood openings at Duck River have been completed.

The contract for deviating the Western Line at Lapstone Hill, thereby dispensing with the Zig Zag, is progressing. The earthwork and bridges are completed, the tunnel has been pierced and is now being bricked.

Various works in connection with the improvement of the curves and grades have been completed and opened for traffic, including the deviations between Blaxland and Karabar, and at Wentworth Falls, the lowering of the grades between Mumbil and Dripstone, and also between Dubbo and Narramine.

The work of raising the line between East and West Maitland has been completed and the traffic is now being worked over the new embankment.

The grades between Muswellbrook and Singleton are being improved and a portion of the work has already been brought into use.

The gasworks at Eveleigh have been completed.

I have, &c.,

WILLIAM T. FOXLEE,

Engineer-in-Chief for Existing Lines.

To the Secretary to the Railway Commissioners.

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RETURN showing the number of Men employed in the maintenance of Permanent-Way.

	30th June, 1892. Number per Mile.	30th June, 1891. Number per Mile.
Sydney to Granville Junction	·97	·97
Granville Junction to River Murray	·81	·77
Granville Junction to Bourke	·78	·77
Strathfield Junction to Hamilton Junction	·78	·72
Newcastle to Wallangarra	·82	·81
Illawarra Line	·80	·80
Cooma Line	·50	·50
Murrumburrah—Blayney Line	·54	·53
South-western Line	·50	·49
Jerilderie Branch	·43	·41
Gundagai Branch	·48	·48
Richmond Branch	·74	·74
Mudgee Branch	·56	·55
Molong Branch	·53	·53
North-western Line	·58	·58
St. Leonards Line	·76	·75
Camden Tramway	·65	·54
Sans-Souci Tramway	·41	·41
Plattsburg Tramway	·81	·81
Yass Tramway	·69	—

The following work was performed during the year :—

Sidings laid in and extended	8 miles 28 chains.
Sidings relaid with steel rails	22½ chains.
Sidings relaid with rerolled iron rails	15¾ chains.
Sleepers used in new sidings	15,568.
Sleepers used in main lines	147,925.
Ballast used on maintenance of main lines ...	317,038 cubic yards.
Length of fences renewed	53 miles 30½ chains.
Culverts and flood-openings constructed ...	70; extra waterway, 1,960 feet.

RETURN showing length of line relaid and paid for out of working expenses during each year 1881 to 1892.

Year ending 30th June.	Relaying done.		Relaying paid for.			
	miles.	chains.	miles.	chains.		
1875	1	1	1	1		
1876	0	67	0	67		
1877	3	23	3	23		
1878	4	6	4	6		
1879	3	27	3	27		
1880	5	56	5	56		
1881	12	43	12	43	miles.	chains.
1882	9	68	9	68	152	7
1883	8	6	8	6		
1884	20	57	20	57		
1885	32	25	32	25		
1886	11	30	11	30		
1887	26	9	18	26		
1888	22	71	20	52		
1889	25	8	35	10		
1890	44	15	44	15		
1891	107	68	61	34	216	62
1892	46	48	76	3		

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APPENDIX II.

Chief Mechanical Engineer's Report for the year ending June 30, 1892.

Sir, Eveleigh, 28 July, 1892.

I have the honour to report that the locomotive stock has been maintained as efficiently as the heavy duty which it performed during the greater portion of the year permitted. Many of the engines which have passed through the shops required exceptionally heavy repairs in consequence of the strain and wear and tear they sustained throughout the busy wheat and wool seasons. The carriage and waggon stock has been strengthened and improved. Enlargements of existing water supplies have been made, and the pumping and hydraulic plant, also the workshop tools, have been maintained in good working order.

Locomotives.

Three hundred and thirty-four locomotives have passed through the shops during the year ending June 30th, 1892. One hundred and eighty-six of them were repaired at Eveleigh, 44 at Newcastle, and 104 at smaller depots. Of these, 236 received heavy repairs and thorough overhaul. The remaining 98 had general repairs of a lighter character. In addition to the above work, 32 new American engines were erected in the Eveleigh shops by the Department.

One tram motor was thoroughly overhauled and heavily repaired at Newcastle.

Two hundred and fifty-seven boilers were dealt with during the year; 187 of them at Eveleigh and 66 at Newcastle. Of these 78 were, after being internally examined, retubed, heavily repaired, replaced in locomotives. Most of our stationary and pumping engine boilers were inspected and tested during the year; 60 of them were repaired, of which 16 received heavy repairs. At Newcastle 4 of the boilers belonging to the hydraulic plant were internally examined and repaired.

Nineteen new boilers have been fitted to locomotives during the year. These include 4 which had been taken out of store and were being fitted on the 30th June, 1891. But during the year 17 new boilers in all were taken out of store, and two of them are being fitted to locomotives. The total debit to working expenses for the year on account of new boilers amounts to £10,569 7s. 5d., in addition to which £7,693 17s. 2d. was charged to the vote £1,000,000 in September last.

Carriages and Waggons.

Four hundred and eighteen passenger vehicles received heavy repairs and thorough overhaul during the year; but there were in all 1,211 passenger vehicles dealt with at Eveleigh and 374 at Newcastle. Similarly, and apart from new waggons built in the shops as given below, 3,884 merchandise vehicles received heavy repairs and thorough overhaul. Eight thousand and sixty-three waggons and vans in all passed through Eveleigh and Newcastle shops during the year.

New Vehicles.

One hundred and fifty-three new vehicles have been constructed in the Eveleigh and Newcastle shops during the year, at a cost of £6,353, and charged to working expenses. They consist of 105 D waggons (entirely new), 1 new bogie timber truck, 19 D waggons rebuilt, and 28 vehicles of a miscellaneous character rebuilt.

Eight new Pullman sleeping-cars have been erected and issued to traffic from the Eveleigh shops, and 30 new D waggons have been constructed. These were charged to capital account.

Improved

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Improved Stock.

Thirty-four A waggons have been converted to ballast waggons.

Five hundred and forty-five defective axles have been withdrawn from traffic and replaced with stronger ones; 730 axle-boxes of defective design have been replaced by standard types. The light draw-gear in 1,060 waggons has been removed and replaced with standard gear; 54 vehicles have had their carrying capacity increased frow 4½ to 6 tons during the year by strengthening them. And 117 waggons of the K and L types have been improved by the alteration of their side springs, and their safety increased.

New Stock.

The new stock received during the year is as follows :—

Ninety-nine new engines have been placed in service, 51 of them as renewals and the remaining 48 as additions to stock.

Engines—	6	mineral tank engines
	15	suburban passenger engines
	20	saddle tank engines
	10	goods tender engines
	20	American consolidation goods engines
	12	do express passenger do
	16	English do do
	99	
Coaching—	1	State car
	8	Pullman sleeping cars
	26	express bogie carriages
	20	suburban bogie carriages
	2	bogie tram-cars (Yass)
	25	horse-boxes
	82	
Goods—	179	coal hopper waggons
	13	goods brake-vans
	369	iron underframe D waggons
	135	timber underframe D waggons
	1	composite underframe bogie waggon
	130	tubular waggons
	50	louvred vans
	12	refrigerating cars
	38	hopper ballast waggons
	50	ordinary ballast waggons
	75	sheep-vans, 4-wheels
	25	cattle-vans on bogies
	28	ballast waggons (second hand).
	1,105	

Twenty-six second class carriages on 4 wheels were replaced by 18 suburban bogie carriages. Of the 26 there are 18 retained as duplicates, 7 converted and 1 broken up.

In consequence of the inadequate number of powerful engines during the greater part of the year, and in spite of the fact that engines were kept at work when they ought to have been in the shops undergoing repairs, the Department was often unable to supply the requirements of traffic, and many trains had in consequence to be cancelled.

As

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As compared with 1891, a reduction occurred of 78,037 train miles executed during the year, whereas the engine mileage increased by 243,423. This was due to a material increase in the weights of the trains hauled, which required assisting engines more frequently; but the recent introduction of larger engines will greatly reduce assistant mileage in future.

A table is appended showing the mileage executed by each engine, in which some exceedingly heavy duties are recorded. Two hundred and eight engines ran between 20,000 and 30,000 miles, 132 others executed from 30,000 to 40,000, 6 engines covered between 40,000 and 50,000 miles, and 1 executed 66,823 during the year.

The facilities for repairing locomotives and their boilers expeditiously and economically are now very imperfectly met by our erecting and boiler shops. Until other provisions are made this will be more and more felt through larger engines having to be dealt with. To enable me to contend effectively with necessary boiler work and repairs of engines, I shall be glad if the proposals are authorised which the Commissioners have had under consideration, but which have been allowed to stand over for financial reasons.

The following improvements in rolling stock have been effected between the 1st January, 1889, and the 30th June, 1892:—

50 new boilers fitted to locomotives.
2,217 defective axles replaced by stronger ones.
1,240 defective axle-boxes removed and replaced by standard design.
7,278 vehicles have had stronger draw-gear put into them.
514 waggons have been strengthened and their carrying capacity increased from $4\frac{1}{2}$ to 6 and 7 tons.
133 waggons with spiral springs have been altered, and laminated springs supplied, also new axle-boxes, so as to increase their safety.

I have, &c.,
W. THOW,
Chief Mechanical Engineer.

To the Secretary to the Railway Commissioners.

APPENDIX III.

STATEMENT OF ACCOUNT OF THE EXPENDITURE AND REVENUE FOR YEAR 1892, WITH COMPARISONS FOR 1891 AND 1888.

DR. RAILWAYS. CR.

EXPENDITURE.	YEAR ENDING JUNE 30, 1892.	CORRESPONDING PERIOD IN 1891.	CORRESPONDING PERIOD IN 1888.
	£	£	£
To Maintenance of Way, Works, and Stations	484,233	446,782	429,001
Locomotive Power	643,924	623,633	466,452
Carriages and Waggons	160,816	156,814	127,836
Traffic Expenses	557,396	527,000	420,028
Compensation—Passengers	3,580	11,165	21,100
Do Goods	4,223	3,642	4,683
General Expenses	60,080	62,335	61,451
	1,914,252	1,831,371	1,530,551
BALANCE, NET RETURN after paying working expenses £	1,193,044	1,143,050	764,573
GRAND TOTAL £	3,107,296	2,974,421	2,295,124

REVENUE.			YEAR ENDING JUNE 30, 1892.	CORRESPONDING PERIOD IN 1891.	CORRESPONDING PERIOD IN 1888.
	Bookings. 1892.	Bookings. 1891.	£	£	£
By Passengers—					
First Class	No. 3,516,937	3,642,586	391,270	420,486	723 645
Second Class	No. 9,144,443	8,494,502	534,519	495,449	
Season Tickets 1st Class	No. 12,323	12,343	44,054	42,407	59 691*
Season Tickets 2nd Class	No. 231,857	222,344	38,600	36,731	
Horses, Carriages, and Dogs			20,733	22,064	20,196
Parcels and Cloak Room			77,520	80,529	59,312
Mails			55,836	56,359	45 727
Miscellaneous			7,924	4,887	1,512
Total Coaching £			1,170,456	1,158,872	910,083
General Merchandise			1,057,334	1,061,729	829,747
Wool			349,675	303,197	217,671
Live Stock			299,252	244,839	164,847
Minerals—Coal and Coke			196,022	180,302	145,456
Miscellaneous			13,902	7,094	5,088
Total Goods £			1,916,185	1,797,161	1,362,809
General Miscellaneous £			20,655	18,388	22,232
GRAND TOTAL £			3,107,296	2,974,421	2,295,124

NOT KEPT SEPARATE IN 1888.

APPENDIX IV.

SCHEDULES under Working Expenses for the Year ending the 30th June, 1892, with comparisons for 1891 and 1888.

RAILWAYS.

BRANCHES.	Year ending June 30, 1892.	Corresponding period in 1891.	Corresponding period in 1888.
A.—Maintenance of Way and Works.	£	£	£
Salaries, offices expenses, and general superintendence	16,415	23,125	19,635
Maintenance and renewals of permanent way, viz.: Wages £328,847		309,743	267,480
Maintenance and renewals of permanent way, viz.: Materials 77,550	406,397	76,378	55,456
Repairs, &c., of bridges, signals, and other works	27,795	13,980	48,187
Repairs, &c., of stations and buildings	28,421	19,007	30,456
Sundries	5,205	4,549	7,837
Lines maintained— 1892: Quadruple 8, Double 143, Single 2,034 = 2,185			
Lines maintained— 1891: Quadruple —, Double 124, Single 2,058 = 2,182			
Lines maintained— 1888: Quadruple —, Double 72, Single 2,042 = 2,114			
	484,233	446,782	429,001
B.—Locomotive Power.			
Locomotive Superintendent and clerks	10,523	10,431	21,566
Locomotive foremen	10,594	8,449	6,848
Locomotive drivers and firemen	223,277	207,568	157,808
Locomotive cleaners, coalmen, and labourers	60,597	53,678	52,287
Locomotive sundries	13,852	11,871	24,185
Coal, coke, and wood	81,088	85,461	54,392
Water	27,548	26,869	14,162
Oil, tallow, and waste	27,312	20,808	18,042
Sundry stores for cleaners	5,859	5,281	4,164
Repairs and renewals of engines Wages £123,502		133,290	92,133
Repairs and renewals of engines Materials 53,773	177,275	53,927	20,865
£	643,924	623,633	466,452
C.—Carriages and Waggons.			
Greasing and oiling Wages / Materials } Traffic charge	3,749	3,808	4,093
	7,744	7,654	9,524
Carriage repairs Wages	38,931	39,090	35,285
Carriage repairs Materials	12,893	18,409	19,236
Waggon repairs Wages	60,069	62,858	39,550
Waggon repairs Materials	37,430	34,929	20,148
£	160,816	156,814	127,836

BRANCHES.	Year ending June 30, 1892.	Corresponding period in 1891.	Corresponding period in 1888.
D.—Traffic Expenses.	£	£	£
Traffic Manager's office and staff	6,816	6,571	7,714
District officers and clerks	23,655	18,739	7,179
Station-masters and night officers	88,649	83,052	67,092
Clerks	25,472	21,107	24,134
Pointsmen, signalmen, and gatekeepers	52,076	49,073	32,533
Guards	71,570	60,786	51,416
Porters, labourers, &c.	160,394	159,601	142,649
Stores for stations	50,243	51,223	33,958
Advertising, stationery, printing, &c.	16,009	10,892	
Travelling and Incidental	6,392	4,677	52,753
Sundries	56,120	55,279	
£	557,896	527,000	420,028
E.—Compensation.			
For personal injury—Passengers	3,580	11,165	21,100
For damage to and loss of goods	4,223	3,642	4,683
£	7,803	14,807	25,783
Gratuities to widows and children of employees who have met with accident	3,210	2,916	1,307
F.—General Expenses.			
Commissioners' and Secretary's office	10,276	9,658	7,915*
Accountant's office	7,757	6,226	7,145*
Audit office	10,092	9,466	10,351
Stores branch	3,700	4,744	7,688*
Telegraph branch	17,443	18,360	22,209
Sundries	7,602	10,965	4,236
£	56,870	59,419	60,144
GRAND TOTAL £	1,914,252	1,831,371	1,530,551

* Under the late administration £6,578 of the expenses in connection with the offices of the Commissioner, Secretary, Accounts, and Store Branches was charged to the Construction Capital Account, otherwise the charges against each branch would have been—Commissioner and Secretary, £9,763; Accountant's office, £9,207 and Stores Branch, £10,396. The figures in Compensation and General Charges in 1888 have been adjusted to show the amounts paid to widows and children of employees.

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APPENDIX V.

Comparative Analysis of Revenue and Expenditure for the years ending 30 June, 1892, 1891, and 1888.

Particulars.	Year ending 30 June, 1892.				Year ending 30 June, 1891.				Year ending 30 June, 1888.			
	Average miles open for traffic ... Miles. 2,182½				Average miles open for traffic ... Miles. 2,162				Average miles open for traffic ... Miles. 2,044			
	Train mileage—				Train mileage—				Train mileage—			
	Passenger 3,062,833				Passenger 3,635,767				Passenger 3,074,678			
	Goods 4,872,283				Goods 4,774,654				Goods 3,614,635			
	Total mileage 8,356,096				Total mileage 8,410,421				Total mileage 6,689,313			
	Numbers or Tonnage.	Revenue.	Per mile open.	Per train mile.	Numbers or Tonnage.	Revenue.	Per mile open.	Per train mile.	Numbers or Tonnage.	Revenue.	Per mile open.	Per train mile.
REVENUE.												
Passengers — First and second class.	Numbers. 12,663,380	£ 925,789	£ 424·2	d.	Numbers. 12,137,088	£ 915,915	£ 419·8	d.	Numbers. 9,572,785	£ 723,645	£ 354·0	d.
Do Season Tickets	244,280	82,654	37·9		234,687	79,138	36·3		169,850	59,691	29·2	
Horses, carriages, and dogs	.....	20,733	9·5		.....	22,064	10·1		.....	20,196	9·9	
Cloak-room and parcels ...	.....	77,520	35·5		.....	80,529	36·9		.....	59,312	29·0	
Mails	.....	55,836	25·6		.....	56,359	25·8		.....	45,727	22·4	
Miscellaneous	.....	7,924	3·6		.....	4,867	2·2		.....	1,512	0·7	
Total, coaching	.....	1,170,456	536·3	76·27	.....	1,158,872	531·1	76·50	.....	910,083	445·2	71·03
	Tons.								Tons.			
General Merchandise	1,239,029	1,010,351	462·9		1,140,259	1,007,895	461·9		*1,152,377	829,747	405·8	
Wool	112,609	349,675	160·2		100,786	303,197	138·9		74,148	217,671	106·4	
Live stock	145,230	299,252	137·1		115,851	244,839	112·2		68,101	164,847	80·6	
Minerals—Coal and Coke...	2,562,124	196,022	89·8		2,229,430	180,302	82·6		*2,105,146	145,456	71·1	
Minerals, other than coal†	237,721	46,983	21·5		216,523	53,834	24·7		.....	.....	.....	
Miscellaneous	.....	13,902	6·4		.....	7,004	3·3		.....	5,088	2·8	
Total, goods	4,296,713	1,916,185	877·9	98·43	3,802,849	1,797,161	823·6	90·33	3,399,772	1,362,809	666·7	90·48
Sundries, special and miscellaneous.	.....	20,655	9·5	0·59	.....	18,388	8·4	0·52	.....	22,232	10·9	0·80
Total Revenue	.....	3,107,296	1423·7	89·25	.....	2,974,421	1363·1	84·88	.....	2,295,124	1122·8	82·34
EXPENDITURE.												
Working Expenses.	Expenditure.	Per mile open.	Per train mile.	Per cent. to Revenue.	Expenditure.	Per mile open.	Per train mile.	Per cent. to Revenue.	Expenditure.	Per mile open.	Per train mile.	Per cent. to Revenue.
	£	£	d.		£	£	d.		£	£	d.	
Maintenance of way, works, and stations	484,253	221·9	13·91	15·58	446,782	204·3	12·75	15·02	429,001	209·9	15·39	18·69
Locomotive power.....	643,924	295·0	18·49	20·72	623,633	285·8	17·80	20·97	466,452	228·2	16·73	20·33
Carriages and waggons.....	160,816	73·7	4·62	5·18	156,814	71·9	4·47	5·27	127,836	62·5	4·59	5·57
Traffic expenses.....	557,396	255·4	16·01	17·94	527,000	241·5	15·04	17·72	420,028	205·5	15·07	18·30
Compensation — Passenger	3,580	1·7	0·10	0·11	11,165	5·1	0·32	0·37	21,000	10·3	0·75	0·91
Do Goods ...	4,223	1·9	0·12	0·14	3,642	1·7	0·10	0·12	4,783	2·3	0·17	0·21
General expenses	60,080	27·5	1·73	1·93	62,335	28·5	1·78	2·10	61,451	30·1	2·21	2·68
Total expenditure	1,914,252	877·1	54·98	61·60	1,831,371	839·3	52·26	61·57	1,530,551	748·8	54·91	66·69
Net profit	**1,193,044**	**546·6**	**34·27**	...	**1,143,050**	**523·8**	**32·62**	...	**764,573**	**374·0**	**27·43**	...
Increase in net profit over year ending 30 June, 1888. (After paying working expenses.)	**428,471**	...	...	...	**378,477**	...	...	...	.....	...	...	...
	EXPENDITURE PERCENTAGE TO GROSS REVENUE, 61·60.				**Expenditure percentage to gross revenue, 61·57.**				**Expenditure percentage to gross revenue, 66·69.**			

* The total in 1888 includes the weight of coal and general goods carried for the service, but are not included in 1891 and 1892.

† The weight and money of "other minerals" were included in general merchandise in 1888.

Percentage of Expenditure in each Division.

Divisions of Expenditure.	Year ending 30 June, 1892.	Year ending 30 June, 1891.	Year ending 30 June, 1888.
	%	%	%
Maintenance of Way, Works, and Stations	25·29	24·40	28·03
Locomotive Power.....	33·64	34·05	30·48
Carriage and Waggon	8·40	8·56	8·35
Traffic Expenses	29·12	28·78	27·44
Compensation (Passengers)	0·19	0·61	1·38
Do (Goods)	0·22	0·20	0·32
General Expenses	3·14	3·40	4·00
	100·00	100·00	100·00

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APPENDIX VI.

RETURN of the Number of Passengers, Tonnage of Goods, Earnings and Working Expenses, Total and per Train Mile, Percentage of Working Expenses to Gross Earnings, Net Earnings, Capital Invested on Lines open, and Interest on Capital each year, from 1855 to 1892, inclusive.

Year.	Length of Line.	Number of Passengers.	Tonnage of Goods.	Train Mileage.	Earnings from Coaching Traffic.	Earnings from Goods Traffic.	Total Earnings.	Working Expenses.	Earnings per Train Mile.	Working Expenses per Train Mile.	Percentage of Working expenses to Gross Earnings.	Net Earnings.	Capital expended on Lines open.	Interest on Capital.
1855	Miles. 14	No. 98,846	Tons. 140	No. 14,107	£ 9,093	£ 156	£ 9,249	£ 5,959	d. 157·34	d. 101·37	% 64·43	£ 3,290	£ 515,347	% ·63
1856	23	350,724	2,469	68,371	29,526	2,757	32,283	21,788	113·32	76·48	67·49	10,495	683,217	1·53
1857	40	329,019	20,847	107,822	34,970	8,417	43,387	31,337	96·58	69·75	72·23	12,050	1,023,588	1·17
1858	55	376,492	33,386	141,495	45,858	16,451	62,309	43,928	105·69	74·51	70·50	18,381	1,231,567	1·49
1859	55	425,877	43,020	147,618	46,502	15,258	61,760	47,598	100·41	77·38	77·07	14,162	1,278,416	1·10
1860	70	551,044	56,304	174,249	45,428	16,841	62,269	50,427	83·37	67·52	80·98	11,842	1,422,672	·83
1861	73	595,591	101,130	214,881	49,637	25,367	75,004	61,187	83·77	68·34	81·58	13,817	1,536,032	·89
1862	97	642,431	205,139	274,565	62,036	41,775	103,871	68,725	90·79	60·07	66·16	35,146	1,907,807	1·84
1863	124	627,164	218,535	315,177	71,297	52,644	123,941	96,867	94·38	73·76	78·16	27,074	2,466,950	1·09
1864	143	693,174	379,661	415,422	81,487	66,167	147,654	103,715	85·30	59·92	70·24	43,939	2,631,790	1·66
1865	143	751,587	416,707	483,446	92,084	73,048	166,032	108,926	82·42	54·07	65·60	57,106	2,746,373	2·07
1866	143	668,380	500,937	490,475	85,036	82,899	168,535	106,239	82·49	51·99	63·04	62,305	2,786,094	2·23
1867	204	616,375	517,022	600,751	87,564	101,508	189,072	117,324	82·02	49·87	62·08	71,748	3,262,320	2·18
1868	247	714,563	596,514	769,529	99,408	124,951	224,359	144,201	70·06	45·03	64·29	80,158	4,060,950	1·97
1869	318	759,635	714,113	893,552	109,427	155,548	264,975	176,362	71·17	47·37	66·57	88,613	4,691,329	1·89
1870	339	776,707	768,523	901,139	117,854	189,288	307,142	206,003	81·81	54·86	67·08	101,139	5,566,092	1·81
1871	358	759,062	741,986	931,333	129,496	225,826	355,322	197,065	91·57	50·79	55·46	158,257	5,887,258	2·68
1872	398	753,910	825,360	1,036,255	164,862	260,127	424,989	207,918	98·43	48·15	48·92	217,071	6,388,727	3·39
1873	403	875,602	923,786	1,109,879	178,216	306,020	484,236	238,035	104·71	51·47	49·16	246,201	6,739,918	3·65
1874	403	1,085,501	1,070,938	1,249,233	188,595	347,980	536,575	257,703	103·09	49·51	48·03	278,872	6,844,546	4·07
1875	473	1,288,223	1,171,354	1,472,204	205,941	408,707	614,648	296,174	100·20	48·28	48·18	318,474	7,245,379	4·39
1876	509	1,727,730	1,244,131	1,688,364	233,870	459,355	693,225	339,406	98·50	48·22	48·96	353,819	7,990,601	4·42
1877	598	2,957,144	1,430,041	2,106,802	271,588	544,332	815,920	418,985	92·95	47·73	51·35	396,935	8,883,177	4·46
1878	688	3,705,733	1,625,886	2,655,176	306,308	596,681	902,989	536,988	81·62	48·54	59·47	366,001	9,784,645	3·74
1879	734	4,317,864	1,720,815	2,932,463	319,950	632,416	952,366	604,721	77·04	49·49	63·49	347,645	10,406,495	3·34
1880	849	5,440,138	1,712,971	3,239,462	390,149	770,868	1,161,017	647,719	86·02	47·99	55·79	513,298	11,778,819	4·35
1881	995	6,907,312	2,033,850	3,923,929	488,675	955,551	1,444,226	738,334	88·33	45·16	51·12	705,892	13,301,597	5·30
1882	1,268	8,984,313	2,619,427	4,851,157	587,825	1,111,038	1,698,863	934,635	84·05	46·24	55·02	764,228	15,843,616	5·13
1883	1,320	10,272,037	2,864,566	5,937,261	661,751	1,269,713	1,931,464	1,177,788	78·07	47·61	60·97	753,676	16,905,014	4·48
1884	1,618	11,253,109	3,124,425	6,403,041	745,665	1,340,572	2,086,237	1,301,259	78·19	48·77	62·37	784,978	20,080,138	4·20
1885	1,732	13,506,346	3,273,004	6,638,399	830,904	1,343,464	2,174,368	1,458,153	78·61	52·72	67·06	716,215	21,831,276	3·37
1886	1,889	14,881,604	3,218,582	6,479,265	849,253	1,310,817	2,160,070	1,492,992	80·01	55·30	69·12	667,078	24,071,454	2·90
1887	2,036	14,451,303	3,339,253	6,472,107	850,499	1,357,796	2,208,295	1,457,760	81·88	54·05	66·01	750,535	26,532,122	2·96
1887-88	2,114	15,174,115	3,399,772	6,689,313	918,975	1,376,149	2,295,124	1,530,551	82·34	54·91	66·69	764,573	27,722,748	2·85
1888-89	2,171	16,086,223	3,485,839	7,641,709	1,025,601	1,512,876	2,538,477	1,634,602	79·72	51·34	64·39	903,875	29,839,167	3·14
1889-90	2,182	17,071,945	3,788,950	8,008,826	1,059,791	1,573,295	2,63 ,086	1,665,835	78·90	49·91	63·26	967,251	30,535,123	3·17
1890-91	2,182	19,037,760	3,802,849	8,410,421	1,177,037	1,797,384	2,974,421	1,831,371	84·88	52·26	61·57	1,143,050	31,708,617	3·59
1891-92	2,185	19,918,916	4,296,713	8,356,096	1,189,231	1,918,065	3,107,296	1,914,252	89·25	54·98	61·60	1,193,044	33,312,608	3·58

The accounts were made up to the 31st December in each year up to 1867, since that time up to the 30th June in each year.
Camden and Sans Souci Tramways not included prior to 1888 in this return.

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APPENDIX VII.

RETURN of the Mileage of Suburban Passengers on All Lines of Railway during the years ending 30th June, 1892, 1891, and 1888.

DESCRIPTION.		1892.	1891.	1888.
NUMBER OF ORDINARY PASSENGERS	No.	10,148,765	9,384,425	7,413,969
NUMBER OF WORKMEN'S JOURNEYS	"	2,577,996	2,422,644	1,738,284
NUMBER OF SEASON TICKET HOLDERS' JOURNEYS	"	4,240,094	4,127,192	3,227,760
TOTAL NUMBER OF PASSENGERS' JOURNEYS	"	16,966,855	15,934,261	12,379,912
NUMBER OF MILES TRAVELLED	MILES	92,609,491	89,270,546	70,172,793
AVERAGE MILEAGE PER PASSENGER	"	5·46	5·61	5·67
AMOUNT RECEIVED FROM PASSENGERS	£	261,744	252,274	186,393
AVERAGE RECEIPT PER MILE PER PASSENGER	D	0·68	0·68	0·64

Note.—Suburban Lines include only distances within 20 miles of Sydney and Newcastle, Liverpool and Morpeth included.

APPENDIX VIII.

RETURN of the Total Amount paid for Wages on the different Branches of the Railways during the years ending 30th June, 1892, 1891, and 1888.

Branches.		1892.	1891.	1888.
RAILWAYS:—		£	£	£
Maintenance Branch		417,216	453,016	394,891
Locomotive "		545,695	522,008	431,229
Traffic "		311,483	304,929	235,269
TOTAL	£	1,274,394	1,279,953	1,061,389

NOTE.—Includes all wages paid by the Department, whether on Maintenance or New Works.

APPENDIX IX.

STATEMENT of the number of Persons employed on the Railways on the 30th June, 1892, 1891, and 31st October, 1888.

Branches.	30th June, 1892.	30th June, 1891.	31st October, 1888.
Commissioners' and Secretary's Office	30	30	54
Chief Accountant's Branch	44	40	48
Traffic Audit Branch	68	65	60
Stores Branch—Salaried Staff	26	22	37
Wages Staff	23	32	60
Sheet Repairers transferred from Traffic—Salaried Staff	.....	1	.....
Wages Staff	10	18	.....
Permanent-way Branch—Salaried Staff	161	190	159
Wages Staff	2,684	2,769	3,274
Locomotive Branch—Salaried Staff	171	173	141
Wages Staff	3,610	3,866	3,204
Traffic Branch—Salaried Staff	994	898	840
Wages Staff	2,486	2,582	2,389
*Electrical Branch—Salaried Staff	85	.....	.....
Wages Staff	31	.....	.....
*Interlocking Branch—Salaried Branch	19	20	8
Wages Staff	189	241	72
Other Branches—Salaried Staff	4	5	.....
Wages Staff	3	.....	.....
Total, Salaried Staff	1,602	1,444	1,347
Total, Wages Staff	9,036	9,498	8,999
GRAND TOTAL	10,638	10,942	10,346

The increases in the Salaried Staff are owing to a large number of officers having been transferred from the Wages to the Salaried Staff.
* A portion of the Electrical and Interlocking Staffs was included in the Traffic and Permanent-way Branches in 1888.

APPENDIX X.

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APPENDIX

NEW SOUTH WALES

STATEMENT showing the number and classes of Locomotive Engines,

LOCOMOTIVE

	PASSENGER.						
	Tender.						
	Express 4-wheels coupled, bogie.	4-wheels coupled, double bogie front.	6-wheels coupled, single bogie front.	4-wheels coupled, single bogie rear.	4-wheels coupled, single bogie front.	Single pair driving wheels.	10-wheeled engines, 6-wheels coupled.
Stock, 30th June, 1891	47	82	20	4	13	3	.....
Renewals to 30th June, 1892	.....	.....	.....	.....	.....	.....	.....
	47	82	20	.....	13	.....	.....
Added at the expense of Capital... ...	.....	.....	.....	.....	.....	.....	28
Stock on the 30th June, 1892	47	82	20	.....	13	.....	28
Duplicate Stock	.....	.....	.....	8	.....	3	.....

15 4-wheel coupled, passenger tank; 10 6-wheels coupled, goods tender; 6 6-wheels coupled, goods tanks; 20 6-wheels coupled, goods tanks; and 1 6-wheels coupled, goods tank.

COACHING

			Sleeping Cars.				First Class.							Composites.				
	Dining.	State.	Pullman.	40ft. Lavatory, Composite.	8 and 12-wheel Ordinary bogie.	4-wheel.	8-wheel bogie Saloon.	40ft. Lavatory.	Bogie and 8-wheel compartment.	Bogie compartment Suburban.	Bogie Suburban.	6-wheel.	4-wheel.	Ashbury 12-wheel bogies.	Bogie and 8-wheel compartment.	Bogie Suburban.	6-wheel.	4-wheel.
Stock, 30th June, 1891	1	2	...	6	17	3	9	24	55	9	81	14	...	8	44	4	11	...
Renewals to 30th June, 1892 ...	...	...	...	...	...	...	...	...	...	...	9	...	...	..	...	...	...	...
Added at expense of capital ...	...	1	8	6	...	...	...	6	...	...	2	...	...	...	...	...	...	...
Stock on 30th June, 1892... ...	1	3	8	12	17	3	9	30	55	9*	90*	14	...	8	44	5	11	...
Duplicate stock	...	...	...	...	...	...	...	...	...	...	...	...	30	...	...	...	...	39

* 3, 36, 3, and 33, respectively, have guard's section. Nine first and nine second class suburban, carrying capacity, 1,032—

GOODS

	OPEN GOODS WAGONS.				TOTAL OPEN GOODS WAGONS.	VANS.						TOTAL COVERED GOODS VANS.
	4-wheels.	6-wheels.	Bogies.	Hopper Coal, 4-wheels.		Ordinary, 4-wheels.	Louvred, 4-wheels.	Bogies.	Powder, 4-wheels.	Meat, 4-wheels.	Refrigerators, Bogies.	
Stock on 30th June, 1891	6,423	3	362	237	7,025	356	200	...	45	48	14	663
Renewals to do.	224	...	131	...	355	1	...	6	...	...	...	7
	6,097	3	486	237	6,823	338	200	6	45	48	13	650
Added at expense of capital to 30th June, 1892 ...	299	...	...	179	478	...	55	...	...	...	12	67
Stock on 30th June, 1892	6,396	3	486	416	7,301	338	255	6	45	48	25	717

* During the year 433 superior vehicles have been built, replacing

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X.

GOVERNMENT RAILWAYS.

Passenger Carriages, and Goods Waggons on the 30th June, 1892.

ENGINES.

Tank.				GOODS.					Sans Souci Tramway engine motors.	Total.
				Tender.			Tank.			
Suburban 4-wheels coupled, single bogie front.	Suburban 4-wheels coupled double bogie front.	Suburban 6-wheels coupled.	Suburban 4-wheels coupled, double bogie front, single bogie rear.	8-wheels coupled, single bogie front.	6-wheels coupled, single bogie front.	6-wheels coupled.	6-wheels coupled.	6-wheels coupled, bogie front and rear.		
18	6	6	.....	11	95	113	15	6	.....	439
.....	.....	.....	15	.....	10	.....	.....	26	.....	51
18	6	.....	15	11	105	76	14	32	.....	439
.....	.....	.....	.....	20	.....	.....	.....	.....	.....	48
18	6	.....	15	31	105	76	14	32	2	489
.....	.....	7	.....	.....	.....	42	1	.....	.....	61

replace 4 4-wheel coupled passenger tender; 3 single pair driving wheels; 6 6-wheels coupled, passenger tank; 37 6-wheels coupled goods tender;

STOCK.

Second Class.						Total, Passenger-carrying Rolling Stock.	Miscellaneous, General.											Total, Miscellaneous Coaching Stock.	Grand Total.
46 ft. bogie compartment.	Bogie compartment Suburban.	Bogie compartment.	Bogie Suburban.	6-wheel.	4-wheel.		Tram-cars.	Mail-vans.	Prison-vans.	Hearses.	Horse-boxes.	Carriage Trucks.	46 ft. Second Class brakes.	Brake-vans.	Workmen's Vans.	Workmen's Sleeping Vans.	Workmen's Cooking Vans.		
36	9	53	83	7	71	547	6	24	7	12	152	71	18	153	33	...	...	476	1,023
...	...	...	9	...	...	18	...	...	...	...	25	...	...	...	...	...	...	25	43
...	...	...	...	...	...	23	2	8	...	...	...	...	6	...	...	...	...	16	39
36	9*	53	93*	7	45	562	8	32	7	12	152	71	24	153	33	...	...	492	1,054
...	...	...	...	...	67	136	...	...	...	...	8	...	...	18	...	61	12	99	235

renew 26 second-class 4-wheels, carrying capacity, 1,016. Other differences are owing to conversions to improve the stock.

STOCK.

STOCK TRUCKS.					Total Stock Trucks	Total Vehicles used for Goods Traffic Purposes.	Brake-Vans.	DEPARTMENTAL.						Total, Departmental.	Grand Total.
Cattle.		Sheep.		Combination, 4-wheels.				Loco. Coal Dump Cars.	Ballast.		Water, 4-wheels.	Gas.		Accident Vans.	
4-wheels.	Bogies.	4-wheels.	Bogies.						Hopper.	Ordinary.		Van.	Truck		
516	1	573	2	18	1,110	8,798	193	201	347	334	54	1	1	11	949	9,940
8	25	29	...	...	62	424	...	2	...	6	1	...	...	...	9	433
466	26	573	2	18	1,085	8,558	193	201	346	353	54	1	1	11	967	*9,718
...	...	63	...	...	63	608	13	...	38	78	...	...	...	...	116	737
466	26	636	2	18	1,148	9,166	206	201	384	431	54	1	1	11	1,083	10,455

655 old worn-out vehicles of inferior build and carrying capacity.

Summary of Stock.

	1892.	1891.
Total, Locomotives	489	439
,, Coaching Stock	1,054	1,023
,, Goods Stock	10,455	9,940
Grand Total	11,998	11,402

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APPENDIX XI.

STATEMENT of the total Rolling Stock, also Vehicles renewed or replaced, exclusive of Capital Account, from the year 1855 to the year ending 30th June, 1892.

Year ending.	Total Stock.			Renewals out of Revenue and Special Vote.		
	Locomotives.	Passenger Vehicles.	Goods Stock.	Locomotives.	* Passenger Vehicles.	* Goods Stock.
31 December, 1855	4	37	55	Nil.	Nil.	Nil.
31 ,, 1856	8	61	91	,,	,,	,,
31 ,, 1857	11	61	106	,,	,,	,,
31 ,, 1858	12	76	128	,,	,,	,,
31 ,, 1859	13	76	136	,,	,,	,,
31 ,, 1860	13	76	151			"
31 ,, 1861	16	152	257	,,	,,	,,
31 ,, 1862	16	176	319	,,	,,	,,
31 ,, 1863	19	176	319	,,	,,	,,
31 ,, 1864	25	177	345	,,	,,	,,
31 ,, 1865	36	180	411	,,	,,	,,
31 ,, 1866	40	180	429	,,	,,	,,
31 ,, 1867	47	185	467	,,	,,	,,
31 ,, 1868	47	198	613	,,	,,	,,
31 ,, 1869	47	204	720	,,	,,	,,
31 ,, 1870	57	232	909	,,	,,	,,
31 ,, 1871	66	259	1,121	,,	,,	,,
31 ,, 1872	67	290	1,312	,,	1	28
31 ,, 1873	69	316	1,405	,,	2	6
31 ,, 1874	81	336	1,513	,,	2	11
31 ,, 1875	100	344	1,610	,,	2	16
31 ,, 1876	101	344	2,217	1	1	8
31 ,, 1877	138	352	2,806	4	Nil.	4
31 ,, 1878	154	378	3,413	Nil.	,,	14
31 ,, 1879	177	444	3,866	2	1	24
31 ,, 1880	215	490	4,443	Nil.	1	33
31 ,, 1881	233	530	4,849	,,	Nil.	17
31 ,, 1882	268	564	5,445	,,	,,	Nil.
31 ,, 1883	296	695	6,386	,,	,,	10
31 ,, 1884	338	776	6,938	6	6	115
31 ,, 1885	392	854	7,972	Nil.	Nil.	20
31 ,, 1886	408	942	8,364	3	2	31
31 ,, 1887	428	1,009	8,798	Nil.	1	78
30 June, 1888	429	1,039	8,833	,,	8	71
30 ,, 1889	429	1,085	9,060	,,	12	125
30 ,, 1890	439	1,064	9,304	3	32	209
0 ,, 1891	439	1,023	9,940	21	100	286
30 ,, 1892	489	1,054	10,455	51	43	433

* The figures in these columns show only vehicles that have been built to replace others worn out or destroyed, and vehicles rebuilt in the workshops of the Department.

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APPENDIX XII.

Dates of Opening and the length in miles of the different sections of Railway Lines, from the commencement to 30th June, 1892.

Date of opening.	From where opened.	To where opened.	Length in Miles.	Date of opening.	From where opened.	To where opened.	Length in Miles.
26 Sept., 1855..	Sydney	Parramatta	14	11 Sept., 1879..	Breeza	Gunnedah	30
,, 1856..	Granville	Liverpool	9	1 June, 1880..	Orange	Wellington	50
April, 1857..	Near Newcastle	East Maitland	17	1 Sept., 1880..	South Wagga	Gerogery	59
Mar., 1858..	Near Newcastle	Newcastle	1	1 Feb., 1881..	Wellington	Dubbo	30
17 May, 1858..	Liverpool	Campbelltown	12	3 ,, 1881..	Gerogery	Albury	18
July, 1858..	East Maitland	West Maitland	2	28 ,, 1881..	Junee	Narrandera	60
,, 1860..	West Maitland	Lochinvar	7	1 Sept., 1881..	Narrandera	Darlington	98
4 ,, 1860..	Parramatta	Blacktown	8	9 Jan., 1882..	Tamworth	Moonbi	12
Dec., 1861..	Blacktown	Rooty Hill	3	1 Mar., 1882..	Darlington	Carrathool	34
Mar., 1862..	Lochinvar	Branxton	3	10 ,, 1882..	Campbelltown	Camden	7½
1 May, 1862..	Rooty Hill	South Creek	5	15 May, 1882..	Wallerawang	Capertee	25
July, 1862..	South Creek	Penrith	5	4 July, 1882..	Carrathool	Hay	24
1 Sept., 1862..	Campbelltown	Menangle	8	11 July, 1882..	Gunnedah	Boggabri	24
7 May, 1863..	Branxton	Singleton	14	2 Aug., 1882..	Moonbi	Uralla	51
1 July, 1863..	Menangle	Picton	13	1 Oct., 1882..	Boggabri	Narrabri	22
2 May, 1864..	East Maitland	Morpeth	3	20 ,, 1882..	Dubbo	Nevertire	63
1 Dec., 1864..	Blacktown	Richmond	10	3 Feb., 1883..	Uralla	Armidale	15
1 Mar., 1867..	Picton	Mittagong	24	9 June, 1883..	Nevertire	Nyngan	35
July, 1867..	Penrith	Weatherboard	28	14 ,, 1883..	Albury	River Murray	1
2 Dec., 1867..	Mittagong	Sutton Forest	9	3 Jan., 1884..	Jugiong Junction	Tarago	20
1 May, 1868..	Weatherboard	Mount Victoria	15	9 June, 1884..	Capertee	Rylstone	31
5 Aug., 1868..	Mittagong	Marulan	28	19 Aug., 1884..	Armidale	Glen Innes	63
19 May, 1869..	Singleton	Muswellbrook	31	2 Sept., 1884..	Nyngan	Byrock	78
27 ,, 1869..	Marulan	Goulburn	20	10 ,, 1884..	Rylstone	Mudgee	32
12 Oct., 1869..	Mount Victoria	Bowenfels	20	16 ,, 1884..	Narrandera	Jerilderie	65
1 Mar., 1870..	Bowenfels	Wallerawang	8	15 Oct., 1884..	Sydney	Hurstville	9
1 July, 1870..	Wallerawang	Rydal	6	4 Mar., 1885..	Tarcutta	Bungendore	20
20 Oct., 1870..	Muscle brook	Aberdeen	7	26 ,, 1885..	Murrumburrah	Young	18
17 April, 1871..	Aberdeen	Scone	9	3 Sept., 1885..	Byrock	Bourke	48
1 Aug., 1871..	Scone	Wingen	10	21 Dec., 1885..	Orange	Molong	22
1 Jan., 1872..	Liverpool	Sidings, Colling-wood, &c.	2	23 ,, 1885..	Hurstville	Sutherland	6
5 April, 1872..	Wingen	Murrurundi	14	9 Mar., 1886..	Sutherland	Waterfall	9
22 ,, 1872..	Rydal	Locke's Platform	19	1 June, 1886..	Cootamundra	Gundagai	34
1 July, 1872..	Lockes Platform	Macquarie Plains	6	1 Sept., 1886..	Glen Innes	Tenterfield	57
4 Mar., 1873..	Macquarie Plains	Raglan	5	17 ,, 1886..	Strathfield	Hornsby	14
4 Feb., 1876..	Raglan	Kelso	3	1 Nov., 1890..	Blayney	Cowra	43
9 Nov., 1875..	Goulburn	Gunning	31	7 April, 1887..	Hornsby	Hawkesbury	16
April, 1876..	Kelso	Bathurst	2	21 June, 1887..	Clifton	Wollongong	12½
3 July, 1876..	Gunning	Bowning	29	16 Aug., 1887..	Gosford	Waratah	50
1 Nov., 1876..	Bowning	Binalong	14	8 Sept., 1887..	Bungendore	Queanbeyan	17½
,, 1876..	Bathurst	Blayney	27	10 ,, 1887..	Kogarah	Sans Souci	6
12 Mar., 1877..	Binalong	Murrumburrah	20	9 Nov., 1887..	Wollongong	North Kiama	21½
19 April, 1877..	Blayney	Orange	20	7 Dec., 1887..	Queanbeyan	Michelago	20½
13 Aug., 1877..	Murrurundi	Quirindi	24	16 Jan., 1888..	Mullet Creek	Gosford	10
1 Nov., 1877..	Murrumburrah	Cootamundra	25	16 ,, 1888..	Tenterfield	Wallangarra	11
2 April, 1878..	Newcastle	Bullock Island Branch	1½	13 Feb., 1888..	Cowra	Blayney	46
5 ,, 1878..	Cootamundra	Bethungra	15	3 Oct., 1888..	Waterfall	Clifton	12
6 July, 1878..	Bethungra	Junee	18	1 May, 1889..	Brooklyn	Mullet Creek	6
2 Sept., 1878..	Junee	North Wagga Wagga	18	31 ,, 1889..	Michelago	Cooma	39
14 Oct., 1878..	Quirindi	Tamworth	28	1 Jan., 1890..	Hornsby	St. Leonards	10½
25 Mar., 1879..	Werris Creek	Breeza	15	20 April, 1892..	Railway Station	Yass	3
1 Sept., 1879..	North Wagga	South Wagga Wagga	6			Total, 30th June, 1892	2,135

2,033½ single, 143 double, and 8½ quadruple miles of line. Total 2,135.

Railway Loan and Debenture Account—

Year.	Vic.	No.	Amount authorised.	Debentures and Inscribed Stock issued.	Amount realised.	Outstanding, 30 June, 1891.	Renewed or Paid from Consolidated Revenue.	Renewed.
			£	£	£ s. d.	£	£	£
1852	16	39	217,500	217,500	223,936 3 4	.....	.....	17,500 50,000 150,000
1854	18	40	624,734	666,800	630,105 11 7	2,700	..... 27,600 ..... 133,300	264,200 ..... 139,000 100,000
1855	19	38 & 40	112,500	112,500	107,821 0 0	.....	112,500	.....
1856	20	1	200,000	203,000	199,997 10 0	.....	203,000	.....
1856	20	34	300,000	299,000	300,895 12 6	.....	500	 298,500
1858	22	22	720,000	722,088	718,472 6 0	22,498	1,518	..... 674,341 23,731 22,498
1860	23	5	281,700	281,700	278,627 11 6	.....	.....	281,700
1860	23	10	88,370	88,300	86,495 14 0	.....	80	88,220
1861	24	24	8,320	8,346	8,176 17 0	8,346	.....	8,346
1862	25	19	1,476,059	1,476,000	1,405,216 18 0	1,476,000	.....	1,476,000
1863	26	14	29,907	29,938	25,266 15 0	29,938	.....	.....
1864	27	14	552,107	552,100	465,975 10 0	552,100	.....	.....
1865	29	5	139,000	139,000	125,216 15 2	.....	44,489	48,178 46,333
1865	29	9	94,800	94,800	83,597 14 0	94,800	.....	.....
1866	29	23	639,000	639,000	605,991 3 0	639,000	.....	.....
1866	30	23	33,000	33,000	31,045 1 6	33,000	.....	.....
1867	31	11	1,000,000	1,000,000	981,655 7 0	388,800	654,300	.....
1868	31	27	7,131	7,122	7,148 6 0	7,122	.....	.....
1869	32	13	70,000	70,000	69,584 3 6	70,000	.....	.....
1870	34	2	179,000	179,000	177,338 8 0	179,000	.....	.....
1870	34	2	100,000	100,000	99,071 16 4	100,000	.....	.....
	Var.	Acts	.....	249,048	243,396 3 2	249,048	.....	.....
1871	35	5	300,124	300,100	300,520 5 0	300,100	.....	.....
1872	36	2	137,257	137,200	142,561 10 0	132,212	4,988	.....
1872	36	2	50,000	50,000	51,953 17 11	50,000	.....	.....
Total, 5 per cents.			7,360,509	7,655,542	7,370,067 19 6	4,334,664	1,182,275	3,688,547
1873	36	17	1,901,500	1,901,500	1,725,661 6 11	1,901,500	.....	.....
1873	36	21	48,178	50,106	48,178 0 0	48,178	.....	.....
1874	38	2	196,333	196,333	192,035 12 2	196,333	.....	.....
1874	38	2						
1876	40	12	2,523,352	2,523,300	2,468,069 5 6	2,523,300	.....	.....
1877	41	4						
1877	41	7						
1879	43	11	6,826,000	6,826,000	6,864,716 2 0	6,826,000	.....	.....
1875	39	18	75,000	73,825	72,779 0 10	73,825	.....	.....
1880	44	12	412,000	412,000	409,138 17 0	412,000	.....	.....
1881	44	28	315,300	315,300	313,110 9 4	315,300	.....	.....
Total, 4 per cents.			12,297,663	12,298,364	12,093,688 13 9	12,296,436	.....	.....
1881	44	28	6,605,700	6,605,700	6,057,451 14 8	6,605,700	.....	.....
1881	45	22	500,000	500,000	449,758 2 0	500,000	.....	.....
1883	46	23	1,245,000	1,245,000	1,119,897 8 0	1,245,000	.....	.....
1884	48	26	1,496,500	1,496,500	1,438,801 13 7	1,496,500	.....	.....
1886	50	28	1,963,000	.....	.....	.....	.....	.....
1888	52	16	972,841	972,841	980,126 6 0	972,841	.....	.....
1888	52	17	875,500	.....	.....	.....	.....	.....
1889	53	23	369,920	.....	.....	.....	.....	.....
1889	53	23	1,920,859	.....	.....	.....	.....	.....
1890	54	33	1,562,550	939,764	879,413 11 0	.....	.....	.....
1890	54	33	1,530,575	1,530,575	1,432,283 8 5	.....	.....	.....
1892	55	35	545,000	.....	.....	.....	.....	.....
Total, 3½ per cents.....£			19,587,445	13,290,380	12,357,732 3 8	10,820,041	.....	.....
Grand total.....£			39,245,617	33,244,286	31,821,488 16 11	27,451,141	1,182,275	3,688,547

* For the redemption of this loan a sum of £70,000 is set apart to pay interest and principal.

† At the end of 1902 the loans raised at 5 per cent. will have been redeemed, the Interminable Debentures under 36 Victoria No. 21 must be added.

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XIII.

Lines Opened for Traffic—June 30th, 1892.

PAID OFF.			IN FORCE.			Due dates of Debentures.			
Vic.	No.	Date.	Outstanding 30 June, 1892.	Rate per cent.	Interest payable Year ending 30 June, 1892.	Vic.	No.	Year.	Amount.
			£		£ s. d.				£
23	5	1860	.....	.....	.....	.....	.....	.....	.....
36	2	1873	.....	.....	.....	.....	.....	.....	.....
38	2	1874	.....	.....	.....	.....	.....	.....	.....
23	5	1860–1	.....	.....	.....	.....	.....	.....	.....
...	...	1860–1	.....	.....	.....	.....	.....	.....	.....
29	5	1886	.....	.....	.....	.....	.....	.....	.....
...	...	1876	.....	.....	.....	.....	.....	.....	.....
34	2	1871	2,700	5	135 0 0	.....	.....	Permanent.	
...	...	1876	.....	.....	.....	.....	.....	.....	.....
...	...	1876	.....	.....	.....	.....	.....	.....	.....
...	...	1879–88	.....	.....	.....	.....	.....	.....	.....
52	16	1888	.....	.....	.....	.....	.....	.....	.....
...	...	1879–88	.....	.....	.....	.....	.....	.....	.....
52	16	1888, July	.....	.....	.....	.....	.....	.....	.....
54	33	1891, Jan.	.....	.....	.....	.....	.....	.....	.....
54	33	1891, July	.....	.....	.....	.....	.....	.....	.....
53	23	1890	.....	.....	.....	.....	.....	.....	.....
53	23	1890	.....	.....	.....	.....	.....	.....	.....
54	33	1891, July	.....	.....	.....	.....	.....	.....	.....
54	33	1892, Jan.	.....	5	36,900 0 0	.....	.....	.....	.....
...	...	.....	29,938	5	1,496 18 0	26	14	1895	29,938
...	...	.....	552,100	5	27,605 0 0	27	14	1895	552,100
36	21	1873	.....	.....	.....	.....	.....	.....	.....
38	2	1874	.....	.....	.....	.....	.....	.....	.....
...	...	.....	94,800	5	4,740 0 0	29	9	1896	94,800
...	...	.....	639,000	5	31,950 0 0	29	23	1896	639,000
...	...	.....	33,000	5	1,650 0 0	30	23	1897	33,000
...	...	.....	345,700*	5	18,362 10 0	31	11	.....	.....
...	...	.....	7,122	5	356 2 0	31	27	1898	7,122
...	...	.....	70,000	5	3,500 0 0	32	13	1899	70,000
...	...	.....	179,000	5	8,950 0 0	34	2	1900	279,000
...	...	.....	100,000	5	5,000 0 0				249,048
...	...	.....	249,048	5	12,452 8 0	Var.	Acts		
...	...	.....	300,100	5	15,005 0 0	35	5	1901	300,100
...	...	1873–5	132,212	5	6,610 12 0	36	2	1902	182,212
...	...	.....	50,000	5	2,500 0 0				
...	...	.....	†2,784,720	5	177,213 10 0	.....	.....	.....	2,436,320†
...	...	.....	1,901,500	4	76,060 0 0	36	17	1903	1,901,500
...	...	.....	50,106	4	2,004 4 9	36	21	Interminable.‡	
...	...	.....	196,333	4	7,853 6 4	38	2	1908	1,213,561
...	...	.....	2,523,300	4	100,932 0 0	38	2		
						40	12	1909	1,506,072
						41	4		
						41	7	1910	2,307,129
						43	11		
...	...	.....	6,826,000	4	273,040 0 0	41	7		
						43	11	1933	4,518,871
...	...	.....	73,825	4	2,953 0 0	39	18	1906	73,825
...	...	.....	412,000	4	16,480 0 0	44	12	1933	412,000
...	...	.....	315,300	4	12,612 0 0	44	28	1924	315,300
...	...	.....	§12,208,364	4	491,934 11 1	.....	.....	.....	12,248,258§
...	...	.....	6,605,700	3½	231,199 10 0	44	28	1924	6,605,700
...	...	.....	500,000	3½	17,500 0 0	45	22	1924	500,000
...	...	.....	1,245,000	3½	43,575 0 0	46	23	1924	1,245,000
...	...	.....	1,496,500	3½	52,377 10 0	48	26	1924	983,664
						48	26	1918	512,836
...	...	.....	.....	...	.....	.....	.....	.....	.....
...	...	.....	972,841	3½	34,049 8 8	52	16	1918	972,841
...	...	.....	.....	.....	.....	.....	.....	.....	.....
...	...	.....	.....	.....	.....	.....	.....	.....	.....
...	...	.....	.....	.....	.....	.....	.....	.....	.....
...	...	.....	939,764	3½	‖ 27,409 15 7	54	33	1918	2,470,339
...	...	.....	1,530,575	3½	‖ 44,641 15 5				
...	...	.....	.....	.....	.....	.....	.....	.....	.....
...	...	.....	13,290,380	3½	450,752 19 8	.....	.....	.....	13,290,380
...	...	.....	¶28,373,464	.....	1,119,901 0 9	.....	.....	.....	27,974,958 ¶

with the exception of £2,700 permanent and a small balance on 31 Vic. No. 11. ‡ Interminable (Funded Stock). § To make up the total of the 4 per cent. loans
‖ Interest for ten months. ¶ Does not include Tramway loans.

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APPENDIX XIV.

STATEMENT showing the cost of Construction and cost per Mile open on different sections of the Railway Lines, on the 30th June, 1892.

Lines opened for Traffic.		Length in Miles.	Total Cost.	Cost per Mile.
			£	£
Darling Harbour Branch		1	357,117	357,117
Sydney to Granville		13	1,843,348	141,796
Haslam's Creek Branch		½	6,459	12,918
Granville to Wodonga		374¼	4,877,481	13,024
Junee to Hay		167	950,158	5,689
Narrandera to Jerilderie		65	402,481	6,299
Granville to Bourke		490	5,343,040	10,904
Wallerawang to Mudgee		85	981,042	11,541
Blacktown to Richmond		16	175,058	10,941
Goulburn to Cooma		127½	1,403,220	11,005
Cootamundra to Gundagai		34	238,052	7,000
Orange to Molong		22	269,329	12,242
Murrumburrah to Blayney		106	1,078,160	10,171
Sydney to Kiama		70	1,946,591	27,794
Homebush to Waratah		93½	2,538,147	27,146
Newcastle to Wallangarra		391	4,930,655	12,610
Werris Creek to Narrabri		97	565,258	5,827
Bullock Island Branch		1½	85,349	56,899
Morpeth Branch		4	60,895	15,224
Hornsby and St. Leonards		11	212,981	19,362
Campbelltown to Camden	Tram lines	7½	38,927	5,190
Kogarah to Sans-Souci	Tram lines	5	12,111	2,422
Yass Tramway	Tram lines	3	27,041	9,014
Average cost of construction		2,185	28,348,900	12,974
Rolling stock	£4,047,316			
Machinery	275,089			
Workshops	631,870			
Furniture	9,433			
		.....	4,963,708	
Average and total cost, all charges		2,185	33,312,608	15,246

APPENDIX XV.

STATEMENT showing cost of Additions to Stations, Buildings, Siding Accommodation, &c., and Rolling Stock, the cost of which was charged to Capital Account, during the year ending 30th June, 1892.

Particulars.		Amount.	Total.
		£	£
Additions to stations and buildings		126,338	
Equipment of stations, &c., cranes and weighing appliances		9,178	
Overbridges and subways		9,213	
Improvements to water supply		7,713	
Extending sidings and making additional sidings, loops, &c.		56,189	
Additions to signals and interlocking, &c.		30,736	
Additional flood-openings and waterways		6,541	
Cost of land resumed		2,757	
		248,665	
Additional rolling stock	£372,020		
Additional machinery	3,669		
Furniture	504		
		376,193	
			624,858

APPENDIX XVI.

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APPENDIX XVI.

COAL AND SHALE TRAFFIC.

COMPARATIVE Abstract of the Tonnage and Amount received for the Carriage of Coal and Shale from the various Collieries during the years ending 30th June, 1892 and 1891.

Stations.	1892.		1891.		Increase.		Decrease.	
	Tons.	Freight.	Tons.	Freight.	Tons.	Freight.	Tons.	Freight.
		£		£		£		£
A.A. Company	20,851	879	29,972	1,255	.....	.....	9,121	376
Anvil Creek	289	20	3,885	375	.....	.....	3,596	349
Blackwall	1,188	626	1,753	788	.....	.....	565	262
Bull's Company	.....	.....	515	21	.....	.....	515	21
Burwood	89,347	3,725	107,515	4,481	.....	.....	18,168	756
Burwood Extended	17,295	865	291	12	17,004	853	.....	.....
Burwood West	7,966	332	8,370	348	.....	.....	404	16
Coal Siding	39	5	83	17	.....	.....	44	12
Co-operative	107,721	5,237	148,640	6,698	.....	.....	40,919	1,461
Curlewis	470	135	694	268	.....	.....	224	133
Dudley (South Burwood)	59,701	3,930	.....	.....	59,701	3,930	.....	.....
Dulwich	2,192	419	227	82	1,965	337	.....	.....
East Maitland	3,523	226	10,461	998	.....	.....	6,938	762
Eleanora	9,768	491	5,653	283	4,115	208	.....	.....
Ferndale	14,173	369	35,547	903	.....	.....	21,374	534
Gladstone	.....	.....	32	9	.....	.....	32	9
Goose	.....	.....	343	41	.....	.....	343	41
Great Northern	64,638	3,941	59,536	3,722	5,102	219	.....	.....
Greta	118,114	10,344	103,180	9,548	14,934	796	.....	.....
Greta East	.....	.....	5,582	455	.....	.....	5,582	455
Greta South	.....	.....	19	5	.....	.....	19	5
Hetton	178,017	5,111	131,180	3,957	46,837	1,154	.....	.....
Hill End	.....	.....	40	2	.....	.....	40	2
Hillside	8	1	.....	.....	8	1	.....	.....
Holmville	9,077	755	6,337	553	2,740	202	.....	.....
Jardel	.....	.....	4,941	265	.....	.....	4,941	265
Lambton	209,224	8,512	164,230	6,843	44,994	1,669	.....	.....
Lambton East	16,473	855	12,202	581	4,271	274	.....	.....
Lambton South, New	56,292	2,331	46,496	1,912	9,796	419	.....	.....
Minmi (Duckenfield)	245,728	12,316	151,415	7,566	94,313	4,750	.....	.....
Monkwearmouth	313	18	22,307	1,439	.....	.....	21,994	1,421
Newcastle	179,980	7,662	191,874	8,100	.....	.....	11,894	438
Northumberland	11	4	3,275	1,135	.....	.....	3,264	1,131
Pearson's	.....	.....	173	7	.....	.....	173	7
Purified	10,356	2,123	4,676	635	5,680	1,488	.....	.....
Rix's Creek	4,872	2,297	9,447	1,986	.....	311	4,575	.....
Roschill	.....	.....	439	180	.....	.....	439	180
Sneddon's (Wallsend)	20,913	945	13,776	578	7,137	367	.....	.....
Thornton	.....	.....	237	14	.....	.....	237	14
Wallsend	323,207	13,778	355,545	14,866	.....	.....	32,338	1,088
Wallsend, New	.....	.....	36	2	.....	.....	36	2
Wallsend South	36,866	1,847	29,521	1,418	7,385	429	.....	.....
Wallsend West	77,716	5,103	51,032	4,716	26,684	387	.....	.....
Wallsend, Young	40,510	2,211	20,011	1,130	20,499	1,081	.....	.....
Waratah	89,901	3,863	46,118	1,956	43,783	1,907	.....	.....
Wickham and Bullock Island	167,651	4,349	143,289	3,559	25,368	790	.....	.....
Total, North	2,184,930	105,531	1,920,883	93,699	442,216	21,572	187,775	9,740
Austinmer	182	36	7,741	1,304	.....	.....	7,559	1,268
Bellambi	18,702	4,241	21,875	3,695	.....	546	3,173	.....
Bulli	12,430	3,407	5,149	1,149	7,281	2,258	.....	.....
Bong Bong	1,517	190	4,936	1,000	.....	.....	3,419	810
Carson's Siding	8,501	1,548	9,713	2,158	.....	.....	1,212	610
Corrimal	55,521	998	38,191	1,230	17,330	.....	.....	232
Cox's Siding	215	24	1,222	172	.....	.....	1,007	148
Helensburgh	69,774	9,355	22,528	3,797	47,246	5,558	.....	.....
Joadja	376	92	2,583	696	.....	.....	2,207	604
Lithgow Collieries	141,458	56,440	147,802	63,184	.....	.....	6,344	6,744
Mittagong Coal Siding	745	126	1,088	296	.....	.....	343	170
Mount Kembla	913	459	1,330	307	.....	152	417	.....
Southern Coal Company's Siding	1,937	1,036	.....	.....	1,937	1,036	.....	.....
Mount Kiera	2,020	306	5,770	1,188	.....	.....	3,750	882
Mount Pleasant	993	245	.....	.....	993	245	.....	.....
North's Siding	10,763	2,798	14,456	3,942	.....	.....	3,693	1,144
South Clifton	40,954	6,038	2,835	524	38,119	5,514	.....	.....
Oakey Park	257	13	54	4	203	9	.....	.....
Irondale	62	34	1,837	288	.....	.....	1,775	254
Total, South, West, and Illawarra	367,320	87,386	289,110	84,934	113,109	15,318	34,899	12,866
Total, Coal	2,551,650	192,917	2,218,999	178,633	555,325	36,890	222,674	22,606
Hartley Vale	15,287	5,222	23,463	8,011	.....	.....	8,176	2,789
Joadja	12,979	4,167	15,357	4,991	.....	.....	2,379	824
North's Siding	5,209	1,640	.....	.....	5,209	1,640	.....	.....
Total, Shale	33,474	11,029	38,820	13,002	5,209	1,640	10,555	3,613
Grand Total, Coal and Shale	2,585,124	203,946	2,257,819	191,635	560,534	38,530	233,229	26,219

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APPENDIX XVII.

COAL EXPORTED FROM NEWCASTLE.

RETURN of the quantity of COAL exported from Newcastle to Foreign and Intercolonial Ports for the years ending 30th June, 1892 and 1891, showing the increase and decrease in each.

Countries.	1891-92.	1890-91.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.
Victoria	828,963	744,471	84,492	.....
New Zealand	155,030	160,855	.....	5,825
South Australia	188,099	195,483	.....	7,384
Tasmania	68,509	53,210	15,299	.....
Western Australia	23,520	22,818	3,702	.....
Fiji	10,151	12,271	.....	2,120
Queensland	18,234	10,374	7,860	.....
Total, Intercolonial	1,295,506	1,199,482	111,353	15,329
			Net Increase ...	96,024
Foreign—				
Sumatra	.....	1,330	.....	1,330
Peru	33,576	17,204	16,372	.....
New Caledonia	16,406	11,298	5,108	.....
India	28,684	19,763	8,921	.....
United States	313,246	184,749	128,497	.....
Hong Kong	9,200	54,799	.....	45,599
China	.....	930	.....	930
Mauritius	15,773	10,398	5,375	.....
Philippine Islands	48,004	43,575	4,429	.....
Chili	201,757	169,121	32,636	.....
Sandwich Islands	36,445	33,314	3,131	.....
Java	32,499	37,293	.....	4,794
Siam	.....	1,213	.....	1,213
Guam	.....	8,641	.....	8,641
Mexico	11,439	8,191	3,248	.....
New Guinea	5,323	1,690	3,633	.....
South Sea Islands	1,943	5,261	.....	3,318
Cape of Good Hope	.....	.....	.....	.....
Solomon Islands	.....	.....	.....	.....
Singapore	39,271	35,018	4,253	.....
Other Countries	16,698	10,571	6,127	.....
Total, Foreign	810,264	654,359	221,730	65,825
			Net Increase ...	155,905
Grand Total (Intercolonial and Foreign)	2,105,770	1,853,841	333,083	81,154
			Net Increase ...	251,929

NUMBER of Tons and Value of Coal exported to Foreign and Intercolonial Ports for the years ending 30th June, 1892 and 1891.

1891-92.		1890-91.		Increase.	
Tons.	Value.	Tons.	Value.	Tons.	Value.
	£		£		£
2,105,770	1,037,135	1,853,841	992,211	251,929	44,924

PORT OF NEWCASTLE.

Foreign and Intercolonial Shipping out of Newcastle.

FROM JUNE TO JUNE.

1891-92.		1890-91.		Increase.	
No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.
1,377	1,459,957	1,227	1,241,582	150	218,375

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APPENDIX XVIII.

WOOL RETURNS.

RETURN of the number of Bales of Wool forwarded on the New South Wales Government Railways, during the years ending **30th June, 1892 and 1891.**

Stations.	Number of Bales.		Stations.	Number of Bales.		Stations.	Number of Bales.	
	1892.	1891.		1892.	1891.		1892.	1891.
Sydney	88	2,616	Darlington	4,539	2,436	Molong	10,790	8,760
Darling Harbour	3,185	2,027	Bringagee	1,392	3,233	Piper's Flat	19	12
Alexandria	.....	14	Carrathool	3,038	3,874	Capertee	766	432
Cabramatta	.....	3	Hay	2,932	3,104	Rylstone	1,351	1,426
Liverpool	2,639	3,590	Morundah	2,581	2,427	Mudgee	15,986	12,578
Ingleburn	3	3	Jerilderie	6,173	4,985	Buccroft	.....	1
Minto	.....	10	Albion Park	4	.....	Newcastle	149	732
Campbelltown	.....	1	Camden	14	30	Hamilton	.....	3
Mittagong	198	138	Parramatta	24	.....	East Maitland	1	10
Moss Vale	279	370	Wentworthville	41	36	Morpeth	6	238
Marulan	853	703	Blacktown	1,140	1,215	West Maitland	3,489	3,524
Towrang	794	654	Mount Victoria	407	563	Farley	.....	2
Goulburn	10,541	8,451	Bowenfels	128	269	Lochinvar	2	.....
Breadalbane	481	270	Wallerawang	1,357	82	Greta	2	.....
Gunning	2,970	2,490	Rydal	89	46	Branxton	255	6
Jerrawa	140	120	Turano	949	982	Whittingham	307	132
Yass	5,923	4,670	Locksley	84	3	Singleton	324	1,089
Bowning	3,619	2,688	Brewongle	458	535	Glennie's Creek	80	61
Binalong	4,985	4,671	Raglan	211	249	Ravensworth	580	594
Rocky Ponds	1,770	1,299	Kelso	1,327	1,266	Musclebrook	6,842	7,199
Harden	1,608	1,924	Bathurst	3,228	3,051	Aberdeen	462	365
Murrumburrah	309	562	Perth	1,735	1,437	Scone	4,643	4,118
Nubba	242	230	George's Plains	63	53	Wingen	395	488
Wallendbeen	2,121	2,389	Wimbledon	295	320	Blandford	1,563	1,629
Cootamundra	8,046	6,581	Newbridge	1,521	1,266	Murrurundi	136	259
Bethungra	1,216	947	Blayney	536	7,675	Doughboy Hollow	517	629
Illabo	1,251	1,020	Millthorpe	899	1,130	Willow Tree	3,768	3,284
Junee Junction	3,350	1,363	Spring Hill	236	248	Quirindi	8,229	8,256
Harefield	588	576	Orange	1,076	1,182	Werris' Creek	795	790
Bomen	13	17	Mullion Creek	885	976	Currabubula	2,101	2,076
Wagga	9,223	8,978	Kerr's Creek	166	46	West Tamworth	14,762	14,376
Uranquinty	1,383	1,319	Warne	914	829	Tamworth	762	737
The Rock	5,285	5,544	Stony Creek	63	33	Moonbi	988	938
Yerong Creek	3,497	3,346	Stuart Town	284	231	Woolbrook (M'Donald River).	614	710
Culcairn	3,542	3,959	Mumbil	1,181	758			
Gerogery	318	563	Dripstone	203	327	Walcha Road	4,962	5,277
Yambla	.....	.....	Wellington	2,163	2,014	Kentucky	1,511	1,592
Tarago	1,674	1,521	Mary Vale	337	336	Uralla	7,583	7,067
Bungendore	3,036	2,286	Geurie	318	387	Armidale	3,463	3,319
Queanbeyan	5,192	4,449	Murrumbidgerie	2,419	3,503	Dumaresq	1,085	965
Michelago	2,523	1,474	Dubbo	22,477	22,683	Black Mountain	533	316
Cooma	10,557	9,412	Narramine	9,591	8,587	Guyra	1,613	1,071
Menangle	20	9	Trangie	12,954	10,832	Ben Lomond	622	491
Bowral	7	.....	Nevertire	26,757	23,141	Glencoe	418	163
Exeter	6	.....	Mullengudgery	4,101	541	Glen Innes	11,992	7,888
Yarra	2	.....	Nyngan	20,263	20,917	Dundee	1,180	1,152
Coolalie	221	.....	Girilambone	7,329	7,735	Deepwater	933	781
Demondrille	205	.....	Coolabah	5,415	5,817	Bolivia	21	14
Henty	679	.....	Byrock	10,211	8,834	Tenterfield	237	164
Coolac	808	1,277	Bourke	87,000	67,615	Jennings	442	119
Gundagai	4,265	3,630	Riverstone	126	455	Breeza	1,916	1,687
Young	18,084	15,453	Mulgrave	401	613	Curlewis	882	646
Koorawatha	1,732	400	Windsor	1,818	882	Gunnedah	9,208	9,145
Old Junee	3,233	2,901	Carcoar	139	3	Boggabri	3,032	2,978
Coolamon	6,954	5,103	Manfurama	1,360	582	Baan Baa	418	232
Grong Grong	2,547	1,993	Lyndhurst	1,066	1,059	Narrabri	68,270	63,689
Narrandera	18,398	8,581	Woodstock	1,447	838	Douglas Park	.....	12
Yanko	1,552	1,728	Cowra	23,347	21,003			
Whitton	7,192	9,202	Borenore	10,172	8,581	Total	661,893	589,545

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APPENDIX XIX.

LIVE STOCK TRAFFIC.

RETURN showing the number of Live Stock forwarded from the undermentioned Stations during the twelve months ending 30th June, 1892.

Stations.	Quantity carried.				
	Horses.	Cattle.	Calves.	Sheep.	Pigs.
Darling Harbour	1,751	1,274	784	6,437	18,379
Ashfield	....	....	2	....	....
Homebush	....	1	1	....	....
Flemington	770	6,207	203	105,077	366
Rookwood	....	....	....	....	14
Auburn	....	....	5	....	....
Granville	10	2	4	....	213
Fairfield	....	42	41	....	....
Cabramatta	15	5	23	....	39
Liverpool	52	795	1,038	136	746
Ingleburn	....	5	45	....	129
Minto	....	1	31	....	2
Campbelltown	13	745	1,730	1,492	275
Menangle	9	49	242	360	226
Douglas Park	....	10	48	15	141
Picton	90	301	530	847	1,125
Balmoral	8	32	21	110	11
Mittagong	4	204	77	3,020	317
Bowral	44	93	101	2	650
Moss Vale	178	1,018	309	11,420	572
Exeter	....	1	....	161	217
Bundanoon	8	2	....	....	....
Wingello	....	....	....	2	....
Marulan	13	690	251	17,540	103
Towrang	....	131	34	2,492	127
Goulburn	411	2,550	1,172	69,647	7,048
Yarra	....	....	....	538	....
Brodalbane	1	490	171	21,597	220
Gunning	98	29	155	16,247	66
Yass Junction	392	....	1	10,124	606
Bowning	72	79	53	9,115	....
Binalong	29	402	68	25,828	708
Harden	47	871	297	19,236	886
Wallendbeen	16	84	....	3,775	83
Cootamundra	139	512	66	18,995	253
Bethungra	....	1	1	891	....
Illabo	2	8	....	20	3
Junee	61	25	104	1,515	57
Bureen	....	1,490	62	11,007	....
Wagga	152	2,887	3	20,431	317
The Rock	12	234	1	4,098	....
Yerong Creek	1	....	....	3,457	40
Henty	3	....	....	312	....
Culcairn	12	136	....	6,669	111
Gerogery	....	....	....	1,403	16
Yambla	1	3	2	12	....
Albury	400	12,393	9	78,203	630
Tarago	7	2,846	840	31,307	79
Bungendore	26	906	187	43,911	150
Queanbeyan	90	376	67	32,552	49
Michelago	....	4	....	1,000	....
Cooma	13	69	30	37,745	1,020
Coolac	25	350	116	4,148	605
Gundagai	178	289	241	6,950	3,194
Young	17	1,238	....	29,127	923
Koorawatha	....	22	20	9,300	68
Old Junee	....	1,462	....	6,519	17
Coolamon	37	6	....	12,006	....
Grong Grong	3	31	....	1,265	....
Narrandera	113	168	45	23,349	193
Yanko	....	....	....	15,447	....
Whitton	7	60	1	40,088	84
Darlington	....	....	....	62,242	....
Brimagee	....	....	....	10,150	....
Carathool	....	99	20	62,000	....
Hay	28	....	80	60,213	....
Moruadah	18	2	....	21,359	....
Jerilderie	44	68	....	32,295	80
Marrakville	....	6	6	....	....
Rockdale	....	1	....	....	....
Hurstville	....	3	9	....	....
Sutherland	....	3	....	....	7
Waterfall	....	1	1	....	....
Helensburgh	....	....	....	....	18
Morpeth	....	16	15	....	132
Clifton	....	9	....	40	....
Clifton, South	....	1	....	100	....
Thirroul	....	5	....	....	....
Bulli	....	7	....	101	9
Wollongong	19	12	....	....	3
Unanderra	....	53	401	3	237
Dapto	112	14	306	....	255
Albion Park	32	56	808	....	319
Shellharbour	....	1	43	....	1,431
Kiama	139	100	209	255	119
Camden	4	90	899	925	5,085
Ryde	....	3	2	....	....
Eastwood	....	1	1	....	....
Carlingford	....	1	1	....	5
Thornleigh	....	....	1	....	....
Hornsby	8	9	2	....	3
Chatswood	1	1	....	....	....
St. Leonards	7	2	4	....	....
Hawkesbury	....	....	....	....	27
Parramatta	94	43	10	110	544
Wentworthville	....	3	1	....	....
Seven Hills	....	....	12	....	2
Blacktown	20	1,042	32	557	1
Rooty Hill	25	66	153	404	21
Mc Druitt	....	2	98	97	....
St. Mary's	73	239	372	497	110
Kingswood	1	....	....	....	....
Penrith	189	147	391	163	199
Emu Plains	....	2	....	193	....
Glenbrook	....	....	....	....	3
Springwood	....	1	....	....	3
Lawson	....	5	2	1	....
Wentworth Falls	....	175	4	1,770	....
Katoomba	10	2	....	66	31
Blackheath	....	3	1	....	....
Mount Victoria	....	58	15	6,036	27
Bell	2	22	1	....	....
Bowenfels	5	3	3	460	....
Wallerawang	10	691	10	29,960	44
Tarana	10	157	96	17,136	2,400
Bowenglen	....	4	....	9,901	147
Raglan	....	1	4	1,240	....
Kelso	131	954	78	48,800	178
Bathurst	8	....	....	223	....
Perth	....	1	1	7,032	30
George's Plains	2	....	....	2,914	....
Wimbledon	....	....	....	12	....
Newbridge	10	373	43	29,107	253
Blayney	16	246	209	15,029	....
Millthorpe	....	11	....	2,499	20
Spring Hill	59	....	....	....	....
Orange	212	1,017	31	9,699	258
Kerr's Creek	....	....	....	312	70
Wattle	5	20	....	618	69
Stuart Town	....	....	....	1,042	102
Mumbil	2	....	....	420	....
Springs	....	....	....	302	....
Wellington	103	3,054	171	16,490	164
Maryvale	....	....	....	699	....
Geurie	....	....	....	....	1
Murrumbidgerie	....	302	20	715	....
Dubbo	210	7,051	118	191,373	536
Narromine	18	173	23	11,437	....
Trangie	36	2,207	25	82,017	117
Nevertire	109	6,093	123	195,703	710
Mullengudgery	....	....	....	12,469	101
Nyngan	99	2,872	....	96,923	420
G bone	9	960	24	17,737	....
Coolabah	4	....	....	4,715	60
Byrock	13	312	107	40,412	14
Bourke	315	27,336	73	234,927	100
Riverstone	1	17	40	1,562	566
Mulgrave	44	48	23	....	53
Windsor	82	9	57	....	104
Clarendon	....	....	....	....	56
Richmond	88	82	107	97	93
Carcoar	13	173	....	3,982	29
Lyndhurst	....	....	....	101	135
Woodstock	30	339	2	10,469	108
Cowra	97	2,499	315	33,851	2,877
Boreonre	....	....	....	5,223	....
Molong	18	168	73	7,893	30
Caperne	....	1	16	6804	118
Rylestone	165	2,877	505	89,452	350
Mudgee	27	3,190	373	65,431	331
Gosford	10	4	2	....	31
Ourimbah	....	....	....	....	19
Wyong	....	....	....	....	18
Morrisett	2	....	....	....	84
Awaba	....	....	1	....	....
Taralba	....	....	....	....	2
Adamstown	....	1	....	....	1
Newcastle	4	14	75	39	99
Honeysuckle Pt.	8	25	15	....	67
Hamilton	....	....	....	90	....
Waratah	....	6	2	....	15
Hexham	....	....	3	....	....
Tarro	....	....	....	....	97
Thornton	....	....	....	....	20
East Maitland	80	2	21	2,137	68
Farley	173	1,858	4	6,807	147
Lochinvar	274	2,921	870	700	2,025
Greta	....	....	....	....	4
Branxton	8	165	66	40	109
Whittingham	103	2,101	233	1,028	200
Singleton	254	2,806	847	7,076	4,705
Glennie's Creek	....	....	....	101	174
Ravensworth	69	425	130	1,814	734
West Maitland	404	1,731	379	12,036	8,110
Muswellbrook	325	1,385	796	21,370	426
Aberdeen	11	389	527	4,351	1,170
Scone	391	1,694	234	9,477	297
Wingen	11	....	....	779	....
Blandford	4	....	....	47	1
Murrurundi	25	48	131	3,213	40
Willow Tree	64	3,105	4	38,760	28
Quirindi	85	2,622	204	145,236	163
Werris Creek	6	660	48	9,267	....
Breeza	490	5,011	349	63,523	230
Curlewis	....	....	....	....	73
Gunnedah	115	2,091	211	92,143	564
Boggabri	44	1,058	65	34,762	279
Baan Baa	4	....	....	....	6
Narrabri	129	4,330	91	305,501	802
Currabubula	3	23	20	4,139	100
West Tamworth	239	2,246	58	23,879	798
Tamworth	....	....	....	9	....
Moonbi	....	....	....	12	10
M'Donald River	....	2	2	50	6
Walcha Road	43	33	....	5,297	22
Kentucky	....	....	....	741	....
Uralla	12	387	1	3,753	23
Armidale	107	15	6	608	146
Black Mountain	....	....	....	3,253	....
Guyra	29	108	4	306	93
Ben Lomond	14	....	....	800	....
Glencoe	38	....	....	2,383	....
Glen Innes	25	5	2	2,117	154
Deepwater	49	8	62	800	....
Bolina	10	....	....	....	....
Tenterfield	1,567	602	2	2,117	153
Jennings	321	103	....	1,206	495
Victoria	5	....	....	153	....
Total	13,456	148,303	21,229	3,139,600	83,119

APPENDIX XX.

Revenue and Expenditure of each Station for the year ending 30 June, 1892.

Stations.	No. of hands employed including Station-masters.	Total Salaries and Wages Expenditure. 1892.	No. of Tickets issued. 1893.	Revenue from Tickets and Coaching Traffic. 1892.	GOODS. Out. Tons.	GOODS. In. Tons.	COAL. Out. Tons.	COAL. In. Tons.	Other Minerals. Out. Tons.	Other Minerals. In. Tons.	WOOL. Out. Bales.	WOOL. In. Bales.	HAY, STRAW, AND CHAFF. Out. Trucks.	HAY, STRAW, AND CHAFF. In. Trucks.	Revenue from Goods and Live Stock. 1892.	Total Earnings, exclusive of Special Earnings. 1892.	Total Earnings, exclusive of Special Earnings. 1891.	Increase. 1892.	Decrease. 1892.	Stations.
		£ s. d.		£ s. d.											£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Sydney—Dent-st.			7,023	260 7 3	.....	.....	.....	.....	....	....	....	....	..	..	.....	306 7 3	201 10 1½	104 8 1½	.....	Sydney-Dent-st.
,, Park-st.			11,803	469 16 5	.....	.....	.....	.....	....	....	....	....	..	..	.....	508 10 5	101 6 3	337 10 3	.....	,, Park-st.
,, Liverpool-st.	10	1,239 11 10	1,121	44 1 1½	.....	.....	.....	.....	....	....	....	....	..	..	.....	44 1 1½	37 2 2	6 18 11½	.....	,, Liverpool-st.
,, Elizabeth-st.			14,767	588 14 8	.....	.....	.....	.....	....	....	....	....	..	..	.....	588 14 8	.....	588 14 8	.....	,, Elizabeth-st.
,, Central Office			31,917	84,012 14 2	.....	.....	.....	.....	....	....	....	....	..	..	.....	84,012 14 2	74,839 18 4½	9,172 15 9½	.....	,, Central Office
,, Redfern	555	57,327 0 7	1,849,901	270,324 10 0½	52,640	37,230	22	2,745	541	10,594	88	....	1,070	8,083	33,145 8 5	309,469 18 5½	314,619 8 5	.....	5,149 9 11½	,, Redfern
,, Darling Harbour	318	35,204 16 0	.....	.....	256,690	351,540	4,587	93,313	24,042	73,327	3,185	477,105	220	1,010	446,231 0 7	446,231 0 7	414,969 7 11	31,261 12 8	.....	,, Darling Har.
Eveleigh	32	3,889 4 11	304,313	5,959 11 3½	625	4,604	0	24	57	....	....	....	1	3	237 16 3	6,274 7 6½	5,448 18 3	825 9 3½	.....	Eveleigh.
Alexandria	3	364 8 11	.....	.....	2,424	19,445	32	.....	.....	10,087	....	1,564	..	14	6,447 6 3	6,447 6 3	4,662 1 11	1,785 4 4	.....	Alexandria.
Macdonaldtown	7	971 1 9	117,097	2,145 2 5	.....	.....	.....	9,561	13,848	....	....	....	..	..	.....	2,145 2 5	2,413 6 0	.....	268 3 7	M'donaldtown.
Newtown	16	2,196 7 5	326,640	7,291 8 10	6,000	38,614	111	27,521	34	8,613	....	....	1	22	15,740 14 6	23,122 3 3	26,730 14 7	.....	3,604 11 4	Newtown.
Stanmore	7	910 12 5	110,340	3,587 11 9	.....	5	.....	.....	....	....	....	....	..	..	.....	3,587 11 9	3,513 18 7	73 13 2	.....	Stanmore.
Petersham	19	2,630 13 2	380,971	12,323 1 11	2,009	18,009	11	16,181	10	3,880	....	....	7	63	9,347 0 4	22,270 8 3	21,510 3 9½	760 4 5½	.....	Petersham.
Lewisham	9	975 4 10	190,654	7,280 17 8	.....	.....	.....	.....	....	....	....	....	..	..	.....	7,280 17 8	6,657 4 3	623 13 5	.....	Lewisham.
Summer Hill	13	1,709 7 0	344,615	12,839 16 9	.....	39	.....	27	....	....	....	....	..	..	30 18 0	12,870 14 9	12,593 15 7	276 19 2	.....	Summer Hill.
Ashfield	14	2,044 11 2	302,101	13,102 15 11	719	23,292	12	4,733	....	14,001	....	....	..	41	5,604 19 9	18,727 15 2	17,142 12 1½	1,585 3 0½	.....	Ashfield.
Croydon	11	1,407 1 0	196,710	8,108 9 8	19	531	.....	.....	104	....	....	....	..	..	15 13 6	8,110 3 2	8,038 5 7	80 17 7	.....	Croydon.
Burwood	15	2,110 9 8	275,920	12,240 11 2	2,133	20,353	200	11,078	....	16,203	....	....	..	368	6,202 9 11	19,148 1 1	13,872 15 11	270 2 2	.....	Burwood.
Strathfield	23	2,300 2 8	196,235	12,243 12 5	95	1,482	13	1,837	....	878	....	....	..	..	745 10 2	12,989 2 7	13,221 10 8½	.....	232 8 1½	Strathfield.
Homebush	19	2,489 1 1	76,779	4,560 10 6	220	4,482	.....	661	....	9,150	....	....	4	44	1,370 10 2	5,940 6 8	121,650 7 10½	.....	115,710 1 2½	Homebush.
Flemington	9	1,218 7 8	14,354	408 0 6	1,026	616	.....	.....	....	469	....	....	..	..	201,546 8 0	202,044 14 0	33,451 18 2	168,592 18 4	.....	Flemington.
Rookwood	10	1,274 0 9	87,106	4,234 0 5	298	2,076	7	417	609	12,230	....	....	1	24	2,010 13 7	6,234 14 0	8,740 12 9	.....	2,506 18 9	Rookwood.
Auburn	8	1,087 5 9	95,762	4,977 0 7	13,368	9,339	.....	6,533	....	6,333	....	....	..	6	4,316 19 6	9,293 6 1	8,474 18 1	818 8 0	.....	Auburn.
Clyde	6	754 6 1	37,379	1,418 16 5	.....	1,977	.....	2,768	....	....	....	....	..	..	.....	1,418 16 5	844 9 0	1,074 7 5	.....	Clyde.
Granville	55	6,815 6 10	189,090	8,057 2 10½	28,202	31,784	.....	9,037	50	14,457	....	....	3	108	12,717 7 3	20,774 10 1½	51,074 12 5	.....	24,300 2 1½	Granville.
Merrylands	3	429 3 4	9,785	768 11 2	5,069	1,709	.....	2,160	....	230	....	....	..	16	1,417 1 2	2,185 12 4	1,808 13 8	376 13 8	.....	Merrylands.
Guildford	1	160 0 0	12,545	833 12 9	579	677	.....	25	....	....	....	....	..	..	110 14 1	1,044 6 9	956 2 2	88 4 7	.....	Guildford.
Fairfield	5	647 7 2	21,777	1,877 15 1	5,190	2,410	.....	173	36	202	....	....	8	20	739 8 11	2,617 4 0	2,690 13 10	.....	73 9 10	Fairfield.
Canley Vale	1	176 6 9	6,437	663 2 5	157	430	.....	21	....	....	....	....	..	..	109 19 6	773 1 10	753 0 7	20 1 3	.....	Canley Vale.
Cabramatta	2	213 1 6	4,636	470 10 8	3,170	560	6	18	....	....	....	....	4	..	130 14 9	601 14 5	797 2 0	.....	195 7 7	Cabramatta.
Liverpool	15	1,675 13 6	38,123	4,289 7 0	32,067	8,431	.....	5,022	614	....	2,039	3,216	34	94	4,912 7 0	9,201 15 3	10,744 5 7	.....	1,542 10 4	Liverpool.
Glenfield	2	291 16 8	759	33 1 0	2,408	69	.....	.....	44	....	....	....	..	..	9 11 3	89 12 9	.....	89 12 9	.....	Glenfield.
Ingleburn	3	381 10 0	3,316	602 9 9	6,035	907	.....	.....	....	....	3	....	..	..	209 3 0	811 12 8	643 3 3	168 9 5	.....	Ingleburn.
Minto	2	299 15 10	3,982	814 13 11	4,235	696	.....	.....	....	....	....	....	5	..	226 4 8	1,040 18 2	1,070 19 10	.....	37 1 8	Minto.
Campbelltown	12	1,421 0 3	16,322	3,905 0 0	7,030	4,029	.....	138	....	336	....	....	143	5	1,570 15 11	5,535 15 11	5,527 6 2	8 9 9	.....	Campbelltown.
do Trams	..	.....	3,750	227 4 11	.....	.....	.....	.....	....	....	....	....	..	..	.....	227 4 11	237 10 0	.....	10 5 1	Cmp'lt'n Trams
Menangle	3	390 15 3	3,502	649 17 9	1,489	817	.....	6	....	....	23	....	271	10	409 16 10	1,058 14 7	932 7 2	126 7 5	.....	Menangle.
Douglas Park	5	586 13 11	4,110	870 2 8	1,393	284	.....	.....	....	....	....	....	50	..	124 6 11	1,003 10 7	685 3 9	318 6 10	.....	Douglas Park.
Picton	17	1,926 12 4	6,240	2,215 3 9	7,270	3,047	6	76	334	....	....	....	2	1	1,723 5 2	3,943 8 11	3,802 18 0	140 15 11	.....	Picton.
Thirlmere	4	579 15 8	1,589	336 10 10	3,470	690	.....	12	....	....	....	....	12	..	290 10 10	627 7 8	830 17 7	.....	203 9 11	Thirlmere.
Picton Lakes	3	290 10 0	628	82 1 10	1,507	97	.....	.....	....	....	....	....	..	..	31 5 4	113 7 2	67 3 4	66 3 10	.....	Picton Lakes.
Balmoral	2	370 13 4	981	171 6 11	207	169	.....	.....	....	....	....	....	..	1	95 4 8	266 10 7	205 10 4	60 14 3	.....	Balmoral.
Hill Top	2	353 1 5	816	137 14 0	207	79	.....	6	....	....	....	....	..	..	57 15 11	195 9 11	226 15 3	.....	31 5 4	Hill Top.
Cole Vale	3	310 10 0	784	104 15 0	671	89	.....	.....	....	....	....	....	1	..	53 0 8	157 15 8	173 17 11	.....	16 2 3	Cole Vale.
Mittagong	12	1,000 15 1	9,300	2,595 15 4	6,877	4,111	1,063	193	12,978	....	196	....	13	20	8,609 8 6	11,095 3 9	12,511 6 11½	.....	1,416 3 2½	Mittagong.
Bowral	8	861 11 6	10,308	1,143 18 8	2,879	6,009	917	1,206	3,335	519	7	....	2	135	4,637 5 7	8,771 4 3	8,886 19 11½	.....	115 15 8½	Bowral.
Moss Vale	12	1,189 7 4	9,969	6,057 6 1½	2,603	6,084	468	877	1	706	279	....	8	63	5,023 10 8	11,080 4 9½	9,958 2 9	1,132 2 0½	.....	Moss Vale.
Exeter	2	292 8 0	662	147 14 4	207	300	.....	6	3	....	6	....	..	..	209 18 8	357 13 0	3 8 1	354 4 11	.....	Exeter.
Bundanoon	3	407 6 2	2,111	420 18 4	345	578	.....	.....	578	....	....	....	..	1	419 0 3	839 18 7	1,002 13 1	.....	162 10 6	Bundanoon.
Kareela	2	288 8 9	311	30 13 5	199	39	.....	.....	....	....	....	....	..	2	18 11 5	49 4 10	0 7 3	48 17 7	.....	Kareela.
Wingello	2	205 15 1	736	172 4 7	1,220	115	.....	.....	....	....	....	....	..	..	52 3 3	224 7 10	309 17 11	.....	85 10 1	Wingello.
Barber's Creek	3	303 0 5	357	168 10 1	511	134	.....	.....	....	....	....	....	..	..	33 10 4	197 0 5	250 0 3	.....	61 19 10	Barber's Creek.
Marulan	4	426 12 11	2,904	1,005 17 11	2,200	773	.....	.....	614	...	852	....	57	10	826 8 5	1,872 6 4	1,815 19 6	53 6 10	.....	Marulan.

APPENDIX XX—*continued.*

Stations.	No. of hands employed (including station-masters).	Total Salaries and Wages Expenditure. 1892.	No. of Tickets issued. 1892.	Revenue from Tickets and Coaching Traffic. 1892.	GOODS. Out. Tons.	GOODS. In. Tons.	COAL. Out. Tons.	COAL. In. Tons.	Other Minerals. Out. Tons.	Other Minerals. In. Tons.	WOOL. Out. Bales.	WOOL. In. Bales.	HAY, STRAW, AND CHAFF. Out. Trucks.	HAY, STRAW, AND CHAFF. In. Trucks.	Revenue from Goods and Live Stock. 1892.	Total Earnings, exclusive of Special Earnings. 1892.	Total Earnings, exclusive of Special Earnings. 1891.	Increase. 1892.	Decrease. 1892.	Stations.
		£ s. d.		£ s. d.											£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Towrang	2	234 9 3	2,035	278 17 7	1,738	829	.....	.....	....	....	704	92	2	..	240 19 2	516 10 9	452 10 5	64 0 4	.....	Towrang.
Goulburn	50	5,198 8 1	24,801	37,959 15 1½	25,654	34,396	1	8,783	....	146	10,541	51	103	46	42,250 12 7	60,219 7 8½	64,252 18 8	.....	4,033 10 11½	Goulburn.
Yarra	3	291 15 2	698	84 13 10	302	47	.....	.....	....	....	2	....	22	4	54 16 3	139 10 1	78 10 1	61 0 0	.....	Yarra.
Breadalbane	7	425 15 4	2,152	403 6 6	4,302	402	.....	.....	331	....	481	....	7	..	405 10 5	809 5 10	1,000 1 3	.....	190 15 5	Breadalbane.
Razorback	3	316 17 8	438	31 4 11	68	92	.....	.....	....	....	.....	.....	..	..	1 11 9	32 16 8	31 6 8	1 10 0	.....	Razorback.
Gunning	6	520 4 6	3,696	1,678 12 11	1,492	1,170	.....	8	....	....	2,020	1	7	..	2,283 4 11	3,901 17 10	3,907 19 3	53 18 7	.....	Gunning.
Jerrawa	3	307 9 4	545	154 3 3	159	57	.....	.....	....	....	140	....	..	..	25 7 1	159 10 4	211 17 9	.....	52 7 5	Jerrawa.
Coolalie	2	238 8 9	85	14 16 5	45	5	.....	.....	....	....	231	....	..	..	0 7 1	15 3 6	0 12 9	14 10 9	.....	Coolalie.
Yass Junction	8	636 10 7	5,148	4,167 18 4	1,893	3,903	.....	107	....	....	6,923	1,076	1	52	6,818 19 11	10,986 18 3	12,907 0 8	.....	1,920 2 5	Yass Junction.
Yass Township	3	66 8 8	1,090	151 7 11½	66	413	.....	40	....	12	.....	.....	.....	2	733 7 0	884 15 9½	.....	884 15 8½	.....	Yass Township.
Bowning	4	537 19 7	1,285	655 0 10	1,612	736	.....	8	....	....	3,619	....	1	6	1,193 15 0	1,753 16 7	2,093 5 4	.....	339 8 9	Bowning.
Goondah	2	242 4 0	.....	.....	.....	.....	.....	.....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Goondah.
Binalong	6	564 2 5	2,178	1,575 17 8	1,300	1,961	.....	6	32	....	4,385	....	3	..	3,722 17 2	5,298 19 10	5,681 1 6	.....	382 6 8	Binalong.
Rocky Ponds	2	251 1 3	}																	{ Rocky Ponds.
Galong	2	267 8 4	618	227 11 11	2,006	234	.....	.....	2	....	1,770	....	69	..	206 5 3	432 17 1	424 13 6	8 3 7	.....	Galong.
Cunningar	1	21 16 0	}																	{ Cunningar.
Harden	15	1,761 12 5	7,750	3,510 0 11	908	1,786	.....	27	....	....	1,608	....	24	1	2,411 6 8	5,021 7 7	5,350 5 4½	565 2 2½	.....	Harden.
Murrumburrah	3	372 12 0	7,502	1,830 13 3	6,885	7,354	.....	284	....	....	300	....	20	1	5,103 13 10	6 824 12 1	6,099 11 6	725 0 8	.....	Murrumburrah.
Demondrille	4	377 5 8	993	94 19 0	416	151	.....	.....	....	....	205	....	49	..	85 18 4	180 17 4	113 7 2	67 10 2	.....	Demondrille.
Nubba	3	182 14 2	479	106 16 3	984	113	.....	.....	....	....	242	....	107	..	101 11 10	208 8 1	321 1 3	.....	113 13 2	Nubba.
Wallendbeen	6	513 8 0	1,809	682 3 11	2,436	736	7	96	....	....	2,121	....	41	..	857 16 6	1,540 0 5	1,826 1 10	.....	286 1 5	Wallendbeen.
Coolamundra	17	1,388 0 1	12,967	7,739 1 7½	12,919	12,731	114	530	....	40	8,046	....	67	27	22,056 0 7	29,355 11 2½	24,016 0 6	4,939 10 8½	.....	Coolamundra.
Bethungra	7	681 8 8	2,330	704 3 6	1,372	1,881	.....	325	299	54	1,216	....	6	2	716 4 3	1,420 7 9	1,183 14 11	236 12 10	.....	Bethungra.
Illabo	3	338 1 8	1,153	340 2 11	1,018	299	.....	.....	....	....	1,251	....	18	1	300 0 0	640 3 5	671 13 4	.....	22 9 11	Illabo.
Junee	27	2,940 10 8	11,979	7,650 15 10½	3,304	5,388	15	215	29	514	3,350	....	20	10	7,113 12 3	14,773 0 1½	13,641 3 0½	1,132 2 3½	.....	Junee.
Harefield	4	358 15 6	838	160 4 9	1,554	232	.....	.....	....	....	538	....	150	..	242 16 10	412 1 7	416 15 3	.....	4 13 8	Harefield.
Bomen	4	311 18 10	629	205 2 5	1,282	151	.....	.....	....	....	18	....	176	..	319 3 1	524 5 6	500 12 11	23 12 7	.....	Bomen.
Wagga	10	1,804 14 1	13,557	10,949 4 3	10,923	12,104	2	1,070	....	4	9,232	264	331	95	25,153 3 7	37,102 8 3	36,060 2 2	1,042 6 1	.....	Wagga.
Uranquinty	3	299 4 0	1,922	287 10 9	2,844	230	.....	.....	....	....	1,283	...	186	1	200 9 0	488 0 3	395 0 7	92 19 8	.....	Uranquinty.
The Rock	4	458 16 11	2,862	1,054 4 4	1,806	701	12	95	10,986	4	5,296	....	19	4	801 4 8	1,855 9 0	2,174 14 2	.....	319 5 2	The Rock.
Yerong Creek	4	370 6 6	2,508	1,113 10 5½	1,622	952	.....	13	....	....	3,107	....	5	..	675 14 7	1,789 5 0½	1,995 1 8	.....	205 16 7½	Yerong Creek.
Henty	1	208 6 8	1,522	605 2 1	1,767	611	.....	12	....	....	679	....	1	..	670 4 11	1,135 7 0	.....	1,135 7 0	.....	Henty.
Culcairn	4	531 11 4	4,410	2,392 19 6	3,010	6,849	.....	250	....	10,986	3,542	....	3	1	6,157 12 0	8,499 12 3	7,168 19 9	1,331 12 6	.....	Culcairn.
Geregery	12	603 6 4	2,359	872 8 8	3,845	779	6	12	....	....	312	....	13	..	926 0 10	1,698 9 6	2,308 5 9	.....	709 16 3	Geregery.
Yanilla	1	143 8 7	940	307 9 3	855	153	.....	7	....	....	.....	.....	47	..	127 14 2	435 3 5	437 8 3	57 17 2	.....	Yanilla.
Albury	30	3,234 17 3	28,992	17,094 4 10	12,993	9,590	.....	720	....	60	.....	24,050	4	13	31,730 14 0	52,474 18 10	68,807 4 4½	.....	16,332 5 7½	Albury.
Tarago	6	533 6 3	4,003	2,813 3 10	4,426	2,295	.....	.....	5	5	1,874	....	70	1	1,822 17 8	4,636 0 6	4,938 9 6	.....	302 9 0	Tarago.
Bungendore	9	464 14 2	2,560	1,085 15 7	2,038	2,309	.....	720	203	....	3,035	....	..	..	3,363 4 2	5,353 19 9	6,169 3 6	.....	815 3 9	Bungendore.
Queanbeyan	12	532 16 11	2,813	2,428 12 10	1,586	2,895	.....	628	9	....	5,192	287	17	1	5,338 16 9	7,765 0 7	6,852 2 8	883 0 11	.....	Queanbeyan.
Michelago	6	293 10 0	950	622 13 0	744	404	.....	.....	5	....	2,523	....	2	..	371 12 9	994 5 9	1,304 19 6	.....	310 13 9	Michelago.
Bredbo	2	39 0 3	221	86 18 10	83	86	.....	.....	....	....	.....	.....	2	1	32 12 10	119 6 8	12 17 1	106 9 7	.....	Bredbo.
Cooma	5	630 16 7	4,581	5,500 16 10½	2,634	4,056	.....	8	....	....	10,057	....	4	11	10,462 9 9	16,962 6 7½	14,962 15 3½	1,999 11 4	.....	Cooma.
Coolac	2	308 2 0	1,862	639 9 1	1,031	705	.....	.....	....	....	502	....	6	..	735 10 5	1,374 19 6	1,454 10 5	.....	79 10 11	Coolac.
Gundagai	5	585 13 4	4,217	4,985 0 11	6,853	3,802	.....	21	18	....	4,265	.... †	5	13	12,333 14 1	17,318 15 0	17,018 14 3	300 0 4	.....	Gundagai.
Young	19	1,068 10 5	16,095	6,934 18 3	7,463	6,846	.....	526	....	317	15,084	....	2	53	14,864 18 7	21,819 16 10	24,157 8 4	.....	2,337 11 6	Young.
Koorawatha	5	228 14 0	955	219 11 9	2,019	332	.....	.....	....	....	1,732	....	..	..	290 5 5	603 17 2	659 16 8	.....	55 19 6	Koorawatha.
Old Junee	4	336 19 0	1,018	258 4 4	6,736	795	.....	1	....	....	3,233	...	20	..	1,029 18 6	1,288 0 10	1,358 17 1	.....	69 16 3	Old Junee.
Coolaman	5	348 14 0	2,963	1,504 14 11	9,021	2,203	.....	25	....	....	6,864	....	19	..	4,836 4 5	6,389 10 4	6,289 16 5	100 2 11	.....	Coolaman.
Grong Grong	1	194 10 0	2,616	867 4 9½	2,079	1,924	.....	5	....	....	2,647	....	3	..	911 17 10	1,770 2 7½	1,176 17 9	605 4 10½	.....	Grong Grong.
Narrandera	8	1,033 7 2	8,706	6,838 7 9	9,342	9,511	.....	907	1,623	....	18,308	3,213	90	153	10,050 15 8	23,406 3 5	20,207 10 11	3,287 12 6	.....	Narrandera.
Yanko	1	159 12 4	446	147 7 9	1,419	231	.....	.....	....	....	1,559	....	1	..	330 6 6	483 14 5	349 9 6	134 4 11	.....	Yanko.
Whitton	3	351 0 7	2,267	1,729 10 1	2,348	2,419	.....	7	23	190	7,192	....	1	39	5,550 3 1	7,073 13 2	9,017 2 3	.....	1,933 0 1	Whitton.
Darlington	1	165 0 0	903	711 19 7	1,764	923	.....	.....	....	....	4,539	....	..	7	1,169 10 0	1,871 10 4	1,480 7 3	391 3 1	.....	Darlington.
Bringagee	1	123 0 1	984	733 0 1	332	481	.....	.....	....	....	1,302	....	..	4	1,560 3 11	2,293 4 0	2,023 2 1	270 1 11	.....	Bringagee.
Carrathool	2	302 11 8	2,767	2,491 13 8	1,053	2,390	.....	.....	....	....	9,038	....	..	3	6,540 4 11	9,032 18 7	10,128 7 2	.....	1,097 8 7	Carrathool.

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APPENDIX XX—*continued.*

Stations.	No. of Hands employed including Station-masters.	Total Salaries and Wages Expenditure. 1892.	No. of Tickets issued. 1892.	Revenue from Tickets and Coaching Traffic. 1892.	GOODS. Out. Tons.	GOODS. In. Tons.	COAL. Out. Tons.	COAL. In Tons.	Other Minerals. Out. Tons.	Other Minerals. In. Tons.	WOOL. Out. Bales.	WOOL. In. Bales.	HAY, STRAW, AND CHAFF. Out. Trucks.	HAY, STRAW, AND CHAFF. In. Trucks.	Revenue from Goods and Live Stock. 1892.	Total Earnings, exclusive of Special Earnings. 1892.	Total Earnings, exclusive of Special Earnings. 1891.	Increase. 1893.	Decrease. 1893.	Stations
		£ s. d.		£ s. d.											£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Hay	6	727 8 10	4,836	6,729 12 0½	1,414	8,806	.....	781	....	....	2,032	.....	40	45	19,847 8 7	25,607 1 1½	25,230 10 1	380 11 0½	.....	Hay.
Moruudah	4	293 1 6	2,372	1,251 11 6½	2,898	945	.....	.....	1,105	....	2,581	.....	40	..	940 8 8	2,192 0 2½	1,744 8 7	447 11 7½	.....	Moruudah.
Jerilderie	4	297 5 8	1,423	1,212 0 4½	6,393	5,417	.....	67	....	....	6,173	.....	12	8	7,449 10 2	9,256 10 6½	8,098 12 10½	1,167 17 8	.....	Jerilderie.
Euskineville	7	823 3 4	143,821	2,859 19 1	.....	.....	.....	.....	....	....	.....	.....	..	..	0 4 10	2,880 3 11	2,576 11 5	233 8 6	.....	Euskineville.
St. Peters	7	822 13 0	156,611	3,184 10 11½	2	4	.....	.....	....	....	.....	.....	..	..	4 8 2	3,189 3 1½	2,973 17 2	215 6 11½	.....	St. Peters.
Marrickville	15	1,885 2 2	170,653	4,266 18 0½	4,847	5,240	295	25,084	8	1,988	.....	.....	2	44	5,075 10 0	8,042 17 0½	8,231 19 7	1,710 17 5½	.....	Marrickville.
Tempe	7	461 13 7	81,446	2,863 8 6	93	2,420	.....	138	605	3,484	.....	.....	13	25	730 8 11	3,604 17 5	2,747 8 0½	857 9 4½	.....	Tempe.
Arncliffe	3	1,049 18 1	100,500	3,772 6 2	457	7,430	.....	1,215	13,723	5,285	.....	.....	..	23	2,119 18 9	6,893 4 11	4,717 10 7	1,714 5 4	.....	Arncliffe.
Rockdale	9	905 0 6	152,365	6,759 16 10	105	9,007	.....	1,101	28	1,127	.....	.....	3	31	1,144 16 3	7,904 12 1	7,480 4 3	424 7 10	.....	Rockdale.
Kogarah	8	911 2 9	102,758	6,135 12 5	261	4,901	20	428	....	....	.....	.....	..	34	407 10 9	6,543 13 2	6,666 4 4	977 8 10	.....	Kogarah.
Carlton	5	683 14 5	37,103	1,087 9 5	.....	6	.....	6	....	.....	.....	.....	..	..	2 14 1	2,009 3 6	1,801 4 4	88 19 2	.....	Carlton.
Hurstville	14	1,616 14 0	68,324	3,894 1 8	16,418	8,960	4	2,658	.....	757	.....	.....	..	8	2,767 13 8	6,031 15 4	5,460 0 6	571 8 10	.....	Hurstville.
Penshurst	4	241 16 0	7,574	478 17 3	.....	3	.....	.....	....	....	.....	.....	..	..	.....	478 17 3	407 7 3	71 10 0	.....	Penshurst.
Oatleys	2	152 16 0	3,978	282 0 4	1,684	59	.....	2,693	....	....	.....	.....	..	..	.....	282 0 4	.....	233 0 4	.....	Oatleys.
Como	6	650 8 11	4,166	287 15 6	70	110	.....	1	....	....	.....	.....	..	..	23 16 11	281 14 4	407 11 10	.....	146 17 6	Como.
Sutherland	3	482 17 3	10,687	679 10 11	7,025	975	.....	24	87	....	.....	.....	1	4	214 5 11	893 16 1?	1,012 12 3	.....	118 15 6	Sutherland.
Loftus Junction	2	254 10 1	1,204	54 3 5	.....	84	.....	12	....	....	.....	.....	..	1	16 2 2	70 5 7	105 6 8	.....	35 1 1	Loftus Junction
Heathcote	2	253 18 4	2,481	211 15 7	3,118	505	.....	857	2,009	....	....	.....	..	..	127 10 2	349 5 9	581 0 10	.....	231 15 1	Heathcote.
Waterfall	3	369 18 4	970	85 0 9	37	62	.....	.....	2,194	....	.....	.....	2	..	17 11 6	102 12 3	217 17 4	.....	115 5 1	Waterfall.
Helensburg (Met. Col. Siding)	4	520 15 2	6,569	1,004 15 10	1,102	2,827	69,774	8	344	....	....	.....	9	6	450 16 0	1,461 10 10	1,506 0 6	.....	43 9 8	Helensburg (Met. Col. Sdg.)
Otford	3	259 9 0	2,650	206 2 1	2,721	673	.....	.....	....	....	.....	.....	4	19	127 18 9	433 0 10	360 18 10	72 2 0	.....	Otford.
Clifton	1	106 8 8	4,111	483 15 10	10	173	.....	.....	....	....	.....	.....	..	..	33 1 1	529 16 11	792 4 4	.....	265 7 5	Clifton.
South Clifton	6	420 10 7	4,870	434 14 6	57	1,558	40,054	31	....	....	.....	.....	..	..	1,477 13 6	1,912 8 0	946 15 2	1,965 12 10	.....	South Clifton
Austinmer	1	136 19 6	3,714	240 2 0	203	365	182	.....	85	....	....	.....	..	..	78 2 11	318 4 11	371 14 0	.....	53 9 1	Austinmer.
Thirroule	1	134 4 0	3,762	264 0 5	503	410	.....	18	14	....	.....	.....	..	..	163 2 11	517 3 4	455 7 6	61 16 10	.....	Thirroule.
Bulli	6	664 4 1	14,804	1,967 14 7	7,751	3,614	12,420	533	374	....	.....	.....	..	7	2,204 12 11	4,222 7 6	3,678 11 1	643 16 5	.....	Bulli.
Bellambi	4	431 3 8	6,089	570 15 11	553	773	18,702	137	....	....	.....	.....	..	3	238 6 0	909 1 11	1,540 14 6	.....	631 12 7	Bellambi.
Corrimal	2	277 11 2	5,671	503 16 6	925	1,132	40,725	152	....	....	.....	.....	..	26	920 17 11	1,424 16 5	1,064 3 2	360 13 3	.....	Corrimal.
Wollongong	13	1,670 5 4	24,225	5,258 18 0	5,084	8,026	5,096	12,868	2,718	1,843	.....	.....	..	56	3,305 18 5	8,564 16 5	8,304 8 3	125 8 2	.....	Wollongong.
Unanderra	3	301 18 0	4,889	480 7 3	2,313	1,050	.....	28,294	400	15	.....	.....	..	..	477 1 7	1,157 8 10	1,301 8 10	.....	144 0 0	Unanderra.
Dapto	4	230 17 2	4,475	625 18 4	1,199	940	7	108	....	61	.....	.....	..	..	446 2 9	1,072 1 3	980 6 4	92 14 11	.....	Dapto.
Albion Park	4	268 4 0	3,561	335 5 7	5,794	1,662	.....	294	....	.....	4	.....	..	..	795 0 11	1,600 6 0	1,584 7 1	15 10 5	.....	Albion Park.
Shellharbour	1	152 3 4	2,675	610 7 9	2,703	520	6	418	....	3	....	.....	..	..	468 3 1	1,068 10 10	1,010 4 0	58 6 10	.....	Shellharbour.
Coomo	6	699 2 0	13,453	6,088 10 0	10,477	4,901	.....	1,801	25,374	.....	.....	.....	..	16	7,701 3 8	15,820 13 8	12,484 14 9	1,344 13 11	.....	Bombo.
Kiama																				Kiama.
Camden	2	287 2 1	11,457	2,309 8 11	5,578	3,153	.....	392	....	60	14	140	444	1	1,060 7 6	4,209 16 5	3,506 14 11	493 1 6	.....	Camden.
Meadow Bank	1	154 6 10	10,108	567 12 2	.....	.....	.....	.....	....	.....	.....	.....	..	..	.....	567 12 2	.....	567 12 2	.....	Meadow Bank.
Ryde	5	612 5 6	19,493	1,485 13 10	801	5,043	7	830	1,979	1,210	....	....	5	55	404 2 10	2,250 16 8	2,580 0 5	.....	329 3 9	Ryde.
Eastwood	4	273 7 3	12,822	855 3 2	1,543	1,054	.....	104	12	....	....	.....	1	5	347 16 8	1,202 19 10	1,008 8 3	194 11 7	.....	Eastwood.
Carlingford	3	286 11 5	15,580	869 9 3	1,403	2,589	.....	22	19,708	....	....	.....	..	..	629 9 9	1,508 13 0	1,732 12 7	336 0 5	.....	Carlingford.
Beecroft	3	166 11 3	7,817	506 2 11	231	405	.....	.....	....	....	....	.....	..	..	14 18 7	531 1 0	226 15 0	854 0 6	.....	Beecroft.
Thornleigh	3	311 10 8	11,751	984 6 4	756	2,420	.....	10	2,730	425	.....	.....	..	41	565 6 1	1,410 12 5	1,300 8 5	110 4 0	.....	Thornleigh.
Hornsby	3	862 7 5	12,431	1,033 17 3	2,474	1,105	.....	13	....	....	.....	.....	..	..	309 13 2	1,343 10 5	1,380 18 4	.....	37 7 11	Hornsby.
Cowan																				Cowan.
Pymble	1	102 10 0	15,557	615 4 9	4,161	1,930	.....	39	....	.....	.....	.....	..	..	312 8 0	927 13 6	755 11 6	172 2 0	.....	Pymble.
Chatswood	1	132 10 0	12,300	354 10 10	432	1,188	.....	1,420	....	732	....	.....	2	29	1,349 7 11	1,704 4 9	1,610 15 4	93 9 5	.....	Chatswood.
St. Leonards	2	184 7 0	18,789	755 4 3	650	6,263	13	7,048	....	.....	.....	.....	1	33	4,181 14 4	4,936 18 7	3,729 6 6	1,207 12 1	.....	St. Leonards.
Hawkesbury River	7	420 17 8	5,501	1,111 3 5	404	2,516	.....	584	....	....	.....	.....	1	..	367 18 9	1,480 2 2	1,604 15 9	.....	136 13 7	Hawkesbury R.
Harris Park	3	302 12 6	27,498	2,103 10 0	.....	.....	.....	.....	....	.....	.....	.....	..	..	.....	2,103 10 0	2,006 3 10	103 6 2	.....	Harris Park.
Parramatta	22	2,846 14 7	222,644	19,232 9 0	11,563	21,523	86	5,187	2,226	829	24	84	5	614	7,172 2 4	26,304 17 4	27,426 9 7	.....	1,248 12 3	Parramatta.
Wentworthville	3	300 0 10	8,331	270 2 2	1,810	1,162	.....	124	....	6	41	12	7	11	190 15 4	456 17 6	322 3 1	134 14 5	.....	Wentworthville
Seven Hills	4	675 14 3	9,202	772 11 10	3,915	1,468	.....	.....	52	.....	.....	.....	4	..	307 11 8	1,030 3 6	1,319 2 2	.....	288 18 8	Seven Hills.
Blacktown	9	1,204 12 1	10,879	1,153 13 10	12,096	1,049	.....	27	....	761	1,140	830	2	14	7,264 6 0	8,358 0 7	6,799 2 1	1,558 18 6	.....	Blacktown.
Rooty Hill	5	469 3 9	10,523	1,467 16 2	15,394	2,731	.....	311	....	537	.....	.....	7	10	932 16 3	2,400 14 5	2,279 6 11	121 7 6	.....	Rooty Hill.

APPENDIX XX.—*continued.*

Stations.	No. of hands employed including Station-masters.	Total salaries and Wages Expenditure. 1892.	No. of Tickets issued. 1892.	Revenue from Tickets and Coaching Traffic. 1892.	GOODS Out. Tons.	GOODS In. Tons.	COAL. Out. Tons.	COAL. In. Tons.	Other Minerals. Out. Tons.	Other Minerals. In. Tons.	WOOL. Out. Bales.	WOOL. In. Bales.	HAY, STRAW, AND CHAFF. Out. Trucks	HAY, STRAW, AND CHAFF. In. Trucks	Revenue from Goods and Live Stock. 1892.	Total Earnings, exclusive of Special Earnings. 1892.	Total Earnings, exclusive of Special Earnings. 1891.	Increase. 1892.	Decrease. 1892.	Stations
		£ s. d.		£ s. d.											£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Mount Druitt	1	131 1 1	3,089	340 17 7	4,216	222	.....	.....	....	....	....	....	..	..	81 17 1	431 14 8	509 17 10	.....	78 3 2	Mount Druitt.
St. Mary's	6	714 18 6	11,154	1,755 7 4	24,330	6,002	.....	639	258	10	....	....	18	22	2,239 14 10	2,935 2 2	3,672 0 1	318 2 1	.....	St. Mary's.
Kingswood	4	438 11 0	1,335	259 13 1	21,284	402	.....	51	....	....	....	....	4	6	142 3 3	402 1 3	602 17 3	.....	200 16 0	Kingswood.
Penrith	29	4,364 12 0	25,244	5,048 14 0	6,197	5,839	.....	1,480	....	234	....	....	30	49	3,013 15 8	8,067 9 8	8,357 11 7	289 18 1	.....	Penrith.
Emu Plains	6	677 10 9	3,270	568 17 8	133	613	.....	403	50,957	....	....	....	4	2	699 11 9	1,268 9 5	1,406 1 11	.....	137 12 6	Emu Plains.
Glenbrook	9	1,014 0 10	5,350	887 7 0	154	2,519	.....	190	....	....	....	....	1	15	689 17 5	1,577 4 5	835 7 10	1,241 16 7	.....	Glenbrook.
Springwood	5	536 14 2	4,543	1,011 9 2	107	1,487	.....	104	....	130	....	....	1	..	682 19 3	1,694 8 5	1,028 0 5	66 19 0	.....	Springwood.
Linden	3	348 11 3	794	131 13 4	7	268	10	73	....	....	....	....	..	4	77 10 0	209 0 9	104 0 3	105 9 6	.....	Linden.
Lawson	5	494 14 0	6,283	861 17 7	54	1,872	.....	180	120	....	....	....	..	2	741 5 5	1,602 3 0	1,483 3 8	122 19 4	.....	Lawson
Wentworth Falls	4	419 7 5	4,813	952 10 4	65	2,143	.....	113	....	....	....	....	..	10	1,418 18 7	2,371 8 11	1,324 16 7	1,046 12 4	.....	Wentworth Fls.
Katoomba	10	1,166 18 1	16,129	2,070 2 2	977	5,927	10,618	1,103	5,563	....	....	....	..	45	4,747 11 10	7,737 14 0	6,659 0 7	1,078 7 5	.....	Katoomba.
Blackheath	6	556 11 1	6,695	1,126 17 10	513	2,153	6	512	....	....	....	....	..	42	1,153 17 3	2,280 15 8	2,447 10 5	.....	166 14 11	Blackheath.
Mount Victoria	10	1,000 3 9	8,703	2,040 15 11	306	1,138	.....	469	3	8	407	6	1	25	957 8 2	3,508 4 1	4,002 18 3	.....	494 14 7	Mount Victoria.
Hartley Vale	2	231 0 8	1,560	471 15 1	1,705	1,406	.....	50	15,287	....	....	....	..	2	688 0 7	1,150 15 8	1,183 4 2	66 11 6	.....	Hartley Vale.
Bell	4	445 7 8	838	213 17 2	154	230	.....	23	96	....	....	....	..	..	160 9 1	380 6 3	458 16 11	.....	79 10 8	Bell.
Clarence Siding	4	496 3 6	677	101 1 10	890	177	.....	82	1,353	....	....	....	..	5	89 10 6	190 13 4	174 19 5	15 12 11	.....	Clarence Siding
Zig Zag	4	519 4 10	121	20 1 4	.....	17	.....	.....	.....	....	....	....	..	..	.....	20 1 4	60 4 1	.....	37 2 9	Zig Zag.
Eskbank	25	2,007 13 0	5,107	2,007 3 11	6,613	8,593	130,235	1,307	205	1,222	....	....	12	123	14,640 19 8	16,706 3 7	22,630 15 5	.....	5,931 11 10	Eskbank.
Lithgow	2	303 2 9	3,881	1,514 10 9	.....	.....	.....	.....	....	....	....	....	..	..	.....	1,514 10 9	1,641 4 4	.....	126 13 7	Lithgow.
Bowenfels	6	591 18 0	1,748	620 12 10	675	650	1,782	98	....	90	129	143	1	5	673 17 8	1,620 10 0	2,430 13 6	.....	809 7 6	Bowenfels.
Wallerawang	16	1,602 16 7	9,008	2,940 16 1	12,892	1,232	8,203	332	....	....	1,957	....	17	1	1,410 19 0	4,351 15 1	4,765 15 5	.....	414 0 4	Wallerawang.
Rydal	8	887 13 9	3,063	779 15 11	1,703	4,904	.....	3,520	1,240	....	80	....	12	29	4,374 17 4	5,154 13 3	6,327 5 8	.....	1,172 12 5	Rydal.
Tarana	4	471 15 6	3,612	1,254 7 2	970	1,791	.....	127	....	6	949	....	31	..	1,152 8 10	2,406 16 0	2,255 17 5	150 18 7	.....	Tarana.
Locksley	2	265 0 0	1,077	217 11 4	327	65	.....	.....	....	....	84	....	47	..	30 6 1	247 16 5	270 18 5	.....	23 2 0	Locksley.
Brewongle	6	557 8 3	1,840	418 9 8	1,310	891	.....	114	....	....	468	....	500	..	303 19 5	812 9 1	1,019 9 5	.....	207 0 4	Brewongle.
Raglan	5	421 14 10	989	102 6 5	2,540	230	.....	111	....	....	241	....	606	..	187 7 8	349 14 1	791 15 8	.....	442 1 7	Raglan.
Kelso	5	618 2 1	1,060	792 10 4	4,269	1,058	.....	281	....	....	1,327	....	901	..	3,892 15 3	4,692 11 7	4,352 4 1	272 7 6	.....	Kelso
Bathurst	38	4,407 2 9	28,020	14,954 1 10	11,015	12,315	87	13,271	340	270	3,223	779	306	9	25,107 4 5	40,121 0 3	43,239 8 11½	.....	3,178 2 8½	Bathurst.
Perth	4	313 15 2	3,406	462 6 8	4,278	875	.....	82	875	....	1,785	....	693	..	1,091 2 5	1,553 16 1	2,015 8 5	.....	491 12 4	Perth.
George's Plains	5	440 19 3	2,374	423 2 0	2,217	204	.....	16	44	....	63	....	376	..	98 10 5	522 2 0	539 2 3	.....	17 0 3	George's Plains.
Wimbledon	3	318 17 11	1,502	208 18 6	1,007	118	.....	.....	.....	....	236	....	53	..	91 0 0	349 18 0	428 15 4	.....	78 17 10	Wimbledon.
Newbridge	7	748 15 1	4,709	1,340 19 10	3,794	1,133	20	30	9	....	1,521	....	386	8	1,438 19 1	2,786 18 11	3,049 19 2	.....	204 0 3	Newbridge.
Blayney	18	1,234 18 2	9,463	3,062 5 4	4,430	2,443	.....	866	6	160	636	....	430	2	2,340 17 0	6,903 2 4	8,173 19 11	.....	1,270 17 7	Blayney.
Millthorpe	9	631 10 5	4,746	1,206 1 10	7,570	1,981	.....	464	2	....	800	....	601	4	2,115 4 2	3,321 6 0	4,215 5 2	.....	893 19 2	Millthorpe.
Spring Hill	9	627 10 6	3,826	700 2 9	4,290	870	.....	702	9	....	206	....	385	8	923 9 11	1,933 12 8	1,283 17 6	349 15 2	.....	Spring Hill.
Orange	29	2,893 8 4	26,041	13,317 16 3½	14,510	15,453	8	3,601	243	56	1,070	....	754	43	20,322 13 5	34,940 3 8½	34,275 0 0½	364 18 11	.....	Orange.
Mullion Creek	5	328 11 2	1,544	285 5 1	1,166	262	.....	.....	0	....	825	....	2	2	138 14 6	481 19 7	604 6 7	.....	122 7 0	Mullion Creek.
Kerr's Creek	3	274 6 3	890	170 17 10	967	134	.....	.....	170	....	166	....	..	..	62 7 0	233 4 10	326 17 7	.....	93 12 9	Kerr's Creek.
Warne	2	231 16 4	1,468	473 4 4	338	315	.....	.....	....	....	914	....	..	..	240 13 4	713 17 8	661 13 8	52 4 0	.....	Warne.
Store Creek	3	315 1 1	490	124 1 10	20	95	.....	.....	....	....	63	....	..	..	29 9 7	153 11 5	144 4 4	29 7 1	.....	Store Creek.
Stuart Town	5	423 0 0	2,552	876 14 10	113	752	.....	27	24	....	284	....	1	..	1,211 18 10	2,110 13 8	1,015 11 7	195 2 1	.....	Stuart Town.
Mumbil	3	310 11 8	1,029	393 2 0	410	220	.....	.....	....	....	1,281	....	..	..	374 15 6	676 17 5	580 16 1	96 1 4	.....	Mumbil.
Dripstone	2	303 0 0	1,163	262 14 3	771	101	.....	.....	....	....	203	....	36	..	130 9 10	392 15 1	391 9 1	1 6 0	.....	Dripstone.
Wellington	16	1,025 17 6	6,402	4,421 18 7	4,666	3,730	.....	101	187	....	2,103	....	170	..	7,606 14 11	12,028 13 6	10,944 10 4	1,083 14 2	.....	Wellington.
Mary Vale	6	372 0 2	741	152 13 4	1,912	185	33	.....	.....	....	337	....	42	..	183 16 8	388 10 0	304 0 5	32 0 7	.....	Mary Vale.
Gourie	2	253 16 2	1,314	633 16 8	992	241	.....	217	795	....	315	....	3	..	352 5 8	866 2 4	546 7 1	349 15 3	.....	Gourie.
Murrumbidgerie	5	315 19 9	2,010	560 13 8	2,776	439	.....	21	....	....	2,419	....	6	..	413 4 3	973 17 11	1,035 17 0	.....	61 10 1	Murrumbidgerie
Dubbo	31	3,121 12 6	14,934	14,445 14 4½	17,185	13,903	.....	992	....	230	22,477	278	55	63	39,870 5 4	54,316 19 8½	47,427 18 7	6,889 1 1½	.....	Dubbo.
Narromine	6	426 2 3	3,482	1,870 4 2	3,120	2,167	.....	13	....	....	9,591	....	45	4	4,206 3 0	6,076 7 11	6,091 10 4	14 17 7	.....	Narromine.
Trangie	4	376 14 0	3,036	2,183 7 5	5,673	1,043	.....	.....	.....	....	12,054	....	..	41	2,906 9 2	6,170 16 7	5,799 1 11	392 14 8	.....	Trangie.
Nevertire	6	673 2 10	5,164	6,398 17 7½	8,146	3,991	.....	27	....	....	20,737	....	2	33	11,341 6 8	17,740 4 3½	16,710 2 8	1,030 1 7½	.....	Nevertire.
Mullengudgery	1	150 0 0	331	322 0 5	749	180	.....	.....	.....	....	4,101	....	..	..	113 14 0	435 14 5	509 2 7	.....	73 8 2	Mullengudgery.
Nyngan	16	1,656 14 0	7,767	10,115 4 9	6,902	20,002	.....	1,909	....	....	20,263	1,369	..	103	33,352 6 4	43,467 10 1	40,187 0 1	3,280 10 0	.....	Nyngan.
Girilambone	2	311 9 10	1,126	890 7 11	1,951	841	.....	.....	445	....	7,339	....	..	3	1,000 2 5	2,790 10 4	2,878 18 5	.....	88 8 1	Girilambone.
Coolabah	2	293 2 0	1,478	1,222 19 8	1,947	1,035	1	0	4,097	....	5,415	....	..	18	3,293 18 6	4,522 18 2	6,771 13 11	.....	2,248 16 9	Coolabah.

APPENDIX XX—*continued.*

Stations.	No. of hands employed, including Station-masters.	Total Salaries and Wages Expenditure. 1892.	No. of Tickets issued. 1892.	Revenue from Tickets and Coaching Traffic. 1892.	GOODS. Out. Tons.	GOODS. In. Tons.	COAL. Out. Tons.	COAL. In. Tons.	Other Minerals. Out. Tons.	Other Minerals. In. Tons.	WOOL. Out. Bales.	WOOL. In. Bales.	HAY, STRAW, AND CHAFF. Out. Trucks	HAY, STRAW, AND CHAFF. In. Trucks	Revenue collected at each Station from Goods and Live Stock Traffic. 1892.	Total Earnings, exclusive of postal Earnings. 1892.	Total Earnings, exclusive of postal Earnings. 1891.	Increase. 1892.	Decrease. 1892.	Stations.
		£ s. d.		£ s. d.											£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Byrock	5	445 6 9	3,068	4,728 7 0	4,061	2,459	.....	19	....	....	10,211	....	..	40	6,508 10 6	11,037 3 6	10,941 13 7	105 9 11	.....	Byrock.
Mooculta	..	.....	36	11 5 2	.....	.....	.....	.....	....	....	....	....	..	..	.....	11 5 2	.....	11 5 2	.....	Mooculta.
Bourke	23	2,977 5 0	6,825	15,821 13 4½	14,332	26,369	.....	793	....	4,508	87,000	197	..	598	80,443 7 5	96,265 0 9½	81,737 7 9	14,527 13 0½	.....	Bourke.
Riverstone	4	417 6 6	8,355	1,251 0 10	90,644	3,390	.....	880	....	40	126	922	11	37	21,386 18 2	22,017 19 0	8,766 8 9	13,851 15 3	.....	Riverstone.
Mulgrave	2	212 19 11	2,406	423 10 7	15,716	463	.....	46	....	453	401	.....	197	5	294 0 4	973 10 11	814 10 10	.....	141 2 11	Mulgrave.
Windsor	4	523 3 6	13,436	2,727 10 7	7,990	4,091	.....	900	16	54	1,318	1,230	512	18	2,111 15 3	4,339 5 10	4,276 10 6	.....	37 4 8	Windsor.
Clarendon	1	201 0 2	1,781	400 0 1	243	128	.....	.....	....	....	....	....	33	3	106 13 6	500 13 6	452 4 7	54 8 11	.....	Clarendon.
Richmond	7	699 10 8	12,160	3,284 4 0	7,618	5,068	.....	213	....	....	....	....	86	5	2,526 11 10	5,879 16 4	4,492 16 2	1,387 0 2	.....	Richmond.
Carcoar	4	229 0 11	3,401	1,037 11 7	732	770	.....	180	317	....	190	....	5	1	1,373 17 5	2,441 9 0	2,629 1 9	.....	217 12 8	Carcoar.
Mandurama	2	183 4 0	1,068	330 6 3	456	349	.....	6	2	....	1,300	15	20	..	694 11 4	784 17 7	1,242 16 4	.....	207 18 9	Mandurama.
Lyndhurst	1	101 10 0	2,260	458 5 1	2,237	585	.....	7	....	....	1,060	....	125	..	786 15 5	1,245 0 6	1,307 17 0	.....	62 16 6	Lyndhurst.
Woodstock	3	280 12 8	2,393	872 12 5	1,580	1,002	.....	7	1,662	....	1,447	....	35	..	1,376 17 1	2,248 0 6	2,592 3 0	.....	343 18 6	Woodstock.
Cowra	15	937 2 11	6,263	3,126 15 8	6,511	8,912	.....	165	....	....	23,347	73	6	8	19,330 3 11	24,456 19 7	22,795 18 0½	1,661 1 0½	.....	Cowra.
Boreonre	4	500 8 3	1,065	433 1 10	5,633	3,307	.....	11	....	....	10,172	....	156	..	2,422 18 7	2,856 0 5	2,377 14 5	478 6 0	.....	Boreonre.
Molong	8	650 17 8	7,263	5,164 4 0½	3,570	14,998	.....	309	6	....	10,750	....	9	4	22,769 7 11	27,923 11 11½	19,902 10 2	8,021 1 9½	.....	Molong.
Piper's Flat	2	220 3 4	417	90 1 8	234	2,039	253	9,025	....	....	19	....	..	4	1,510 19 10	1,910 1 6	1,857 11 8	.....	227 10 2	Piper's Flat.
Brogan's Creek	1	278 7 2	624	280 2 10	3,204	482	97	1,819	62	....	706	....	..	2	651 8 3	941 11 1	1,696 15 2	.....	755 4 1	Brogan's Ck.
Capertee	5																			Capertee.
Kylstone	7	520 0 10	3,527	1,706 17 1	858	1,689	143	1,573	....	....	1,951	....	1	4	1,773 2 3	3,484 19 4	4,188 5 10	.....	703 6 6	Kylstone.
Mudgee	12	1,078 8 4	7,615	7,424 19 8	9,080	8,267	71	2,759	40	....	15,280	8	230	..	22,400 18 1	29,825 17 0	25,278 13 2	4,547 5 7	.....	Mudgee.
Woy Woy	2	154 8 7	609	101 11 2	20	104	.....	.....	....	....	....	....	..	..	12 13 7	114 4 9	.....	114 4 9	.....	Woy Woy.
Gosford	10	1,014 12 3	8,285	2,347 12 3	2,243	1,707	.....	123	....	....	....	....	..	1	630 10 7	3,273 8 10	3,124 12 10	153 16 0	.....	Gosford.
Ourimbah	10	573 2 7	3,229	429 16 4	5,393	250	.....	10	....	....	....	....	4	26	696 4 6	896 0 10	1,021 7 6	.....	25 0 8	Ourimbah.
Wyong	6	436 1 2	6,536	1,062 17 11	10,612	1,960	.....	31	....	288	....	....	1	8	1,375 0 4	2,437 18 3	2,402 9 7	35 8 8	.....	Wyong.
Morrisett	4	345 4 0	3,590	597 0 1	5,537	520	449	1	....	....	....	....	..	..	204 6 2	801 5 3	820 10 5	.....	26 14 2	Morrisett.
Awaba	2	321 17 5	2,045	343 10 1	5,060	223	.....	.....	....	....	....	....	..	..	64 8 10	397 18 11	558 6 0	.....	160 7 7	Awaba.
Fassifern	2	264 0 11	2,339	330 8 2	663	289	11	218	96	....	....	....	..	..	103 0 1	433 14 3	52 15 5	385 18 10	.....	Fassifern.
Teralba	4	441 10 2	11,253	977 2 11	504	1,243	1,270	30	5,290	....	....	....	..	3	715 8 3	1,692 11 2	2,144 0 8½	.....	451 9 0½	Teralba.
Cockle Creek	7	732 4 4	10,784	900 2 0	1,470	1,540	1,670	35	....	....	....	....	..	1	262 0 4	1,128 8 1	2,242 18 0	.....	1,114 14 11	Cockle Creek.
Adamstown	3	420 0 9	14,011	905 14 0	1,787	3,107	842	63	....	235	....	....	..	20	254 11 0	1,790 5 0	1,419 12 6½	.....	229 6 5½	Adamstown.
Broadmeadow	5	614 1 8	4,036	422 2 0	20	302	.....	12	8	....	....	....	..	9	70 1 3	408 4 0	782 6 6½	.....	283 2 6½	Broadmeadow.
Newcastle	118	14,801 8 4	107,927	28,006 11 0½	47,226	34,968	54	2,105,752	2,717	1,500	149	70,956	247	783	141,630 6 8	169,736 18 2½	159,951 9 2½	16,684 15 0	.....	Newcastle.
Honeysuckle Point	16	2,313 17 6	40,826	3,513 19 7	4,729	9,640	23	1,182	250	161	....	....	3	163	3,010 14 1	6,523 13 8	7,250 11 1	.....	726 17 5	Honeysuckle P.
Bulloek Island	17	5,759 8 4	.....	24 0 4	2,044	1,110	2,787	1,127	....	316	....	37	..	6	189 5 3	213 4 0	228 8 8	.....	15 4 8	Bulloek Island.
Hamilton	21	2,904 8 4	61,883	3,962 14 10	775	8,769	43	5,420	....	1,011	....	....	..	49	1,046 18 4	5,500 18 2	5,050 5 11	.....	360 12 9	Hamilton.
Hamilton Weighbridge	2	320 0 0	.....	.....	.....	.....	2,182,007	.....	....	....	....	....	..	..	.....	.....	.....	.....	.....	Hamilton W. B.
Waratah	12	1,000 0 0	61,100	3,336 8 1½	2,967	4,426	.....	7,038	....	1,224	....	....	1	52	970 4 6	4,312 12 7½	5,111 2 0	.....	798 9 4½	Waratah.
Wallsend	10	980 16 4	17,584	1,777 3 10	1,027	7,658	282	58	....	....	....	....	2	98	1,904 5 6	3,031 14 4	3,536 14 10	.....	505 0 6	Wallsend.
Hexham	9	927 0 6	15,773	1,902 2 10	202	2,756	77	.....	6	106	....	....	16	30	357 2 0	1,710 4 10	2,281 0 10	.....	561 16 0	Hexham.
Tarro	2	200 0 0	6,424	550 3 10	199	412	.....	10	....	....	....	....	17	2	61 7 1	601 10 11	740 19 7	.....	139 8 8	Tarro.
Thornton	2	225 8 3	2,231	140 1 1	352	46	.....	.....	....	....	....	....	6	2	11 2 10	151 3 11	174 8 6	.....	23 4 7	Thornton.
East Maitland	12	1,324 0 1	34,087	4,499 2 5½	5,069	2,157	3,623	105	19	437	1	0	192	82	2,920 15 4	7,418 17 9½	6,920 4 6	492 13 3½	.....	East Maitland.
Morpeth	17	1,668 0 0	18,297	2,160 5 3	11,453	12,604	.....	3,848	....	2,046	6	65,132	47	21	31,977 15 5	38,078 0 5	31,346 14 2	2,782 6 0	.....	Morpeth.
High-street	5	477 17 3	21,012	3,280 8 5	.....	.....	.....	.....	....	....	....	....	.....	.....	.....	3,280 8 5	4,622 7 10½	.....	1,235 19 5½	High-street.
West Maitland	29	2,986 4 11	34,237	10,270 12 10	16,064	14,593	1,043	116	314	....	8,469	3,082	677	220	11,339 1 4	21,609 14 2	21,253 3 4	356 10 10	.....	West Maitland.
Farley	3	370 4 6	1,707	209 13 2	499	325	399	15	....	....	.....	....	1	..	646 13 5	750 6 7	438 19 2	317 7 5	.....	Farley.
Lochinvar	4	257 4 10	2,957	904 17 1	1,175	931	.....	6	57	....	2	....	114	3	316 0 0	1,271 3 1	1,287 3 8	13 19 10	.....	Lochinvar.
Allandale	8	209 2 9	2,703	446 6 7	2,295	391	.....	.....	....	....	....	....	4	1	218 14 11	665 1 6	702 2 2	.....	37 0 8	Allandale.
Greta	3	439 6 1	6,828	1,550 13 1	878	1,830	941	40	....	....	2	....	6	0	877 7 0	2,428 0 7	2,577 19 7	.....	149 19 0	Greta.
Branxton	4	432 9 9	5,153	1,220 14 0	2,768	1,464	.....	74	....	....	255	....	105	..	253 1 2	1,727 15 8	2,162 10 0½	.....	34 14 10½	Branxton.
Whittingham	2	183 4 0	983	344 12 0	436	1,174	.....	27	....	....	307	....	34	..	301 19 1	646 12 7	1,086 13 0	.....	439 0 5	Whittingham.
Singleton	23	2,363 8 10	17,563	7,044 4 7½	6,945	8,015	4,650	1,270	....	126	324	.....	186	13	5,385 10 4	13,229 14 11½	13,455 16 2	.....	226 0 2½	Singleton.
Nundah	2	297 5 9	2,684	999 5 5	.....	.....	.....	.....	....	....	....	....	..	..	.....	249 5 5	.....	249 5 5	.....	Nundah.
Glennie's Creek	1	150 0 0	938	220 0 8	527	402	3,037	.....	....	....	60	..	8	..	214 13 4	434 19 7	404 6 1	30 13 6	.....	Glennie's Creek.
Ravensworth	5	300 15 0	1,821	317 8 9	331	259	.....	.....	....	....	590	..	..	..	224 11 5	642 0 2	380 18 1	161 2 1	.....	Ravensworth.

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APPENDIX XX—*continued.*

Stations.	No. of hands employed including Station-masters.	Total Salaries and Wages Expenditure. 1892.	No. of Tickets issued. 1892.	Revenue from Tickets and Coaching Traffic. 1892.	GOODS		COAL.		Other Minerals.		WOOL.		HAY, STRAW AND CHAFF.		Revenue from Goods and Live Stock. 1892.	Total Earnings, exclusive of Special Earnings.		Increase. 1892.	Decrease. 1892.	Stations
					Out. Tons.	In. Tons.	Out. Tons.	In. Tons.	Out. Tons.	In. Tons.	Out. Bales.	In Bales.	Out. Trucks	In. Trucks		1892.	1891.			
		£ s. d.		£ s. d.											£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Muswellbrook	23	1,481 15 4	7,712	4,887 4 3	2,806	4,388	20	278	....	....	6,842	....	6	12	6,307 3 11	11,234 8 2	11,287 14 1	.....	3 5 11	Muswellbrook.
Aberdeen	5	415 19 1	3,110	910 2 0	3,464	3,775	.....	2,216	....	....	492	....	1	..	9,887 5 7	10,753 7 7	2,030 0 6	8,717 7 1	.....	Aberdeen.
Scone	10	740 0 11	6,080	3,087 5 0	1,089	3,749	.....	223	....	....	4,643	....	10	..	4,302 10 2	7,380 18 2	7,158 16 0	221 1 8	.....	Scone.
Wingen	5	383 14 0	1,171	394 18 2	843	245	.....	7	....	....	395	....	7	..	245 3 0	640 1 2	946 14 5	.....	306 13 3	Wingen.
Blandford	2	259 2 0	703	350 19 2	358	280	.....	20	....	4	1,563	....	5	2	307 17 11	658 17 1	934 9 11	.....	275 12 10	Blandford.
Murrurundi	10	1,433 13 3	2,974	2,283 9 11	530	1,703	.....	144	....	....	136	....	3	4	2,466 3 1	4,750 13 0	4,781 10 2	.....	31 17 2	Murrurundi.
Doughboy Hollow	5	345 10 3	1,099	205 11 7	160	212	.....	70	....	....	417	....	..	..	146 6 6	411 18 1	329 13 0	85 4 7	.....	Doughboy H.
Willowtree	5	441 12 4	1,513	420 12 0	861	680	.....	5	....	....	3,763	....	..	..	1,500 7 11	2,020 0 8	2,194 14 5	.....	174 10 9	Willow-tree.
Quirindi	13	963 16 1	5,700	3,841 3 4	2,560	3,921	.....	141	....	....	8,220	....	7	11	7,536 5 6	10,370 8 10	10,694 17 0	372 13 10	.....	Quirindi.
Werris Creek	13	1,288 14 10	3,891	2,387 9 3	430	647	.....	18	....	....	795	....	3	2	742 3 5	3,129 12 8	3,423 7 10	.....	293 15 2	Werris Creek.
Breeza	6	540 12 8	818	479 3 11	698	230	.....	.....	....	....	1,216	....	..	..	1,335 7 2	1,814 10 1	1,743 7 7	71 3 6	.....	Breeza.
Curlewis	2	188 10 0	1,013	430 10 11	521	587	670	.....	....	....	882	....	1	1	616 18 0	1,049 3 11	1,211 8 5	.....	162 4 6	Curlewis.
Gunnedah	9	766 8 4	4,523	3,933 6 3	3,708	3,019	29	42	48	....	9,208	....	2	11	7,632 15 0	11,580 2 2	11,383 8 8	267 13 6	.....	Gunnedah.
Boggabri	6	393 16 6	2,043	1,281 7 0	3,182	1,124	.....	.....	....	....	3,032	....	..	4	2,045 6 11	3,295 13 11	2,740 13 10½	540 1 0½	.....	Boggabri.
Baan Baa	1	150 0 0	1,002	382 13 0	913	290	.....	11	....	....	418	....	3	1	224 2 9	606 10 3	431 13 0	175 9 3	.....	Baan Baa.
Narrabri	10	1,034 13 7	5,613	2,441 13 5	12,331	13,013	.....	216	....	....	63,270	115	..	180	43,324 10 11	51,766 13 4	45,433 12 11	6,332 0 5	.....	Narrabri.
Currabubula	6	324 12 4	1,339	462 18 2	1,111	412	.....	6	....	....	2,101	....	30	..	679 0 0	881 18 2	993 9 2	.....	116 11 0	Currabubula.
West Tamworth	9	880 5 5	957	420 2 5	3,973	2,780	.....	101	....	....	14,762	....	23	..	7,596 12 8	8,009 14 8	8,849 8 11	.....	842 14 3	West Tamworth.
Tamworth	18	1,479 4 8	8,298	3,847 13 2	7,279	8,407	.....	988	8	111	702	42	211	2	17,717 3 11	28,895 2 1	25,750 0 4	606 1 9	.....	Tamworth.
Moonbi	6	424 6 0	2,400	547 2 0	1,117	420	.....	.....	57	....	988	....	60	..	577 6 2	1,124 8 2	710 11 2	407 17 0	.....	Moonbi.
Woolbrook	2	247 7 3	597	158 5 4	116	420	.....	.....	....	....	614	100	..	..	187 0 8	325 12 0	310 9 2	15 2 10	.....	Woolbrook.
Wallcha Road	8	646 3 1	2,439	1,962 2 8	1,340	2,995	.....	60	....	....	4,003	....	..	4	5,184 9 0	7,136 11 8	7,131 15 11	4 15 9	.....	Wallcha Road.
Kentucky	1	182 10 0	731	238 12 0	350	200	.....	.....	....	....	1,511	5	..	..	270 4 6	553 17 0	581 5 11	.....	27 8 11	Kentucky.
Uralla	11	819 1 2	3,140	1,715 4 9	1,703	2,375	.....	38	....	....	7,583	16	7	..	5,514 10 10	7,260 1 7	8,263 3 2	.....	1,003 1 7	Uralla.
Armidale	23	2,180 11 1	8,393	10,124 2 4	3,084	12,140	5	1,458	1,236	....	3,403	....	81	63	29,520 4 3	38,663 7 0	37,764 4 0	899 3 0	.....	Armidale.
Dumaresq	4	244 2 0	916	173 2 5	770	124	.....	.....	.....	....	1,085	....	4	..	148 6 2	316 8 7	357 13 3	.....	41 4 8	Dumaresq.
Black Mountain	3	199 8 0	413	203 4 5	1,463	237	.....	.....	64	....	533	....	..	..	210 10 3	419 2 8	429 11 11	.....	10 8 3	Black Mountain.
Guyra	6	434 14 6	2,418	1,247 6 0	2,190	720	.....	15	3	....	1,013	....	64	..	1,174 5 8	2,421 11 8	4,278 13 5	.....	1,857 1 9	Guyra.
Ben Lomond	4	222 12 0	870	313 14 0	652	310	.....	.....	.....	....	622	1	13	..	373 0 7	690 15 1	690 13 3	20 1 10	.....	Ben Lomond.
Glencoe	5	300 8 0	708	302 8 1	582	144	.....	.....	.....	....	418	....	7	..	245 17 4	598 5 5	591 15 1	6 10 4	.....	Glencoe.
Glen Innes	16	1,200 7 4	5,738	5,907 17 7	4,527	8,771	.....	175	702	2	11,402	4	29	16	10,173 16 7	25,031 14 2	24,227 6 10	854 7 4	.....	Glen Innes.
Dundee	4	231 2 0	672	207 16 2	2,218	237	.....	.....	.....	....	1,150	396	..	..	218 15 11	421 12 1	448 3 0	.....	23 11 8	Dundee.
Deepwater	3	319 0 4	2,640	1,786 18 1	720	2,116	.....	20	1,591	9	933	1	..	23	4 885 9 0	6,672 7 10	7,577 11 4	.....	905 3 6	Deepwater.
Bolivia	1	213 0 0	431	169 9 1	583	73	.....	.....	.....	....	21	....	..	..	31 17 2	201 6 3	238 16 9	.....	37 10 6	Bolivia.
Tenterfield	14	983 15 3	4,350	3,077 0 10	2,029	2,452	.....	96	82	11	237	....	1	17	7,005 1 2	10,682 2 0	10,887 1 5	.....	204 10 5	Tenterfield.
Jennings	1	6 13 4	3,397	2,290 2 5	3,185	1,086	.....	.....	283	....	442	....	..	..	2,024 5 4	4,413 7 9	6,174 15 6	.....	1,761 7 9	Jennings.
Victoria	..	.....	25,780	33,109 0 11	10,720	7,755	.....	6,121	....	....	....	....	..	..	5,005 17 9	33,114 18 8	44,581 0 6½	.....	6,490 1 10½	Victoria.
Queensland	..	.....	3,048	10,684 17 1	.....	.....	.....	.....	....	....	....	....	..	..	.....	10,684 17 1	10,127 0 0	557 17 1	.....	Queensland.
South Australia	..	.....	1,040	2,487 17 2½	.....	.....	.....	.....	....	....	....	....	..	..	.....	2,487 17 2½	2,387 0 4	100 16 10½	.....	South Australia.
Cook and Sons	..	.....	1,603	1,710 4 2½	.....	.....	.....	.....	....	....	....	....	..	..	.....	1,710 4 2½	1,862 0 6	.....	251 16 3½	Cook & Sons.
Orient S.S. Co.	..	.....	135	377 6 6	.....	.....	.....	.....	....	....	....	....	..	..	.....	377 6 6	250 2 7	127 3 11	.....	Orient S.S. Co.
P. and O. S.S. Co.	..	.....	177	294 0 1	.....	.....	.....	.....	....	....	....	....	..	..	.....	294 0 1	346 19 11	.....	52 19 10	P. & O. S.S. Co.
Total	3,145	333,376 10 0	8,142,003	1,121,294 1 0½	1,351,633	1,351,633	2,562,123	2,562,134	237,721	237,721	663,803	637,893	15,115	15,115	1,934,425 2 0	3,055,079 4 0½	2,626,162 14 3½	305,747 16 3½	235,521 0 0	

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APPENDIX XXI.

RAILWAYS.

Permanent-way Materials, Rails for Renewals and Duplications, imported for the New South Wales Railways during year ending 30th June, 1892.

Indent for 12,000 tons Flat-bottomed Rails (80 lb. per yard) and Fastenings. Dated 31st January, 1891.

Date of Arrival.	Name of Ship.	Description of Material.	Supplied by	Weight. T.	c.	q.	lb.	Rate. £	s.	d.	Invoice Cost. £	s.	d.	Freight. £	s.	d.	English Charges £	s.	d.	Colonial Charges £	s.	d.	Total Cost. £	s.	d.	Per ton or Article. £	s.	d.
1891.																												
16 Aug.	Rodney	410 rails	Chas. Cammell & Co., Ld.	146	8	2	8	5	2	6	750	8	11	56	14	10	6	5	0	10	6	4	833	15	1	5	13	10½
30 July	Aleyone	600 ,,	,, ,,	234	5	2	24	5	2	6	1088	4	4	83	0	9	9	1	0	29	14	11	1220	1	6	5	13	10½
13 Aug.	Aristides	230 ,,	,, ,,	100	0	0	0	5	2	6	512	10	0	38	15	0	4	6	4	13	17	6	569	8	10	5	13	10½
14	General Gordon	230 ,,	,, ,,	100	0	0	0	5	2	6	512	10	0	38	15	0	4	6	4	13	17	9	569	9	1	5	13	10½
9 July	Damascus	13212 fish-plates	Barrow Hæmatite Steel Co., Ld.	61	13	2	14	7	3	0	444	7	0	35	0	8	3	12	4	9	9	10	492	18	10	7	19	2½
12 ,,	Port Caroline	441 rails	Chas. Cammell & Co., Ld.	157	10	0	0	6	2	6	807	3	9	64	1	3	8	13	6	20	17	6	900	16	6	5	14	4½
24 Aug.	Dromedel	464 ,,	,, ,,	185	14	0	12	4	17	9	899	17	8	103	11	5	7	1	4	22	13	5	943	3	10	5	13	10
7 ,,	Murrumbidgee	846 ,,	,, ,,	302	2	3	5	5	2	6	1548	9	4	172	18	7	16	10	3	40	0	7	1727	13	9	5	14	4½
12 Sept.	Bardowie	3120 ,,	,, ,,	1110	9	2	8	4	17	9	5427	9	8	694	1	0	46	8	4	151	18	8	6319	17	4	5	13	10
9 Nov.	Sophocles	566 ,,	,, ,,	202	2	3	12	5	2	0	1035	19	3	73	5	7	8	11	5	28	1	2	1150	18	10	5	13	10½
14 July	Baltarat	60244 wood screws	Bayliss, Jones, & Bayliss	24	17	0	0	14	0	0	375	18	0	19	3	5	4	6	11	4	5	5	409	13	9	14	18	5½
25 ,,	Oceana	39712 ,,	,, ,,	40	1	0	0	14	0	0	560	14	0	24	2	5	6	6	4	6	7	6	597	10	3	14	18	4½
5 Oct.	Gleniti	2892 rails	Chas. Cammell & Co., Ld.	1032	13	1	9	4	17	9	5047	3	7	648	9	4	49	4	9	141	6	2	5877	2	10	5	13	10
16 ,,	Port Jackson	231 ,,	,, ,,	100	7	0	2	5	2	0	514	6	0	38	17	8	4	0	7	15	19	0	571	9	2	5	13	10½
17 ,,	Carnbalg	656 ,,	,, ,,	199	10	3	0	6	2	6	1047	10	0	76	18	8	8	3	6	37	11	3	1130	8	4	5	13	10½
20 Aug.	Australasian	18984 fish-plates	Barrow Hæmatite Steel Co., Ld.	88	8	2	0	7	3	0	604	9	0	50	12	6	6	17	6	12	13	11	703	12	11	7	19	1½
13 ,,	Parramatta	15048 ,,	,, ,,	70	10	3	0	7	3	6	506	2	2	40	7	4	4	0	6	9	1	6	559	11	6	7	18	8½
29 ,,	Australasian	80640 wood screws	Bayliss, Jones, & Bayliss	36	0	0	0	14	0	0	504	0	0	21	12	6	5	14	7	7	9	7	538	17	8	14	19	4½
17 ,,	Austral	110 rails	Chas. Cammell & Co., Ld.	39	5	2	4	5	2	6	201	5	10	15	19	8	2	5	6	4	14	10	224	5	10	5	14	2½
23 ,,	Britannia	81200 wood screws	Bayliss, Jones, & Bayliss	30	0	0	0	14	0	0	420	0	0	18	1	0	4	16	5	4	15	10	447	12	8	14	18	b
16 Oct.	California	1220 rails	Chas. Cammell & Co., Ld.	435	12	0	27	4	17	9	2120	1	6	272	5	2	18	6	0	59	12	3	2472	4	5	5	13	10
31 Aug.	Orotava	315 ,,	,, ,,	112	2	3	3	5	2	6	576	5	0	45	15	0	4	4	2	13	11	0	641	15	9	5	14	4
8 Sept.	Port Denison	842 ,,	,, ,,	300	12	2	25	5	2	6	1540	15	2	122	0	5	16	8	6	39	17	7	1719	7	10	5	14	4½
12 Nov.	Alhaera	80640 wood screws	Bayliss, Jones, & Bayliss	30	0	0	0	14	0	0	504	0	0	20	12	11	5	3	8	8	2	3	537	18	11	14	18	10½
17 Dec.	Neotsfield	387 rails	Chas. Cammell & Co., Ld.	131	1	1	16	5	2	6	671	14	8	50	15	10	5	12	2	13	1	1	746	3	9	5	13	10½
8 ,,	Hesperus	584 ,,	,, ,,	201	6	2	1	5	2	6	1031	16	7	78	0	4	8	10	10	27	16	3	1146	4	0	5	13	10½
24 Sept.	Carthage	312 ,,	,, ,,	111	7	0	18	5	2	6	570	14	3	43	6	1	6	3	7	12	15	3	634	19	2	5	14	0½
9 Nov.	Cambusnethan	842 ,,	,, ,,	300	13	3	7	5	0	11	1517	4	8	131	11	7	12	15	2	43	0	0	1704	1	6	5	13	4½
1 Oct.	Port Victor	80640 wood screws	Bayliss, Jones, & Bayliss	36	0	0	0	14	0	0	504	0	0	21	12	8	5	16	10	7	9	7	548	17	1	14	18	4½
22 Nov.	Allerton	3120 rails	Chas. Cammell & Co., Ld.	1117	2	1	10	4	17	5	5450	18	2	609	3	11	46	14	11	152	2	5	6350	10	5	5	13	9½
,,	Liverpool	703 ,,	,, ,,	259	10	1	7	5	2	6	1352	6	0	100	14	9	10	19	8	37	16	3	1521	16	3	5	14	0
1 Oct.	Lusitania	563 ,,	,, ,,	200	10	1	16	5	2	6	1029	19	4	81	15	6	11	0	8	24	4	3	1146	10	7	5	14	4
1 ,,	Port Victor	282 ,,	,, ,,	100	13	3	10	5	2	0	516	0	11	40	19	5	5	11	7	13	8	10	576	0	9	5	14	5
1 ,,	,,	47 ,,	,, ,,	16	15	2	11	5	2	6	90	0	0	6	10	0	0	18	0	2	4	9	85	10	19	5	14	5
,,	Dun-yre	1121 ,,	,, ,,	400	4	1	16	5	0	11	2019	8	10	176	1	11	16	17	0	67	4	5	2208	12	11	5	12	4½
21 ,,	Shannon	39370 wood screws	Bayliss, Jones, & Bayliss	17	11	2	8	14	0	0	246	2	0	10	11	8	2	17	8	2	15	10	282	7	2	14	18	6
20 Nov.	Pass of Balmaha	1484 rails	Chas. Cammell & Co., Ld.	531	8	0	13	4	17	9	2597	4	11	332	2	7	22	5	10	72	7	0	3024	0	6	5	13	10
	Kelton	2331 ,,	,, ,,	852	5	1	14	4	17	9	4067	14	2	520	3	4	34	17	6	118	6	7	4736	1	7	5	13	10
	Strathdon	380 ,,	,, ,,	117	17	0	6	5	2	6	603	19	11	45	18	5	5	1	2	18	5	5	671	0	2	5	13	10½
	Madagascar	1303 ,,	,, ,,	450	18	1	11	4	17	9	2203	17	3	281	16	0	18	18	9	61	7	9	2565	0	3	5	13	10½
1892.																												
17 Jan.	Cockermouth	649 ,,	,, ,,	231	14	2	10	4	17	9	1152	11	7	144	16	7	9	16	9	31	10	11	1318	15	10	5	13	10
10 Feb.	Dawpool	352 ,,	,, ,,	125	13	3	6	4	17	9	614	0	2	78	11	2	5	7	8	17	2	5	715	7	5	5	13	9½
	Anglopine	1474 ,,	,, ,,	525	17	2	16	4	17	9	2570	5	0	328	13	7	22	1	10	71	12	2	2992	12	8	5	13	10
	Palgrave	1114 ,,	,, ,,	399	7	1	17	5	2	6	2040	15	6	154	15	0	16	15	8	55	3	4	2273	9	5	5	14	1
	Invermore	1130 ,,	,, ,,	405	14	1	4	4	17	9	1982	18	3	253	11	5	17	2	0	56	4	8	2308	16	8	5	13	9½
16 Jan.	Ophrapore	410 ,,	,, ,,	160	9	2	8	5	2	6	750	8	11	50	11	7	8	1	7	19	8	2	837	10	4	5	14	4½
	Keir	506 ,,	,, ,,	190	0	3	24	5	0	11	940	0	2	78	18	1	7	13	3	25	15	8	1022	7	2	5	13	4½
	Westgate	647 ,,	,, ,,	230	10	3	17	4	17	9	1128	19	0	144	7	5	9	16	0	31	8	8	1314	11	10	5	13	9½
2 Feb.	Elderslie	738 ,,	,, ,,	263	11	1	20	5	2	6	1350	16	1	107	4	10	14	8	6	34	18	7	1507	8	0	5	14	2½

Indent for 4,000 tons S.T. Rails (80 lb. per yard). Dated 23rd October, 1891.

																							per ton.		
1892.																									
12 Mar.	Gulf of Venice	1373 rails	Charles Cammell & Co.	493	7	0	16	4	9	3	2188	4	4	199	10	8	26	14	3	62	12	10	2477	1	8	4	10	7½
7 April	Cadzow Forest	340 ,,	,, ,,	300	0	0	0	4	9	3	1398	15	0	126	5	0	12	14	4	41	5	4	1508	10	8	5	0	7½
30 ,,	Wasdale	949 ,,	,, ,,	383	13	2	8	4	9	3	1512	9	4	151	8	8	14	5	5	44	14	4	1702	13	10	5	0	5
3 June.	Glengoil	984 ,,	,, ,,	351	8	2	8	4	9	3	1582	5	0	136	3	7	14	15	11	46	7	11	1785	12	5	5	0	5½
3 ,,	,,	700 ,,	,, ,,	250	0	0	0	4	9	3	1125	12	6	96	17	6	10	11	4	33	0	10	1256	2	1	5	0	6½
4 ,,	Waverlee	840 ,,	,, ,,	300	0	0	0	4	9	3	1338	15	0	116	5	6	12	13	0	41	5	4	1508	18	7	5	0	7
9 May	Gulf of Mexico	420 ,,	,, ,,	150	0	0	0	4	9	3	669	7	6	61	0	8	8	5	6	19	1	10	767	15	1	5	1	0½
30 ,,	Naimshire	230 ,,	,, ,,	100	0	0	0	4	9	3	446	5	0	40	13	8	5	11	4	12	14	4	505	4	1	5	1	0½

Indent for extra Fastenings for 80 lb. per yard S.T. and B.H. Rails. Dated 9th June, 1891.

1891.																									
1 Dec.	Flintshire	71566 cup-head spikes	Patent Nut and Bolt Co., Ld.	40	1	0	0	10	0	0	400	10	0	23	15	11	4	14	1	7	2	1	436	2	1	10	17	9½
30 Nov.	Ballaarat	26360 fish-bolts and nuts	Ibbotson Bros. & Co., Ld.	15	0	0	0	21			315	0	0	10	16	0	3	10	2	2	15	3	332	2	2	22	6	0
1892.																									
7 Jan.	Glencurry	68444 cup-head spikes	Patent Nut and Bolt Co., Ld.	38	0	0	10	10		0	388	1	7	22	15	3	4	9	7	6	15	8	437	2	1	10	17	9½
15 ,,	Thermopylæ	7020 fish-plates	Barrow Hæmatite Steel Co.	32	18	0	14		3		230	2	0	22	19	5	1	19	9	5	1	0	256	2	2	8	1	9
15 ,,	,,	25800 fish-bolts and nuts	Ibbotson Bros. & Co., Ld.	15	0	0	0	21	0	0	315	0	0	10	16	0	3	8	6	3	17	2	333	2	5	22	4	11
15 ,,	,,	23200 ,,	,, ,,	13	8	3	2	21	0	0	283	5	2	10	1	0	3	2	1	2	9	10	299	18	7	22	4	4
15 ,,	,,	34800 wt.-iron wood screws	,, ,,	15	0	0	0	13	10	0	202	10	0	10	17	11	1	0	2	3	1	0	217	15	1	14	10	4
15 ,,	,,	34800 ,, ,, ,,	,, ,,	15	0	0	0	13	10	0	202	10	0	10	18	0	1	0	2	3	1	0	217	15	2	14	10	4
15 ,,	Woolloomooloo	34800 ,, ,, ,,	,, ,,	15	0	0	0	13	10	0	202	10	0	10	18	0	1	7	8	3	0	11	217	16	7	14	10	6½
20 Feb.	Hobbuck	40500 ,, ,, ,,	,, ,,	18	13	0	12	13	10	0	265	6	11	14	5	0	3	2	2	8	19	8	286	14	6	14	11	9

Indent for 120 sets of 15-feet T. Rails, Switches for 71½-lb. Flanged Bottom Rails. Dated 10th February, 1891.

																							per set.		
1891.																									
7 Aug.	Murrumbidgee	40 sets steel switches	Ransomes and Rapier					22	5	0	890	0	0	39	9	7	9	15	1	31	16	1	942	0	9	23	11	0½
13 ,,	Parramatta	40 ,, ,,	,, ,,					22	5	0	890	0	0	39	9	7	9	15	2	8	14	10	938	19	7	23	9	6½
23 ,,	Britannia	40 ,, ,,	,, ,,					22	5	0	890	0	0	31	4	6	9	15	6	3	17	5	939	17	5	23	9	11⅓

Indent for 100,000 Oblong Head Spikes for 71½-lb. S.T. Rails. Dated 20th May, 1891.

																							per ton.		
1891.																									
2 Oct.	Port Victor	100000 oblong head spikes	Patent Nut and Bolt Co.	28	0	1	7	10	15	0	411	7	1	22	14	9	4	16	10	6	19	7	445	17	3	11	15	0½

Indent for additional 250 tons F.B. Rails, 80 lb. per yard, short lengths. Dated 28th April, 1890.

1891.																									
5 Aug.	Loch Trool	101 rails	Charles Cammell & Co. (Limited).	35	19	3	15	6	0	0	215	19	4	.....			1	10	0	3	9	0	220	18	4	6	2	9

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APPENDIX XXI—*continued.*

Miscellaneous Articles imported for the New South Wales Railways during the year ending 30th June, 1892.

Date of Arrival.	Name of Ship.	Description of Material.	Supplied by	Weight.	Rate.	Invoice Cost.	Freight.	English Charges.	Colonial Charges.	Total Cost.	Per ton or each.
1891.				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d. each.
6 July.	Baroda	6 goods traffic locomotive engines.	Dübs & Co.	.....	2300 0 0	14300 0 0	.....	257 8 0	....	14557 8 0	2011 0 7½
6 „	„	Duplicate parts for goods traffic loco. engines and tenders.	„	.....	1300 0 0	1300 0 0	.....	20 0 0	....	1326 0 0	1326 0 0
6 „	„	25 Extra whistles for goods traffic loco. engines.	„	.....	4 10 0	112 10 0	.....	2 5 0	....	114 15 0	4 11 9½ per lb.
13 „	Drumburton	506 seamless brass loco. tubes	The Broughton Copper Co., Ltd.	7 10 0 10	.....	529 16 9	8 7 6	8 10 11	8 16 1	613 0 3	0 0 8½ each.
28 „	Mimi	Material for 10 gondola cars, without sides and floors.	The Tubular Frame Wagon Co., Ld.	.....	135 0	1350 0 0 34 4 4	120 14 0	13 15 6	....	1523 14 4	152 7 8½
13 „	Clunbar	20 9-ft.5-in. gas-holders	Thos. Figott & Co.	.....	4 0 0	80 0 0	11 8 4	1 14 7	1 0 6	94 3 7	4 14 2½
13 „	„	5 6-ft. „	„	.....	3 5 0	16 5 0	2 5 8	0 7 0	0 4 1	19 1 9	3 15 4½
13 „	Drumburton	3 12-wheeled bogie tank locomotive engines.	Beyer, Peacock, & Co.	.....	2215 0 0	8745 0 0	.....	113 1 1	....	8963 1 1	2954 7 0½
13 „	„	50 wheels	Ashbury Railway Carriage & Iron Co., Ld.	.....	4 2 7	206 3 8	14 6 6	6 18 6	4 17 0	439 6 6	8 3 8½
13 „	„	50 cast-steel tyres for the above.	Vickers, Sons, & Co., Ld.	9 16 1 20	18 0 0	176 15 9					
13 „	Clunbar	250 cast-steel carriage tyres	Thos. Bradford & Co.	46 13 2 0	18 0 0	840 3 0	41 5 6	16 19 10	11 14 2	910 5 6	3 12 10
13 „	Patriarch	Washing machinery	„	.....	498 10 0	498 10 0	16 4 2	0 3 0	5 7 7	509 4 9	509 4 9 per lb.
5 Aug.	Louis Trool	1206 seamless brass loco. tubes	The Broughton Copper Co., Ld.	16 9 0 20	0 8½	1210 16 5	11 3 3	18 6 3	11 16 8	1252 4 7	0 0 8½ each.
30 July.	Alleyne	24 3-wire block instruments	Tyer & Co.	.....	11 0 0	264 0 0	1 8 4	6 14 2	2 12 6	274 15 0	11 8 11½
30 „	„	24 bells and relays for above	„	.....	4 10 0	108 0 0	0 11 6	2 14 10	1 1 6	112 7 10	4 13 8
13 Aug.	Colwyn	100 c.-s. carriage and wagon axles.	Vickers, Sons, & Co., Ld.	20 9 2 6	5 16 6	582 10 0	13 7 11	8 17 9	6 19 6	611 15 2	6 2 4½
11 July.	Culgoa	800 I. R. body blocks	George Spencer & Co.	.....	0 3 0	120 5 0	0 11 7	2 2 0	1 3 4	124 1 11	0 3 1½
11 „	„	62 6-ft. gas-holders	Lloyd & Lloyd	.....	3 18 0	241 16 0	25 13 5	4 0 9	2 14 0	274 4 2	4 8 5½
11 „	„	13 9-ft. 5-in. „	„	.....	5 1 5	65 18 3	6 18 6	1 2 0	0 14 7	74 13 4	5 14 10½
11 „	„	17 12-ft. 5-in. „	„	.....	6 6 9	107 14 9	11 8 0	1 16 0	1 4 0	122 2 9	7 3 7
24 Aug.	Drumcliff	3 10-wheeled bogie tank locomotive engines.	Beyer, Peacock, & Co.	.....	2065 0 0	8895 0 0	.....	120 1 6	....	9015 1 6	3005 0 6 per lb.
11 July.	Culgoa	200 angle brass bars	Allen, Everett, & Sons.	0 5 1 7½	0 0 7½	19 4 9	0 10 6	0 11 0	0 5 7	20 12 7	0 0 8½ per yard.
13 Aug.	Suffolk	503 ½ yds. French carpet, 36in	Dalton, Barton, & Co.	.....	0 2 6½	63 0 11	1 6 0	1 5 0	0 14 1	66 15 0	0 2 7½ per foot.
18 „	„	614 wrought-iron boiler tubes, 7490 ft. 8in.	Lloyd & Lloyd	.....	0 0 8	249 13 9	16 1 7	4 2 3	3 6 7	273 4 2	0 0 8½ each.
18 „	„	600 V. I. R. rings, 5" x ½" x 1"	George Spencer & Co.	.....	0 2 6	50 0 0	0 10 6	1 1 0	0 11 8	52 3 2	0 2 7½
12 Sept.	Barilowie	8 10-wheeled bogie tank locomotive engines.	Beyer, Peacock, & Co.	2966 0 0	2965 0 0	8895 0 0	.....	120 1 6	....	9015 1 6	3006 0 6
7 Aug.	Murrumbidgee	36 enamel callenders	Lamp Manufacturing Co., Ld.	.....	0 2 5	4 5 4	0 7 11	0 5 10	0 3 0	5 2 1	0 2 11
7 „	„	38 „ funnels	„	.....	0 0 9	1 7 9	0 2 7	0 1 10	0 1 2	1 13 4	0 0 10½
7 „	Murrumbidgee	800 wagon bearing-springs	Chas. Cammell & Co., Ld.	41 5 0 16	0 13 9	550 0 0	.....	6 12 0	....	556 12 0	0 13 11
18 „	Suffolk	20 railway ticket dating machines.	Joseph Sloper	.....	5 1 11	102 10 0	0 9 2	2 5 0	1 5 1	136 9 3	5 4 11½ per set.
18 „	„	6 extra sets of dies for above.	„	.....	2 10 0	15 0 0	0 1 0	0 5 1	0 2 9	15 8 10	2 11 5½ each.
18 „	„	36 extra dies for above machines.	„	.....	.....	3 4 0	0 0 4	0 1 1	0 0 7	3 6 0	0 1 10
25 July.	Oceana	116 c.-s. carriage and wagon axles.	Vickers, Sons, & Co., Ld.	23 15 0 10	5 16 6	675 14 0	15 19 11	10 11 2	4 15 0	707 0 3	6 1 12
24 Aug.	Gulf of Venice	15 6-ft. gas-holders	Lloyd & Lloyd	.....	3 18 0	58 10 0	7 10 5	1 2 0	0 12 3	67 16 7	4 10 4½
24 „	„	1 9-ft. 5-in. gas-holder	„	.....	5 1 6	5 1 6	0 12 9	0 1 11	0 1 1	5 17 2	5 17 2
24 „	„	5 12-ft. 5-in. „	„	.....	6 6 9	31 13 9	4 1 7	0 12 2	0 7 0	36 14 6	7 6 10½
15 „	Suffolk	4 12-ft. 5-in. „	„	.....	6 6 9	25 7 0	3 3 0	0 8 11	0 5 8	29 4 7	7 6 1½
18 „	„	1 9-ft. 5-in. „	„	.....	5 1 5	5 1 5	0 12 7	0 1 11	0 3 4	6 19 3	5 19 3
18 „	„	19 6-ft. gas-holders	„	.....	3 13 0	74 3 0	9 6 4	1 7 0	0 14 3	85 9 7	4 9 11½
24 „	Gulf of Venice	400 I.R. body blocks	George Spencer & Co.	.....	0 3 0	60 2 6	0 10 6	1 4 0	0 13 6	62 10 6	0 3 1½
24 Sept.	Trafalgar	20 3-wire block instruments	Tyer & Co.	.....	11 0 0	220 0 0	1 9 5	7 5 1	3 10 1	237 4 7	11 8 7½
24 „	„	20 bells and relays	„	.....	4 10 0	117 0 0	0 12 1	2 19 5	1 0 6	121 12 0	4 13 0½ per set.
24 Aug.	Gulf of Venice	Casts boiler-fittings (goods)	Beyer, Peacock, & Co.	.....	72 0 0	432 0 0	8 6 1	0 15 7	2 12 9	460 14 6	15 2 4½ each.
25 July.	Oceana	1500 (safety chain) volute springs.	Turton Bros. & Matthews	.....	0 2 0	150 0 0	5 9 3	3 1 7	1 0 8	159 7 6	0 2 1½
7 Aug.	Murrumbidgee	150 papier-mache panels	G. D. Peters & Co.	.....	1 6 1	196 12 0	6 5 3	3 4 3	2 1 8	207 4 1	1 7 7½ per lb.
1 „	Gulf of Genoa	420 soft copper tubes	Elliott's Metal Co., Ld.	3 16 0 1½	0 0 9½	226 10 8	3 9 10	5 3 11	2 14 7	237 19 0	0 0 9.53
24 „	Gulf of Venice	1 portable valve facing machine.	Beyer, Peacock, & Co., Ld	.....	65 0 0	65 0 0	0 10 6	1 5 0	0 14 1	67 10 1	67 10 1 per gross.
26 July.	Oceana	100 gross gal.-iron thimbles	Bullivant & Co.	.....	0 7 6	37 10 0	1 1 0	0 17 3	0 3 0	39 11 3	0 7 11 each.
25 „	„	50 wrought-iron wheels	The Patent Shaft and Axletree Co., Ld.	.....	3 19 0	197 10 0	37 14 7	14 14 6	6 9 7	1019 8 11	7 16 10
25 „	„	50 „ „ „	„	.....	3 19 0	318 0 0					
25 „	„	130 c.-s. tyres for above	Vickers, Sons, & Co., Ld.	25 7 0 28	18 0 0	456 10 2					per set.
24 Aug.	Hubbuck	4 sets boiler-mountings	Dübs & Co.	.....	85 0 0	340 0 0	15 2 11	5 9 1	3 1 8	363 13 3	90 18 4 each.
13 „	Parramatta	400 wagon bearing-springs	Chas. Cammell & Co., Ld.	20 12 1 20	0 13 9	276 0 0	.....	3 6 0	....	278 6 0	0 13 11
24 „	Hubbuck	14 6-ft. gas-holders	Lloyd & Lloyd	.....	3 13 0	54 12 0	7 11 8	0 19 3	0 12 4	63 15 3	4 11 7
24 „	„	10 9-ft. 5-in. gas-holders	„	.....	5 1 5	50 14 0	7 0 8	0 17 9	0 11 5	59 3 10	5 18 4½
24 „	„	17 12-ft. 5-in. „	„	.....	6 6 9	107 14 9	14 17 10	1 17 11	1 4 3	125 14 9	7 7 11½
20 „	Strathdon	18 freight locomotives	Burnham, Williams, and Co., Baldwin Locomotive Works.	.....	.....	65572 6 9	.....	.....	.....	65572 6 9	3642 18 2
20 „	„	2 compound freight locomotives.		.....	.....	7598 13 8	.....	.....	.....	7598 13 8	3799 16 4½
20 „	„	Duplicate parts for passenger engines.		.....	.....	2171 14 4	.....	.....	.....	2171 14 4	.....
16 „	Californian	4 10-wheeled bogie tank locomotive engines.	Beyer, Peacock, & Co.	2965 0 0	2965 0 0	11860 0 0	.....	160 2 2	....	12020 2 2	3005 0 6½
Per mail		200 transfer labels	Tearne & Sons	.....	0 0 4	3 0 8	.....	9 1 0	....	3 7 8	0 0 4
14 Oct.	Orizaba	2 (Webb & Thompson's) train staff apparatus.	The Railway Signal Co., Ld.	.....	40 0 0	80 0 0	.....	.....	.....	80 0 0	40 0 0
31 Aug.	Port Pirie	150 wheels	Craven Bros. & Co.	.....	6 8 0	960 0 0	59 8 1	42 4 1	29 1 0	2926 14 8	10 7 6½
31 „	„	132 „	„	.....	6 8 0	844 10 0					
31 „	„	282 c.-s. tyres	Vickers, Sons, & Co.	55 0 1 6	38 0 0	920 5 6					
18 „	California	1 pair h. p. direct acting coupled wall engines.	Craven Bros., Ld.	.....	385 18 0	385 18 0	14 3 11	5 13 0	3 18 7	389 13 11	389 13 11
31 „	Port Pirie	1000 (safety-chain) volute springs.	Turton Bros. & Matthews	.....	0 2 0	100 0 0	3 13 6	1 16 0	1 5 8	106 15 2	0 2 1½ per ton.
23 „	Britannia	Bolts and nuts for interlocking	Patent Nut & Bolt Co.	6 0 0 0	23 10 0	141 0 0	3 11 10	1 14 2	1 9 5	147 0 5	24 11 7 each.
16 „	California	1 hydraulic wheel-press	Craven Bros., Ld.	.....	461 0 3	461 0 3	17 10 2	7 1 4	5 3 2	490 14 11	490 14 11 per set.
21 „	Oruba	6 sets train tablet apparatus	Tyer & Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	47 10 4
14 Sept.	Wilcannia	6 sets boiler-fittings (goods)	Beyer, Peacock, & Co.	.....	72 0 0	432 0 0	8 4 1	6 15 7	3 12 9	450 14 5	75 2 5 each.
14 Sept.	Wilcannia	20 electrial train staff instruments.	The Railway Signal Co., Ld.	.....	37 0 0	740 0 0	9 12 4	0 6 8	5 17 8	755 15 8	37 15 9½
14 „	„	10 block gongs for above	„ „	.....	41 0 0	20 10 0	0 5 3	0 0 2	0 3 4	20 18 9	2 1 10½
14 „	„	10 block bells „	„ „	.....	41 0 0	20 10 0	0 5 3	0 0 2	0 3 3	20 18 8	2 1 10½

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APPENDIX XXI—*continued.*

Miscellaneous Articles Imported for the New South Wales Railways during the year ending 30th June, 1892—*continued.*

Date of Arrival.	Name of Ship.	Description of Material.	Supplied by	Weight.	Rate.	Invoice Cost.	Freight.	English Charges.	Colonial Charges.	Total Cost.	Per ton or each.
1891.				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
10 Sept.	Massilia	800 wagon bearing-springs	Chas. Cammell & Co., Ld.	41 4 2 8	0 13 9	550 0 0	.....	0 12 0	....	550 12 0	0 13 11 each.
14 ,,	Woolloomooloo	1 valve facing machine	Craven Bros., Ld.	.....	85 0 0	85 0 0	0 10 6	0 16 0	0 9 3	86 16 3	30 16 3 per 100.
14 ,,	,,	50000 railway sponge cloths	Rigby, Wainwright, & Co	.....	0 6 9½	169 0 10	4 10 3	2 16 8	1 9 2	177 17 4	0 7 1½ each.
14 ,,	,,	13 12-ft. 5-in. gas-holders	Thos. Piggott & Co.	.....	5 5 0	68 5 0	11 18 3	1 6 5	0 15 8	82 5 4	0 6 6½
22 Nov.	Allerton	5 10-wheeled bogie tank locomotives.	Beyer, Peacock, & Co.	.....	2005 0 0	14825 0 0	.....	200 2 9	....	15025 2 9	3005 0 6½ each.
28 Sept.	Dordogne	0 sets boiler-fittings (goods)	,, ,, ,,	.....	72 0 0	432 0 0	9 3 1	0 15 7	3 11 4	451 20 0	75 5 0 per sec.
28 ,,	,,	1 6-ft. gas-holder	Thos. Piggott & Co.	.....	4 0 0	4 0 0	0 12 2	0 2 0	0 1 0	4 15 2	4 15 2 each.
28 ,,	,,	6 12-ft. 5-in. gas-holders	,, ,, ,,	.....	5 5 0	31 10 0	4 14 7	0 14 7	0 7 1	37 6 3	6 4 4½
28 ,,	,,	2 cotton ropes for 25-ton cranes.	Craven Bros., Ld.	.....	27 10 0	82 10 0	1 17 6	0 8 4	0 13 6	86 9 4	28 16 5½
28 ,,	,,	2 cotton ropes for 12 and 16 ton cranes.	,, ,,	.....	12 12 0	25 4 0	0 11 5	0 8 8	0 4 2	26 8 3	13 4 1½
28 ,,	,,	3 cotton ropes for 12-ton cranes.	,, ,,	.....	10 4 0	30 12 0	0 14 2	0 10 6	0 5 1	32 1 9	10 13 11
14 ,,	Woolloomooloo	11 12-ft. 5-in gas-holders	Thos. Piggott & Co.	.....	5 6 0	57 15 0	3 7 1	1 0 0	0 12 10	67 15 6	6 3 2½
14 ,,	,,	20 6-ft.	,, ,, ,,	.....	4 0 0	80 0 0	11 10 5	1 8 6	0 17 7	93 16 6	4 13 10
6 Nov.	Tamar	144 stamped steel axle-boxes	Adams & Co.	.....	1 10 0	216 0 0	4 16 11	3 7 9	2 7 10	226 12 6	1 11 5½
....	Firth of Clyde	4 saddle-tank locomotive engines.	Dübs & Co.	.....	2520 0 0	10080 0 0	.....	142 0 4	....	10062 0 4	2805 10 1
3 Oct.	Victoria	20 Tinnals' patent springs	J. A. Tinnals	.....	0 13 6	13 10 0	1 1 0	0 10 0	0 1 7	15 2 7	0 15 1½
....	Dunsyre	6 saddle-tank locomotive engines.	Dübs & Co.	.....	2520 0 0	15780 0 0	.....	213 0 7	....	16993 0 7	2605 10 1
9 Nov.	Asloun	40 electrical train staff instruments.	The Railway Signal Co., Ld.	.....	37 0 0	1480 0 0	19 4 3	0 7 7	11 14 11	1511 6 9	37 16 8
9 ,,	,,	20 block bells for above	,, ,,	.....	2 1 0	41 0 0	0 10 8	0 0 3	0 6 7	41 17 6	2 1 10½
9 ,,	,,	20 ,, gongs ,, ,,	,, ,,	.....	2 1 0	41 0 0	0 10 8	0 0 3	0 6 7	42 17 6	2 1 10½
9 ,,	,,	17 6-ft. gas-holders	Thos. Piggott & Co.	.....	4 0 0	68 0 0	8 17 1	1 4 7	0 14 11	78 16 7	4 12 8½
9 ,,	,,	9 12-ft. 5-in. ,, ,,	,, ,,	.....	5 5 0	47 5 0	0 2 1	0 17 1	0 10 6	54 14 8	6 0 0½
21 Oct.	Shannon	180 stamped steel axle-boxes	Adams & Co.	.....	1 10 0	270 0 0	.....	....	....	.....	.....
21 ,,	,,	180 leather packings for axle-boxes.	,, ,,	.....	0 0 5	3 15 0	18 16 2	4 6 10	1 13 4	298 11 4	1 12 7½
21 ,,	,,	48 stamped steel axle-boxes	,, ,,	.....	1 10 0	72 0 0	3 12 7	1 2 10	0 6 8	77 4 1	1 12 2
9 Nov.	Eclipse	12 sets boiler fittings	Beyer, Peacock, & Co.	.....	72 0 0	864 0 0	19 19 7	13 6 11	7 5 3	904 11 9	75 7 7½
9 ,,	,,	430 lubricating pads with frames and springs.	Dalton, Barton, & Co.	.....	0 1 2	25 1 8	0 6 1	0 11 0	0 0 0	26 4 9	0 1 2½
9 ,,	,,	1000 lubricating pads without frames and springs.	,, ,,	.....	0 0 4½	17 14 2	0 4 5	0 7 10	0 4 4	18 10 9	0 0 4½
9 ,,	,,	200 Wilton monogram rugs	G. D. Peters & Co.	.....	0 18 6	185 0 0	2 17 11	3 1 0	1 13 7	192 13 6	0 19 3½
19 Dec.	Kelton	3 6-wheeled powerful bogie passenger engines and tenders complete.	Beyer, Peacock, & Co.	.....	3692 10 0	11077 10 0	.....	149 10 11	....	11227 0 11	3742 7 0
3 Nov.	Valeta	192 leather packings for axle-boxes.	Adams & Co.	.....	3 0 0	4 0 0	.....	0 17 8	0 0 8	4 18 4	per gross. 0 18 9
3 ,,	Euhena	1200 wagon bearing springs	Chas. Cammell & Co., Ld.	.....	0 13 9	825 0 0	.....	0 18 0	....	834 18 0	each. 0 13 11
....	Nairnshire	20 electrical train staff instruments with staffs complete.	The Railway Signal Co., Ld.	.....	37 0 0	740 0 0	9 12 2	0 0 3	5 17 3	755 15 8	37 15 9½
....	,,	10 block bells	,, ,,	.....	2 1 0	20 10 0	0 5 4	0 0 2	0 3 4	20 18 10	2 1 10½
....	,,	10 block gongs	,, ,,	.....	2 1 0	20 10 0	0 5 4	0 0 2	0 3 4	20 18 10	2 1 10½
....	Kelton	Bridgework for superstructure, Long Cove, Ck., Petersham,	Butterly Co., Ld.	320 18 3 10	14 15 0	4733 17 10	.....	60 4 0	48 5 0	4842 8 10	per ton. 15 1 9
....	,,	Wrought-iron in main girders, cross girders, rail-bearers, floor-plates, bracing, &c.	,, ,,	2 19 2 2	30 0 0	89 5 6	.....	1 2 10	0 9 0	90 17 4	30 10 8½
....	,,	Wrought-iron in bolts, nuts, straps, and washers, &c.	,, ,,	13 14 1 18	14 15 0	202 7 6	.....	2 11 6	2 1 3	207 0 3	15 1 10
....	,,	Cast-iron in rockers and bed-plates.	,, ,,	0 18 3 18	0 0 9	33 11 3	.....	0 8 11	0 3 0	34 3 2	per foot. 0 0 9½
12 Nov.	Orient	315 ft. wrought-iron gas tubing, &c.	Tyer & Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	each. 47 10 4
....	Elginshire	6 sets train tablet apparatus	Dübs & Co.	.....	2520 0 0	13150 0 0	.....	177 10 6	....	13327 10 6	2665 10 1
....	Nairnshire	6 saddle tank locomotive engines.	Chas. Cammell & Co., Ld.	4 1 0 0	0 3 9	75 0 0	3 10 6	1 8 6	0 19 11	80 18 11	0 4 0½
....	,,	400 9-in. draw springs	Dalton, Barton, & Co.	.....	0 1 2	20 8 4	0 10 6	0 12 1	0 6 7	21 17 6	0 1 3
15 Nov.	Arcadia	350 lubricating pads with frames and springs.	Tyer & Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	47 10 4
20 ,,	Aberdeen	6 sets train tablet apparatus	James H. Tozer & Son	.....	0 13 6	13 10 0	1 1 0	0 10 1	0 5 0	15 6 1	0 15 3½
15 ,,	Arcadia	20 Lapthorn's hydraulic brushes.	Adams & Co.	.....	1 10 6	453 0 0	23 0 10	....	2 1 0	.....	.....
15 ,,	,,	288 stamped steel axle-boxes	,, ,,	.....	3 0 0	6 0 0	0 6 6	8 17 5	0 13 1	471 8 4	axle & leather. 1 12 6½ each.
15 ,,	Madagascar	288 leather packings for axle-boxes.	,, ,,	.....	0 0 6	6 0 0	0 6 6	8 17 5	0 13 1	471 8 4	1 12 6½ each.
15 ,,	,,	3 powerful bogie passenger engines with tenders complete.	Beyer, Peacock, & Co.	.....	3692 10 0	11077 10 0	.....	149 10 11	....	11227 0 11	3742 6 11
12 Dec.	Culgoa	2100 brass loco. tubes	Allen, Everitt, & Sons	25 14 1 6½	0 0 7½	1742 3 4	39 19 8	20 12 0	15 6 4	1824 3 10	0 17 4½
12 ,,	,,	11 12-ft. 5-in. gas-holders	Thos. Piggott & Co.	.....	5 5 0	57 15 0	11 13 1	1 1 1	0 12 3	71 1 5	0 0 2½
12 ,,	,,	12 6-ft. ,, ,,	,, ,, ,,	.....	4 0 0	48 0 0	9 12 10	0 17 6	0 10 7	58 10 0	4 10 2
12 ,,	,,	720 lubricating pads with frames and springs.	Dalton, Barton, & Co.	.....	0 1 2	42 0 0	1 12 0	0 18 7	0 10 4	45 0 11	0 1 3
30 Nov.	Ballarat	600 9-in. draw springs	Charles Cammell & Co.	6 4 2 0	0 3 9	112 10 0	4 10 0	1 19 7	1 0 11	120 0 6	0 4 0
31 Dec.	Flintshire	Copper (bar)	William Foster & Co., Ld.	15 0 0 0	62 5 0½	934 3 5	13 13 10	14 7 7	8 8 4	970 13 2	per ton. 64 14 2½
7 Jan.	Cloncurry	760 safety chain springs	Chas. Cammell & Co., Ld.	4 4 1 7	0 2 0	76 0 0	3 12 11	1 11 5	1 0 2	82 4 6	each. 0 2 1½
7 ,,	,,	1200 9-in. draw springs	,, ,,	12 10 1 4	0 3 0	225 0 0	10 17 4	4 16 0	2 19 9	243 13 1	0 4 0½
7 ,,	,,	109 Lowmoor iron plates	Lowmoor Co., Ld.	7 4 1 21	21 0 0	153 14 0	5 13 10	2 12 0	1 16 11	166 16 9	per ton. 22 6 7½
7 ,,	,,	300 wagon-bearing springs	Chas. Cammell & Co., Ld.	41 2 1 20	0 13 9	550 0 0	.....	6 12 0	....	556 12 0	each. 0 13 10½
7 ,,	,,	1 cast-steel crank axle	Vickers, Sons, & Co., Ld.	1 0 3 23	122 10 0	122 10 0	1 1 7	2 16 0	1 0 2	127 6 9	127 6 9
1891. 17 Jan.	Cockermouth	2 powerful bogie passenger engines with tenders complete.	Beyer, Peacock, & Co., Ld.	.....	3692 10 0	7385 0 0	.....	99 13 11	....	7484 13 11	3742 6 11½
14 Dec.	Parramatta	504 patent stamped steel axle boxes.	Adams & Co.	.....	1 10 0	756 0 0	47 19 7	....	1 17 5	.....	.....
14 ,,	,,	504 leather packings for axle boxes.	,, ,,	.....	3 0 0	10	0 0 12 9	11 13 9	2 17 7	831 10 1	axle leather and box. 1 13 0 each.
3 Jan.	Flintshire	6 vit enamel funnels	Lamp Manufacturing Co., Ld.	.....	0 0 9	0 3 9	.....	....	....	0 3 9	0 0 9
3 ,,	,,	53 vit enamel cullenders	,, ,,	.....	0 2 6	7 5 0	.....	....	....	7 5 0	0 2 6
21 Dec. 1892.	Ophir	6 sets train tablet apparatus,	Tyer & Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	47 10 4
13 Jan.	Elginshire	50 bells and relays	,, ,,	.....	4 10 0	225 0 0	1 17 11	0 6 0	2 0 1	228 4 0	4 11 8

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APPENDIX XXI—*continued.*

Miscellaneous Articles imported for the New South Wales Railways during the year ending 30th June, 1892—*continued.*

Date of Arrival.	Name of Ship.	Description of Material.	Supplied by	Weight.	Rate.	Invoice Cost.	Freight.	English Charges.	Colonial Charges.	Total Cost.	Per Ton or Each.
1892.				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d
7 Jan.	Yarrawunga	29 electrical train staff instruments with staffs complete.	The Railway Signal Co., Ltd.	.....	37 0 0	740 0 0	9 12 4	0 5 9	5 17 6	755 15 6	37 15 9
7 ,,	,,	10 block bells	,, ,,	.....	2 1 0	20 10 0	0 5 3	0 0 2	0 3 3	20 18 8	2 1 10½
7 ,,	,,	10 block gongs	,, ,,	.....	2 1 0	20 10 0	0 5 3	0 0 2	0 3 3	20 18 8	2 1 10½
10 Feb.	Dawpool	2 powerful bogie passenger engines with tenders complete.	Beyer, Peacock & Co., Ltd.	.....	3692 10 0	7385 0 0	.....	99 13 11	....	7484 13 11	3742 6 11
1891.											per set.
24 Dec.	Britannia	6 sets train tablet apparatus.	Tyer and Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	47 10 4
1892.											each.
15 Jan.	Thermopylæ	1 cast-steel crank axle	Vickne, Sons, & Co.	1 0 3 23	122 10 0	122 10 0	1 1 7	2 16 0	1 0 2	127 6 9	127 6 9
17 ,,	Duke of Devonshire	500 lubricating pads with frames and springs.	Dalton, Barton, & Co.	.....	0 1 2	29 3 4	1 1 0	0 14 0	0 7 1	31 6 5	0 1 3
16 ,,	Thermopylæ	1200 draw springs, 0 in.	Chas. Cammell & Co., Ltd.	11 5 2 0	0 2 9	206 5 0	9 14 10	4 8 7	2 14 4	223 2 9	0 4 0½
16 ,,	,,	720 safety-chain springs	,, ,,	3 10 3 14	0 2 0	72 0 0	3 9 1	1 4 7	0 19 1	77 12 9	0 2 1½
15 ,,	,,	1200 ,, ,,	,, ,,	6 13 0 14	0 2 0	120 0 0	5 15 3	1 19 0	1 11 10	129 6 1	0 2 1½
16 ,,	,,	700 6-in. draw springs	,, ,,	5 10 0 0	0 4 9	180 5 0	8 15 10	1 18 2	175 12 11	0 5 0	
15 ,,	Firth of Solway	5 saddle tank locomotive engines.	Dübs & Co.	.....	2630 0 0	13150 0 0	.....	177 10 6	....	13327 10 6	2665 10 1
											per set.
14 ,,	Massilia	6 sets train tablet apparatus.	Tyer & Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	47 10 4
											each.
2 ,,	Oruba	20 cups and stands	Hammersley & Co.	.....	0 3 5	3 3 0	1 1 0	0 0 7	0 0 6	4 11 10	0 3 0½
14 ,,	Massilia	1 block instrument	The Lancashire and Yorkshire Ry. Co.	.....	8 0 0	8 0 0	0 19 0	0 0 5	0 1 1	9 5 10	9 5 10
14 ,,	,,	1 tail lamp	,, ,,	.....	0 13 6	0 13 6	0 2 0	0 0 3	0 0 1	0 15 10	0 15 10
											per set.
26 ,,	Oriental	6 sets train tablet apparatus	Tyer & Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	47 10 4
31 ,,	Woolloomooloo	6 sets boiler mounting	Dübs & Co.	.....	82 0 0	492 0 0	30 17 5	10 5 3	4 5 3	537 8 4	89 11 4½
											each
31 ,,	,,	700 9-in. draw springs	Chas. Cammell & Co., Ltd.	7 4 0 0	0 3 9	131 5 0	6 4 6	2 18 0	1 14 7	142 2 6	0 4 0½
31 ,,	,,	820 safety-chain springs	,, ,,	1 16 2 24	0 2 0	32 0 0	1 10 11	0 18 9	0 8 6	34 18 3	0 2 2½
31 ,,	,,	160 patent buffers	Geo. Turton Platts & Co.	.....	1 10 7½	133 2 6	5 17 1	2 19 11	2 2 8	194 2 2	1 18 9½
31 ,,	,,	80 ,, ,,	,, ,,	.....	1 10 7½	146 10 6	4 18 7	3 0 11	1 14 1	155 18 7	1 18 1½
											per set.
31 ,,	,,	40 sets triple elliptic steel bearing springs.	Ibbotson Bros. & Co., Ltd.	6 9 2 22	2 10 0	182 0 0	5 2 2	2 10 0	1 9 1	191 2 0	3 0 6½
											each.
31 ,,	,,	700 6-in. draw springs	Chas. Cammell & Co., Ltd.	5 9 0 0	0 4 9	166 5 0	4 15 1	3 12 0	1 16 0	176 8 7	0 5 0½
											per ton.
31 ,,	,,	Copper rivets	Elliott's Metal Co., Ltd.	5 0 0 0	83 10 0	417 10 0	4 2 10	8 13 9	3 9 11	433 16 6	86 15 8½
											each.
25 ,,	Oriental	2 ticket staffs for electric train staff instruments	The Railway Signal Co., Limited.	.....	3 5 0	6 10 0	.....	0 16 0	0 0 8	7 7 2	3 13 7
											per set.
1 Feb.	Cuzco	6 sets train tablet apparatus.	Tyer & Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	47 10 4
											axle & leather
31 Jan.	Woolloomooloo	200 stamped steel axle boxes	Adams & Co.	.....	1 10 0	460 0 0	16 6 8	9 9 0	4 0 0	489 15 8	1 12 7
31 ,,	,,	300 leather packings for do.	,, ,,	.....	3 0 0	6 5 0	0 4 10				
											each.
20 Feb.	Hubbuck	60 patent buffers	George Turton, Platts, & Co.	.....	1 10 7½	109 17 6	3 10 7	2 10 6	1 5 6	117 3 0	1 19 0½
29 ,,	,,	90 bogie cattle van bearing springs.	Charles Cammell & Co., Ltd.	5 10 1 0	0 16 9	76 7 0	4 0 10	1 16 1	1 1 11	82 12 4	0 18 4½
											axle & leather
12 ,,	Australasian	500 stamped steel axle boxes	Adams & Co.	.....	1 10 0	450 0 0	10 15 8	9 9 11	4 12 6	466 8 6	1 12 8½
12 ,,	,,	300 leather packings for do.	,, ,,	.....	3 0 0	6 5 0	0 5 4				
											each.
8 April	Westgate	2 powerful bogie passenger engines, with tenders complete.	Beyer, Peacock & Co.	.....	3692 10 0	7385 0 0	.....	99 13 11	....	7484 13 11	3742 6 11
2 Mar.	Elderslie	60 patent buffers	Geo. Turton, Platts, & Co.	.....	1 16 7½	109 17 6	3 10 3	2 10 8	1 5 5	117 3 10	1 19 0½
14 ,,	Wiltonnia	120 ,, ,,	,, ,,	.....	1 19 1½	234 15 0	8 1 2	5 0 7	2 13 11	250 10 0	2 1 0
14 ,,	,,	800 6-in. draw springs	Chas. Cammell & Co., Ltd.	6 4 2 5	0 4 9	190 0 0	6 8 8	4 2 0	2 1 4	202 12 0	0 5 0½
	Invermark	4 powerful bogie passenger engines, with tenders complete.	Beyer, Peacock, & Co.	.....	3692 10 0	14770 0 0	.....	399 7 10	....	14969 17 10	3742 6 11
31 Mar.	Bungaree	80 patent buffers	Geo. Turton, Platts, & Co.	.....	1 19 1½	156 10 0	5 7 7	3 8 7	1 15 7	167 1 9	2 1 9
18 ,,	Ruahine	Duplicate parts and appliances for train tablet instruments.	Tyer & Co.	.....	.....	125 6 6	0 10 6	0 6 0	0 3 0	126 6 0	.....
											axle & leather
18 ,,	,,	300 stamped steel axle boxes	Adams & Co.	.....	1 10 0	450 0 0	16 0 5	9 3 6	4 10 5	480 8 8	1 12 5
18 ,,	,,	300 leather packings for do.	,, ,,	.....	3 0 0	6 5 0	0 4 4				
											each.
31 ,,	Bungaree	800 6-in. draw volute springs	Chas. Cammell & Co., Ltd.	.....	0 4 9	190 0 0	5 3 8	4 2 7	2 1 3	201 12 6	0 5 0½
18 ,,	Arcadia	1000 transfers for railway carriages.	Adams & Co.	.....	0 5 4	265 18 4	.....	4 11 1	0 18 11	272 3 4	0 5 5½
9 April	Duke of Argyle	40 patent plunger buffers	Geo. Turton, Platts, & Co.	.....	1 19 1½	78 5 0	2 10 10	1 13 3	0 10 1	82 5 2	2 1 7½
9 ,,	,,	60 patent buffers	,, ,,	.....	1 16 7½	100 17 6	3 11 8	2 7 11	1 4 7	107 1 8	1 19 0
9 ,,	,,	60 Hellesen's patent dry elements.	Siemens Brothers & Co., Ld.	.....	0 2 7½	6 11 6	0 19 6	0 8 7	0 5 0	7 15 7	0 3 1
											per foot.
9 ,,	,,	1500 ft. delivery hose	North British Rubber Co., Ld.	.....	0 0 7½	46 6 3	1 1 0	1 4 1	0 9 7	48 0 11	0 0 7½
											per cwt.
9 ,,	,,	4 bars cast steel, "Boreas"	Bobker Bros. & Co.	0 1 2 5	8 21 7s	10 15 0	0 5 3	0 6 4	0 3 1	11 9 8	7 7 8½
9 ,,	,,	4 ,, "Special"	,, ,,	0 1 1 19	4 3 10½	5 19 0	0 5 3	0 6 4	0 3 1	6 13 8	4 14 2
9 ,,	,,	Locomotive packing	The Loco. Packing Co.	4 7 0 0	5 14 3½	407 2 0	8 4 8	10 4 10	3 14 6	519 6 0	6 19 4½
											each.
9 ,,	,,	50 cordeaux screw pin insulators.	Bullers, Limited	.....	0 1 0	2 9 5	0 10 6	0 6 0	0 3 3	3 9 10	0 1 4½
9 ,,	,,	1 spur-wheel and brake-wheel for 10-ton accident frame.	Cowans, Sheldon, & Co. Limited.	.....	11 15 0	11 15 0	0 10 10	0 10 7	0 4 6	13 0 11	13 0 11
9 ,,	,,	25 w. i. tubes, 4' long x 2" x 2½",	John Spencer	.....	0 8 9½	10 19 6	0 12 6	0 11 5	0 4 3	12 7 7	0 9 10½
											Axle-box & Leather.
9 ,,	,,	204 patent stamped steel axle-boxes.	Adams & Co.	.....	1 10 0	306 0 0	12 0 6	6 10 11	2 17 5	331 14 1	1 12 0
9 ,,	,,	204 leather packing for the above.	,, ,,	.....	0 0 5	4 6 0					
											each.
0 ,,	Orotava	6 sets train tablet apparatus.	Tyer & Co.	.....	47 10 0	285 0 0	.....	....	0 1 11	285 1 11	47 10 4
9 ,,	,,	50 shunting horns	J. Tournier	.....	0 2 1½	5 6 0	.....	0 19 3	0 1 1	6 7 1	0 2 6½
											per ton.
2 May	Gulf of Mexico	12 plates Lowmoor iron	Lowmoor Iron Co.	4 6 2 22	25 1 0	110 18 11	3 8 4	2 3 7	1 4 1	115 14 11	26 16 3
											each.
22 June	Benicia	4 bogie-wheel passenger engines.	Beyer, Peacock, & Co.	.....	3692 10 0	14770 0 0	.....	199 7 10	....	14969 7 10	3742 6 11
28 May	Gulf of Siam	6 cast steel driving-wheels	Dubbs & Co.	5 4 1 24	.....	192 0 0	3 8 7	2 10 9	1 11 0	179 10 10	38 8 5½
	Mariposa / Strathdon	8 palace cars	Pullman Car Co.	.....	.....	21848 9 10	.....	....	....	21848 9 10	2731 1 2½
											per ton,
23 ,,	Gulf of Siam	57 ingot bronze	J. Stone & Co.	0 10 0 0	132 17 0	61 8 6	0 10 0	1 10 7	0 2 0	63 13 7	127 17 2
											each
28 ,,	,,	204 axle-boxes	Adams & Co.	.....	.....	310 5 0	10 10 6	6 10 1	2 17 6	330 3 1	1 12 4½
30 ,,	Nairnshire	100 l. r. springs	George Spencer Moulton & Co.	.....	0 14 1½	70 13 0	0 10 6	1 14 3	0 10 9	73 9 3	0 14 8½
											per set.
28 ,,	Oriental	6 sets train apparatus	Tyer & Co.	.....	.....	285 0 0	.....	....	0 1 11	286 1 11	47 10 4
27 April	Britannia	6 ,, ,,	,,	.....	.....	285 0 0	.....	....	0 2 3	285 2 3	47 10 4

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APPENDIX XXII.

RAILWAYS.

RETURN of the number and nature of the Accidents and Injuries to Life and Limb which have occurred during the year ending 30th June, 1892.

Date of Accident.	Passengers killed or injured.				Servants of the Department or of Contractors killed or injured.				Trespassers, &c.		Nature of Accident.
	Causes beyond their control.		Their own misconduct or want of caution.		Causes beyond their control.		Their own want of caution.		Own want of caution.		
1891.	Killed	Injured.	Killed	Injured.	Killed	Injured.	Killed	Injured.	Killed	Injured.	
3 July..	...	...	...	...	...	...	...	1	...	...	Fettler broke his ankle getting on a trolly in motion.
4 ,,	...	...	...	1	...	...	...	...	...	...	Man injured his knee alighting from a train in motion.
7 ,,	...	...	...	1	...	...	...	...	...	...	Man injured his right foot through leaving train in motion.
8 ,,	...	...	...	...	...	...	1	...	...	...	Contractor's labourer run over at Summer Hill.
8 ,,	...	...	...	...	...	...	1	...	...	...	Shunter run over at level crossing, Petersham.
12 ,,	...	...	...	...	...	...	...	1	...	...	Loco. employee injured; tricycle run into by goods train.
14 ,,	...	...	...	1	...	...	...	...	...	...	Man struck by train crossing the line.
14 ,,	...	...	...	...	...	...	...	1	...	...	Fettler slightly injured by a goods train colliding with his trolly
15 ,,	...	...	...	1	...	...	...	...	...	...	Man fell on platform through alighting from a train in motion.
18 ,,	...	...	...	...	...	...	...	1	...	...	Shunter's foot crushed by a wheel of a wagon.
18 ,,	...	...	...	...	...	...	...	1	...	...	Shunter's foot crushed during shunting operations.
18 ,,	...	...	...	...	...	...	1	...	...	...	Fettler run over.
24 ,,	...	...	...	...	...	...	...	1	...	...	Fettler's foot crushed; run over by a trolly.
30 ,,	...	...	...	...	...	...	...	...	...	1	Man attempted to pass under a wagon, and crushed his leg.
30 ,,	...	...	...	...	...	...	...	1	...	...	Contractor's labourer injured by a rail falling on him.
31 ,,	...	...	...	...	...	...	...	1	...	...	Shunter's leg crushed during shunting operations.
1 Aug...	...	...	...	...	...	...	...	1	...	...	Shunter's hand crushed coupling up trucks.
3 ,,	...	...	...	...	...	...	...	1	...	...	Engine-driver, not on duty, struck by a water column.
3 ,,	...	...	...	...	...	...	...	...	1	...	Man struck by down express.
3 ,,	...	...	...	1	...	...	...	...	...	...	Man attempting to alight from train in motion.
8 ,,	...	...	1	...	...	...	...	...	...	...	Man in attempting to leave train in motion.
10 ,,	...	...	...	...	...	...	...	2	...	...	Two fettlers run into on a trolly.
11 ,,	...	...	...	...	...	...	...	1	...	...	Guard sprained his ankle.
12 ,,	...	...	...	...	...	...	...	1	...	...	Driver's foot crushed by his engine.
13 ,,	...	...	...	...	...	...	...	1	...	...	Fell between platform and engine.
14 ,,	...	...	...	...	...	...	...	1	...	...	Fettler's head injured by door of a wagon.
16 ,,	...	...	...	...	...	...	...	1	...	...	Porter fell on a rail.
19 ,,	...	...	...	...	...	...	...	1	...	...	A fireman struck by the staff.
19 ,,	...	...	...	...	...	...	...	...	...	1	Man's foot crushed by a coal wagon.
19 ,,	...	...	...	1	...	...	...	...	...	...	Child slightly cut by falling over a piece of timber.
21 ,,	...	...	...	...	...	...	...	1	...	...	Bricklayer injured; tricycle run into.
26 ,,	...	...	...	...	...	...	...	1	...	...	Porter's head crushed by the slide-door of a van.
26 ,,	...	...	...	...	...	...	...	1	...	...	Night-officer's left foot run over.
26 ,,	...	...	...	...	...	...	...	1	...	...	Fireman injured by falling from engine.
27 ,,	...	...	...	1	...	...	...	...	...	...	A lady fell from train in motion; slightly injured.
28 ,,	...	...	...	...	...	...	...	3	...	...	Fettlers injured; trolly run into.
28 ,,	...	...	...	1	...	...	...	...	...	...	Man attempting to leave train in motion.
28 ,,	...	...	...	...	...	...	2	...	...	...	Permanent-way Inspector and fettler killed; trolly run into.
29 ,,	...	...	...	1	...	...	...	...	...	...	Lady attempting to leave train in motion.
31 ,,	...	...	...	1	...	...	...	...	...	...	Man struck by a train while crossing the line.
31 ,,	...	...	1	...	...	...	...	...	...	...	Man run over crossing line.
4 Sept...	...	...	...	...	...	...	...	1	...	...	Guard injured when entering his break-van.
7 ,,	...	...	...	...	...	...	...	1	...	...	Porter crushed between wagons.
9 ,,	...	...	...	...	...	...	...	1	...	...	Contractor's employes attempting to get on truck in motion.
17 ,,	...	...	...	...	...	...	1	...	...	...	Man loading timber was crushed between two logs.
17 ,,	...	...	...	...	...	...	...	1	...	...	Shunter injured by a horse-box.
19 ,,	...	...	...	...	...	1	...	...	...	...	Fireman cut by a stone thrown at the train.
19 ,,	...	...	...	...	...	...	...	...	1	...	Man struck by an engine while crossing line.
19 ,,	...	...	...	1	...	...	...	...	...	...	Boy attempting to leave train in motion.
21 ,,	...	...	...	1	...	...	...	...	...	...	Lady attempting to leave train in motion.
22 ,,	...	...	...	1	...	...	...	...	...	...	Lady attempting to leave train in motion.
23 ,,	...	...	...	1	...	...	...	...	...	...	Man injured by the jib of a crane striking him.
24 ,,	...	...	1	...	...	...	...	...	...	...	Man attempting to enter train in motion.
25 ,,	...	...	...	...	...	...	...	1	...	...	Fireman fell over a bridge.
25 ,,	...	...	...	...	...	...	...	1	...	...	Servant's foot run over.
28 ,,	...	...	...	...	...	...	...	1	...	...	Lady attempting to leave train in motion.
30 ,,	1	...	...	...	1	1	...	...	...	...	Engine left the rails near Teralba.
1 Oct....	...	...	...	...	...	...	...	1	...	...	Fireman fell from engine.
1 ,,	...	...	...	1	...	...	...	...	...	...	Man attempting to join train in motion.
7 ,,	...	...	...	...	...	...	...	3	...	...	Fettlers slightly injured; trolly run into.
8 ,,	...	...	...	...	...	...	1	...	...	...	While crossing from one platform to another.
9 ,,	...	...	...	...	...	3	...	...	...	...	Slightly injured jumping from goods train.
9 ,,	...	1	...	...	...	...	...	...	...	...	Man injured through portion of train breaking away.
10 ,,	...	...	...	...	...	...	...	1	...	...	Telegraph repairer struck by buffer-beam of an engine.
12 ,,	...	...	...	...	...	...	...	1	...	...	Man crushed between buffers of wagons.
12 ,,	...	...	...	1	...	...	...	...	...	...	Lady attempting to leave train in motion.
12 ,,	...	...	...	...	...	1	...	...	...	...	Flagman injured by wagon.
12 ,,	...	...	...	...	...	...	...	1	...	...	Porter's leg injured unloading wool.
14 ,,	...	...	...	...	...	1	...	...	...	...	Porter's leg injured by a horse.
14 ,,	...	...	...	...	...	...	...	2	...	...	Contractor's men injured by a passing engine.
14 ,,	...	...	...	...	...	...	1	...	...	...	Porter run over.
14 ,,	...	...	...	...	...	...	1	...	...	...	Porter run over.
17 ,,	...	...	...	...	...	...	...	1	...	...	Porter injured whilst coupling trucks.
19 ,,	...	...	...	...	...	...	1	...	...	...	Contractor's employee run over.
19 ,,	...	...	...	1	...	...	...	...	...	...	Man stepped into an ash-pit.
19 ,,	...	...	...	...	...	...	1	...	...	...	Signalman run over.
19 ,,	...	...	...	...	...	...	...	1	...	...	Ganger knocked down.
22 ,,	...	...	...	...	...	...	...	1	...	...	Shunter's fingers crushed while coupling train.
26 ,,	...	...	...	...	...	...	...	1	...	...	Guard injured through van colliding with buffer stops.

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APPENDIX XXII—*continued.*

Date of Accident	Passengers killed or injured.				Servants of the Department or of Contractors killed or injured.				Trespassers, &c.		Nature of Accident.
	Causes beyond their control.		Their own misconduct or want of caution.		Causes beyond their control.		Their own want of caution.		Own want of caution.		
1891.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
26 Oct.								1			Guard sprained ankle during shunting operations.
26 "				1							A lady alighting from train in motion.
27 "								1			Shunter's foot crushed by the wheel of a waggon.
28 "									1		Child struck by an engine while crossing the line.
30 "				1							Man alighting from train fell and cut his face.
31 "							1				Porter run over when detaching a horse-box.
31 "								1			Porter's foot crushed while unloading rails.
2 Nov.				1							Man's finger crushed by carriage door.
3 "		1									Man's rib broken through derailment of trucks.
3 "								1			Porter fell from a load of wool.
3 "						1					Porter injured while shooting a waggon.
5 "						3					Driver and firemen injured. Train derailed.
7 "								1			Carriage cleaner's foot and knee slightly injured.
13 "								1			Wool-checker fell off a waggon.
17 "							1				Night-officer attempting to enter train in motion.
17 "				1							Lady attempting to leave train in motion.
17 "				1							Lady attempting to leave train in motion.
17 "		1									Lady knocked down by a platform trolly.
20 "								1			Porter sprained his ankle.
21 "						2					Guard and fireman slightly injured in a collision.
21 "		1									Man slightly injured in a collision.
22 "								1			Guard's finger crushed during shunting.
28 "						1					Ticket collector pushed off the platform; sprained his ankle.
30 "							1				Fireman fell from his engine and was run over.
1 Dec.						1					Fettler struck by an engine.
3 "								1			Porter fell from a truck.
5 "								1			Porter's thumb crushed.
5 "				1							Gentleman fell from a 2nd class car.
7 "							1				Shunter run over at Auburn.
8 "								1			Porter's hand crushed.
9 "						4					Injured through derailment of ballast train.
10 "								1			Porter crushed between two bales while loading wool.
11 "								1			Porter's hand crushed by a rail.
15 "								1			Porter's hand cut while unloading wool.
15 "								1			Contractor's employee's foot run over.
16 "								1			Constable, on duty, crushed between door and waggon.
17 "								1			Porter injured loading wool.
20 "								1			Contractor's employee attempting to get on truck in motion.
21 "								1			Porter's back injured by bale of wool.
21 "								1			Guard's hand crushed by door of brake-van.
21 "										1	Lady struck by the engine of goods train.
22 "			1								Gentleman run over crossing the line.
23 "								1			Ganger fell from a waggon.
23 "								1			Night-officer fell from platform.
24 "								1			Guard attempting to enter brake-van in motion.
27 "										1	Man found with both feet cut off.
27 "			1								Employee alighted from train on wrong side, and fell on rail.
28 "								1			Porter fell off goods shed platform.
29 "								1			Man's hand crushed while unloading rails.
30 "				1							Lady attempting to alight from train in motion.
30 "								1			Fireman knocked down at Newcastle.
30 "								1			Shunter's foot injured through jumping off engine in motion.
30 "								1			Porter's foot crushed while unloading rails.
30 "								1			Shunter's leg injured during shunting operations.
1892.											
2 Jan.				1							Man attempting to alight from train in motion.
8 "								1			Night-officer sprained his ankle while shunting.
8 "								1			Fireman struck his head against water crane.
11 "								1			Porter's foot crushed whilst loading rails.
13 "								1			Assistant guard injured through falling off a waggon.
13 "								1			Fettler was struck by a piece of coal falling from engine.
15 "						1					Fettler struck by bottle thrown from passing train.
16 "								1			Per. way employee fell down sub-way.
18 "								1			Fireman fell from his engine.
18 "								1			A guard fell from a waggon at Cardiff.
19 "			1								Man attempting to enter a carriage in motion.
20 "								2			Contractor's employees injured by a fall of earth.
20 "								1			Porter's leg crushed by a carriage door.
21 "								1			Contractor's employee fell from a waggon in motion.
21 "								1			Porter fell off a carriage.
23 "		1									Gentleman's leg injured through a collision.
26 "								1			Shunter's leg injured during shunting operations.
28 "				1							Boy left train in motion.
1 Feb.								1			Fireman came in contact with sheep-race.
1 "								1			Porter injured through jumping off waggon.
4 "										1	Boy's leg crushed.
6 "				1							Girl fell from carriage before train came to a stand.
7 "							1				Ganger run over.
9 "						1					Fireman scalded by steam of assisting engine.
9 "								1			Porter injured by a piece of iron falling on his foot.
10 "			1								Lady run over while crossing the line.
15 "								1			Man alighting from train in motion.
16 "								1			Porter fell off the landing.
18 "				1							Man knocked down crossing the line.

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APPENDIX XXII—*continued.*

Date of Accident.	Passengers killed or injured.				Servants of the Department or of Contractors killed or injured.				Trespassers, &c.		Nature of Accident.
	Causes beyond their control.		Their own misconduct or want of caution.		Causes beyond their control.		Their own want of caution.		Own want of caution.		
1892.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
20 Feb.	...	...	...	...	...	...	...	1	...	...	Porter injured by a sprag.
27 "	...	...	...	1	...	...	...	...	...	...	Man attempting to enter carriage in motion.
1 Mar.	...	...	...	...	...	1	...	...	...	...	Porter knocked down by horses.
4 "	...	...	...	...	...	1	...	...	...	...	Assistant guard's foot injured.
4 "	...	...	...	...	...	...	...	1	...	...	Contractor's employee's leg broken by a rail.
5 "	...	...	...	...	...	...	...	...	1	...	Man threw himself in front of the train.
6 "	...	...	...	1	...	...	...	...	...	...	Lady attempting to alight from a train in motion.
7 "	...	...	...	1	...	...	...	...	...	...	Lady attempting to enter a carriage in motion.
7 "	...	...	...	...	...	...	...	1	...	...	Guard's hand injured while coupling wagons.
8 "	...	...	...	...	...	...	...	...	...	1	Girl knocked down at an unauthorised crossing.
9 "	...	...	...	...	...	...	...	1	...	...	Porter injured by a piece of coal falling on him.
9 "	...	...	...	...	...	...	...	1	...	...	Guard's leg injured during shunting operations.
10 "	...	...	...	...	...	1	...	...	...	...	Assistant guard injured by collision.
10 "	...	...	...	...	...	...	...	1	...	...	Guard slightly injured by a sprag.
11 "	...	...	...	...	...	...	...	1	...	...	Guard injured during shunting operations.
12 "	...	...	...	...	...	...	...	1	...	...	Guard's hand crushed attempting to sprag a wagon.
14 "	...	...	1	...	...	...	...	...	...	...	Lady attempting to enter a train in motion.
15 "	...	...	...	...	...	...	...	1	...	...	Contractor's employee struck on head by passing train.
23 "	...	...	...	...	...	...	1	...	...	...	Gatekeeper run over.
24 "	...	...	...	...	...	...	...	1	...	...	Fettler slightly injured by engine running into trolly.
25 "	...	...	...	...	...	...	...	1	...	...	Porter injured while cleaning the window of carriage.
26 "	...	...	...	...	...	...	1	...	...	...	Employee run over.
27 "	...	...	...	...	...	...	...	1	...	...	Porter's foot run over.
28 "	...	1	...	...	...	...	...	...	...	...	Lady injured at level crossing.
30 "	...	...	...	...	...	...	...	1	...	...	Fireman fell from his engine.
1 April.	...	...	...	...	...	...	...	1	...	...	Fireman fell from an engine.
4 "	...	...	...	1	...	...	...	...	...	...	Man jumped from train in motion.
4 "	...	...	...	...	...	...	...	1	...	...	Station-master when crossing line struck by engine.
6 "	...	...	...	...	...	1	...	...	...	...	Guard struck by the door of a van.
6 "	...	...	...	...	...	...	...	...	...	1	Woman struck by footboard of carriage.
7 "	...	...	...	...	...	...	...	1	...	...	Contractor's employee struck by engine of passing train.
7 "	...	...	...	...	...	...	...	1	...	...	Clerk attempting to get on goods shed platform.
8 "	...	...	...	...	...	...	...	1	...	...	Porter's foot run over during shunting operations.
14 "	...	...	...	...	...	...	1	...	...	...	Gate-keeper run over.
14 "	...	...	...	...	...	...	1	...	...	...	Contractor's employee run over.
16 "	...	...	...	...	...	...	...	...	1	...	Man run over.
16 "	...	...	...	...	...	...	...	1	...	...	Man fell from a truck of hay.
22 "	...	...	...	...	...	...	1	...	...	...	Flagman run over at Mittagong.
23 "	...	...	...	...	...	...	...	1	...	...	Driver came in contact with electric-light pole.
25 "	...	...	...	...	...	...	...	1	...	...	Permanent-way employee fell over a bridge.
26 "	...	...	...	...	...	1	...	...	...	...	Fireman jumped from his engine.
26 "	1	3	...	...	...	...	...	...	...	...	Accident to Sells Brothers' Circus employees rear collision.
27 "	8	9	...	...	1	2	...	...	...	...	Part of down western mail left the rails near Tarana, broken rail.
28 "	...	1	...	...	...	...	...	...	...	...	Passenger's arm struck by wagon door.
29 "	...	...	...	1	...	...	...	...	...	...	Lady attempting to alight from a train in motion.
30 "	...	...	...	...	...	...	...	...	1	...	Man run over near Teralba.
3 May.	...	...	...	1	...	...	...	...	...	...	Lady attempting to alight from a train in motion.
4 "	...	...	...	...	...	...	1	...	...	...	Shunter crushed between buffers at Dubbo.
5 "	...	...	...	...	...	...	...	1	...	...	Man slightly injured when unloading goods.
5 "	...	...	...	...	...	...	...	...	1	...	Man run over at Muswellbrook.
6 "	...	...	...	1	...	...	...	...	...	...	Man struck by train when crossing the line.
6 "	...	...	...	...	...	...	...	1	...	...	Porter fell between truck and platform.
9 "	...	...	...	...	...	...	...	1	...	...	Porter's foot crushed during shunting operations.
10 "	...	...	...	...	...	...	...	1	...	...	A porter injured during shunting operations.
11 "	...	...	...	...	...	...	...	1	...	...	Permanent-way employee injured when loading rails.
12 "	...	...	...	1	...	...	...	...	...	...	Boy in attempting to leave train in motion.
13 "	...	...	...	...	...	...	...	1	...	...	Contractor's employee struck by train.
13 "	...	...	...	...	...	...	...	1	...	...	Porter injured while unloading a case.
16 "	...	...	...	...	...	...	...	1	...	...	Porter slightly injured during shunting operations.
17 "	...	...	...	...	...	...	...	1	...	...	Shunter crushed between the dock and a horse-box.
26 "	...	...	...	...	...	...	...	1	...	...	Porter's foot crushed by a cart.
29 "	...	...	...	...	...	...	...	1	...	...	Shunter's arm crushed between buffers.
2 June.	...	...	...	...	...	...	...	1	...	...	Fettler's leg injured through his trolly being run into.
3 "	...	...	...	...	...	...	...	1	...	...	Foreman injured by jumping off a trough.
6 "	...	...	...	...	...	...	...	1	...	...	Contractor's employee's foot crushed by a trolly.
6 "	...	...	...	...	...	1	...	...	...	...	Guard scalded by steam from an engine.
6 "	...	...	...	...	...	...	...	1	...	...	Messenger's leg cut.
7 "	...	...	...	...	...	...	...	1	...	...	Guard crushed during shunting operations.
10 "	...	...	...	...	...	...	...	...	...	...	Laborer's leg bruised by a rail falling on it.
11 "	...	...	...	...	...	...	...	1	...	...	Porter's arm crushed by wagon.
13 "	...	...	...	1	...	...	...	...	...	...	Lady attempting to alight from train in motion.
21 "	...	...	...	...	...	...	1	...	...	...	Fettler found in a cutting.
23 "	...	...	...	...	...	...	1	...	...	...	Fettler run over.
28 "	...	...	...	...	...	...	...	1	...	...	Porter's foot crushed while loading rails.
28 "	...	...	...	...	...	...	...	1	...	...	Guard injured during shunting operations.
29 "	...	...	...	1	...	...	...	...	...	...	Man attempting to enter a train in motion.
30 "	...	...	...	...	...	...	...	1	...	...	Fettler knocked down.

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APPENDIX XXIII.

RETURN showing the Total Mileage of each Engine for year ending 30th June, 1891.

No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.
1	28,772	74	31,304	141	23,834	208	34,557	275	39,340	342	39,589	409	Nil.
2	23,562	75	5,100	142	28,329	209	24,459	276	32,516	343	33,794	410	22,387
3	28,967	76	7,880	143	18,158	210	26,717	277	29,583	344	27,608	411	42,193
4	30,171	77	7,126	144	10,320	211	36,574	278	27,201	345	34,659	412	30,257
5	11,089	78	6,826	145	27,608	212	32,331	279	32,880	346	44,569	413	39,414
10	10,046	79	23,529	146	23,214	213	24,194	280	30,994	347	33,351	414	17,837
13	7,921	80	27,163	147	28,056	214	27,654	281	39,228	348	40,402	415	18,538
14	28,408	81	33,345	148	23,028	215	29,491	282	41,305	349	28,085	416	39,257
15	18,647	82	19,996	149	25,882	216	25,550	283	21,456	350	30,767	417	22,817
16	27,432	83	37,147	150	25,181	217	21,686	284	28,359	351	25,748	418	23,585
17	23,270	84	30,522	151	26,030	218	30,827	285	12,369	352	16,302	419	36,518
18	24,132	85	28,126	152	23,014	219	27,958	286	15,856	353	27,028	420	23,189
19	16,392	86	27,191	153	23,121	220	29,233	287	23,922	354	20,043	421	28,451
20	22,555	87	24,976	154	22,062	221	26,990	288	28,080	355	14,486	422	36,337
21	28,894	88	9,481	155	21,838	222	26,021	289	23,666	356	29,426	423	28,898
22	24,215	89	42,457	156	24,309	223	35,467	290	20,743	357	24,780	424	28,423
23	Nil.	90	19,605	157	17,871	224	26,282	291	37,197	358	32,369	425	36,823
24	13,716	91	30,670	158	31,025	225	27,561	292	14,948	359	19,826	426	29,905
25	25,269	92	32,826	159	34,538	226	28,914	293	15,428	360	14,037	427	23,038
26	23,835	93	37,025	160	35,857	227	30,352	294	26,391	361	26,307	428	37,155
27	21,373	94	34,540	161	31,232	228	27,422	295	21,141	362	25,773	429	32,450
28	3,230	95	30,320	162	33,215	229	29,226	296	23,520	363	38,456	430	21,615
29	5,320	96	32,325	163	15,772	230	32,956	297	19,951	364	22,083	431	31,049
30	9,739	97	33,222	164	35,091	231	26,754	298	22,973	365	22,462	432	35,238
31	5,568	98	28,179	165	25,503	232	33,698	299	18,037	366	30,078	433	27,491
32	20,862	99	28,607	166	32,341	233	32,902	300	20,651	367	21,276	434	28,373
33	9,232	100	33,403	167	33,080	234	30,025	301	16,691	368	23,275	435	35,600
34	16,685	101	33,958	168	22,840	235	34,872	302	18,011	369	26,588	436	34,606
35	21,780	102	33,916	169	22,399	236	31,664	303	22,415	370	21,318	437	38,797
36	Nil.	103	25,688	170	32,130	237	24,760	304	29,948	371	26,202	438	39,146
37	22,936	104	34,150	171	28,873	238	33,174	305	16,476	372	33,841	439	40,845
38	18,353	105	1,135	172	42,094	239	35,436	306	28,270	373	36,810	440	41,376
39	31,916	106	35,976	173	29,828	240	19,185	307	25,084	374	25,747	441	37,250
40	18,360	107	24,517	174	33,805	241	19,991	308	33,876	375	36,480	442	37,566
41	6,603	108	28,730	175	53,457	242	28,288	309	19,080	376	24,362	443	42,660
42	17,296	109	30,734	176	18,592	243	33,796	310	29,876	377	45,356	444	41,236
43	10,846	110	32,840	177	32,192	244	32,210	311	31,152	378	39,865	445	35,442
44	25,979	111	37,004	178	23,883	245	35,902	312	17,813	379	24,170	439 Engines.	
45	10,856	112	20,319	179	31,224	246	28,167	313	30,725	380	24,753	Mileage of old Engines since renewal.	
46	33,043	113	27,252	180	29,227	247	34,238	314	37,183	381	38,744		
47	21,859	114	27,084	181	41,513	248	36,734	315	36,619	382	37,559		
48	24,873	115	27,308	182	24,571	249	21,074	316	38,247	383	40,886	5	5,039
49	23,158	116	26,864	183	36,420	250	32,070	317	29,185	384	30,224	10	20,576
50	21,544	117	23,185	184	36,204	251	24,824	318	22,030	385	40,760	11	15,114
51	27,977	118	23,220	185	30,837	252	16,900	319	30,023	386	30,058	13	122
52	22,780	119	15,850	186	33,458	253	32,980	320	28,590	387	31,355	29	558
53	23,966	120	27,363	187	32,978	254	37,401	321	36,602	388	5,630	31	2,601
54	18,795	121	28,864	188	31,001	255	37,563	322	24,427	389	4,614	60	29,222
55	23,274	122	27,550	189	32,937	256	35,477	323	30,547	390	4,652	61	32,795
56	19,646	123	30,498	190	26,401	257	35,745	324	32,816	391	5,050	62	23,731
57	19,105	124	21,638	191	30,824	258	44,926	325	36,114	392	5,852	63	22,050
58	15,961	125	20,506	192	30,272	259	44,425	326	38,176	393	6,605	64	29,084
59	20,582	126	26,963	193	28,549	260	27,612	327	27,669	394	13,916	65	15,479
60	11,451	127	17,134	194	33,136	261	30,397	328	41,708	395	36,346	75	24,468
61	7,333	128	16,378	195	33,230	262	39,834	329	37,184	396	35,144	76	13,696
62	11,537	129	9,486	196	24,871	263	34,591	330	38,245	397	18,584	77	15,802
63	11,554	130	5,700	197	28,118	264	37,803	331	25,501	398	23,988	78	17,547
64	11,396	131	30,582	198	24,462	265	28,251	332	28,704	399	26,148	388	Nil.
65	7,550	132	19,982	199	26,496	266	34,052	333	33,546	400	16,243	389	7,801
66	35,664	133	17,996	200	30,396	267	30,387	334	37,083	401	9,962	390	Nil.
67	18,752	134	33,111	201	20,706	268	29,915	335	39,716	402	Nil.	392	9,983
68	26,028	135	33,298	202	28,248	269	40,260	336	30,550	403	6,927	393	Nil.
69	25,148	136	32,392	203	35,362	270	30,014	337	37,527	404	24,220	403	30,363
70	19,260	137	34,650	204	22,598	271	38,289	338	38,381	405	25,175	395	654
71	25,427	138	27,909	205	26,295	272	20,399	339	38,047	406	17,093	396	Nil.
72	36,223	139	25,018	206	24,966	273	30,630	340	39,718	407	24,429	99	13,572
73	11,712	140	22,248	207	29,564	274	38,946	341	42,669	408	18,659		Engines.

Grand total mileage ... ... 12,118,682 miles.

APPENDIX XXIV.

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APPENDIX XXIV.

RETURN showing the Total Mileage of each Engine for year ending 30th June, 1892.

No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.	No. of Engine.	Miles run.
1	30,166	68	13,929	133	20,780	210	31,293	281	22,635	352	7,272	423	14,037	Mileage of old engines renewed.	
2	26,566	69	14,170	140	19,294	211	12,805	282	28,150	353	18,128	424	27,097		
3	30,881	70	27,800	141	20,298	212	32,349	283	29,349	354	34,713	426	22,452		
4	10,542	71	39,668	142	21,148	213	16,532	284	25,951	355	7,134	425	26,145	10	5,620
5	31,855	72	9,278	143	37,076	214	37,167	285	15,218	356	19,991	427	26,347	14	14,428
6	14,494	73	20,774	144	23,906	115	28,421	286	14,698	357	27,719	429	33,245	15	34,728
7	14,710	74	30,247	145	26,755	216	26,378	287	10,617	358	20,969	429	8,046	16	10,692
8	15,026	75	29,776	146	32,649	217	24,023	288	20,097	359	28,048	430	17,366	17	10,236
9	13,879	76	34,303	147	22,439	218	32,970	289	18,206	360	19,933	431	13,223	18	16,398
10	30,281	77	32,585	148	31,393	219	25,148	290	19,025	361	20,323	432	25,095	19	13,785
11	15,360	78	25,583	149	26,171	220	25,285	291	28,182	362	14,494	433	31,227	20	18,321
12	11,936	79	23,149	150	27,437	221	30,140	292	6,771	363	22,426	434	37,139	21	20,476
12 (Motor.)	112	80	30,784	151	14,915	222	39,317	293	6,609	364	20,355	435	29,570	22	2,106
		81	7,387	152	22,648	223	22,190	294	14,507	365	25,136	436	36,054	30	6,829
13	29,442	82	13,419	153	30,303	224	30,719	295	14,230	306	24,093	437	36,101	37	16,286
13 (Motor.)	2,455	83	30,400	154	14,127	225	34,938	296	13,693	367	14,432	438	36,052	38	28,694
		84	22,085	155	31,899	226	28,204	297	17,300	368	19,092	439	35,320	39	17,078
14	27,665	85	28,352	156	21,252	227	23,530	298	8,511	369	22,859	440	34,619	40	14,843
15	23,258	86	28,765	157	19,268	228	37,036	299	14,570	370	35,040	441	30,899	41	22,124
16	24,660	87	11,253	158	33,886	229	25,820	300	11,720	371	27,755	442	30,541	42	24,169
17	1,706	88	35,408	159	32,626	230	29,908	301	16,319	372	29,187	443	35,877	43	14,458
18	7,267	89	37,635	160	26,324	231	36,315	302	14,651	373	20,892	444	24,497	44	19,951
19	8,415	90	22,789	161	30,849	232	24,384	303	18,954	374	18,001	445	35,714	45	85
20	8,690	91	27,925	162	21,550	233	26,918	304	29,806	375	31,239	446	28,944	46	10,501
21	2,368	92	23,512	163	26,329	234	37,504	305	66,823	376	38,981	447	21,176	47	Nil.
22	5,792	93	25,746	164	20,502	235	32,368	306	24,014	377	27,876	448	26,663	48	6,030
23	Nil.	94	24,943	165	21,932	236	26,995	307	21,922	378	28,690	449	22,049	49	3,383
24	Nil.	95	20,748	166	18,858	237	32,115	308	17,118	379	26,791	450	19,058	50	50
25	753	96	24,121	167	9,062	238	25,124	309	28,176	380	42,750	451	24,284	51	25,279
25	20,242	97	27,004	168	21,280	239	8,911	310	23,572	381	19,645	452	20,520	52	12,471
27	6,809	98	23,009	169	15,045	240	33,951	311	24,908	382	35,686	453	22,145	53	Nil.
28	Nil.	99	24,283	170	21,015	241	38,010	312	31,956	383	25,874	454	21,384	54	19,154
29	30,758	100	30,370	171	21,864	242	27,238	313	24,050	384	34,371	455	18,738	55	19,878
30	23,398	101	26,908	172	36,200	343	16,321	314	24,424	385	37,948	456	16,920	56	Nil.
31	31,645	102	34,243	173	22,373	244	16,267	315	19,565	386	15,249	457	22,047	57	4,778
32	12,501	103	6,142	174	24,560	245	30,984	316	21,802	387	24,012	458	11,188	58	17,336
33	2,305	104	27,737	175	13,654	246	29,734	317	13,648	388	31,098	459	8,008	59	17,216
34	18,134	105	29,958	176	30,914	247	16,393	318	30,916	389	32,469	460	10,247	60	22,144
35	6,157	106	25,363	177	22,989	248	25,899	319	19,941	390	26,016	461	8,785	61	2,396
36	26,364	107	30,085	178	15,602	249	30,709	320	24,662	391	6,853	462	5,228	62	22,270
37	25,809	108	16,445	179	31,669	250	35,382	321	19,445	392	28,402	463	4,403	63	13,215
38	21,101	109	31,057	180	28,620	251	29,021	322	25,817	393	32,526	464	1,422	64	14,285
39	24,408	110	35,954	181	31,669	252	33,256	323	31,436	394	7,107	465	1,655	65	13,188
40	26,664	111	24,422	182	23,272	253	33,091	324	28,687	395	29,956	466	925	66	13,527
41	29,528	112	29,580	183	26,775	254	6,704	325	16,508	396	23,863	467	350	75	14,240
42	26,861	113	27,472	184	20,829	255	40,039	326	27,444	397	6,928	483	8,396	76	39,570
43	32,108	114	28,651	185	16,989	256	41,303	327	34,746	398	3,511	484	1,272	77	30,898
44	27,023	115	25,707	186	33,595	257	43,858	328	19,134	399	1,619	485	17,007	78	11,900
45	26,249	116	22,962	187	26,015	258	22,764	329	35,073	400	2,125	486	16,344	103	406
46	20,117	117	40,500	188	21,153	259	34,657	330	35,364	401	2,082	487	15,313	127	14,986
47	29,534	118	33,576	189	27,917	260	32,243	331	11,472	402	3,198	488	18,095	128	17,124
48	25,204	119	33,511	190	18,170	261	31,471	332	24,487	403	29,725	489	20,289	129	15,415
49	18,183	120	25,149	191	16,350	262	32,275	333	30,892	404	23,951	490	20,440	292	13,364
50	14,470	121	28,459	192	25,574	263	27,833	334	28,425	405	13,902	491	17,082	293	17,950
51	23,555	122	31,343	193	30,011	264	28,438	335	9,814	406	5,410	492	10,989	394	15,196
52	13,629	123	30,685	194	35,024	265	27,197	336	29,647	407	28,848	493	11,370	397	26,098
53	17,908	124	33,904	195	22,496	266	31,674	337	37,237	408	30,093	494	16,032	398	100
54	12,391	125	21,125	196	31,633	267	41,022	338	24,486	409	28,367	495	16,235	399	23,263
55	25,924	126	14,139	197	32,066	268	34,109	339	29,677	410	31,929	496	19,419	400	Nil.
56	30,104	127	6,042	198	29,331	269	34,395	340	28,495	411	30,996	497	13,797	401	25,348
57	28,742	128	6,906	199	26,176	270	30,686	341	23,762	412	5,749	498	13,252	402	1,651
58	26,305	129	5,303	200	12,072	271	30,041	342	25,708	413	25,541	499	16,597	407	19,079
59	26,370	130	21,665	201	35,884	272	32,416	343	27,250	414	36,441	500	14,998	408	20,217
60	30,446	131	14,579	202	33,683	273	27,175	344	31,100	415	37,749	501	7,486	410	20,145
61	27,682	132	14,989	203	35,669	274	33,164	345	27,189	416	12,346	502	9,864		
62	38,871	133	15,474	204	12,885	275	39,513	346	9,042	417	12,503				
63	31,293	134	19,428	205	33,550	276	31,803	347	28,576	418	26,626	489 Engines.			
64	31,098	135	21,263	206	34,693	277	36,061	348	29,996	419	29,825				
65	29,462	136	18,607	207	29,845	278	33,641	349	30,274	420	30,280				
66	29,842	137	10,212	208	9,511	279	30,504	350	30,498	421	36,855				
67	31,217	138	16,571	209	28,837	280	29,186	351	9,393	422	21,499				

Total Engine Mileage ... ... 12,362,105 miles.

COMPARATIVE Summary of Engines running a given mileage, years ending 30th June, 1892 and 1891.

Miles.	1892.	1891.	Miles.	1892.	1891.
Nil.	9	4	25,001 to 30,000.....	110	100
Under 1,000	4	0	30,001 to 35,000.....	93	87
1,000 to 3,000.....	9	1	35,001 to 40,000.....	36	65
3,001 to 5,000.....	3	3	40,001 to 45,000.....	5	18
5,001 to 7,500.....	21	13	46,639	1	...
7,501 to 10,000.....	15	8	53,437	...	1
10,001 to 12,500.....	14	10	66,823	1	...
12,501 to 15,000.....	33	7		469	439
15,001 to 20,000.....	55	43			
20,001 to 25,000.....	86	79			

APPENDIX XXV.

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APPENDIX XXV.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

RETURN showing the Appointments of Railway Employés from 1st July, 1891, to 30th June, 1892.

Date.	Name.	Position.	Rate.	Remarks.
		SECRETARY'S BRANCH.		
1891.				
1 Dec. ...	Cantor, A. ...	Junior Clerk ...	£75 per annum ...	From Supernumerary Staff.
		CHIEF ACCOUNTANT'S BRANCH.		
22 Sept. ...	Brown, William J. ...	Clerk ...	£210 per annum ...	From Permanent-way Branch, *vice* A. Holt.
1892.				
28 Jan. ...	Miller, F. C. ...	Junior Clerk ...	£100 ,, ...	From Traffic Branch.
1 Mar. ...	Waller, F. A. ...	Apprentice Clerk ...	£50 ,, ...	From Supernumerary Staff, *vice* J. Butler.
1 April ...	Howell, Price ...	Statistical Clerk ...	£250 ,, ...	From Supernumerary Staff.
		TRAFFIC AUDITOR'S BRANCH.		
1891.				
1 Aug. ...	Walker, John ...	Clerk ...	£180 per annum ...	From Traffic Branch.
10 Sept. ...	Ellis, J. C. ...	Apprentice Clerk ...	£30 ,, ...	Vice William Wightman.
1892.				
1 May ...	Fisher, Jabez A. ...	Clerk ...	£150 ,, ...	From Supernumerary Staff.
16 ,, ...	Lackey, James ...	Apprentice Clerk ...	£30 ,, ...	*Vice* N. S. Holden.
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
1891.				
17 Aug. ...	Griffin, Joseph ...	Labourer ...	6/6 per day ...	*Vice* J. Fitzgerald.
17 ,, ...	Green, Michael ...	,, ...	6/6 ,, ...	*Vice* E. Nuttall.
17 ,, ...	Norberry, John ...	,, ...	6/6 ,, ...	*Vice* J. Joyce.
17 ,, ...	Sykes, George ...	,, ...	6/6 ,, ...	*Vice* H. Thompson.
29 ,, ...	Cooil, Richard ...	Fettler ...	6/6 ,, ...	*Vice* W. Wells.
3 Sept. ...	Maloney, Patrick ...	Labourer ...	6/6 ,, ...	*Vice* T. Pettit.
3 ,, ...	Robinson, George ...	,, ...	6/6 ,, ...	*Vice* W. Reynolds.
4 ,, ...	Bray, John ...	Fettler ...	6/6 ,, ...	*Vice* J. Galbraith.
15 ,, ...	Fisher, Alfred ...	Rough carpenter ...	8/ ,, ...	*Vice* J. Moore.
16 Oct. ...	Thom, Lindsay ...	Labourer ...	7/6 ,, ...	*Vice* T. Hunt.
19 ,, ...	Moore, Horace ...	,, ...	7/6 ,, ...	*Vice* J. O'Toole.
26 ,, ...	Thomas, C. ...	,, ...	7/ ,, ...	From Traffic Branch.
11 Nov. ...	Taylor, Samuel ...	,, ...	6/6 ,, ...	*Vice* H. O'Brien.
16 ,, ...	M'Kenna, Joseph ...	,, ...	6/6 ,, ...	*Vice* J. Kavanagh.
23 ,, ...	M'Faddien, Frank ...	Inspector ...	10/- ,, ...	From Traffic Branch.
24 ,, ...	O'Rourke, Hugh ...	Labourer ...	6/6 ,, ...	*Vice* P. Tully.
27 ,, ...	Stead, John ...	,, ...	6/6 ,, ...	*Vice* T. Filson.
11 Dec. ...	Whitlock, Charles ...	,, ...	6/6 ,, ...	*Vice* J. Daley.
15 ,, ...	Butlers, Adam ...	,, ...	6/6 ,, ...	*Vice* D. Evans.
1892.				
18 Jan. ...	Sherritt, Robert ...	Fettler ...	7/6 ,, ...	From Locomotive Branch.
1 Feb. ...	Cole, William ...	,, ...	6/6 ,, ...	*Vice* Charles Cole.
1 ,, ...	Helleman, Alfred ...	Labourer ...	6/6 ,, ...	From Supernumerary Staff, *vice* Hugh Heyburn.
23 ,, ...	Houghton, Benjamin ...	,, ...	6/6 ,, ...	*Vice* David Houghton.
1 Mar. ...	Abigail, F. J. ...	Clerk ...	£170 per annum	From Traffic Audit Branch.
10 ,, ...	M'Dermott, John ...	Labourer ...	6/6 per day ...	From Supernumerary Staff, *vice* David Lloyd.
10 ,, ...	Dunkinson, John ...	,, ...	6/6 ,, ...	From Supernumerary Staff, *vice* William Condon.
14 ,, ...	Riley, John ...	Fettler ...	7/6 ,, ...	From Supernumerary Staff, *vice* Richard Allison.
17 ,, ...	Wilson, Allen ...	,, ...	6/6 ,, ...	*Vice* William Lewis.
17 ,, ...	Kirk, Edward ...	Labourer ...	6/6 ,, ...	*Vice* John Cooper.
18 ,, ...	Trimmer, Henry ...	,, ...	6/6 ,, ...	*Vice* John Clitts.
19 ,, ...	Sidwell, William ...	,, ...	6/6 ,, ...	*Vice* Joseph Cahill.
21 ,, ...	Jobson, James ...	,, ...	6/6 ,, ...	*Vice* John Black.
21 ,, ...	Tynan, John ...	,, ...	6/6 ,, ...	*Vice* Joseph Bullman.
22 ,, ...	Gilligan, Michael ...	,, ...	6/6 ,, ...	*Vice* Thomas Pollyblank.
26 ,, ...	Carter, John ...	,, ...	6/6 ,, ...	*Vice* Robert McCoy.
1 April ...	Moffatt, W. T. ...	Surveyor ...	£210 per annum	From Supernumerary Staff.
8 ,, ...	M'Crea, Francis ...	Fettler ...	6/6 per day ...	,, ,, *vice* W. Riddle.
11 ,, ...	Bray, Albert ...	Labourer ...	6/6 ,, ...	*Vice* H. Stevens.
15 ,, ...	Keevers, Matthew ...	,, ...	7/6 ,, ...	From Supernumerary Staff, *vice* R. Sims.
22 ,, ...	Jacobs, James ...	,, ...	6/6 ,, ...	,, ,, *vice* T. Beck.
22 ,, ...	Cassell, John ...	,, ...	6/6 ,, ...	,, ,, *vice* J. Crabtree.
22 ,, ...	Harding, Robert ...	,, ...	6/6 ,, ...	,, ,, *vice* E. Coll.
22 ,, ...	Anderson, Henry ...	Fettler ...	6/6 ,, ...	,, ,, *vice* B. Treloar.
22 ,, ...	Bailey, Chas. ...	,, ...	6/6 ,, ...	,, ,, *vice* S. Jenkins.
22 ,, ...	Unwin, William ...	,, ...	6/6 ,, ...	,, ,, *vice* T. Driscoll.
22 ,, ...	York, William ...	,, ...	6/6 ,, ...	,, ,, *vice* J. Lowndes.
22 ,, ...	Rillett, W. ...	,, ...	6/6 ,, ...	,, ,, *vice* J. Mitchell.
22 ,, ...	Farnsworth, Eli ...	,, ...	7/- ,, ...	,, ,, *vice* J. McGann.
22 ,, ...	Hartigan, Andrew ...	,, ...	7/6 ,, ...	,, ,, *vice* G. Stacey.

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APPENDIX XXV—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH—*continued.*		
1892.				
22 April	Swan, George	Fettler	6/6 per day	From Supernumerary Staff, *vice* J. Baker.
22 "	Walsh, James	Labourer	6/6 "	*vice* R. Ashford.
22 "	Ferry, Simon	"	6/6 "	*vice* W. Smith.
22 "	Brennan, Joseph	Fettler	6/6 "	*vice* J. McCudden.
22 "	Barrett, John	"	7/6 "	*vice* W. Barnett.
22 "	Lawrence, George	"	6/6 "	*vice* J. Scanlon.
22 "	Seivers, Frank	"	6/6 "	*vice* R. Sherritt.
22 "	Lewis, Alfred	"	6/6 "	*vice* J. Gilligan.
29 "	Horan, Martin	Labourer	6/6 "	*Vice* J. Leary.
29 "	Lynch, William	"	7/- "	From Supernumerary Staff, *vice* W. Bowe.
29 "	Riles, Benjamin	Fettler	7/6 "	*vice* A. Duggan.
29 "	Howlett, Thomas	Labourer	7/- "	*vice* J. McGuire.
29 "	Uhrig, Jacob	"	6/6 "	*vice* M. Cahill.
29 "	Parsons, Frederick	Office boy	2/- "	
29 "	Broad, Jonathan	Fettler	7/- "	
29 "	Morris, Alfred	"	7/6 "	*vice* W. Mills.
29 "	Mitchell, Robert	"	7/- "	*vice* R. Johnson.
29 "	McCarthy, Francis	"	7/6 "	*vice* P. Cannon.
29 "	Acland, Alfred	"	7/6 "	*vice* W. Bell.
29 "	Nugent, Patrick	"	7/6 "	*vice* J. McKay.
29 "	O'Shea, Alfred	"	7/6 "	*vice* M. Mugivan.
29 "	O'Donnell, Patrick	"	7/6 "	*vice* C. Marshall.
29 "	Eggleston, John	"	6/6 "	*vice* C. May.
29 "	Williams, James	"	7/6 "	*vice* J. Howell.
29 "	Olsen, Alfred	"	6/6 "	*vice* H. Archard.
29 "	Tanner, Frederick	"	7/6 "	*vice* E. Travers.
29 "	Sherwin, Jno.	"	7/- "	*vice* J. Woods.
29 "	Purtill, John	"	7/6 "	*vice* P. Joyce.
29 "	Bowman, Henry	"	7/6 "	*vice* W. Most.
29 "	Ralph, George	"	7/- "	*vice* T. Naylon.
29 "	Hooker, Alexander	"	7/- "	*vice* J. Eady.
29 "	Taylor, George	Labourer	7/- "	*vice* T. Couldrake.
29 "	Lyle, Frederick	"	7/- "	*vice* E. McCarthy.
29 "	O'Donnell, John	"	7/6 "	*vice* J. Byrnes.
29 "	Clarke, Michael	Fettler	7/6 "	*vice* J. Clifford.
29 "	Davidson, James	"	6/6 "	*vice* W. Good.
29 "	McKervey, Patrick	"	7/6 "	*vice* T. Davies.
29 "	Thompson, David	"	7/6 "	*vice* G. Oram.
29 "	McFadden, John	"	7/6 "	*vice* E. Hogan.
29 "	Sweeney, Michael	"	7/- "	*vice* R. McDonald.
29 "	McGrath, James	Ganger	8/6 "	
29 "	Gavenlock, James	Fettler	7/- "	*vice* John Drinkwater.
29 "	Swan, George	"	7/- "	*vice* W. Bowen.
29 "	Albern, William	"	6/6 "	*vice* W. Duggan.
1 May	Melville, W. R. H.	Draftsman (cadet)	£52 per annum	
1 "	Moore, A. J.	Clerk	10/- per day	
6 "	Conlon, John	Labourer	7/6 "	*vice* R. Lampshire.
6 "	Murphy, Patrick	"	6/6 "	*vice* E. Stubbs.
6 "	Brown, Richard	Office boy	2/- "	
6 "	Moloney, Patrick	Fettler	6/6 "	*vice* T. Pettitt.
6 "	Protheroe, William	Labourer	6/6 "	*vice* J. Taylor.
6 "	Parkinson, William	"	6/6 "	*vice* O. Sherlock.
6 "	Jenkins, Thomas	"	7/6 "	*vice* H. Adams.
9 "	Jamieson, Chas.	"	6/6 "	*Vice* P. Larkins.
16 "	Neale, Arthur	"	7/6 "	From Locomotive Branch.
23 "	Horan, James	"	6/6 "	*Vice* E. Puckett.
26 "	McMahon, William	"	6/6 "	*Vice* F. Boots.
1 June	Light, E. E.	Assistant Engineer	£300 per annum	From Supernumerary Staff.
1 "	Cockburn, W. J.	Clerk	£125 "	
3 "	McConaghy, H.	Office boy	2/- per day	*Vice* Black.
3 "	Diege, Alfred	Labourer	6/6 "	From Supernumerary Staff.
3 "	Byron, Thomas	"	7/- "	
3 "	Scott, James	"	6/6 "	
3 "	Harding, John	"	6/6 "	
3 "	Dignam, John	"	7/- "	*vice* W. Barton.
3 "	Arkinstall, William	"	6/6 "	*vice* H. Fuller.
3 "	Harper, Uriah	"	6/6 "	*vice* J. Joyce.
3 "	Mordlock, George	"	7/6 "	
3 "	Williams, William	Painter	8/6 "	*vice* W. Stevenson.
3 "	Blogg, Thomas	Labourer	7/- "	
3 "	M'Dermott, J.	"	6/6 "	*vice* D. Lloyd.
10 "	Hughes, Augustus	"	7/- "	
10 "	Bourke, Edward	Fettler	7/- "	*vice* W. Adamson.
10 "	Parish, William	Labourer	7/- "	*vice* E. McCormack.
10 "	Stephens, Alfred	"	6/6 "	*vice* J. Cousin.
10 "	Randall, Alfred	"	7/- "	
10 "	Plowman, Frederick	"	6/6 "	*vice* R. Melmouth.
10 "	Malcolm, Peter	Fettler	7/- "	*vice* J. Crossingham.
10 "	Gibson, William	"	7/- "	*vice* J. Liddell.
10 "	Cole, William	"	6/6 "	*vice* C. Cole.
10 "	Taylor, Samuel	Labourer	6/6 "	
13 "	Horner, C.	"	6/6 "	*vice* J. Cheetham.
14 "	Davis, George	"	7/6 "	*vice* R. Riley.
14 "	Jaques, Thomas	"	6/6 "	*vice* R. McAllister.
14 "	Harding, Francis	"	6/6 "	*vice* J. Whalan.

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APPENDIX XXV—*continued.*

Date	Name	Position.	Rate.	Remarks.
		CHIEF MECHANICAL ENGINEER'S BRANCH.		
1891.				
1 July	Brogan, Denis	Fuelman	6/6 per day	From Supernumerary Staff, *vice* M. Rogans.
1 "	Carlisle, A. W.	Apprentice Clerk	£30 per annum	*Vice* J. Wallace.
5 "	Padley, Thomas	Labourer	6/6 per day	From Supernumerary Staff, *vice* Thomas M'Alister.
7 "	Hazlet, Henry	Car-builder	10/- "	From Tramways, *vice* J. Doyle.
17 "	Pavey, John	Boilermakers' Assistant	7/- "	From Supernumerary Staff, *vice* W. Wardale.
17 "	Beardmore, William	Filecutter	8/6 "	*Vice* T. Woodhead.
21 "	Whyte, William	Brassfinisher	10/- "	*Vice* H. Bowles.
28 "	Acres, Randall	Cleaner	6/6 "	From Supernumerary Staff.
1 Aug.	Cullen, Alex	Fitter	10/- "	" " *vice* G. Newton.
1 "	Ewels, Henry	Cleaner	5/6 "	" " *vice* S. Evans.
1 "	Ferrier, Fred.	Fuelman	6/6 "	" " *vice* H. Parsons.
1 "	Bruderlin, Frederick	Fireman	8/- "	" " *vice* J. Rolston.
1 "	Watson, J.	Cleaner	5/- "	" " *vice* J. Bussey.
1 "	Duggan, John	Fuelman	6/6 "	" " *vice* C. Newing.
3 "	Barker, Frederick	Cleaner	3/3 "	*Vice* J. Marshall.
3 "	Bishop, James	Carpenter	10/- "	From Supernumary Staff, *vice* A. Scotland.
3 "	Summers, Charles	Cleaner	3/3 "	*Vice* Henry Sydenham.
6 "	Tisdale, Henry	Labourer	7/- "	From Supernumerary Staff, *vice* J. Pannelly.
6 "	Sykes, George	Tinsmith	9/- "	From Supernumerary Staff, *vice* C. Sykes.
7 "	Skews, A.	Striker	7/- "	*Vice* A. Thompson.
10 "	Brown, W. H.	Gasfitter	10/- "	*Vice* J. Wallach.
14 "	Oates, George	Plumber	10/- "	From Permanent-way Branch.
15 "	O'Connell, William	Cleaner	5/- "	From Supernumerary Staff, *vice* A. M'Lennan.
21 "	Meyers, Edward	Painter's Assistant	6/6 "	*Vice* J. Hayes.
22 "	Morrice, James	Blacksmith	10/8 "	From Supernumerary Staff, *vice* C. Powell.
22 "	Fuchses, Peter	Labourer	6/6 "	" " *vice* P. Leonard.
22 "	Lane, Joseph	"	6/6 "	" " *vice* J. Foreman.
1 Sept.	Gale, Thomas	Cleaner	5/- "	" " *vice* J. Wright.
1 "	Corbine, William	"	4/- "	" " *vice* R. Campbell.
1 "	Tilley, Charles	"	5/- "	From Traffic Branch, *vice* W. Christison.
7 "	Smith, Thomas	"	4/- "	From Tramways.
8 "	Pope, John L.	Fitter	11/- "	From Tramways, *vice* B. Dummer.
11 "	Leonard, Elizabeth	Upholsteress	5/- "	*Vice* Mrs. Evans.
14 "	Hallett, Arthur	Labourer	6/6 "	*Vice* W. Baker.
22 "	McCaldon, John	Fitter	10/- "	*Vice* D. Thomas.
25 "	Donald, R.	Apprentice	10d. "	*Vice* A. Doyle.
1 Oct.	Weldon, John	Fuelman	6/6 "	*Vice* R. Elliott.
8 "	Thackall, John H.	"	6/6 "	*Vice* W. Taylor.
15 "	Johnstone, John	Labourer	6/6 "	*Vice* E. Worms.
15 "	Croal, Alexander	Assistant Painter	6/6 "	*Vice* J. Hays.
20 "	Dodds, Edward	Boy	1/9 "	*Vice* H. Dawes.
26 "	Eakins, T. W.	Painter	11/- "	From Supernumerary Staff, *vice* S. Stainton.
27 "	Miller, Thomas	Labourer	7/6 "	From Permanent Way Branch, *vice* D. Daly.
27 "	Sherritt, R.	Fuelman	6/6 "	From Permanent Way Branch.
30 "	Callaghan, Margaret	Caretaker	7/6 per week	
3 Nov.	Cobb, William	Labourer	6/6 per day	*Vice* N. Munson.
4 "	Croker, Thomas	Oiler	7/3 "	From Permanent Way Branch, *vice* J. Wardale.
5 "	Grant, John	Labourer	6/6 "	*Vice* J. Smart.
8 "	White, Arthur	Fitter	10/- "	*Vice* J. Matthews.
10 "	Adair, Maria	Upholsteress	4/- "	*Vice* Mrs. Apps.
10 "	Williams, S. H.	Blacksmith	10/2 "	*Vice* J. Murray.
13 "	Stevenson, Wm.	Cleaner	5/- "	From Permanent Way Branch.
14 "	Horsfield, William	Fuelman	6/6 "	*Vice* C. Olsson.
24 "	Hodgson, Christopher	Caretaker	50/- per week	From Tramways, *vice* R. Aldrick.
18 Dec.	Sydenham, H.	Fireman	9/- per day	Reinstated.
29 "	Curran, James	Fuelman	6/6 "	*Vice* A. Wilson.
31 "	Priest, E. J.	Painter	9/- "	From Supernumerary Staff, *vice* G. Redman.
1892.				
7 Jan.	O'Donnell, Frank	Labourer	6/6 "	*Vice* J. Jolly.
7 "	Crossley, John	Assistant Boilermaker	7/- "	From Supernumerary Staff, *vice* A. Root.
11 "	McEvoy, John	Waggon Builder	10/- "	*Vice* C. Richardson.
12 "	Tideswell, Walter	Apprentice	-/10 "	*Vice* J. Warr.
18 "	McDougall, E. J.	Turner	8/- "	*Vice* J. Parkin.
20 "	Buchanan, James	Fitter	13/- "	
15 Feb.	Milwood, Henry	Coppersmith	10/- "	*Vice* D. Deekman.
15 "	Boland, Thomas	Labourer	6/6 "	*Vice* R. Stormont.
18 "	Matthews, John	Cleaner	5/- "	From Tramways.
21 "	Johnson, William	Striker	7/- "	*Vice* G. Pate.
23 "	Webb, Edward	Apprentice	-/10 "	*Vice* Arthur Beaver.
26 "	Dodds, James	"	-/10 "	*Vice* D. McKenzie.
14 Mar.	Ambrose, Henry	Apprentice Clerk	£30 per annum.	
14 "	Edwards, James	Fitter	11/4 per day	
22 April	Matthews, George	Fireman	10/- "	Re-employed.
9 May	Sims, Richard	Cleaner	5/- "	Re-employed.
11 "	Gaynor, James	Labourer	7/- "	From Supernumerary Staff, *vice* J. Byrnes.
20 "	Bell, Richard	Striker	7/- "	From Interlocking Branch, *vice* J. Cambridge.
30 "	Reid, Fred	Junior Clerk	£120 per annum	From Traffic Branch, *vice* P. Duffy.
17 June	Broadfoot, Adam	Blacksmith	10/8 per day	*Vice* D. Harris.
20 "	Stormont, Robert	C. and W. Examiner	10/8 "	Re-employed.
21 "	Ford, A. G. H.	Clerk	£130 per annum	From Traffic Branch, *vice* A. Hay.

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APPENDIX XXV—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
		CHIEF TRAFFIC MANAGER'S BRANCH.		
1891.				
6 July ...	Farnie, Jane	Gatekeeper	7/- per week ...	*Vice* Mrs. Hartigan.
6 ,, ...	Connors R.	,,	15/- ,, ...	*Vice* J. Uhrig.
10 ,, ...	Green, T. E.	Junior Porter	3/4 per day ...	*Vice* W. Ogden.
17 ,, ...	Wardale, W.	Porter	7/- ,, ...	From Locomotive Branch.
21 ,, ...	Bethel, Henry	Junior Porter	5/- ,, ...	*Vice* C. Cale.
24 ,, ...	Markwell, Mrs.	Gatekeeper	20/- per week ...	*Vice* Mrs. Radnidge.
31 ,, ...	Abbott, B.	Junior Porter	2/6 per day ...	*Vice* A. Darlington.
13 Aug. ...	Smith, Mrs.	Caretaker	20/- per week ...	*Vice* Mrs. Sinclair.
15 ,, ...	Morgan, John	Porter	7/- per day ...	From Permanent-way Branch.
21 ,, ...	Eyres, William	,,	7/- ,, ...	,, ,,
26 ,, ...	Thomas, Charles	,,	7/- ,, ...	,, ,,
28 ,, ...	Baker, Louis	,,	7/- ,, ...	,, ,,
10 Sept. ...	Farrell, James	Clerk	7/- ,, ...	*Vice* D. Gurvan.
13 ,, ...	Packer, W.	Porter	6/- ,, ...	*Vice* A. Blackburn.
21 ,, ...	Bond, Charles	Clerk	£210 per annum ...	From Interlocking Branch.
1 Oct. ...	Tuffy, Joseph	Shunter	7/6 per day ...	From Supernumerary Staff.
1 ,, ...	Wilson, J. H.	,,	6/6 ,, ...	From Supernumerary Staff, *vice* J. Burke.
1 ,, ...	Johnson, Mrs.	Gatekeeper	Free house ...	*Vice* Mrs. Fuller.
1 ,, ...	Hurst, William	Messenger	10/- per week ...	From Supernumerary Staff.
1 ,, ...	Kerr, J. G.	Apprentice Clerk	£30 per annum ...	,, ,,
1 ,, ...	Flanders, A.	Probationer	2/6 per week ...	
2 ,, ...	Rees, Mrs.	Gatekeeper	7/- ,, ...	*Vice* Mrs. Donohue.
3 ,, ...	Gould, A. W.	Porter	6/- per day ...	From Supernumerary Staff, *vice* J. Colgan.
5 ,, ...	Gibbons, H. G.	,,	6/- ,, ...	,, ,, *vice* I. Benson.
5 ,, ...	O'Brien, Hugh	,,	6/- ,, ...	From Permanent Way Branch.
6 ,, ...	Cavanough, C.	Probationer	2/6 per week ...	
12 ,, ...	Savage, Mrs.	Gatekeeper	7/- ,, ...	*Vice* Mrs. Coates.
14 ,, ...	Seldon, Oswald	Relieving Station-master ...	£180 per annum	From Traffic Audit Branch.
15 ,, ...	Dunstan, Joseph	Porter	6/- per day ...	*Vice* G. Robinson.
16 ,, ...	O'Neill, Robert	Operator	£80 per annum ...	*Vice* V. Hudson.
16 ,, ...	Swinbourne, James	Probationer	2/6 per week ...	
19 ,, ...	Furlow, W.	,,	2/6 ,, ...	
20 ,, ...	Henson, Frederick	Junior Conductor	3/4 per day ...	From Supernumerary Staff.
21 ,, ...	Dawson, George	Probationer	2/6 per week ...	
21 ,, ...	Williams, R.	,,	2/6 ,, ...	
22 ,, ...	Bruton, Mrs.	Gatekeeper	7/- ,, ...	*Vice* Mrs. Page.
23 ,, ...	Flanders, W.	Probationer	2/6 ,, ...	
24 ,, ...	Craig, Charles	Gatekeeper	5/- per day ...	*Vice* T. Miles.
25 ,, ...	McArdle, Mrs.	,,	7/- per week ...	*Vice* Mrs. Coyne.
26 ,, ...	Wall, P.	,,	15/- ,, ...	*Vice* H. Shone.
26 ,, ...	Stainton, S.	Foreman	11/- per day ...	From Locomotive Branch.
28 ,, ...	O'Leary, C.	Junior Porter	5/- ,, ...	From Supernumerary Staff.
29 ,, ...	Mercer, N.	,,	4/2 ,, ...	*Vice* M. Flannery.
29 ,, ...	Baldry, Thomas	Shunter	7/- ,, ...	*Vice* W. McCormack.
29 ,, ...	Bedall, Joseph	Porter	6/- ,, ...	*Vice* J. Johnstone.
30 ,, ...	Melville, Hugh	Probationer	2/6 per week ...	
30 ,, ...	Taylor, Vincent	Junior Porter	3/4 per day ...	From Supernumerary Staff.
30 ,, ...	Mason, Mrs.	Gatekeeper	7/- per week ...	*Vice* Mrs. Cole.
30 ,, ...	Jones, William	,,	6/- per day ...	*Vice* J. Manson.
1 Nov. ...	Heron, Frank	Porter	7/- ,, ...	From Supernumerary Staff, *vice* A. M'Kie.
1 ,, ...	O'Connor, M.	,,	6/6 ,, ...	From Supernumerary Staff.
1 ,, ...	Field, J.	Junior Porter	2/6 ,, ...	,, ,,
1 ,, ...	Vidler, G. E.	,,	3/4 ,, ...	,, ,,
1 ,, ...	Ford, F.	Porter	7/- ,, ...	From Supernumerary Staff, *vice* T. Early.
1 ,, ...	Rawlinson, L.	,,	6/6 ,, ...	From Supernumerary Staff.
1 ,, ...	Fulton, G. A.	Junior Porter	2/6 ,, ...	,, ,,
1 ,, ...	Blake, John	Porter	7/- ,, ...	,, ,,
1 ,, ...	Higgins, H. A.	Junior Porter	4/2 ,, ...	,, ,,
1 ,, ...	Norton, A.	Messenger	2/6 ,, ...	,, ,,
1 ,, ...	Turner, Sydney	Porter	6/- ,, ...	,, ,,
1 ,, ...	Kirkham, J. T.	Junior Clerk	£90 per annum	,, ,,
1 ,, ...	Farrell, Thomas	Probationer	2/6 per week ...	
1 ,, ...	Brooks, A.	,,	2/6 ,, ...	
4 ,, ...	Fulton, C.	,,	2/6 ,, ...	
6 ,, ...	Roarty, Hugh	,,	2/6 ,, ...	
6 ,, ...	Swain, William	Operator	£80 per annum	,, ,,
9 ,, ...	Thrift, A.	Probationer	2/6 per week ...	
13 ,, ...	Horn, Mrs.	Gatekeeper	7/- ,, ...	*Vice* Mrs. Bryant.
13 ,, ...	Duggan, Mrs. M.	,,	7/- ,, ...	*Vice* Mrs. Duggan.
15 ,, ...	Dowling, A.	Probationer	2/6 ,, ...	
23 ,, ...	Foreman, Sarah	Gatekeeper	7/- ,, ...	
23 ,, ...	Beaver, Arthur	Foreman	9/6 per day ...	From Locomotive Branch.
23 ,, ...	Neylon, Thomas	Gatekeeper	15/- per week ...	*Vice* Mrs. Mayne.
23 ,, ...	Hickey, J. J.	Probationer	2/6 ,, ...	
27 ,, ...	Jeavis, Frederick	Gatekeeper	15/- ,, ...	*Vice* A. Hodges.
28 ,, ...	Fleming, Mrs.	,,	7/- ,, ...	*Vice* Mrs. Kavanagh.
1 Dec. ...	Treacy, George	Junior Porter	2/6 per day ...	From Supernumerary Staff.
1 ,, ...	Harper, H. J.	Porter	6/- ,, ...	From Supernumerary Staff, *vice* E. Collingwood.
1 ,, ...	Crane, W.	Junior Porter	3/4 ,, ...	From Supernumerary Staff.
1 ,, ...	Brooks, S.	Apprentice Clerk	£50 per annum ...	,, ,,
1 ,, ...	Faull, Robert	Junior Porter	2/6 per day ...	,, ,,
1 ,, ...	Hetherton, James	Porter	6/- ,, ...	From Supernumerary Staff, *vice* J. Port.
1 ,, ...	Wattles, H. E.	Junior Porter	4/2 ,, ...	,, ,, *vice* J. Scott.
1 ,, ...	Ruhan, James	Porter	7/- ,, ...	From Supernumerary Staff.
1 ,, ...	Green, G. H.	Junior Conductor	2/6 ,, ...	,, ,,
1 ,, ...	O'Neill, Morgan	Messenger	2/6 ,, ...	,, ,,

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APPENDIX XXV—*continued.*

Date	Name.	Position.	Rate.	Remarks.
		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
1891.				
1 Dec.	Frost, John	Porter	6/- per day	From Supernumerary Staff.
2 "	Brady, H.	Probationer	2/6 per week	
3 "	Pyle, William	Junior Clerk	£110 per annum	" "
3 "	Harris, George	Gatekeeper	10/- per week	*Vice* R. Grigg.
4 "	Brownsmith, Mrs.	Platform Attendant	5/- "	
7 "	Teague, Phillip	Apprentice Clerk	£60 per annum	From Supernumerary Staff.
7 "	Dunne, James	Probationer	2/6 per week	
9 "	Morgan, E.	Junior Porter	2/6 per day	*Vice* F. Sheard.
28 "	Harburn, John W.	Shunter	7/- "	*Vice* J. Fleming.
1892.				
1 Jan.	Moore, Susan	Gatekeeper	15/- per week	*Vice* Mrs. Reynolds.
1 "	Pryke, E. B.	Junior Porter	3/4 per day	From Supernumerary Staff.
1 "	Baker, Hubert	"	4/2 "	" "
1 "	Unwin, J.	Porter	6/6 "	" "
1 "	McGlew, Sidney	"	6/- "	" "
1 "	Vermeech, A.	"	5/- "	" "
1 "	Thomas, G. W. D.	Junior Porter	2/6 "	" "
1 "	Lawless, E.	"	4/2 "	" "
1 "	Humbey, A. C.	Porter	6/- "	" "
1 "	Reilly, M.	"	6/- "	" "
1 "	Woollens, F.	"	6/- "	" "
1 "	Hill, A. H.	"	6/- "	" "
1 "	Hull, Sidney	Shunter	7/- "	" "
1 "	McLean, H.	Porter	6/6 "	" "
1 "	Elliott, S.	Junior Porter	4/2 "	" "
1 "	Curran, J. J.	"	5/- "	" "
1 "	Boreland, A.	Porter	6/6 "	" "
1 "	Barrington, F. C.	"	6/- "	" "
1 "	Daly, Thomas	"	7/- "	" "
1 "	Oliver, E.	Junior Porter	4/2 "	" "
1 "	Hargraves, J.	"	5/- "	" "
1 "	Clarke, W. T.	"	3/4 "	" "
1 "	Hall, G. W.	Shunter	7/6 "	" "
1 "	Main, Alexander	"	7/6 "	" "
1 "	Meldrum, R. M.	Porter	6/6 "	" "
1 "	Humphreys, F.	Junior Porter	3/4 "	" "
1 "	Lynch, John	Car Washer	7/- "	" "
1 "	Walker, W. J.	"	6/- "	" "
1 "	Warne, F.	"	6/- "	" "
1 "	Bartlett, F.	Junior Car Washer	5/- "	" "
1 "	Brogan, E.	"	5/- "	" "
1 "	Asprey, Joseph	"	5/- "	" "
1 "	Cannon, R.	"	5/- "	" "
1 "	Stokes, James	"	5/- "	" "
1 "	M'Enroe, M.	"	5/- "	" "
1 "	Muir, James	"	5/- "	" "
1 "	Tracey, T.	"	5/- "	" "
1 "	Irwin, C.	"	4/2 "	" "
1 "	Montgomery, A. J.	"	5/- "	" "
1 "	O'Shea, Charles	"	4/2 "	" "
1 "	M'Laren, Charles	"	3/4 "	" "
1 "	Little, William	"	3/4 "	" "
1 "	Reid, Thomas C.	"	3/4 "	" "
1 "	Edwards, J.	"	3/4 "	" "
1 "	Escott, J.	"	3/4 "	" "
1 "	Gregory, F.	"	3/4 "	" "
1 "	Keating, W.	"	2/6 "	" "
1 "	Strange, M.	"	3/4 "	" "
1 "	Potter, Arthur	"	3/4 "	" "
1 "	Matthews, J.	"	2/6 "	" "
1 "	Cox, S.	"	2/6 "	" "
1 "	Clarke, B.	"	2/6 "	" "
1 "	Burns, A.	"	4/2 "	" "
1 "	Kennedy, D.	"	2/6 "	" "
1 "	M'Caffrey, J.	"	2/6 "	" "
1 "	Dauncey, J. A.	"	2/6 "	" "
1 "	Duggan, W.	"	2/6 "	" "
1 "	Colls, Thomas	"	2/6 "	" "
1 "	Gordon, J.	"	2/6 "	" "
1 "	Gibson, W.	"	2/6 "	" "
1 "	M'Dowel, B.	"	2/6 "	" "
1 "	Richards, J. H.	"	2/6 "	" "
1 "	Hennessey, W.	"	5/- "	" "
1 "	Barford, James	"	6/- "	" "
1 "	Wallington, A.	"	4/2 "	" "
1 "	Barry, P.	"	3/4 "	" "
1 "	Canean, A.	"	2/6 "	" "
1 "	Rose, E.	"	2/6 "	" "
1 "	Groves, F.	"	2/6 "	" "
1 "	Gray, A. J.	"	2/6 "	" "
1 "	Bavin, G.	"	2/6 "	" "
1 "	Otton, W.	"	2/6 "	" "
1 "	Horrocks, B.	"	2/6 "	" "
1 "	Green, W.	"	5/- "	" "
1 "	Hatton, J.	"	5/- "	" "
1 "	Bennett, G. H.	"	5/- "	" "
1 "	Yeldon, A.	"	5/- "	" "

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APPENDIX XXV—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
1892.				
1 Jan.	Stead, C. H.	Junior Car Washer	4/2 per day	From Supernumerary Staff.
1 ,,	Moore, R.	,,	4/2 ,,	,, ,,
1 ,,	Montgomery, W.	,,	5/- ,,	,, ,,
1 ,,	Fox, M.	,,	4/2 ,,	,, ,,
1 ,,	Reid, John S.	,,	4/2 ,,	,, ,,
1 ,,	Silvester, A.	,,	3/4 ,,	,, ,,
1 ,,	Salmon, J.	,,	3/4 ,,	,, ,,
1 ,,	Scott, J. H.	,,	3/4 ,,	,, ,,
1 ,,	O'Brien, C.	,,	3/4 ,,	,, ,,
1 ,,	Owen, James	,,	2/6 ,,	,, ,,
1 ,,	Costello, A.	,,	3/4 ,,	,, ,,
1 ,,	Hughes, F.	,,	3/4 ,,	,, ,,
1 ,,	Bedford, A.	,,	5/- ,,	,, ,,
1 ,,	James, W. C.	,,	5/- ,,	,, ,,
1 ,,	Turner, J. F.	,,	5/- ,,	,, ,,
1 ,,	Woodlands, E.	,,	3/4 ,,	,, ,,
1 ,,	Pimm, J.	,,	2/6 ,,	,, ,,
1 ,,	Dollen, L.	,,	5/- ,,	,, ,,
1 ,,	Bloomfield, H.	,,	3/4 ,,	,, ,,
1 ,,	Duckett, A.	,,	2/6 ,,	,, ,,
1 ,,	Houston, J.	,,	3/4 ,,	,, ,,
1 ,,	M'Manus, J. W.	,,	5/- ,,	,, ,,
1 ,,	Castlemaine, Charles	Shunter	7/- ,,	From Permanent Way Branch.
1 ,,	Ward, Martin	Car Washer	7/- ,,	From Supernumerary Staff.
1 ,,	Date, William	,,	6/- ,,	,, ,,
1 ,,	Davis, William	,,	6/- ,,	,, ,,
1 ,,	M'Namarra, W. M.	,,	6/- ,,	,, ,,
1 ,,	Carleton, T.	,,	6/- ,,	,, ,,
1 ,,	Thomaswitch, C.	,,	6/- ,,	,, ,,
1 ,,	Gallaway, J. C.	Junior Car Washer	4/2 ,,	,, ,,
1 ,,	O'Brien, Frank	Special Inquiry Officer	£300 per annum.	From Secretary's Branch.
1 ,,	Mercier, N.	Junior Car Washer	4/2 per day	From Supernumerary Staff.
1 ,,	Greathead, J.	,,	4/2 ,,	,, ,,
7 ,,	Adams, Mrs.	Gatekeeper	7/- per week	
11 ,,	Cahill, E.	Probationer	2/6 ,,	
13 ,,	Evans, W.	Gatekeeper	2/6 per day	*Vice* W. Furby.
15 ,,	Clarke, R. M.	Probationer	2/6 per week	
15 ,,	M'Ginley, W.	Junior Porter	2/6 per day	*Vice* H. Parker.
18 ,,	Pryor, H.	Apprentice Clerk	£50 per annum	From Supernumerary Staff, *vice* F. C. Layton.
21 ,,	Gilmore, W.	Probationer	2/6 per week	*Vice* C. Lawrence.
22 ,,	Taylor, Mrs.	Gatekeeper	10/- ,,	*Vice* Mrs. Maher.
1 Feb.	Edwards, J. H.	Apprentice Clerk	£30 per annum	From Supernumerary Staff.
1 ,,	O'Connor, John	Junior Porter	2/6 per day	From Supernumerary Staff, *vice* E. Brickley.
1 ,,	Smee, F. W.	Porter	7/- ,,	From Supernumerary Staff, *vice* W. G. Easterling.
1 ,,	M'Ardle, P.	Junior Porter	2/6 ,,	From Supernumerary Staff, *vice* E. Stephenson.
1 ,,	Beamey, James	,,	3/4 ,,	From Supernumerary Staff.
1 ,,	Forward, William	,,	2/6 ,,	,, ,,
1 ,,	Colls, F. J.	Porter	6/6 ,,	,, ,,
1 ,,	Shoebridge, A.	,,	7/- ,,	,, ,,
1 ,,	Bowen, Walter	,,	7/- ,,	,, ,, *vice* J. Webster.
1 ,,	Morgan, J. E.	Junior Clerk	£110 per annum	,, ,, *vice* F. C. Miller.
4 ,,	Maguire, William	Gatekeeper	15/- per week	*Vice* M. Hall.
4 ,,	Bray, Margaret	,,	Free house	*Vice* Mrs. Fewkes.
9 ,,	Ali, Mark	Probationer	2/6 per week	
11 ,,	Harris, Amelia	Gatekeeper	7/6 ,,	*Vice* E. Grigg.
12 ,,	M'Mahon, M.	,,	5/- ,,	*Vice* M. Whybourne.
18 ,,	Touse, F. C.	,,	7/- ,,	*Vice* L. Rees.
19 ,,	O'Brien, W.	,,	15/- ,,	*Vice* N. Sweeney.
20 ,,	Sullivan, Florence	,,	Free house	*Vice* M. Meaney.
21 ,,	Clifford, Mary	,,	7/- per week	*Vice* M. Stapleton.
4 Mar.	O'Brien, Michael	,,	12/6 ,,	*Vice* M. O'Brien.
4 ,,	Brown, L.	,,	7/- ,,	*Vice* S. Roberts.
4 ,,	Northward, Emily	,,	7/- ,,	*Vice* R. White.
9 ,,	Lee, L.	,,	7/- ,,	*Vice* E. Heyburn.
11 ,,	Dean, James	Watchman	7/- per day	*Vice* W. Scott.
18 ,,	Burns, James	Gatekeeper	15/- per week	
24 ,,	Sweeney, M.	,,	15/- ,,	*Vice* W. O'Brien.
25 ,,	Stapleton, M.	,,	7/- ,,	*Vice* M. Robertson.
1 April	Shellard, E. C.	Junior Clerk	£110 per annum	From Supernumerary Staff.
1 ,,	Parker, F. J.	Junior Porter	2/6 per day	,, ,,
1 ,,	Cherry, W.	Porter	7/- ,,	,, ,, *vice* J. Gordon.
1 ,,	Wilkie, H.	,,	7/- ,,	,, ,,
1 ,,	Parker, H. T.	Junior Portor	2/6 ,,	,, ,, *vice* T. McGinley.
1 ,,	Dawes, P. H.	Porter	7/- ,,	,, ,, *vice* D. Nicholas.
1 ,,	Dudley, W. A.	,,	6/- ,,	,, ,, *vice* M. Roach.
1 ,,	Wilson, F.	,,	6/6 ,,	,, ,, *vice* G. Higginson.
1 ,,	Freeman, J.	,,	6/6 ,,	,, ,,
1 ,,	Bryan, John	,,	7/6 ,,	,, ,, *vice* S. Davis.
1 ,,	Davies, E.	Junior Porter	5/- ,,	,, ,, *vice* W. Lindsay.
1 ,,	Osgood, Charles	,,	3/4 ,,	,, ,, *vice* W. Heggarty.
1 ,,	Fulton, W.	,,	2/6 ,,	,, ,,
1 ,,	Stanley, J.	,,	2/6 ,,	,, ,,
1 ,,	Rochester, C.	,,	4/2 ,,	,, ,,
1 ,,	Dunn, P.	,,	2/6 ,,	,, ,,

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APPENDIX XXV—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
		Chief Traffic Manager's Branch—*continued.*		
1892.				
1 April ...	Heffernan, Mrs.	Gatekeeper	7/- per week	*Vice* Mrs. Bourcng.
1 ,, ...	Brown, Mrs.	,,	Free House	*Vice* Mrs. Fletcher.
1 ,, ...	Crean, George	Porter	7/- per day	From Supernumerary Staff.
1 ,, ...	Jacobs, George	,,	7/- ,,	,, ,,
1 ,, ...	Reid, Henry	,,	7/- ,,	,, ,,
1 ,, ...	Smee, Frederick	,,	7/- ,,	,, ,,
1 ,, ...	Lloyd, Mrs.	Gatekeeper	7/- per week	*Vice* P. Bush.
1 ,, ...	Hammond, Alfred	Shunter	7/6 per day	From Supernumerary Staff.
1 ,, ...	Joass, Alfred	,,	7/6 ,,	,, ,,
1 ,, ...	Sweeney, Mrs.	Gatekeeper	15/- per week	*Vice* W. O'Brien.
1 ,, ...	Scully, W.	Porter	7/- per day	From Supernumerary Staff, *vice* W. Macpherson.
1 ,, ...	Frost, W. E.	Probationer	2/6 per week	
1 ,, ...	Hooper, J.	Junior Porter	4/2 per day	From Supernumerary Staff.
1 ,, ...	Morgan, E.	,,	2/6 ,,	,, ,,
1 ,, ...	McFadden, F.	Foreman	10/- ,,	From Permanent-way Branch.
1 ,, ...	Smith, John	Porter	6/- ,,	From Supernumerary Staff.
1 ,, ...	Doughan, E.	Junior Porter	4/2 ,,	,, ,,
1 ,, ...	Adams, A.	,,	4/2 ,,	,, ,,
1 ,, ...	Kinchella, A.	,,	2/6 ,,	,, ,,
1 ,, ...	Guilmartin, O.	Probationer	2/6 per week	
2 ,, ...	Barclay, T.	,,	2/6 ,,	
4 ,, ...	Gillard, R.	Shunter	6/- per day	,, ,,
4 ,, ...	Marlow, J. S.	,,	7/- ,,	,, ,,
4 ,, ...	Keogh, Mrs.	Gatekeeper	7/- per week	
5 ,, ...	Scully, John	Messenger	2/6 per day	,, ,,
5 ,, ...	Davidson, J.	Porter	7/- ,,	,, ,,
6 ,, ...	Byron, Mrs.	Gatekeeper	7/- per week and house.	*Vice* Mrs. Boyton.
7 ,, ...	Lee, Mrs.	,,	10/- per week	*Vice* Mrs. Southor.
11 ,, ...	Marr, Mrs.	,,	5/- ,,	*Vice* H. Oddy.
12 ,, ...	Harrison, Mrs.	,,	10/- ,,	*Vice* L. Kelhear.
12 ,, ...	House, John	Probationer	2/6 ,,	
21 ,, ...	Morrin, Thomas	Apprentice Clerk	£30 per annum	From Supernumerary Staff.
22 ,, ...	Robinson, C.	Junior Porter	4/2 per day	,, ,,
25 ,, ...	Marshall, J.	Porter	6/6 ,,	,, ,,
30 ,, ...	Kelly, M.	,,	6/6 ,,	,, ,,
30 ,, ...	Costelloe, W.	Junior Porter	3/4 ,,	
1 May ...	Brady, W. J.	Probationer	2/6 per week	
1 ,, ...	Tomlinson, W. H.	Chief Delivery Clerk	£250 per annum	
1 ,, ...	Murphy, S. C.	Apprentice Clerk	£30 ,,	,, ,,
1 ,, ...	Carr, H. S.	,,	£30 ,,	,, ,,
1 ,, ...	Verdon, A. L.	Inspector	£350 ,,	,, ,,
1 ,, ...	Adams, A. J.	Apprentice Clerk	£30 ,,	*Vice* J. Edgar.
1 ,, ...	Saggs, George	Porter	7/- per day	From Supernumerary Staff, *vice* F. Benson.
1 ,, ...	Morgan, E.	,,	7/- ,,	,, ,, *vice* E. Milgate.
1 ,, ...	Griffiths, John	,,	6/- ,,	,, ,, *vice* D. Gower.
1 ,, ...	Clay Alfred	,,	6/- ,,	,, ,, *vice* J. M'Phee.
1 ,, ...	Freeman W.	,,	6/- ,,	,, ,, *vice* J. F. Walsh.
1 ,, ...	Dickson, James	Junior Porter	2/6 ,,	,, ,, *vice* T. Bonamy.
1 ,, ...	King, Patrick	Shunter	7/- ,,	,, ,, *vice* M. Harford.
1 ,, ...	Brownlow, Joseph	Porter	6/- ,,	,, ,, *vice* T. Allen.
1 ,, ...	Elwood, Thomas	Postal Assistant	10/- per week	
13 ,, ...	Sheldrick, Jane	Postmistress	10/- ,,	
13 ,, ...	M'Neil, Maurice	Junior Porter	4/2 per day	,, ,, *vice* T. Keilly.
19 ,, ...	M'Gee, Mrs.	Gatekeeper	Free house	*Vice* Mrs. Hailey.
20 ,, ...	Harburn F.	Shunter	7/- per day	From Supernumerary Staff.
27 ,, ...	Newman, Mrs.	Gatekeeper	Free house	*Vice* Mrs. Peck.
30 ,, ...	Welsh, Daniel	Junior Porter	3/4 per day	From Supernumerary Staff, *vice* L. Richards.
1 June ...	Funnell, Mrs.	Gatekeeper	7/- per week	*Vice* Mrs. Hosther.
1 ,, ...	Hicks, E.	Probationer	2/6 ,,	
1 ,, ...	Moore, T. H.	,,	2/6 ,,	
1 ,, ...	Irving, George	Junior Clerk	£110 per annum	From Supernumerary Staff.
1 ,, ...	Sorrell, A.	Porter	6/- per day	,, ,, *vice* J. Donald.
3 ,, ...	Meale, Lewis	Gatekeeper	30/- per week	*Vice* T. James.
5 ,, ...	Summergreen, Mrs.	,,	Free house	*Vice* Mrs. Ware.
6 ,, ...	Boyle, Mrs.	,,	7/- per week	*Vice* Mrs. Osborne.
12 ,, ...	Whiteley, Mrs.	,,	15/- ,,	*Vice* R. M'Kenzie.
21 ,, ...	Martin, Frank	Junior Clerk	£30 per annum	From Locomotive Branch.
30 ,, ...	Stanbrook, George	Porter	6/- per day	From Supernumerary Staff, *vice* T. White.
30 ,, ...	Allen, E. L.	Junior Porter	5/- ,,	,, ,,
		Comptroller of Stores Branch.		
		Nil.		
		Signal and Interlocking Branch.		
1891.				
30 Sept. ...	Booth, Benjamin	Apprentice Clerk	£30 per annum	*Vice* C. Bond.
1892.				
23 May ...	Saunders, John	Striker	7/6 per day	Re-employed.
		Property and Estate Branch.		
2 April ...	Flanders, Amos	Billposter	7/- per day	From Tramways.
10 May ...	Vogan, A. J.	Clerk	£150 per annum	From Permanent-way Branch.
		Electrical Engineer's Branch.		
23 June ...	Pellitier, John	Electric Light Attendant	9/- per day	From Tramways, *vice* W. English.

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APPENDIX XXVI.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

RETURN, in accordance with clause No. 44 of the Railway Act, showing the Removals of Employees, from the 1st July, 1891, to the 30th of June, 1892.

Date.	Name.	Position.	Rate.	Remarks.
1892.		SECRETARY'S BRANCH.		
1 Jun ...	O'Brien, Frank	Inspector	£300 per annum.	To Traffic Branch.
		CHIEF ACCOUNTANT'S BRANCH.		
30 Jan ...	Wickham, F. J.	Accountant	£700 per annum.	Deceased.
17 Mar. ...	Holt, Albert	Clerk	£200 ,,	Retired.
1891.		TRAFFIC AUDITOR'S BRANCH.		
1 Sept. ...	Wightman, William	Clerk	£200 per annum.	Retired.
14 Oct. ,,	Seldon, O.	,, ...	£150 ,,	To Traffic Branch.
1892.				
20 Feb. ...	Abigail, F. J.	,, ...	£170 ,,	To Permanent Way Branch
14 May ...	Holden, Norman	Apprentice Clerk	£30 ,,	Resigned
1891.		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
20 June ...	Thake, Charles	Labourer	7/6 per day.....	Deceased.
26 ,, ...	Fitzgerald, John.....	Fettler	7/6 ,, ...	Resigned.
30 ,, ...	Nuttall, Eli	Labourer	7/6 ,, ...	,,
1 July ...	Sutherland, D.....	Sub-Inspector	£230 per annum..	Discharged.
3 ,, ...	Hartigan, M.	Labourer	7/6 per day.....	Resigned.
6 ,, ...	Joyce, John.....	,, ...	7/6 ,, ...	Discharged.
10 ,, ...	Thompson, Henry	Fettler	7/6 ,, ...	,,
14 ,, ...	Newcombe, George.....	Labourer	7/6 ,, ...	Deceased.
18 ,, ...	Barton, William	,, ...	7/6 ,, ...	,,
23 ,, ...	Reeves, Edward	Inspector	14/- ,, ...	To Construction Department.
23 ,, ...	Ackland, Samuel	Bricklayer	12/- ,, ...	Resigned.
1 Aug. ...	Mitchell, William	Labourer	7/6 ,, ...	Discharged.
13 ,, ...	Oates, George.....	Plumber	10/- ,, ...	To Locomotive Branch.
13 ,, ...	Pettit, Thomas	Labourer	7/6 ,, ...	Resigned.
15 ,, ...	Morgan, John.....	Fettler	7/6 ,, ...	To Traffic Branch.
20 ,, ...	Reynolds, William	Labourer	7/6 ,, ...	Discharged.
20 ,, ...	Cotterill, Daniel..'	Rough Carpenter.....	10/- ,, ...	Resigned.
21 ,, ...	Eyres, William	Labourer	7/- ,, ...	To Traffic Branch.
21 ,, ...	Wright, Charles	Painter	9/2 ,, ...	Deceased.
24 ,, ...	Stuart, Robert	Labourer	7/6 ,, ...	Discharged.
25 ,, ...	Wells, William	Fettler	7/6 ,, ...	Resigned.
25 ,, ...	Verney, Edward.....	Labourer	7/6 ,, ...	,,
26 ,, ...	Thomas, Charles	,, ...	7/- ,, ...	To Traffic Branch.
27 ,, ...	Carey, Denis	Fettler	7/6 ,, ...	Resigned.
28 ,, ...	Cornthwaite, Thomas	Inspector	£230 per annum..	Deceased.
28 ,, ...	Baker, Louis	Fettler	7/6 per day.....	To Traffic Branch.
3 Sept. ...	Galbraith, John	,, ...	7/6 ,, ...	Resigned.
4 ,, ...	Jones William	,, ...	7/6 ,, ...	Deceased.
9 ,, ...	M'Inerney, Michael	,, ...	7/6 ,, ...	Resigned.
12 ,, ...	Moore, John	Rough Carpenter	8/6 ,, ...	Discharged.
18 ,, ...	Moorby James	Fettler	7/6 ,, ...	Resigned.
22 ,, ...	Brown, William J.....	Clerk	£195 per annum..	To Chief Account Branch.
28 ,, ...	Evans, Daniel	Labourer	7/6 per day.....	Discharged.
1 Oct. ...	Angus, James.....	Engineer-in-Chief	£1,200 per annm.	Resigned.
1 ,, ...	Pearce, Henry	Fettler	9/- per day	,,
1 ,, ...	Scanlon, John	Labourer	7/6 ,, ...	,,
2 ,, ...	Strahan, David	Fettler	7/6 ,, ...	,,
5 ,, ...	O'Brien, Hugh	Labourer	7/6 ,, ...	To Traffic Branch.
5 ,, ...	Hunt, Thomas	,, ...	7/6 ,, ...	To Tramways.
9 ,, ...	O'Toole, John	Fettler	7/6 ,, ...	Resigned.
9 ,, ...	Taylor, John	,, ...	7/6 ,, ...	,,
21 ,, ...	Sherritt, Robert.....	Labourer	7/6 ,, ...	To Locomotive Branch.
26 ,, ...	Thomas, Charles	,, ...	7/- ,, ...	Discharged.
27 ,, ...	Miller, Thomas	,, ...	7/6 ,, ...	To Locomotive Branch.
27 ,, ...	Stevenson, William	Boy	5/- ,, ...	,, ,,
28 ,, ...	Trelnar, Bennett.....	Labourer	7/6 ,, ...	Deceased.
30 ,, ...	Tully, Patrick.....	,, ...	9/- ,, ...	,,
30 ,, ...	Burges, William	Blacksmith	9/- ,, ...	Resigned.
31 ,, ...	Perrin, Frederick	Fettler	7/6 ,, ...	To Traffic Branch.
31 ,, ...	Coates, John	,, ...	7/6 ,, ...	Resigned.
4 Nov. ...	Graham, William	,, ...	7/6 ,, ...	Deceased.
5 ,, ...	Broderick, Thomas	Labourer	7/6 ,, ...	,,
6 ,, ...	M'Innes, Donald	Fettler	7/6 ,, ...	Resigned.
10 ,, ...	Fuller, Henry.....	,, ...	7/6 ,, ...	Deceased.
15 ,, ...	Kavanagh, John.....	Ganger	9/- ,, ...	,,
19 ,, ...	M'Guire, Peter	Fettler	7/6 ,, ...	,,
27 ,, ...	Naughtman, John	,, ...	7/6 ,, ...	Retired.
4 Dec. ...	M'Alister, Robert	Labourer	7/6 ,, ...	Resigned.
10 ,, ...	Filson, Thomas	Fettler	8/2 ,, ...	Retired.
14 ,, ...	Bradley, William	,, ...	7/6 ,, ...	Resigned.
14 ,, ...	Ward, Hugh	,, ...	7/6 ,, ...	Retired.
16 ,, ...	Daley, John	Ganger	9/- ,, ...	Resigned.
17 ,, ...	Harvey, James	,, ...	7/6 ,, ...	,,
22 Dec. ...	Dodds, William	Fettler	7/6 ,, ...	,,
25 ,, ...	Phemister, Alexander	,, ...	7/6 ,, ...	Deceased.
28 ,, ...	Edwards, Alfred.....	,, ...	7/6 ,, ...	Resigned.
1892.				
1 Jan ...	Castlemain, Chas.	,, ...	7/6 ,, ...	To Traffic Branch.
6 ,, ...	Knudson, Chris.....	Painter	6/- ,, ...	Discharged.
13 ,, ...	Anderson, Frederick	Carpenter	8/- ,, ...	Deceased.
15 ,, ...	Skidmore, R.	Boy	5/- ,, ...	Resigned.
22 ,, ...	Cole, Charles	Fettler	7/6 ,, ...	,,

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APPENDIX XXVI—*continued.*

Date.	Name.	Position.	Rate.	Remarks
1892.		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH—*continued.*		
24 Jan.	Heyburn, Hugh	Fettler	7/6 per day	Deceased.
25 ,,	Chitts, John	,,	7/6 ,,	Discharged.
28 ,,	Cahill, Joseph	Labourer	7/6 ,,	Resigned.
29 ,,	Guiry, Patrick	,,	7/- ,,	Deceased.
13 Feb.	Black, John	Fettler	7/6 ,,	Resigned.
13 ,,	Allinson, Richard	,,	7/6 ,,	,,
20 ,,	Black, William	Boy	2/- ,,	,,
23 ,,	Lewis, William	Labourer	7/6 ,,	Discharged.
23 ,,	Bond, William	Blacksmith	11/8 ,,	Resigned.
24 ,,	Cooper, John	Fettler	7/6 ,,	,,
24 ,,	Brown, William	Painter	9/- ,,	Deceased.
29 ,,	Canavan, William	Carpenter	11/- ,,	Retired.
29 ,,	Wallwork, Daniel	Machinist	9/8 ,,	,,
29 ,,	Berneoni, Phillip	Carpenter	10/6 ,,	,,
29 ,,	Smith, Henry	,,	10/6 ,,	Resigned.
29 ,,	Hicks, Jacob	,,	8/8 ,,	,,
29 ,,	Rule, Giles	Labourer	7/6 ,,	,,
29 ,,	Hickey, John	Fettler	7/6 ,,	,,
29 ,,	Bullman, Joseph	,,	7/6 ,,	,,
29 ,,	King, George	Carpenter	10/4 ,,	,,
29 ,,	Bennett, William	,,	10/- ,,	,,
29 ,,	Dellar, James	Gunger	8/6 ,,	,,
29 ,,	Willison, George	,,	9/- ,,	,,
29 ,,	Vears, William	Fettler	7/6 ,,	,,
29 ,,	Leatham, Michael	,,	7/6 ,,	,,
2 Mar.	O'Brien, Edward	Plumber	10/8 ,,	To Locomotive Branch.
3 ,,	Houghton, David	Ganger	9/- ,,	Deceased.
3 ,,	Mottram, Frank	Labourer	7/- ,,	Resigned.
3 ,,	Pollyblank, Thomas	,,	7/6 ,,	,,
5 ,,	Carey, Charles	Fettler	7/6 ,,	Deceased.
7 ,,	M'Coy, Robert	Labourer	7/6 ,,	Discharged.
10 ,,	Lloyd, David	,,	7/6 ,,	Left.
10 ,,	Condon, William	,,	7/6 ,,	,,
11 ,,	Boots, Frank	Fettler	7/6 ,,	Discharged.
12 ,,	Greenwood, George	Ganger	9/- ,,	Deceased.
18 ,,	Stevens, Henry	Fettler	7/6 ,,	Resigned.
21 ,,	Sullivan, George	,,	7/6 ,,	,,
26 ,,	Curry, Hugh	Labourer	7/6 ,,	Deceased.
26 ,,	Kelly, Thomas	Fettler	7/6 ,,	Discharged.
31 ,,	Coleman, John	Sub-Inspector	£215 per annum	Retired.
1 April	Mercer, Robert	,,	£215 ,,	,,
1 ,,	McFadden, Frank	Inspector Ballast Trains	10/- per day	To Traffic Branch.
7 ,,	McDonald, William	Fettler	7/6 ,,	Resigned.
7 ,,	Martin, Thomas	,,	7/6 ,,	,,
7 ,,	Sims, Robert	,,	7/6 ,,	Deceased.
7 ,,	Brock, Oliver	Labourer	7/6 ,,	,,
16 ,,	Pucket, Edwin	Fettler	7/6 ,,	Resigned.
18 ,,	Leary, John	,,	7/6 ,,	Retired.
18 ,,	Larkin, Pierce	Ganger	9/- ,,	Resigned.
22 ,,	Lipscombe, E.	Boy	5/- ,,	Deceased.
28 ,,	Condon, Thomas	Fettler	7/6 ,,	Resigned.
28 ,,	Fox, Thomas	,,	7/6 ,,	,,
29 ,,	Johnston, Robert	,,	7/6 ,,	Discharged.
30 ,,	Cruikshanks, William	Sub-Inspector	£230 per annum	Retired.
30 ,,	Paton, John	Inspector	15/- per day	Retrenchment.
3 May	Shaw, George	Fettler	7/6 ,,	Resigned.
5 ,,	DePatron, John	Carpenter	12/- ,,	Retrenchment.
5 ,,	Skinner, William	,,	11/- ,,	,,
5 ,,	Bailey, George	,,	11/- ,,	,,
5 ,,	Robertson, Thomas	,,	11/- ,,	,,
5 ,,	Nash, William	,,	10/6 ,,	,,
5 ,,	Howe, John	,,	10/6 ,,	,,
5 ,,	Stevens, Thomas	,,	10/6 ,,	,,
5 ,,	Beaver, John	,,	10/6 ,,	,,
5 ,,	Bennett, A.	,,	9/6 ,,	,,
5 ,,	Mullis, John	,,	9/- ,,	,,
5 ,,	Martin, Benjamin	,,	11/- ,,	,,
5 ,,	Watkins, Charles	Painter	9/4 ,,	,,
5 ,,	Stanner, Stephen	,,	9/- ,,	,,
5 ,,	Johnston, L.	,,	9/- ,,	,,
5 ,,	Douglas, Henry	,,	9/- ,,	,,
5 ,,	Clarke, James	,,	8/8 ,,	,,
5 ,,	Rigg, George	Carpenter	11/- ,,	,,
7 ,,	Pont, Frederick	Labourer	7/6 ,,	Resigned.
16 ,,	Carney, Hugh	Fettler	7/- ,,	Discharged.
16 ,,	Burrows, John	Storeman	8/6 ,,	Retrenchment.
16 ,,	Lane, Daniel	Mason	11/- ,,	,,
16 ,,	Willis, Frederick	,,	12/- ,,	,,
16 ,,	Littlejohn, Robert	,,	12/- ,,	,,
16 ,,	Purton, Thomas	Bricklayer	12/- ,,	,,
16 ,,	Blacker, John	,,	12/- ,,	,,
16 ,,	Castle, George	,,	12/- ,,	,,
16 ,,	Gascoigne, James	,,	10/- ,,	,,
18 ,,	Chinner, Henry	Inspector	15/- ,,	,,
18 ,,	Williams, James	Labourer	7/6 ,,	Deceased.
21 ,,	Jackson, H. O.	Draftsman	£360 per annum	Retrenchment.
21 ,,	Shaw, G. T.	,,	£200 ,,	,,
21 ,,	Hall, Sydney	,,	£175 ,,	,,
21 ,,	Welsby, James	Inspector	£310 ,,	,,

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APPENDIX XXVI—*continued*

Date	Name.	Position.	Rate.	Remarks
1892.		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH—*continued.*		
21 May ...	Vogan, A. J.	Draftsman	£150 per annum	To Property and Estate Branch.
25 ,, ...	Felton, Joseph	Fettler	7/6 per day	Retired.
25 ,, ...	Peachy, John	Ganger	9/- ,,	Deceased.
27 ,, ...	Foley, John	Labourer	7/6 ,,	Discharged.
30 ,, ...	Woodward, Frederick	Fettler	7/8 ,,	Retired.
4 June ...	Robinson, Walter	Carpenter	10/6 ,,	Retrenchment.
4 ,, ...	Cook, H. A. G.	Apprentice Clerk	£40 per annum	Resigned.
10 ,, ...	M'Dougall, Joseph	Sub-inspector	£200 ,,	Retrenchment.
17 ,, ...	Walters, Frederick	Labourer	7/6 per day	To Tramways.
18 ,, ...	May, John	,,	7/6 ,,	Deceased.
22 ,, ...	Chambers, George	Carpenter	10/- ,,	Discharged.
22 ,, ...	Lawless, James	,,	8/6 ,,	,,
23 ,, ...	Jones, Henry	Fettler	7/6 ,,	Deceased.
30 ,, ...	Wyabe, Peter	Labourer	7/6 ,,	Resigned.
1891.		CHIEF MECHANICAL ENGINEER'S BRANCH.		
1 July ...	Rogers, Michael	Fuelman	8/- per day	Resigned.
4 ,, ...	Doyle, Ambrose	Apprentice	2/8 ,,	,,
6 ,, ...	M'Allister, Thomas	Car-builder	7/6 ,,	Deceased.
7 ,, ...	Doyle, James	,,	11/- ,,	To Tramways.
9 ,, ...	Fairhall, James	Waggon-builder	10/4 ,,	Discharged.
9 ,, ...	Bowles, Henry	Brass-finisher	10/- ,,	,,
11 ,, ...	Vernon, Arthur	Apprentice	1/3 ,,	Resigned.
16 ,, ...	Daggar, Sydney	Assistant Gasfitter	5/- ,,	Discharged.
17 ,, ...	Wardale, William	Boilermaker's assistant	7/6 ,,	To Traffic Branch.
23 ,, ...	Petrie Joseph	Stationary Engine-driver	7/8 ,,	Retired.
25 ,, ...	Wallach, James	Gas-fitter	10/8 ,,	Discharged.
25 ,, ...	Keens, George	,,	9/4 ,,	,,
27 ,, ...	Norton, James	Fireman	9/- ,,	Resigned.
30 ,, ...	Cracknell, Edward	Driver	14/- ,,	Discharged.
31 ,, ...	Thompson, Albert	Striker	7/6 ,,	Resigned.
31 ,, ...	Smith, Henry	Labourer	7/- ,,	Discharged.
3 Aug. ...	Scotland, Albert	Carpenter	10/- ,,	Deceased.
6 ,, ...	Sykes, Charles	Tinsmith	10/- ,,	Discharged.
8 ,, ...	Cotterill, William	Gasfitter	10/8 ,,	,,
13 ,, ...	Sydenham, Henry	Fireman	9/- ,,	Resigned.
15 ,, ...	M'Lennan, Alexander	,,	10/- ,,	,,
22 ,, ...	Delfendahl, William	Fitter	12/4 ,,	Retired.
22 ,, ...	Powell, Charles	Springmaker	10/8 ,,	Discharged.
22 ,, ...	M'Queen, James	Boilermaker	10/2 ,,	,,
22 ,, ...	Leonard, Patrick	Labourer	7/6 ,,	,,
22 ,, ...	Foreman, John	,,	7/6 ,,	,,
22 ,, ...	Shore, John	Turner	11/8 ,,	,,
22 ,, ...	Smith, J. B.	Waggon-builder	10/- ,,	,,
22 ,, ...	Norton, John	Stationary Engine-driver	8/- ,,	,,
22 ,, ...	Roby, Michael	Painter's Assistant	7/6 ,,	,,
27 ,, ...	Baker, William	Washer-out	8/- ,,	,,
29 ,, ...	Evans, Mrs.	Upholstress	5/- ,,	Resigned.
29 ,, ...	Freckleton, John	Brassfinisher	10/- ,,	Deceased.
1 Sept. ...	Christison, William	Cleaner	7/- ,,	Discharged.
4 ,, ...	Croll, George	Pumper	10/- ,,	Retired.
10 ,, ...	Wardrobe, John	Oiler	8/- ,,	Resigned.
12 ,, ...	Thomas, David	Fitter	10/- ,,	Retired.
12 ,, ...	Dunmer, Benjamin	,,	10/- ,,	To Tramways.
16 ,, ...	Munson, Nathan	Stationary Engine-driver	9/- ,,	Retired.
19 ,, ...	Daly, Denis	Fireman	9/- ,,	Discharged.
24 ,, ...	Taylor, William	Fuelman	7/6 ,,	,,
24 ,, ...	Hough, John	Waggon-builder	10/- ,,	,,
24 ,, ...	Root, Alexander	Machinist	9/- ,,	,,
28 ,, ...	Dawes, Herbert	Labourer	7/6 ,,	,,
28 ,, ...	Newton, Francis	Pumper	8/8 ,,	,,
1 Oct. ...	Elliott, Robert	Storeman	8/8 ,,	Retired.
1 ,, ...	Buchanan, James	Fitter	13/- ,,	,,
2 ,, ...	Chambers, Patrick	Driver	13/- ,,	Deceased.
4 ,, ...	Worms, Emil	Gasman	9/6 ,,	,,
4 ,, ...	Smart, Joseph	Labourer	7/6 ,,	Retired.
17 ,, ...	Rodds, F. J.	Cadet	5/- ,,	Resigned.
20 ,, ...	Wilson, Albert	Pumper	8/8 ,,	Deceased.
23 ,, ...	Beaver, Arthur	Painter	9/6 ,,	To Traffic Branch.
24 ,, ...	Aldrick, Robert	Caretaker	50/- per week	Discharged.
26 ,, ...	Stainton, Samuel	Painter	11/- per day	To Traffic Branch.
31 ,, ...	Apps, Mrs.	Upholstress	5/- ,,	Resigned.
31 ,, ...	Murray, James	Blacksmith	10/6 ,,	Discharged.
31 ,, ...	Matthews, Joshua	Fitter	10/- ,,	,,
10 Dec. ...	Richardson, Charles	Car-builder	10/4 ,,	Deceased.
12 ,, ...	Hinchy, John	Labourer	7/- ,,	Discharged.
23 ,, ...	Jolly, John	Labourer	7/- ,,	,,
24 ,, ...	Redman, George	Painter	9/- ,,	Resigned.
27 ,, ...	Parkins, James	Turner	11/8 ,,	Deceased.
31 ,, ...	Hemming, Henry	Car-builder	11/- ,,	Discharged.
1892.				
1 Jan. ...	Davies, Evan	Inspector	£300 per annum	Retired.
14 ,, ...	Molan, John	Cleaner	7/- per day	Discharged.
15 ,, ...	Pate, George	Springmaker	11/8 ,,	,,
16 ,, ...	Deckman, David	Coppersmith	11/- ,,	,,
16 ,, ...	Sherritt, Robert	Fuelman	7/- ,,	To Permanent-way Branch.
24 ,, ...	Johnston, Robert	Moulder	11/2 ,,	Deceased.

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APPENDIX XXVI—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
1892.	CHIEF MECHANICAL ENGINEER'S BRANCH—*continued.*			
30 Jan.	Ison, William	Fireman	10/- per day	Resigned.
30 ,,	McKenzie, David	Apprentice	3/6 ,,	Discharged.
30 ,,	Duncan, Herbert	Boilermaker	9/4 ,,	,,
31 ,,	Newton, George	Inspector	£410 per annum	Retired.
31 ,,	Mulholland, Phillip	Shed Inspector	£290 ,,	,,
4 Feb.	Burridge, Charles	Cleaner	7/- per day	Resigned.
11 ,,	Gray, Alfred	Boilermaker	9/4 ,,	Discharged.
11 ,,	Barton, John	Fireman	8/- ,,	Resigned.
12 ,,	Chisholm, Walter	,,	9/- ,,	Discharged.
19 ,,	Stormont, Robert	C. and W. Examiner	10/8 ,,	,,
21 ,,	Jenkins, Richard	,,	8/- ,,	Deceased.
16 ,,	Harrison, Hugh	Assistant boilermaker	7/6 ,,	,,
26 ,,	Rowatt, John	Driver	14/- ,,	Resigned.
17 ,,	Meymott, H. A.	Cadet	£100 per annum	Retrenchment.
1 Mar.	Higgs, Percy	Draftsman	£180 per annum	,,
1 ,,	Thomson, James W.	,,	£175 ,,	,,
1 ,,	Plunkett, W. J.	,,	£175 ,,	,,
1 ,,	Chambers, James	Iron and steel tester	£350 ,,	,,
10 ,,	McCann, Mary	Caretaker	8/- per week	Discharged.
23 ,,	Christison, Robert	Cleaner	7/- per day	,,
23 ,,	Barry, George	Watchman	7/6 ,,	,,
24 ,,	Whitcombe, William	Driver	14/- ,,	Resigned.
24 ,,	Aston, Frederick	Cleaner	5/- ,,	Retrenchment.
24 ,,	Tisdale, Henry	,,	5/- ,,	,,
24 ,,	Sims, Richard	,,	5/- ,,	,,
28 ,,	Matthews, George	Driver	14/- ,,	Discharged.
1 April	Webster, William	Inspector	£350 per annum	Retired.
1 ,,	Duffy, P. J.	Clerk	£185 ,,	,,
2 ,,	Byrnes, John	Labourer	7/6 per day	Resigned.
2 ,,	Leech, George	,,	7/- ,,	Discharged.
4 ,,	Young, David	Cleaner	5/- ,,	Retrenchment.
6 ,,	Benn, Joseph	Boilermaker	12/8 ,,	Resigned.
7 ,,	Spence, Arthur	Cleaner	5/6 ,,	Retrenchment.
7 ,,	Hughes, George	,,	5/- ,,	,,
7 ,,	Claridge, H. B.	,,	5/- ,,	,,
7 ,,	Pegg, William	,,	5/6 ,,	,,
7 ,,	Carbine, William	,,	5/- ,,	,,
7 ,,	Quinn, Patrick	,,	5/- ,,	,,
13 ,,	Leonard, Elizabeth	Upholsteress	5/- ,,	Resigned.
17 ,,	Ireland, Edward	Painter	9/- ,,	Deceased.
18 ,,	Woodward, E. R.	Labourer	7/6 ,,	Discharged.
19 ,,	Pollard, William	Fitter	10/8 ,,	Resigned.
21 ,,	Cooper, John F.	Cleaner	3/3 ,,	Retrenchment.
21 ,,	Johnston, Charles	,,	5/- ,,	,,
26 ,,	Webster, William	Fireman	9/- ,,	Discharged.
27 ,,	Kerston, C.	Driver	13/- ,,	Deceased.
29 ,,	Dodds, James	Apprentice	5/- ,,	Resigned.
29 ,,	Smith, Warren	Shed Inspector	£255 per annum	Deceased.
4 May	Hallett, Arthur	Labourer	6/6 per day	Retrenchment.
4 ,,	Thackall, John	Fuelman	6/6 ,,	,,
5 ,,	Hay, Alexander	Clerk	£130 per annum	Discharged.
5 ,,	Donohue, Michael	Cleaner	5/6 per day	Retrenchment.
5 ,,	O'Connell, William	,,	5/- ,,	,,
5 ,,	Matthews, J.	,,	5/- ,,	,,
5 ,,	Scott, William	Boilermaker	10/8 ,,	Discharged.
6 ,,	Harris, David	Blacksmith	11/2 ,,	Deceased.
7 ,,	Stewart, Charles	Stationary Engine Driver	8/- ,,	Discharged.
14 ,,	Reid, William R.	Cleaner	5/8 ,,	Retrenchment.
19 ,,	Baker, Edward	,,	5/6 ,,	,,
19 ,,	Wainwright, David	,,	5/6 ,,	,,
19 ,,	Murray, Alfred	,,	5/- ,,	,,
19 ,,	Smith, Sydney	,,	7/- ,,	,,
19 ,,	Stephenson, Thomas	,,	7/- ,,	,,
19 ,,	Hawkes, James	Fuelman	8/- ,,	Retired.
19 ,,	Peacock, W.	Blacksmith	11/2 ,,	Resigned.
26 ,,	McFarlane, John	Striker	7/6 ,,	,,
2 June	Hickson, John	Fitter	10/8 ,,	Retired.
3 ,,	Shennick John	Moulder	11/2 ,,	Deceased.
16 ,,	Hardie, R.	Finisher	10/- ,,	Discharged.
16 ,,	Bond, John	Car Builder	10/6 ,,	Resigned.
16 ,,	Killingback, Robert	Laborer	7/6 ,,	Deceased.
16 ,,	Ryan, James	Cleaner	5/- ,,	Retrenchment.
16 ,,	Hellyer, Vincent	,,	5/- ,,	,,
16 ,,	Martin, Henry J.	,,	5/6 ,,	,,
16 ,,	Lewis, Fred	,,	4/- ,,	,,
16 ,,	Donnellan, Michael	,,	5/6 ,,	,,
16 ,,	Thorburn, Hugh	,,	5/6 ,,	,,
16 ,,	Welton John	Fuelman	6/6 ,,	,,
21 ,,	Martin, Frank	Junior Clerk	£90 per annum	To Traffic Branch.
24 ,,	Clark, Patrick	Cleaner	5/6 per day	Retrenchment.
25 ,,	Creswick, James	Pumper	8/- ,,	Discharged.
27 ,,	Sharp, John	Trimmer	10/- ,,	Resigned.
29 ,,	O'Brien, Thomas	Laborer	7/6 ,,	Deceased.
20 ,,	Wooley, William	Cleaner	5/6 ,,	Retrenchment.
30 ,,	Ashworth, Herbert	,,	5/6 ,,	,,
30 ,,	Heath, Charles	,,	5/- ,,	,,
30 ,,	Peterson, Charles	Laborer	7/- ,,	Discharged.

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APPENDIX XXVI—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
1891.		CHIEF TRAFFIC MANAGER'S BRANCH.		
1 July ...	Dencen, George	Clerk	£120 per annum	Discharged.
1 " ...	*Watson, Samuel J.	Telegraph Inspector	£200 "	To Telegraph Department.
1 " ...	Matthews, Mrs.	Caretaker	10/- per week.	Discharged.
1 " ...	Edwards, James P.	Station-master	£105 per annum	Retired.
1 " ...	Dowling, William	Guard	12/- per day	"
2 " ...	Hartigan, Mary	Gatekeeper	7/- per week	Resigned.
4 " ...	Ubrig, J.	"	30/- "	Retired.
12 " ...	Ogden, W. D.	Porter	7/- per day	Resigned.
12 " ...	Darlington, A.	Shunter	9/- "	Discharged.
12 " ...	Davies, Samuel	"	7/6 "	Deceased.
14 " ...	Parkinson, W.	"	8/- "	Discharged.
15 " ...	Manson, J. F.	Gatekeeper	30/- per week	Deceased.
16 " ...	Cale, Charles	Junior Porter	3/4 per day	Resigned.
17 " ...	Pearce, William	Messenger	42/- per week.	Retired.
19 " ...	Herald, Edmund	Station-master	£310 per annum	"
21 " ...	Lyons, W. P.	Porter	7/6 per day	Resigned.
23 " ...	Radnidge, Mrs.	Caretaker	20/- per week	Discharged.
30 " ...	Ryan, Mrs.	Gatekeeper	10/- "	"
30 " ...	Fletcher, Mrs.	"	7/- "	"
30 " ...	O'Toole, Jane	"	7/- "	"
1 Aug. ...	Markham, H.	"	2/6 "	"
1 " ...	Walker, John	Clerk	£150 per annum	To Traffic Audit Branch.
5 " ...	Hoskins, P.	Porter	8/- per day	Discharged.
7 " ...	Matthews, J.	Gatekeeper	5/- per week	Retired.
7 " ...	Nelson, William	Shunter	7/- per day	Resigned.
8 " ...	Hegarty, J.	Porter	7/- "	Discharged.
8 " ...	Middleton, G.	"	7/- "	Retired.
8 " ...	Humphries, J.	Station-master	£225 per annum	"
10 " ...	Williams, Edward	Gatekeeper	7/- per day	"
13 " ...	Sinclair, Mrs.	Caretaker	20/- per week	Resigned.
16 " ...	Borland, W.	Guard	9/- per day	"
17 " ...	Price, E.	Shunter	7/- "	Deceased.
25 " ...	Jones, J.	Gatekeeper	30/- per week	Retired.
27 " ...	Shore, Edwin	"	15/- "	Discharged.
28 " ...	Green, James	Porter	7/- per day	Resigned.
28 " ...	Nolan, Margaret	Gatekeeper	7/- per week	Discharged.
29 " ...	M'Inerney, Mary	"	10/- "	Resigned.
3 Sept. ...	Summergreen, Mary	"	10/- "	Discharged.
4 " ...	Murtyn, Richard	Porter	6/6 per day	Resigned.
8 " ...	Hudson, W.	Night officer	£130 per annum	Discharged.
10 " ...	Chapman, James	Porter	7/- per day	Retired.
10 " ...	Fully, Mary	Gatekeeper	7/- per week	Resigned.
10 " ...	Garvan, D. A.	Station-master	£180 per annum	Retired.
11 " ...	Kearney, H.	Porter	8/- per day	Deceased.
13 " ...	King, James	Gatekeeper	30/- per week	"
14 " ...	Pike, Thomas	Porter	8/- per day	Retired.
15 " ...	Keppie, James	"	7/- "	"
23 " ...	Roberts, James A.	"	6/6 "	Resigned.
23 " ...	Bennett, Copeland	Station-master	£210 per annum	Retired.
24 " ...	Jones, William	Porter	7/- per day	"
24 " ...	Webster, James	"	8/6 "	"
1 Oct. ...	Turner, Henry	Guard	10/- "	Discharged.
1 " ...	Ireland, H.	Junior Porter	2/6 "	Resigned.
1 " ...	Bradford, Thomas	Signalman	7/- "	"
1 " ...	Sheldrick, Mrs.	Gatekeeper	7/- per week	Discharged.
1 " ...	Blackburn, A.	Porter	7/- per day	Resigned.
1 " ...	Port, John	Porter	6/6 "	Retired.
1 " ...	Benson, Isaac	Junior clerk	£95 per annum	Resigned.
1 " ...	Beattie, Richard	Officer-in-charge	£150 "	Discharged.
1 " ...	White, R.	Station-master	£160 "	Retired.
1 " ...	Early, Thomas	Porter	7/- per day	Deceased.
1 " ...	Fuller, Mrs.	Gatekeeper	Free house	Resigned.
2 " ...	Scott, J. D.	Junior Porter	5/- per day	"
2 " ...	Donohue, Mrs.	Gatekeeper	7/6 per week	"
6 " ...	Scott, E.	Junior Porter	3/4 per day	"
8 " ...	Thomas, C.	Porter	7/- "	To Permanent-Way Branch.
8 " ...	Flannery, M.	"	7/- "	Discharged.
12 " ...	Cootes, Mrs.	Gatekeeper	7/- per week	Resigned.
14 " ...	Robinson, George	Porter	6/- per day	Deceased.
16 " ...	Colgan, John	Gatekeeper	7/- "	Retired.
17 " ...	Mansfield, J. G.	Signalman	11/6 "	Deceased.
17 " ...	Rees, Thomas	Porter	7/- "	Resigned.
17 " ...	M'Cormack, William	Shunter	7/- "	"
17 " ...	Coyne, Agnes	Gatekeeper	7/- per week	"
22 " ...	M'Cotter, Thomas	Porter	6/- per day	Discharged.
22 " ...	Page, Mrs.	Gatekeeper	7/- per week	Resigned.
22 " ...	Mohan, P.	Shunter	7/0 per day	Discharged.
25 " ...	Shone, H.	Gatekeeper	15/- per week	"
25 " ...	Whitely, H.	Porter	7/- per day	Deceased.
25 " ...	Miles, Thomas	Gatekeeper	6/6 "	Retired.
25 " ...	Johnstone, James	Porter	7/6 "	Deceased.
30 " ...	Cole, Mrs.	Gatekeeper	7/- per week	Resigned.
31 " ...	Dawson, George	Probationer	2/6 "	"
31 " ...	M'Kie, Anthony	Porter	7/- per day	Deceased.
3 Nov. ...	Sheard, F. W.	Junior Porter	4/2 per day	Discharged.
4 " ...	Hodges, A.	Gatekeeper	15/- per week	"
6 " ...	Rose, Henry	Night Officer	£140 per annum.	Retired.
6 " ...	Powell, George	Guard	10/6 per day	Discharg d.
11 " ...	Higgison, James	Porter	7/6 "	Deceased.

* Joint officer, Commissioners' contribution of salary.

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APPENDIX XXVI—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
1891.		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
12 Nov.	Thompson, Mrs.	Gatekeeper	7/- per week	Deceased.
13 ,,	Bryant, Mrs.	,,	7/- ,,	Resigned.
13 ,,	Duggan, Mrs. T.	,,	7/6 ,,	Deceased.
17 ,,	Connors, Edward	,,	30/- ,,	,,
20 ,,	Drum, Francis	Operator	£120 per annum	Discharged.
20 ,,	Barrett, Thomas	Clerk	£220 ,,	,,
20 ,,	Mullholland, Mrs.	Caretaker	12/- per week	Not required.
21 ,,	Connors, John	Junior Porter	4/2 per day	Discharged.
23 ,,	M'Fadden, Frank	Night Foreman	10/- ,,	To Permanent-Way Branch.
23 ,,	Mayne, Mrs.	Gatekeeper	15/- per week	Discharged.
27 ,,	Kavanagh, Mrs.	,,	7/6 ,,	Resigned.
1 Dec.	Curran, John	Operator	£120 per annum	,,
2 ,,	Grigg, Ernest	Gatekeeper	10/- per week	,,
3 ,,	Duffy, M.	,,	30/- ,,	Discharged.
3 ,,	Verdon, W. R.	Station-master	£225 per annum	Retired.
3 ,,	Tate, G.	Officer-in-charge	£150 ,,	Discharged.
8 ,,	Tanner, James	Station-master	£180 ,,	Retired.
9 ,,	Payne, Mrs.	Office-cleaner	25/- per week	Deceased.
10 ,,	Lupton, F.	Clerk	£125 per annum	Resigned.
12 ,,	Furbanks, Ernest	Shunter	7/- per day	Resigned.
16 ,,	Hicks, John	Junior Porter	2/6 ,,	Discharged.
17 ,,	Wilkins, Mrs.	Gatekeeper	7/- per week	,,
21 ,,	Griffen, J.	Operator	£80 per annum	Resigned.
21 ,,	Harris, William	Shunter	8/- per day	Discharged.
24 ,,	Flecknoe, Walter	Porter	7/- ,,	,,
28 ,,	Fleming, J.	Shunter	7/6 ,,	,,
28 ,,	Tunks, M.	Junior Porter	5/- ,,	,,
31 ,,	Leary, Mary	Gatekeeper	5/- per week	Gates closed.
1892.				
1 Jan.	Alexander, A.	Porter	6/- per day	Discharged.
1 ,,	Reynolds, Mrs.	Gatekeeper	15/- per week	Resigned.
1 ,,	Riddle, James	Night Officer	£120 per annum	Discharged.
1 ,,	Clarke, Arthur	Officer-in-charge	£130 ,,	,,
1 ,,	Douglas, C.	Watchman	45/- per week	Retired.
1 ,,	McFee, J.	Porter	7/- per day	Resigned.
1 ,,	Collett, Robert	Signal Lighter	7/- per week	Discharged.
4 ,,	Jacobs, A.	Guard	10/- per day	,,
7 ,,	Tibbs, Robert	Officer-in-charge	£165 per annum	,,
9 ,,	Tuck, W. G.	Junior Clerk	£110 ,,	,,
12 ,,	Furby, William	Gatekeeper	2/6 per day	Resigned.
15 ,,	Parker, Henry	Junior Porter	2/6 ,,	Discharged.
15 ,,	Walsh, Hugh	Shunter	7/6 ,,	Deceased.
15 ,,	Brown, Henry	Gatekeeper	35/- per week	,,
16 ,,	Gower, D.	Porter	6/6 per day	Discharged.
17 ,,	Douglinn, Mrs.	Gatekeeper	10/- per week	,,
21 ,,	Miller, F. C.	Junior Clerk	£100 per annum	To Chief Account Branch.
25 ,,	Kerrigan, Mary	Gatekeeper	15/- per week	Gates closed.
30 ,,	Jeavis, Frank	,,	15/- ,,	Discharged.
31 ,,	Otton, William	Junior Porter	2/6 per day	,,
1 Feb.	Hogue, H. F.	Apprentice Clerk	£40 per annum	Resigned.
3 ,,	Walker, J. H.	Station-master	£180 ,,	Retired.
3 ,,	Pocock, E.	Clerk	£235 ,,	Dismissed.
4 ,,	Hull, Mary	Gatekeeper	15/- per week	Resigned.
4 ,,	Heggarty, William	Shunter	7/6 per day	Discharged.
4 ,,	Fewkes, Mrs.	Gatekeeper	Free house	Resigned.
5 ,,	Green, Frederick	Guard	10/6 per day	,,
5 ,,	Gibbons, G.	Station-master	£165 per annum	Deceased.
5 ,,	Payne, Samuel	Porter	7/- per day	Retired.
8 ,,	Quinn, John	,,	7/- ,,	Resigned.
10 ,,	Grigg, Ethel	Gatekeeper	7/6 per week	,,
11 ,,	Morris, George	Assistant Guard	6/- per day	Discharged.
11 ,,	Whybourne, M.	Gatekeeper	5/- per week	,,
11 ,,	M'Cardell, R.	Operator	5/- per day	,,
11 ,,	Nicholas, D.	Officer-in-charge	£130 per annum	,,
15 ,,	Lawrence, C.	Clerk	£215 ,,	Retired.
15 ,,	Boran, G.	Junior Porter	2/6 per day	Resigned.
17 ,,	Rees, L.	Gatekeeper	7/- per week	,,
18 ,,	Brand, John	Watchman	7/- per day	Retired.
19 ,,	Meaney, M.	Gatekeeper	Free house	Resigned.
20 ,,	Winfield, W.	Junior Clerk	£110 per annum	Discharged.
20 ,,	Dwyer, M.	Gatekeeper	7/- per week	Retired.
20 ,,	Robertson, M.	,,	7/- ,,	Resigned.
21 ,,	Maher, Mrs.	,,	7/6 ,,	,,
21 ,,	Stapleton, M.	,,	7/- ,,	Discharged.
22 ,,	Wright, George	Porter	7/- per day	Retired.
25 ,,	Sweeney, N.	Gatekeeper	15/- per week	Resigned.
25 ,,	Thompson, W.	,,	45/- ,,	Discharged.
29 ,,	Roberts, S.	,,	7/- ,,	Resigned.
29 ,,	Heyburn, E.	,,	7/- ,,	,,
1 Mar.	Bacott, J.	Junior Porter	4/2 per day	Discharged.
1 ,,	Humphries, J. C.	Officer-in-charge	£150 per annum	Retired.
3 ,,	Smith, T.	Porter	7/- per day	Discharged.
3 ,,	O'Brien, Mary	Gatekeeper	12/6 per week	Resigned.
4 ,,	White, R.	,,	7/- ,,	,,
9 ,,	Scott, W.	Watchman	42/- ,,	Discharged.
12 ,,	Callaghan, P.	Gatekeeper	7/6 per day	Retired.
13 ,,	Morris, W.	Porter	7/- ,,	Discharged.
15 ,,	Armfield, E.	Gatekeeper	30/- per week	,,
15 ,,	Muncaster, A.	Signalman	11/- per day	,,

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APPENDIX XXVI—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
1892.		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
15 Mar.	Heaton, John	Guard	12/- per day	Deceased.
15 "	Strange, M.	Junior Porter	3/4 "	Discharged.
18 "	Coffey, John	Shunter	7/6 "	"
18 "	Rowe, W.	Block Lad	15/- per week	"
19 "	Murphy, Daniel	Porter	7/- per day	"
19 "	Brown, A.	"	7/- "	"
19 "	O'Connor, J.	"	7/- "	"
19 "	Burleigh, S.	"	7/- "	"
19 "	Ryan, J. J.	"	7/- "	"
21 "	Meldrum, H.	Gatekeeper	30/- per week	"
21 "	Rowe, William	Signalman	11/- per day	"
23 "	Bates, George	Points Cleaner	7/6 "	"
24 "	Price, Kate	Gatekeeper	7/- per week	"
24 "	O'Brien, William	"	15/- "	Deceased.
27 "	Robinson, W. C.	Clerk	£130 per annum	Resigned.
31 "	Bennett, Stanley	Gatekeeper	49/- per week	Retired.
31 "	Bush, Percy	"	15/- "	Resigned.
1 April	Peet, Mrs.	"	7/- "	"
1 "	Jones, W.	"	30/- "	Retired.
1 "	Fletcher, Mrs.	"	7/- "	Discharged.
1 "	Carpenter, T.	Porter	7/- per day	Retired.
1 "	Mahony, C.	Watchman	7/6 "	"
1 "	Waddups, F.	"	45/- per week	"
1 "	Bouveng, Mrs.	Gatekeeper	7/- "	Resigned.
1 "	M'Guarr, W.	Assistant Guard	8/6 per day	Retired.
1 "	Barry, Mrs.	Gatekeeper	Free house	Discharged.
1 "	Williams, Mrs.	Gatekeeper	15/- per week	Retrenchment.
1 "	Brown, W.	"	35/- "	Discharged.
1 "	Menzies, R.	Shunter	8/- per day	Retrenchment.
1 "	Pike, J. C.	Travelling Inspector	£210 per annum	Retired.
1 "	Walsh, Joseph	Night Officer	£130 "	Discharged.
1 "	Cowley, John	Porter	6/6 per day	Retrenchment.
4 "	Lord, W.	Gatekeeper	7/6 "	Retired.
4 "	Eyre, A.	Porter	7/- "	Retrenchment.
4 "	Rein, William	Officer-in-charge	£150 per annum	Retired.
5 "	Carlton, Thomas	Porter	6/6 per day	Retrenchment.
5 "	Ryan, J. J.	Junior Porter	7/- "	"
7 "	Souther, Mrs.	Gatekeeper	10/- per week	Resigned.
7 "	Burke, Thomas	Porter	7/- per day	Retrenchment.
8 "	Phillips, W.	"	7/- "	"
8 "	M'Goldrick, C.	"	7/- "	"
8 "	Boston, Mrs.	Gatekeeper	17/- per week	Resigned.
8 "	Ormiston, H.	Junior Porter	3/4 per day	"
11 "	Hicking, W.	"	5/- "	Retrenchment.
11 "	Curry, F.	"	5/- "	"
11 "	Oddy, Henry	Gatekeeper	25/- per week	Retired.
13 "	Dunstan, J.	Porter	6/- per day	Retrenchment.
14 "	Rankin, W.	Gatekeeper	7/- "	Deceased.
14 "	Borland, G.	Junior Porter	5/- "	Retrenchment.
15 "	Wynne, E. M.	Porter	6/- "	"
15 "	Mowbray, B.	"	6/6 "	"
16 "	Willison, A.	"	6/6 "	"
16 "	Virgos, C.	Shunter	7/- "	"
16 "	Smith, S.	Gatekeeper	7/- per week	Resigned.
16 "	Kelhear, L.	"	10/- "	"
17 "	O'Connor, M.	Shunter	7/- per day	Discharged.
17 "	Plunkett, G.	Porter	6/- "	Retrenchment.
17 "	Kidd, Richard	"	6/- "	"
17 "	Baker, J.	"	7/- "	"
18 "	Geelan, Mary	Gatekeeper	10/- per week	Discharged.
21 "	Cahill, Mrs.	"	7/- "	"
22 "	Young, Thomas	"	35/- "	Retired.
23 "	Webster, A.	Junior Porter	5/- per day	Retrenchment.
25 "	Butcher, F.	Gatekeeper	30/- per week	Retired.
28 "	Ross, Mrs.	Charwoman	25/- "	Retrenchment.
28 "	Richards, F.	Gatekeeper	7/6 "	"
30 "	Williams, John	Officer-in-charge	£150 per annum	Retired.
30 "	Squires, J.	Signalman	8/6 per day	"
30 "	Martin, Mrs.	Gatekeeper	7/- per week	Resigned.
30 "	Johnstone, P.	Porter	8/- per day	Retrenchment.
1 May	Gould, E.	"	8/- "	Retired.
1 "	Hawkins, J.	Head Porter	8/6 "	"
1 "	Woods, Moses	Porter	8/- "	"
1 "	Fitzpatrick, C.	Guard	12/- "	"
1 "	Fleming, J.	"	12/- "	"
1 "	Bramwell, Alfred	Porter	6/6 "	Retrenchment.
1 "	Lilleycrop, E.	"	6/- "	"
1 "	Walsh, J. F.	"	6/6 "	"
4 "	Agnew, John	Junior Porter	3/4 "	Resigned.
4 "	Bradney, J.	Porter	6/- "	Retrenchment.
4 "	Bolton, W.	Shunter	7/- "	Deceased.
4 "	Morrisey, P.	Junior Porter	5/- "	Discharged.
6 "	Steele, John	Porter	7/- "	"
10 "	Smith, John	"	7/- "	"
11 "	Rose, Charles	Night Officer	£130 per annum	"
14 "	Bottle, Henry	Porter	7/- per day	"
14 "	Hetherton, James	"	6/- "	Retrenchment.

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APPENDIX XXVI—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
1892.		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
16 May ...	Mansell, J. C.	Signalman	8/6 per day	Discharged.
19 ,, ...	Middleton, W.	Porter	7/- ,,	,,
20 ,, ...	Hailey, Mrs.	Gatekeeper	Free house	Resigned.
20 ,, ...	Jenkinson, J.	Porter	6/- per day	Retrenchment.
21 ,, ...	Olson, C.	Junior Porter	4/2 ,,	Discharged.
21 ,, ...	Smith, George	Porter	6/6 ,,	Retrenchment.
23 ,, ...	Asprey, J.	Junior Porter	5/- ,,	Discharged.
23 ,, ...	Hennessey, W.	,,	5/- ,,	,,
23 ,, ...	Gray, A. G.	,,	2/6 ,,	,,
25 ,, ...	Wilson, Albert	Gatekeeper	7/- ,,	,,
26 ,, ...	Reid, George	Watchman	45/- per week	Deceased.
26 ,, ...	Davidson, J. L.	Porter	7/- per day	Discharged.
27 ,, ...	Peck, Mrs.	Gatekeeper	Free house	Resigned.
27 ,, ...	Smith, John	Porter	6/- per day	Retrenchment.
27 ,, ...	Reid, Fred	Junior Clerk	£120 per annum	To Locomotive Branch.
27 ,, ...	Hailey, John	Porter	6/6 per day	Retrenchment.
28 ,, ...	Crowe, James	,,	7/- ,,	,,
30 ,, ...	Wilcox, John	,,	7/- ,,	Retired.
31 ,, ...	White, Thomas	Shunter	9/- ,,	Retrenchment.
31 ,, ...	Ware, Henry	Porter	7/- ,,	Discharged.
1 June ...	Meers, E.	Gatekeeper	8/6 ,,	Retired.
1 ,, ...	French, Samuel	Night Officer	£130 per annum	Discharged.
1 ,, ...	Hoathers, Mrs.	Gatekeeper	7/- per week	Resigned.
2 ,, ...	Lewis, Henry	Porter	7/- per day	Retrenchment.
2 ,, ...	Wilson, Charles	,,	6/- ,,	,,
2 ,, ...	Holly, John	,,	7/6 ,,	Discharged.
2 ,, ...	Croall, A.	,,	6/- ,,	Retrenchment.
2 ,, ...	Higgins, H.	Junior Porter	4/2 ,,	Discharged.
2 ,, ...	James, Thomas	Gatekeeper	30/- per week	Retired.
3 ,, ...	Howieson, F.	Junior Porter	5/- per day	Retrenchment.
4 ,, ...	Field, George	Porter	7/- ,,	Discharged.
5 ,, ...	Ware, Mrs.	Gatekeeper	Free house	Resigned.
6 ,, ...	Becker, W.	Porter	6/- per day	Retrenchment.
7 ,, ...	Pearson, Edward	Signalman	8/6 ,,	Discharged.
7 ,, ...	Mortimer, Alfred	Officer-in-charge	£140 per annum	,,
8 ,, ...	Turnidge, W.	Porter	6/- per day	Retrenchment.
9 ,, ...	Rose, William	Junior Porter	5/- ,,	Discharged.
10 ,, ...	Weeks, James	Gatekeeper	7/- ,,	,,
11 ,, ...	Freeman, John	Porter	6/6 ,,	Retrenchment.
13 ,, ...	Faull, Robert	Junior Porter	3/4 ,,	Discharged.
13 ,, ...	Downer, W.	,,	2/6 ,,	Resigned.
13 ,, ...	Brain, Thomas	Station-master	£255 per annum	Retired.
13 ,, ...	M'Kenzie, R.	Gatekeeper	30/- per week	Retired.
16 ,, ...	Bennett, H.	,,	6/- per day	Retrenchment.
16 ,, ...	Bartie, W.	,,	30/- per week	Discharged.
17 ,, ...	Clarke, T.	Porter	6/- per day	Retrenchment.
17 ,, ...	Rowan, J.	Night Officer	£130 per annum	Discharged.
19 ,, ...	Sheedy, M.	Porter	7/6 per day	Deceased.
19 ,, ...	Barrington, F.	,,	6/6 ,,	Discharged.
21 ,, ...	Crossman, W. A.	Guard	11/- ,,	Deceased.
21 ,, ...	Ford, A. G. H.	Clerk	£130 per annum	To Locomotive Branch.
23 ,, ...	Johnson, W.	Officer-in-charge	£181 ,,	Discharged.
23 ,, ...	Howard, Charles	Clerk	£125 ,,	Resigned.
24 ,, ...	George, F.	Junior Porter	3/4 per day	Discharged.
24 ,, ...	Johnson, Mrs.	Gatekeeper	15/- per week	,,
25 ,, ...	Cooper, James	Signalman	8/6 per day	Retired.
26 ,, ...	Poulton, J.	Gatekeeper	6/- ,,	Retrenchment.
26 ,, ...	Kelly, Michael	Guard	10/- ,,	Deceased.
26 ,, ...	Usher, Joseph	Porter	6/- ,,	Discharged.
27 ,, ...	O'Donnell, H.	,,	7/- ,,	,,
30 ,, ...	Pearce, Mrs.	Gatekeeper	7/- per week	Resigned.
1891.		COMPTROLLER OF STORES BRANCH.		
17 Dec. ...	Collie, A.	Sheet Dresser	7/- per day	Retrenchment.
1892.				
1 Mar. ...	Jacobs, Jesse	Foreman	£200 per annum	Retired.
30 April ...	Wallis, George	Storeman	9/- per day	Retrenchment.
30 ,, ...	Heggarty, John	Watchman	7/- ,,	,,
1891.		SIGNAL AND INTERLOCKING BRANCH.		
22 Sept. ...	Bond, Charles	Clerk	£210 per annum	To Traffic Branch.
9 Nov. ...	Parkinson, John	Turner	10/8 per day	Deceased.
1892.				
9 Jan. ...	Smith, John R.	Labourer	7/6 per day	Resigned.
22 ,, ...	Hayes, Reuben	Striker	7/6 ,,	Discharged.
4 April ...	Cooper, Edward	,,	7/6 ,,	,,
21 ,, ...	Best, Edwin	Carpenter	10/- ,,	Retrenchment.
21 ,, ...	Becker, Sebastian	,,	10/- ,,	,,
5 May ...	Garrard, George	,,	10/- ,,	,,
5 ,, ...	Dillon, Michael	Labourer	7/6 ,,	,,
5 ,, ...	Saunders, John	,,	7/6 ,,	,,
5 ,, ...	Wilson, Robert	,,	7/6 ,,	,,
5 ,, ...	Pratt, Thomas	Signal Fitter	9/- ,,	,,
5 ,, ...	Nelson, James	,,	9/6 ,,	,,
5 ,, ...	Lewis, William	Carpenter	10/- ,,	,,
		ELECTRICAL ENGINEER'S BRANCH.		
4 June ...	English, W.	Electric Light Attendant	8/6 per day	Resigned.

APPENDIX XXVII.

SECTIONAL EARNINGS—SYDNEY TO KIAMA, 70 miles.

Years ending 31st December, 1890, and 1891.

1890.

CAPITAL, £2,064,802.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles run.	Earnings per Train Mile
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	46,419	21·11	39·95	Coaching	77,040	343,416	53·06
Permanent-way	35,144	15·99	30·25	Goods	39,146	179,194	52·43
Traffic	26,401	12·01	22·72				
General	3,925	1·78	3·38				
	111,889	50·89	96·30		116,186	527,610	52·85
Balance profit on working, exclusive of interest.	4,297						
	£ 116,186				£ 116,186		

	£
Interest on Capital, at 3½ per cent.	72,268
Cost of working the line	111,889
Total cost for the year	184,157
Total traffic for the year	116,186
LOSS ON THE YEAR'S WORKING	£ 67,971

1891.

CAPITAL, £2,152,610.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles run.	Earnings per Train Mile
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	61,259	22·56	44·53	Coaching	85,458	394,902	51·93
Permanent-way	22,936	8·44	16·68	Goods	52,092	256,792	48·68
Traffic	27,478	10·12	19·97				
General	4,486	1·65	3·26				
	116,159	42·77	84·44		137,550	651,694	50·65
Balance profit on working, exclusive of interest.	21,391						
	£ 137,550				£ 137,550		

	£
Interest on Capital, at 3½ per cent.	75,341
Cost of working the line	116,159
Total cost for the year	191,500
Total traffic for the year	137,550
LOSS ON THE YEAR'S WORKING	£53,950

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APPENDIX XXVII—*continued.*

SECTIONAL EARNINGS—**HORNSBY TO ST. LEONARDS, 11 miles.**

Years ending 31st December, 1890 and 1891.

1890.
CAPITAL, £215,504.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	2,287	21·11	110·27	Coaching	1,288	16,590	18·63
Permanent-way	3,928	36·26	189·39	Goods	786	9,410	20·04
Traffic	780	7·20	37·61				
General	193	1·78	9·30				
£	7,188	66·35	346·57	£	2,074	26,000	19·14
				Balance loss on working, exclusive of interest.	5,114		
£	7,188			£	7,188		

	£
Interest on Capital at 3½ per cent.	7,543
Cost of working the line	7,188
Total cost for the year	14,731
Total traffic for the year	2,074
LOSS ON THE YEAR'S WORKING £	12,657

1891.
CAPITAL, £215,146.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	2,569	22·56	100·98	Coaching	1,481	20,486	17·35
Permanent-way	1,318	11·59	51·83	Goods	1,062	6,822	37·36
Traffic	1,000	8·79	39·32				
General	188	1·65	7·39				
£	5,074	44·59	199·52	£	2,543	27,310	22·35
				Balance loss on working, exclusive of interest.	2,531		
£	5,074			£	5,074		

	£
Interest on Capital at 3½ per cent.	7,530
Cost of working the line	5,074
Total cost for the year	12,604
Total traffic for the year	2,543
LOSS ON THE YEAR'S WORKING £	10,061

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SECTIONAL EARNINGS—GOULBURN TO COOMA, 127½ miles.

Years ending 31st December, 1890 and 1891.

1890.

CAPITAL, £1,454,416.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	11,261	21·11	33·63	Coaching	16,046	39,616	97·21
Permanent-way	8,838	16·57	26·39	Goods	17,440	88,386	47·35
Traffic	3,140	5·91	9·40				
General	952	1·78	2·84				
£	24,200	45·37	72·26	£	33,486	128,002	62·78
Balance profit on working, exclusive of interest.	9,286						
£	33,486			£	33,486		

	£
Interest on Capital at 3½ per cent.	50,904
Cost of working the line	24,200
Total cost for the year	75,104
Total traffic for the year	33,486
LOSS ON THE YEAR'S WORKING	£ 41,618

1891.

CAPITAL, £1,456,991.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	12,224	22·56	35·25	Coaching	16,152	42,140	91·10
Permanent-way	11,777	21·75	33·96	Goods	18,524	87,860	50·60
Traffic	5,001	9·23	14·42				
General	895	1·65	2·58				
£	29,897	55·19	86·21	£	34,676	130,000	64·02
Balance profit on working, exclusive of interest.	4,779						
£	34,676			£	34,676		

	£
Interest on Capital at 3½ per cent.	50,934
Cost of working the line	29,897
Total cost for the year	80,891
Total traffic for the year	34,676
LOSS ON THE YEAR'S WORKING	£ 46,215

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APPENDIX XXVII—*continued.*

SECTIONAL EARNINGS—COOTAMUNDRA TO GUNDAGAI, 34 miles.

Years ending 31st December, 1890 and 1891.

1890.

CAPITAL, £241,751.

EXPENDITURE.

Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.
Expenses.	£	d.	%
Locomotive	2,308	21·11	33·47
Permanent-way	2,838	25·97	41·15
Traffic	1,211	11·09	17·56
General	195	1·78	2·83
£	6,552	59·95	95·01
Balance profit on working, exclusive of interest.	344		
£	6,896		

EARNINGS.

Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Receipts.	£		d.
Coaching	3,688	11,472	77·15
Goods	3,208	14,758	52·17
£	6,896	26,230	63·09
£	6,896		

	£
Interest on Capital at 3½ per cent.	8,461
Cost of working the line	6,552
Total cost for the year	15,013
Total traffic for the year	6,896
LOSS ON THE YEAR'S WORKING	£8,117

1891.

CAPITAL, £248,611.

EXPENDITURE.

Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.
Expenses.	£	d.	%
Locomotive	2,404	22·56	35·26
Permanent-way	2,989	28·06	43·84
Traffic	1,418	13·31	20·80
General	176	1·65	2·58
£	6,987	65·58	102·48
Balance loss on working, exclusive of interest.	169		
£	6,987		

EARNINGS.

Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Receipts.	£		d.
Coaching	3,656	12,561	69·85
Goods	3,162	13,009	58·33
£	6,818	25,570	63·99
£	6,818		

	£
Interest on Capital at 3½ per cent.	8,701
Cost of working the line	6,987
Total cost for the year	15,688
Total traffic for the year	6,818
LOSS ON THE YEAR'S WORKING	£8,870

APPENDIX XXVII—*continued.*

SECTIONAL EARNINGS—NARRANDERA TO JERILDERIE, 65 miles.

Years ending 31st December, 1890 and 1891.

1890.

CAPITAL, £419,880.

EXPENDITURE.

Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.
Expenses.	£	d.	£
Locomotive	2,757	21·12	35·67
Permanent-way	4,063	31·12	52·57
Traffic	882	6·75	11·41
General	233	1·78	3·01
£	7,935	60·77	102·66

EARNINGS.

Department.	Amount.	Train Miles run.	Earnings per Train Mile.
Receipts.	£		d.
Coaching	3,615	10,128	85·66
Goods	4,114	21,206	46·56
	7,729	31,334	59·20
Balance loss on working, exclusive of interest.	206		
£	7,935		

	£
Interest on Capital at 4 per cent.	16,795
Cost of working the line	7,935
Total cost for the year	24,730
Total traffic for the year	7,729
LOSS ON THE YEAR'S WORKING	£17,001

1891.

CAPITAL, £424,143.

EXPENDITURE.

Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.
Expenses.	£	d.	%
Locomotive	2,352	22·56	25·74
Permanent-way	4,546	43·62	49·75
Traffic	1,474	14·14	16·13
General	172	1·65	1·88
£	8,544	81·97	93·50
Balance profit on working, exclusive of interest.	594		
£	9,138		

EARNINGS.

Department.	Amount.	Train Miles run.	Earnings per Train Mile.
Receipts.	£		d.
Coaching	3,764	11,005	82·09
Goods	5,374	14,008	92·07
£	9,138	25,013	87·68

	£
Interest on Capital at 4 per cent.	16,965
Cost of working the line	8,544
Total cost for the year	25,509
Total traffic for the year	9,138
LOSS ON THE YEAR'S WORKING	£16,371

APPENDIX XXVII—*continued.*

SECTIONAL EARNINGS—JUNEE TO HAY, 167 miles.

Years ending 31st December, 1890 and 1891.

1890.

CAPITAL, £1,025,174.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	17,503	21·11	33·82	Coaching	21,193	54,572	93·20
Permanent-way	11,310	13·64	21·85	Goods	30,566	144,378	50·80
Traffic	5,008	6·04	9·68				
General	1,490	1·79	2·85				
£	35,301	42·58	68·20	£	51,759	198,950	62·44
Balance profit on working, exclusive of interest.	16,458						
£	51,759			£	51,759		

	£
Interest on Capital at 4 per cent.	41,007
Cost of working the line	35,301
Total cost for the year	76,308
Total traffic for the year	51,759
LOSS ON THE YEAR'S WORKING	£24,549

1891.

CAPITAL, £1,034,072.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	14,360	22·56	26·30	Coaching	22,651	51,337	105·89
Permanent-way	14,247	22·39	26·09	Goods	31,952	101,380	75·64
Traffic	6,175	9·71	11·31				
General	1,051	1·65	1·92				
£	35,833	56·31	65·62	£	54,603	152,717	85·81
Balance profit on working, exclusive of interest.	18,770						
£	54,603			£	54,603		

	£
Interest on Capital at 4 per cent.	41,362
Cost of working the line	35,833
Total cost for the year	77,195
Total traffic for the year	54,603
LOSS ON THE YEAR'S WORKING	£ 22,592

SECTIONAL EARNINGS—WALLERAWANG TO MUDGEE, 85 miles.

Years ending 31st December, 1887, 1890, and 1891.

1887.
CAPITAL, £1,002,517.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	7,373	19·84	26·72	Coaching..	9,157	33,936	94·23
Per.-way ...	18,933	51·11	68·82	Goods	18,439	55,248	80·10
Traffic	5,694	15·32	20·63				
General ...	1,129	3·04	4·09				
	33,189	89·31	120·26		27,596	89,184	74·26
				Balance loss on working, exclusive of interest.	5,593		
	£ 33,189				£ 33,189		

	£
Interest on Capital at 4 per cent.	40,100
Cost of working the line	33,189
Total cost for the year	73,289
Total traffic for the year	27,596
LOSS ON THE YEAR'S WORKING	**£ 45,693**

1890.
CAPITAL, £1,002,517.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	8,444	21·11	27·22	Coaching..	10,845	31,262	83·26
Per.-way ...	14,661	36·66	47·27	Goods ...	20,176	64,720	74·82
Traffic	3,712	9·28	11·96				
General ...	714	1·79	2·30				
	27,531	68·84	88·75		31,021	95,982	77·57
Balance profit on working	3,490						
	£ 31,021				£ 31,021		

	£
Interest on Capital at 4 per cent.	40,100
Cost of working the line	27,531
Total cost for the year	67,631
Total traffic for the year	31,021
LOSS ON THE YEAR'S WORKING	**£ 36,610**

1891.
CAPITAL, £1,035,021.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	11,552	22·56	33·39	Coaching..	11,554	30,597	90·63
Per.-way ...	11,467	22·41	33·14	Goods ...	23,046	92,257	59·95
Traffic	4,731	9·24	13·67				
General ...	846	1·65	2·44				
	28,596	55·86	82·64		34,600	122,854	67·59
Balance, profit on working, exclusive of interest.	6,004						
	£ 34,600				£ 34,600		

	£
Interest on Capital { 30,000 at 3½ per cent. / 1,005,021 at 4 per cent. }	41,250
Cost of working the line	28,596
Total cost for the year	69,846
Total traffic for the year	34,600
LOSS ON THE YEAR'S WORKING	**£ 35,246**

SECTIONAL EARNINGS—ORANGE TO MOLONG, 22 miles.

Years ending 31st December, 1890 and 1891.

1890.

CAPITAL, £282,623.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	1,716	21·11	22·57	Coaching	3,506	8,622	97·59
Per.-way	1,839	22·63	24·18	Goods	4,098	10,882	90·38
Traffic	1,483	18·25	19·50				
General	145	1·79	1·91				
£	5,183	63·78	68·16	£	7,604	19,504	93·37
Balance profit on working, exclusive of interest.	2,421						
£	7,604			£	7,604		

	£
Interest on Capital at 3½ per cent.	9,892
Cost of working the line	5,183
Total cost for the year	15,075
Total traffic for the year	7,604
LOSS ON THE YEAR'S WORKING	**£7,471**

1891.

CAPITAL, £282,976.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	1,834	22·56	23·36	Coaching	3,544	8,535	99·65
Per.-way	2,407	29·62	30·66	Goods	4,307	10,967	94·26
Traffic	2,288	28·16	29·13				
General	134	1·65	1·71				
£	6,663	81·99	84·86	£	7,851	19,502	96·62
Balance profit on working, exclusive of interest.	1,188						
£	7,851			£	7,851		

	£
Interest on Capital at 3½ per cent.	9,904
Cost of working the line	6,663
Total cost for the year	16,567
Total traffic for the year	7,851
LOSS ON THE YEAR'S WORKING	**£8,716**

SECTIONAL EARNINGS—MURRUMBURRAH TO BLAYNEY, 112 miles.

Years ending 31st December, 1890 and 1891.

1890.

CAPITAL, £1,129,778.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles run.	Earnings per Train Mile.
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	19,416	21·11	44·91	Coaching	16,349	77,292	50·77
Permanent-way	12,292	13·37	28·43	Goods	26,887	143,402	45·00
Traffic	6,958	7·56	16·09				
General	1,642	1·79	3·79				
£	40,308	43·83	93·22	£	43,236	220,694	47·02
Balance profit on working, exclusive of interest.	2,928						
£	43,236				43,236		

	£
Interest on Capital at 3½ per cent.	39,542
Cost of working the line	40,308
Total cost for the year	79,850
Total traffic for the year	43,236
LOSS ON THE YEAR'S WORKING	**£36,614**

1891.

CAPITAL, £1,135,592.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles run.	Earnings per Train Mile.
Expenses.	£	d.	%	**Receipts.**	£		d.
Locomotive	22,354	22·56	60·67	Coaching	16,567	77,788	51·14
Permanent-way	12,327	12·45	33·45	Goods	20,278	159,945	30·43
Traffic	6,824	6·89	18·52				
General	1,637	1·65	4·45				
£	43,142	43·55	117·09	£	36,845	237,733	37·19
				Balance loss on working, exclusive of interest.	6,297		
£	43,142			£	43,142		

	£
Interest on Capital at 3½ per cent.	39,745
Cost of working the line	43,142
Total cost for the year	82,887
Total traffic for the year	36,845
LOSS ON THE YEAR'S WORKING	**£46,042**

APPENDIX XXVII—*continued.*

SECTIONAL EARNINGS—DUBBO TO BOURKE, 225 miles.

Years ending 31st December, 1890 and 1891.

1890.

Capital, £1,508,175.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	29,996	21·12	22·64	Coaching	31,376	99,842	75·42
Permanent-way	45,868	32·29	34·61	Goods	101,134	241,104	100·67
Traffic	13,180	9·27	9·95				
General	2,587	1·78	1·91				
£	91,581	64·46	69·11	£	132,510	340,946	93·28
Balance profit on working, exclusive of interest.	40,929						
£	132,510			£	132,510		

	£
Interest on Capital at 4 per cent.	60,327
Cost of working the line	91,581
Total cost for the year	151,908
Total traffic for the year	132,510
Loss on the Year's working	**£19,398**

1891.

Capital, £1,602,001.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	32,609	22·56	18·60	Coaching	40,908	70,703	138·86
Permanent-way	24,650	17·02	14·02	Goods	134,909	277,050	116·87
Traffic	14,748	10·18	8·39				
General	2,394	1·65	1·36				
£	74,491	51·41	42·37	£	175,817	347,753	121·34
Balance profit on working, exclusive of interest.	101,326						
£	175,817			£	175,817		

	£
Interest on Capital—£20,050, at 3½ per cent. £1,581,951, at 4 per cent.	63,979
Cost of working the line	74,491
Total cost for the year	138,470
Total traffic for the year	175,817
Profit on the Year's working	**£37,347**

APPENDIX XXVII—*continued.*

SECTIONAL EARNINGS—WERRIS CREEK TO NARRABRI, 97 miles.

Years ending 31st December, 1887, 1890, and 1891.

1887.
CAPITAL, £610,234.

EXPENDITURE.

Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.
Expenses.	£	d.	%
Locomotive	8,142	18·28	19·90
Per.-way ...	11,816	26·53	28·88
Traffic	9,853	22·12	24·07
General	1,651	3·71	4·03
£	31,462	70·64	76·88
Balance, profit on working, exclusive of interest.	9,463		
£	40,925		

EARNINGS.

Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Receipts.	£		d.
Coaching..	13,626	33,411	97·88
Goods ...	27,299	73,469	89·18
£	40,925	106,880	91·90
£	40,925		

	£
Interest on Capital at 4 per cent.	24,409
Cost of working the line	31,462
Total cost for the year.....	55,871
Total traffic for the year	40,925
LOSS ON THE YEAR'S WORKING	**£14,946**

1890.
CAPITAL, £610,234.

EXPENDITURE.

Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.
Expenses.	£	d.	%
Locomotive	8,160	21·11	18·26
Per.-way ...	10,534	27·26	23·57
Traffic	4,286	11·09	9·59
General ...	690	1·78	1·54
£	23,670	61·24	52·96
Balance, profit on working, exclusive of interest.	21,020		
£	44,690		

EARNINGS.

Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Receipts.	£		d.
Coaching..	12,145	30,048	97·00
Goods ...	32,545	62,707	124·56
£	44,690	92,755	115·63
£	44,690		

	£
Interest on Capital at 4 per cent.	24,409
Cost of working the line	23,670
Total cost for the year.....	48,079
Total traffic for the year	44,690
LOSS ON THE YEAR'S WORKING	**£3,389**

1891.
CAPITAL, £649,681.

EXPENDITURE.

Department.	Amount.	Cost per Train Mile.	Percentage to Earnings.
Expenses.	£	d.	%
Locomotive	10,120	22·56	18·70
Per.-way ...	11,689	26·06	21·59
Traffic	4,699	10·47	8·68
General ...	741	1·65	1·37
£	27,249	60·74	50·34
Balance, profit on working, exclusive of interest.	26,873		
£	54,122		

EARNINGS.

Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Receipts.	£		d.
Coaching..	13,511	30,048	107·91
Goods ...	40,611	77,617	125·57
£	54,122	107,665	120·64
£	54,122		

	£
Interest on Capital at *3½ per cent. and 4 per. cent.	25,966
Cost of working the line	27,249
Total cost for the year	53,215
Total traffic for the year	54,122
PROFIT ON THE YEAR'S WORKING	**£907**

*£645,690 at 4 per cent.
£3,991 at 3½ per cent.

APPENDIX XXVII—*continued.*

SECTIONAL EARNINGS—ARMIDALE TO JENNINGS, 132 miles.

Years ending 31st December, 1890 and 1891.

1890.

CAPITAL, £1,529,395.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	13,577	21·12	36·25	Coaching	19,570	82,632	56·84
Permanent-way	17,189	26·72	45·87	Goods	17,887	71,685	59·89
Traffic	6,430	9·98	17·14				
General	1,148	1·78	3·06				
£	38,323	59·60	102·32	£	37,457	154,317	58·25
				Balance loss on working, exclusive of interest	871		
£	38,328			£	38,328		

	£
Interest on Capital at 4 per cent.	61,175
Cost of working the line	38,328
Total cost for the year	99,503
Total traffic for the year	37,457
LOSS ON THE YEAR'S WORKING	£62,046

1891.

CAPITAL, £1,533,068.

EXPENDITURE.				EARNINGS.			
Department.	Amount.	Cost per Train Mile.	Per-centage to Earnings.	Department.	Amount.	Train Miles Run.	Earnings per Train Mile.
Expenses.	£	d.	%	Receipts.	£		d.
Locomotive	13,670	22·56	38·53	Coaching	19,045	84,564	54·05
Permanent-way	16,240	26·81	45·77	Goods	16,435	60,814	64·86
Traffic	7,253	11·98	20·44				
General	1,001	1·65	2·82				
£	38,164	63·00	107·56	£	35,480	145,378	58·57
				Balance loss on working, exclusive of interest	2,684		
£	38,164			£	38,164		

	£
Interest on capital— { 127,756 at 3½ per cent; 1,405,312 at 4 per cent }	60,683
Cost of working the line	38,164
Total cost for the year	98,847
Total traffic for the year	35,480
LOSS ON THE YEAR'S WORKING	£63,367

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APPENDIX XXVIII.

Report of the Tramway Locomotive Superintendent.

To the Secretary to the Railway Commissioners,—

Gentlemen,

I have the honor to report that the condition of the rolling stock, machinery, and workshops has been efficiently maintained during the year ending the 30th of June last, but the additional shop accommodation, which has already been approved to meet the necessary demands of the traffic, is very much needed.

CITY AND SUBURBAN STEAM LINES.

Workshops and Machinery.

The running-shed roof at Randwick, which was found to be defective in the early part of the year, has been considerably renewed, extensive repairs have been effected to the stationary engine for driving the electric light and machinery, and three lathes have been added to the stock.

Loco. Engines.

Fifteen new motors have been received, two have been transferred to Newcastle, and the stock now on the books for the City and Suburban traffic numbers 108; eighty-nine (89) engines have been thoroughly overhauled and repaired; one hundred and thirty-eight (138) have received moderate repairs; and one hundred and fifty-one (151) have been repainted and varnished. Extensive repairs have been made to the motor boilers, twelve have been thoroughly examined and retubed, and four have been supplied with new fire-boxes, stays, and tubes. The stock has been well maintained; 73,531 additional train miles have been run, and the demands of the traffic have been fully met without increasing the working expenses.

NORTH SHORE CABLE TRAMWAY.

The cable brought into use in November, 1891, is in a very satisfactory condition, and the gear has been efficiently maintained. Four dummy-cars and one tow-car have been thoroughly overhauled and repainted.

ELECTRIC TRAMWAY.

The electric system of tramway which was tried on the Randwick and Waverley section for 17 months was found to be less economical than steam power on that section, and the latter system was reverted to in April last.

PLATTSBURG TRAMWAY.

The locomotive branch was placed under my charge in October, 1891. The stock and appliances are in fair working order, the motor power has been increased, while the working expenses have decreased.

I have, &c.,

GEO. DOWNE,

Locomotive Superintendent.

Randwick, 1st August, 1892.

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APPENDIX XXIX.

Report of Tramway Engineer.

Office of Engineer for Tramways, July, 1892.

To the Secretary to the Railway Commissioners,—

Gentlemen,

I have the honor to submit my annual report on the condition of the Existing Tramways for the year ending 30th June, 1892.

During the year the Cleveland-street line, 1 mile 6 chains, connecting the Botany and Randwick lines; the Newtown to St. Peters, 59 chains; the Ashfield to Enfield, 1 mile 79 chains, and the Forest Lodge to Balmain, 1 mile 58 chains, have been opened for traffic. Owing to the heavy vehicular traffic on the Cleveland-street line the maintenance will be costly, but on the Newtown to St. Peters line (which is wood-paved) and the Ashfield to Enfield line the maintenance will be comparatively light. The Balmain line runs the greater distance through reserves; the cost of maintenance will therefore be slight.

The roads are well macadamised throughout, and are in as good order as the light rails laid over the greater portion of the roads will admit. The greatest difficulty is still experienced in keeping the joints in good order where the 42-lb. rails are laid on sleepers bedded in concrete.

The work of relaying and repaving Oxford-street, from Liverpool-street to Dowling-street, a distance of 42 chains, has been completed, also the relaying of that portion of Newtown Road between Newtown Junction and Bligh-street, 51 chains. In the latter case the concrete was removed, and the road laid with 60-lb. T rails on sleepers 8′ x 9″ x 4½″, spaced 2′ 4½″ apart, with ordinary blue metal ballast in place of concrete, the old rails removed being used as guard rails. This relaying has been done at much less cost than the construction of the line originally, and from the heavier material used and the method of construction should last half as long again.

Throughout the Tramways generally special attention has been paid to the junctions and sharp curves. Six junctions have been relaid with heavier rails and guards, and now only two junctions with light rails remain, and one of these will be shortly renewed. Care has been taken to reduce the number of joints at junctions, and the mechanism of the points has been improved.

The aggregate length of sharp curves renewed is 68 chains.

Although the condition of the lines has been greatly improved, much more is required in the same direction, and portions of the Waverley, Botany, and Newtown lines, which were re-railed eight or nine years ago with 42-lb. rails, will require renewing.

Tenders have been accepted for supplying the necessary paving-blocks with a view of continuing the wood-paving and relaying of Oxford-street through Paddington to the Woollahra Junction.

On the North Shore cable line the slot-rails, which are too light to withstand the heavier vehicular traffic, have in places been strengthened with tie-bolts, and it is intended to similarly treat the remainder. With this exception this line is now in good order.

I have, &c.,
G. R. COWDERY,
Engineer for Tramways.

STATEMENT OF ACCOUNT OF THE EXPENDITURE AND REVENUE FOR YEAR 1892, WITH COMPARISONS FOR 1891 AND 1888.

DR. TRAMWAYS. CR.

EXPENDITURE.	YEAR ENDING JUNE 30, 1892.	CORRESPONDING PERIOD IN 1891.	CORRESPONDING PERIOD IN 1888.
* CITY AND SUBURBAN.	£	£	£
To Maintenance of Way, Works, and Stations	52,016	34,286	29,002
Locomotive Power	110,080	115,482	116,367
Cars and Waggons	10,718	15,728	13,679
Traffic Expenses	46,666	46,432	41,469
Compensation	3,606	2,087	603
General Charges	6,059	7,490	4,108
	229 145	221,505	204,227
NORTH SHORE CABLE.			
To Maintenance of Way, Works, and Stations	910	1,189	920
Locomotive Power	4,554	4,032	4,031
Cars and Waggons	621	495	459
Traffic Expenses	1,655	1,765	1,202
General Charges	162	123	221
	7,902	7,603	6,833
NEWCASTLE AND FLATTSBURG.			
To Maintenance of Way, Works, and Stations	1,111	1,205	750
Locomotive Power	5,499	6,423	4,136
Cars and Waggons	702	622	287
Traffic Expenses	2,487	2,192	2,843
Compensation	148	5	.....
General Charges	90	124	120
	10,037	10,571	8,136
ASHFIELD TO ENFIELD.			
To Maintenance of Ways, Works, and Stations	310	.....	.....
Motive Power	726	.....	.....
Cars and Waggons	10	.....	.....
Traffic Expenses	233	.....	.....
Compensation	216	.....	.....
General Charges	12	.....	.....
	1,507	.....	.....
TOTAL WORKING EXPENSES ..... £	248,591	239,679	219,196
BALANCE, NET PROFIT (AFTER PAYING WORKING EXPENSES.) ..... £	56,499	53,171	17,323
GRAND TOTAL ..... £	305,090	292,850	236,519

REVENUE.		YEAR ENDING JUNE 30, 1892.	CORRESPONDING PERIOD IN 1891.	CORRESPONDING PERIOD IN 1888.
CITY AND SUBURBAN.		£	£	£
By Passengers—	Pass. Fares			
Fares	66,299,083	279,135	270,020	215,355
Miscellaneous Receipts		186	345	5,706
		279,321	270,365	221,060
NORTH SHORE CABLE.				
By Passengers—				
Fares	2,666,400	11,123	10,333	7,232
Miscellaneous Receipts		.....	.....	16
		11,123	10,333	7,248
NEWCASTLE AND PLATTSBURG.				
By Passengers—				
Fares	3,284,494	13,691	12,146	8,085
Miscellaneous Receipts		5	6	126
		13,696	12,152	8,211
ASHFIELD TO ENFIELD.				
By passengers—				
Fares	227,991	950		
GRAND TOTAL ..... £		305,090	292,850	236,519

* Includes Electric Tram

APPENDIX XXXI.

Schedules under Working Expenses for the Year ending 30th June, 1892, with comparisons for 1891 and 1888.

CITY AND SUBURBAN TRAMWAYS.

Branches.	Year ending June 30, 1892.	Corresponding period in 1891.	Corresponding period in 1888.
A.—Maintenance of Way and Works.	£	£	£
Salaries, office expenses and general superintendence	1,308	821	580
Maintenance and renewals of permanent way, viz.: Wages £31,418		23,032	17,304
Materials 19,005	50,423	9,075	9,332
Repairs, &c., of bridges, culverts, and other works	82	.....	464
Repairs, &c., of waiting-sheds and buildings	207	449	1,045
Sundries	1	9	277
£	52,016	34,286	29,002
B.—Locomotive Power.			
Locomotive superintendence and clerks £1,680		1,649	3,925
Locomotive foremen and Clerks 1,723	3,403	1,271	860
Locomotive drivers and firemen	44,307	43,233	37,528
Locomotive cleaners, coalmen, and labourers	8,867	8,947	10,724
Locomotive sundries	2,471	2,174	7,007
Coal, coke, and wood	16,059	18,897	11,818
Water	2,139	3,163	1,104
Oil, tallow, and waste	3,681	3,495	2,270
Stores for cleaners	562	576	469
Repairs and renewals of engines—Wages £23,089		23,393	32,350
Materials 5,210	28,279	8,493	7,312
Repairs, electric motors and machinery—Wages £230		159	.....
Materials 82	312	32	.....
£	110,080	115,482	115,367
C.—Cars and Waggons.			
Greasing and oiling—Wages / Materials — Traffic Charge	220 / 153	143 / 166	236 / 121
Car repairs—Wages	5,922	5,881	9,604
Materials	4,317	9,392	3,559
Waggon repairs—Wages	75	84	97
Materials	31	62	61
£	10,718	15,728	13,678

Branches.	Year ending June 30, 1892.	Corresponding period in 1891.	Corresponding period in 1888.
D.—Traffic Expenses.	£	£	£
Traffic Manager's office and staff	1,713	1,729	2,131
Clerks	1,212	1,231	922
Staffmen, pointsmen, and flagmen	6,176	6,103	5,833
Conductors	24,001	22,460	19,433
Car-cleaners, shunters, and lamp-trimmers	5,100	5,956	5,393
Stores	2,924	3,257	1,833
Advertising, printing, and stationery	1,276	1,486	317
Travelling and incidental	273	251	215
Sundries	4,091	3,959	5,392
£	46,666	46,432	41,469
E.—Compensation.			
For personal injury	2,918	1,533	603
For damage to vehicles, &c.	688	554	.....
£	3,606	2,087	603
F.—General Expenses.			
Commissioners	643	627	207
Secretary's office	393	467	553
Accountant's office	590	703	553
Audit office	1,512	1,512	1,040
Stores office	560	472	1,196
Sundries	2,361	3,709	559
£	6,059	7,490	4,108
GRAND TOTAL £	229,145	221,505	204,227

*This includes commission on sale of tickets which was formerly deducted from earnings, amounting to £2,270 in 1891, and £2,115 in 1892.

APPENDIX XXXII.

SCHEDULE under Working Expenses for 10 months, July, 1891, to April, 1892, with comparison by Steam Tramway.

ELECTRIC TRAMWAY.

Branches.	10 months ending April, 1892.	Same period under Steam.
Maintenance of Way and Works.	**Electric.**	**Steam.**
	£	£
Superintendence and Office Expenses	6	7
Repairs and Renewals to Permanent-way	373	482
	379	480
Motive-Power Branch.		
GENERAL EXPENSES.		
Superintendence and Office Expenses	24	16
RUNNING EXPENSES.		

Electric.	Stationary Engine.	Electric Motors.	Total.
	£	£	£
Drivers	309	296	605
Fuel	514	...	514
Water	107	...	107
Oil, Tallow, and Waste	51	6	57
Cleaners	70	...	70
Cleaners' Stores	7	...	7
Gas & other lighting	11	...	11
Tools	2	...	2
Sundries	46	...	46
	1,117	302	1,419

Steam.	£	
Drivers	405	
Coal, Coke, and Wood	142	
Water	33	
Oil, Tallow, and Waste	32	
Cleaners, Coalmen, &c.	113	
Cleaners' Stores	7	
Sundries	19	
	751	1,419 / 751

REPAIRS.	£		£
Rep. Stationary Engine	...	Repairing engines	...
Wages	39	Wages	226
Materials	9	Materials	69
Rep. Motors	...		
Wages	139		
Materials	68		
Rep. Armatures	...		
Wages	4		
Materials	1		
Forward	259	Forward	295
		Forward	1,443 / 767

Branches.	10 months ending April, 1892.	Same period under Steam.
	Electric.	**Steam.**
	£	£
REPAIRS—*continued.*		
Brought forward	1,443	767

Electric.	£	*Steam.*	£		
Brought forward	259	Brought forward	295		
Rep. Overhead Wires	...				
Wages	49				
Materials	4				
Total	312		295	312	295
		Total		1,755	1,062

Carriages.

	£		£		
Rep. Cars	...	Rep. Cars	...		
Wages	6	Wages	35		
Materials	2	Materials	18		
Total	8		53	8	53

Traffic Expenses.

Traffic Manager and Staff	15	15
Conductors	266	266
Car Cleaners, Shunters, &c.	11	11
	292	292

General Expenses.

Proportion of General Expenses	18	14
Stores Expenses	7	5
	25	19
GRAND TOTAL £	2,459	1,915

This statement is given separately to show the comparative working, the working expenses having been included in the City and Suburban Schedule.

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APPENDIX XXXIII.

Schedules under Working Expenses for the Year ending 30th June, 1892.

ASHFIELD TO ENFIELD TRAMWAY.

BRANCHES.	From 23rd September, 1891, to 30th June, 1892.	BRANCHES.	From 23rd September, 1891, to 30th June, 1892.
A.—Maintenance of Way and Works.	£	**D.—Traffic Expenses.**	£
Salaries, office expenses, and general superintendence	6	Traffic Manager's office and staff	13
Maintenance and renewals of permanent way, viz.: Wages £244; Materials 60	304	Staffmen, pointsmen, and flagmen	2
		Conductors	207
Repairs, &c., of bridges, culverts, and other works	.....	Car-cleaners, shunters, and lamp-trimmers	.....
Repairs, &c., of waiting-sheds and buildings	.....	Stores	5
Sundries	.....	Advertising, printing, and stationery	2
£	310	Travelling and incidental	.....
		Sundries	4
		£	233
B.—Locomotive Power.			
Locomotive superintendence and clerks	7		
Locomotive foremen and clerks	.....		
Locomotive drivers and firemen	363	**E.—Compensation.**	
Locomotive cleaners, coalmen, and labourers	84		
Locomotive sundries	12	For personal injury	6
Coal, coke, and wood	128	For damage to vehicles, &c.	210
Water	20	£	216
Oil, tallow, and waste	39		
Stores for cleaners	7		
Repairs and renewals of engines: Wages £50; Materials 16	66	**F.—General Expenses.**	
£	726	Proportion of General Expenses	10
		Stores office	2
C.—Cars and Waggons.		£	12
Car repairs: Wages 5; Materials 5	10	GRAND TOTAL £	1,507

APPENDIX XXXIV.

SCHEDULES under Working Expenses for the Year ending the 30th June, 1892, with Comparisons for 1891 and 1888.

NORTH SHORE CABLE TRAM.

	Year ending June 30, 1892.	Corresponding period in 1891.	Corresponding period in 1888.
Permanent Way Branch.	£	£	£
Maintenance of Way :—			
Superintendence and Office Expenses	24	17	12
Repairs and Renewals of Buildings	2	9	159
Repairs and Renewals of Line, Sidings, &c.	884	1,162	749
Sundries	.....	...	.....
£	910	1,188	920
Locomotive Branch.			
GENERAL EXPENSES.			
Superintendence and Office Expenses	364	316	43
Repairs and Renewals of Machinery, Tools, and Implements	4	11	69
Lighting Buildings and Depôts	64	71	84
Sundries	147	197	79
£	579	595	274
RUNNING EXPENSES.			
Wages of Gripmen and Stationary Engine-drivers	1,481	1,388	1,389
Wages of Cleaners, Firemen, Pulley-oilers, and Running Shed Labourers	150	160	278
Cost of Fuel	622	576	676
Running Stores for Engines or Cables, exclusive of Fuel	159	118	160
Cost of Water	81	95	38
Sundries	70	28	.....
£	2,563	2,365	2,541
REPAIRING EXPENSES.			
Repairs and Renewals of Stationary Engines	43	56	74
Repairs and Renewals of Cable	1,180	632	885
Repairs and Renewals of Running Gear and other Cable Fittings	186	373	175
Repairs and Renewals of Water-supply Pipes, &c.	3	11	3
£	1,412	1,072	1,137
Total, Locomotive Expenses £	4,554	4,032	4,081

	Year ending June 30, 1892.	Corresponding period in 1891.	Corresponding period in 1888.
Cars and Waggons.	£	£	£
Repairs and Renewals to Carriages and Dummies	560	377	414
Repairs and Renewals of Grippers	61	118	45
£	621	495	459
Traffic Branch.			
Management and Office Expenses	85	70	.....
Repairs and Renewals of Furniture, Fittings, Implements, and Stores	10	36	4
Fuel and Lighting	54	67	27
Wages of Clerks, Conductors, &c.	1,260	1,303	1,071
Sundries	131	104	20
Cleaning Grooves	115	195	80
£	1,655	1,765	1,202
General Charges.			
Proportion of General Establishment	59	61	38
Store Expenses	28	16	63
Office Expenses and Contingencies	.....	...	14
Sundries	75	46	106
£	162	123	221
GRAND TOTAL	7,902	7,603	6,833

SCHEDULES under Working Expenses for the Year ending the 30th June, 1892, with comparisons for 1891 and 1888.

PLATTSBURG TRAMWAY.

BRANCHES.	Year ending June 30, 1892.	Corresponding period in 1891.	Corresponding period in 1888.
A.—Maintenance of Way and Works.	£	£	£
Salaries, office expenses, and general superintendence	38	51	1
Maintenance and renewals of permanent way, viz.: Wages	951	1,091	582
Maintenance and renewals of permanent way, viz.: Materials	108	63	131
Repairs, &c., of bridges, culverts, and other works	.....	.....	27
Repairs, &c., of waiting-sheds and buildings	14	.....	3
Sundries	.....	.....	6
£	1,111	1,205	750
B.—Locomotive Power.			
Locomotive superintendent and clerks	119	104	47
Locomotive foreman	240	118	.....
Locomotive drivers and firemen	2,198	1,991	1,422
Locomotive cleaners, coalmen, and labourers	544	585	677
Locomotive sundries	51	36	26
Coal, coke, and wood	664	815	791
Water	65	30	13
Oil, tallow, and waste	179	201	94
Stores for cleaners	31	59	43
Repairs and renewals of engines: Wages	1,149	1,921	940
Repairs and renewals of engines: Materials	259	663	83
£	5,499	6,423	4,136

BRANCHES	Year ending June 30, 1892.	Corresponding period in 1891.	Corresponding period in 1888.
C.—Cars and Waggons.	£	£	£
Greasing and oiling: Wages	21	26	.....
Greasing and oiling: Materials — Traffic charge	17	21	28
Car repairs: Wages	502	440	175
Car repairs: Materials	162	135	84
£	702	622	287
D.—Traffic Expenses.			
Traffic Manager's office and staff	135	89	160
Clerks	296	273	.....
Staffmen, pointsmen, and flagmen	457	337	1,218
Conductors	1,168	1,039	673
Car-cleaners, shunters, &c.	118	177	517
Stores	155	145	72
Advertising, stationery, and printing	32	5	8
Travelling and incidental	7	2	.....
Sundries	119	125	195
£	2,487	2,192	2,843
E.—Compensation.			
Personal injury £	148	5	.....
F.—General Charges.			
Proportion of general establishment	71	79	50
Store expenses	19	19	66
Sundries	.....	26	4
£	90	124	120
GRAND TOTAL £	10,037	10,571	8,136

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APPENDIX XXXVI.

CITY AND SUBURBAN LINES.

Total Tramway Rolling Stock on City and Suburban Lines and Vehicles renewed or replaced out of Revenue, year ending 30th June, 1892.

Year ending	Total Stock.				RENEWALS OUT OF REVENUE.			
	Motors.	Cars.	Goods trucks.	Water tanks.	Motors.	Cars.	Goods trucks.	Water tanks.
31 December, 1879	4	6	...	...	Nil.	Nil.	...	...
31 ,, 1880	10	23	...	...	,,	,,	...	...
31 ,, 1881	29	47	...	...	,,	,,	...	...
31 ,, 1882	46	83	4	...	,,	,,	Nil.	...
31 ,, 1883	67	99	4	...	,,	,,	,,	...
31 ,, 1884	75	108	13	2	,,	,,	,,	Nil.
31 ,, 1885	95	108	16	2	,,	,,	,,	,,
31 ,, 1886	96	127	16	2	,,	1	,,	,,
31 ,, 1887	88	114	14	3	,,	Nil.	,,	,,
30 June, 1888	88	125	14	3	,,	,,	,,	,,
30 ,, 1889	88	129	14	3	,,	10	,,	,,
30 ,, 1890	88	146	14	4	,,	31	,,	1
30 ,, 1891	95	180	14	5	4	15	,,	,,
30 ,, 1892	108	193	14	5	...	...	...	...

Duplicate Stock—14 Cars.

APPENDIX XXXVII.

ELECTRIC TRAMWAY.

Total Rolling Stock on the Electric Tramway, 30th June, 1892.

Year ending	Motor Cars.
30 June, 1891	3
30 ,, 1892	3

APPENDIX XXXVIII.

NORTH SHORE CABLE TRAMWAY.

Total Rolling Stock on the North Shore Cable Tramway, 30th June, 1892.

Year ending	Total Stock.		
	Dummies.	Cars.	Total.
31 December, 1886	8	8	16
31 ,, 1887	8	8	16
30 June, 1888	8	8	16
30 ,, 1889	8	10	18
30 ,, 1890	8	14	22
30 ,, 1891	8	14	22
30 ,, 1892	10	18	28

APPENDIX XXXIX.

PLATTSBURG TRAMWAY.

Total Rolling Stock on the Plattsburg Tramway, 30th June, 1892.

Year ending	Motors.	Cars.	Trucks.	Total.
30 June, 1889	8	18	2	28
30 ,, 1890	8	18	2	28
30 ,, 1891	11	18	2	31
30 ,, 1892	13	20	2	35

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APPENDIX XL.

STATEMENT showing the cost of Construction and cost per Mile open on different Sections of the City and Suburban Tramway Lines on the 30th June, 1892.

Particulars.	Length in Miles.	Total Cost.	Cost per Mile.
		£	£
Railway Station to Bridge-street	1¼	94,916	54,237
Liverpool-street to Randwick and Coogee	5¼	112,454	21,419
Darlinghurst Junction to Waverley and Woollahra	4¼	54,706	12,872
Waverley to Bondi Beach	1¾	25,419	14,525
Waverley to Randwick	1½	11,525	7,683
Crown-street Junction to Cleveland-street	¾	16,069	21,425
Railway Station to Glebe and Forest Lodge	2¼	38,021	16,898
Newtown (Glebe Junction) to Dulwich Hill	4¼	57,998	13,646
Forest Lodge Junction to Leichhardt and Five Dock	5	54,621	10,924
Railway Station Junction to Botany	6¾	90,640	13,428
Forest Lodge to Balmain	1¾	22,362	12,778
Newtown Bridge to St. Peters	¾	12,336	16,448
Redfern to Moore Park	1	18,446	18,446
Average cost of Construction	37	609,513	16,473
Tramway Workshops £55,261			
Rolling Stock 252,870			
Machinery 13,150			
Furniture 2,113			
.....		323,394	.....
	37	932,907	25,213

APPENDIX XLI.

RETURN of the Number of Passenger Fares collected, Earnings and Working Cost, Total and per train mile, Percentage Working Cost to Earnings, Capital Invested, and Interest on Capital returned by the City and Suburban Tramways for each year from 1879 to 1892 inclusive.

Year.	Length of Line.	Number of Passenger Fares collected.	Car mileage.	Total Earnings.	Working Expenses.	Earnings per Car Mile.	Working Cost per Car Mile.	Percentage of Working Cost to Gross Earnings.	Net Earnings.	Capital invested on lines open.	Interest on Capital.
	Miles.			£	£				£	£	
1879*	1½	443,341	13,270	4,416	2,278	79·87	41·19	51·59	2,138	22,269	9·60
1880	4	2,066,897	84,074	18,980	13,444	54·19	38·38	70·83	5,536	60,218	12·34
1881	9½	7,090,125	296,906	62,549	52,107	50·56	42·12	83·31	10,442	169,450	6·16
1882	22	15,269,100	670,649	126,202	103,136	45·16	36·91	81·72	23,066	412,561	6·80
1883	25	25,684,285	1,076,096	190,699	178,877	42·53	39·89	93·80	11,822	544,105	2·22
1884	27½	30,202,303	1,242,491	219,942	215,167	42·48	41·56	97·82	4,775	643,111	0·76
1885	27½	†39,594,753	1,220,500	223,340	207,995	43·91	40·90	93·13	15,345	708,109	2·17
1886	27½	52,977,578	1,222,943	226,367	201,737	44·42	39·59	89·12	24,630	742,113	3·37
1887	29½	50,108,256	1,220,026	214,125	201,468	42·12	39·63	94·08	12,657	731,582	1·76
1888	29½	51,563,197	1,246,543	221,060	204,227	42·56	39·32	92·38	16,833	742,535	2·22
1889	29½	52,810,026	1,338,386	225,833	206,092	40·49	36·95	91·25	19,741	771,255	2·56
1890	30½	57,463,650	1,474,646	249,508	207,517	40·60	36·46	83·17	41,991	790,555	5·31
1891	33½	62,676,636	1,553,048	270,365	221,505	41·78	34·23	81·92	48,860	857,455	5·74
1892	37	65,299,063	1,613,443	279,321	229,145	41·55	34·09	82·04	50,176	932,907	5·54

* The line was opened for three and a half months only in 1879, and for part of this period was worked with horse-power.
† Up to the year 1885, 3d. cash fares and 2d. tickets were counted as single fares; from 1886, inclusive, all tickets issued were at 1d. values, and cash fares paid are in this Return calculated at same rate.

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APPENDIX XLII.

RETURN of the total Amount paid for Wages on the different Branches of the Tramways 1887–8, 1891, and 1892.

Branches.	1892.	1891.	1888.
TRAMWAYS :—	£	£	£
Maintenance Branch	35,246	28,072	30,824
Locomotive ,,	93,778	92,687	97,751
Traffic ,,	40,341	39,447	31,087
TOTAL, TRAMWAYS £	169,365	160,206	159,662

NOTE.—Includes all wages paid by the Department, whether on maintenance or new works.

APPENDIX XLIII.

STATEMENT of the number of Persons employed on the Tramways on 30th June, 1892, 1891, and the 31st October, 1888.

Branches.	30th June, 1892.	30th June, 1891.	31st October, 1888.
Locomotive Branch—Salaried Staff	19	19	25
Wages Staff	647	620	592
Traffic Branch—Salaried Staff	14	14	22
Wages Staff	239	238	200
*Maintenance Branch—Salaried Staff	7	6	.....
Wages Staff	206	424	198
Stores Branch—Salaried Staff	3	2	4
Wages Staff	1	1	7
Other Branches—Salaried Staff	.....	1	.....
Wages Staff	.....	.....	.....
†Plattsburg Tramway—Traffic Wages	15	16	.....
Total, Salaried Staff	43	42	51
Total, Wages Staff	1,108	1,297	997
GRAND TOTAL	1,151	1,339	1,048

* The Salaried Staff for 1888 was part of Maintenance Branch, Railways.
† Included in Traffic Branch, Railways, for 1888.

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APPENDIX XLIV.

TRAMWAYS.

RETURN of the number and nature of Accidents, and the Injuries to Life and Limb, which occurred on the Tramways from 1st July, 1891, to 30th June, 1892.

Date.	Servants of Department.		Passengers.		Other than Passengers.		Nature of Accident.
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
1891.							
14 July					1		Man trying to enter car in motion.
18 "						1	Girl slightly injured—buggy collided with tram.
20 August				1			Woman slightly injured—leaving car in motion.
8 September						1	Man injured—cart collided with tram.
10 "						1	Man's leg broken—cart skidding on tram line.
3 October		1					Pointsman slightly injured—cart collided with tram.
7 "						1	Woman knocked down by motor.
24 "	1						Conductor killed during shunting.
5 November				1			Boy slightly injured—leaving car in motion.
5 "				1			Woman slightly injured—leaving car in motion.
7 "		1					Fireman injured—spring of motor breaking.
8 December				1			Man slightly injured—fell from tram.
5 "						1	Man's arm broken—cart collided with tram.
12 "				1			Man slightly injured—leaving car in motion.
14 "				1			Woman slightly injured—leaving car in motion.
1892.							
8 January					1		Boy killed—jumping on car whilst in motion.
11 "						1	Girl slightly injured—knocked down by motor.
25 "					1		Boy killed—knocked down by motor.
4 February				1			Boy crushed his foot—fell off car.
1 March						1	Man slightly injured—knocked down by motor.
14 "				1			Man slightly injured—leaving car in motion.
18 "				1			Man's foot crushed—leaving car in motion.
20 April						1	Boy's arm broken—cart collided with tram.
6 May				1			Man slightly injured—knocked off footboard of car.
9 "				1			Boy slightly injured—leaving car in motion.
11 "				1			Man slightly injured—fell from car.
18 "						1	Girl's arm cut off—knocked down by motor.
22 "	1						Caught by passing motor.
25 "				1			Girl slightly injured—leaving car whilst in motion.
9 June						1	Man slightly injured—fell between motor and car.
16 "						1	Woman slightly injured—cart collided with tram.
17 "				1			Man slightly injured—left car in motion.
18 "						1	Man slightly injured—cart ran into train.
21 "						1	Boy's foot crushed—knocked down by motor.
	2	2	.....	14	3	14	

APPENDIX XLV.

TRAMWAYS.

MISCELLANEOUS Articles Imported for the New South Wales Tramways during the year ending 30th June, 1892.

Date of Arrival.	Name of Ship.	Description of Material.	Supplied by	Weight.	Rate.	Invoice Cost.	Freight.	English Charges.	Colonial Charges.	Total Cost.	Per Ton or Each.
1891.				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
17 July	Samaria	100 No. 4 diaphragms complete.	R. W. Cameron & Co.		5 13 5	567 0 3	3 9 4	27 7 4	5 8 9	603 5 8	6 0 6 each.
17 "	"	400 pieces of hose with connections complete.	" "		0 10 3½	208 3 9	1 18 11	25 7 2	3 1 1	226 10 11	0 11 4
18 "	Patriarch	24 No. 3 injectors for motor boilers.	Körting Bros.		9 15 0	234 0 0	0 10 6	3 13 2	2 7 11	240 11 7	10 0 5 per ton.
11 "	Gulgoa	24840 feet, 3¾-in. circ., best packet improved steel wire rope for North Shore cable tramway.	Thos. William Smith	25 0 0 0	41 9 3	1036 13 3	36 19 11	16 2 1	76 3 6	1165 16 9	46.12 8
31 Aug.	Port Pirie	48 c.-s. motor axles	Vickers, Sons, & Co., Ld.	6 0 3 24	22 0 0	133 1 3	3 14 11	2 5 11	1 11 5	140 13 5	23 5 2 each.
15 Oct.	Port Jackson	100 cylindrical No. 3 springs	George Spencer & Co.	0 2 2 25	0 10 5½	62 8 2	0 10 6	0 18 8	0 13 5	64 10 9	0 10 11
17 "	Dungeree	2 emery wheels for slide-bar grinding machine.	Beyer, Peacock, & Co.		5 15 0	11 10 0	0 10 6	0 9 6	0 4 9	12 14 9	6 7 4½ per lb.
27 Dec. 1892.	Stradidon	120 brass loco. tubes	Allen, Everitt, & Sons	6 18 0 22	0 0 7½	421 14 1	4 16 1	7 7 6	4 16 10	438 14 6	0 0 7¾ per lb.
3 Jan. 1891.	Gulf of Lyons	75 steel wheels	Steel Co. of Scotland	5 12 3 7	9 7 6	52 17 8	7 15 1	0 18 0	1 0 4	62 6 1	11 1 3
11 July 1892.	Culgoa	Gear for unwinding wire rope for North Shore tramway.	Thos. Wm. Smith			15 0 0				15 0 0	
28 May.	Gulf of Siam	280 motor tyres	Vickers, Sons, & Co.	27 2 0 2	32 10 0	892 2 1	13 0 4	18 6 8	13 5 9	940 15 10	34 6 2 per set.
30 "	Nairnshire	100 Hecla car wheels	Hadfield & Co., Ld.	6 0 3 8	9 14 6	243 2 6	4 5 8	5 3 3	3 7 9	255 18 9	10 4 9
.....	Culgoa	100 Hecla cast wheels	" "	6 10 2 24	9 14 6	243 2 6	4 5 10	5 3 3	3 3 0	255 10 7	10 4 9½
.....	"	100 cast wheels Hecla pin	" "	6 10 2 10	9 14 6	243 2 6	4 5 8	5 3 3	3 3 0	255 10 5	10 4 9½

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APPENDIX XLVI.

RETURN showing the Appointments of Tramway Employees from 1st July, 1891, to 30th June, 1892.

Date.	Name.	Position.	Rate.	Remarks.
		TRAMWAYS—LOCOMOTIVE BRANCH.		
1891.				
8 July ...	Doyle, James	Car-builder	11/- per day	From Railways, *vice* H. Hazlett.
12 ,, ...	Hardge, Samuel	Cleaner	5/6 ,,	*Vice* J. Watson.
14 ,, ...	Hobbs, E.	Machinist	8/8 ,,	*Vice* W. Kidson.
7 Aug. ...	McGie, Daniel	Cleaner	5/6 ,,	*Vice* J. Smith.
20 ,, ...	Woodford, Arthur	Labourer	6/6 ,,	*Vice* R. Aldrick.
5 Sept. ...	Edwards, Alfred	Cleaner	4/6 ,,	From Railways, *vice* T. Smith.
8 ,, ...	Fincher, Robert	Labourer	6/6 ,,	*Vice* T. Lane.
14 ,, ...	Dummer, Benjamin	Fitter	10/- ,,	From Railways, *vice* J. Pope.
19 ,, ...	Calow, I.	Labourer	6/6 ,,	*Vice* G. Mansfield.
25 ,, ...	Walker, George	Brassmoulder	10/- ,,	*Vice* H. Nell.
1 Oct. ...	Matthews, John	Fuelman	6/6 ,,	From Supernumerary Staff, *vice* A. Fitzgibbon.
1 ,, ...	Timperly, Richard	Cleaner	5/6 ,,	From Supernumerary Staff.
1 ,, ...	Downes, Charles	,,	5/6 ,,	,, ,, ,,
1 ,, ...	Weir, James	Oiler	5/- ,,	,, ,, ,,
1 ,, ...	Bowers, James	Cleaner	5/6 ,,	From Supernumerary Staff, *vice* P. M'Cawley.
1 ,, ...	Power, William	,,	5/6 ,,	From Supernumerary Staff, *vice* W. Lang.
1 ,, ...	Fletcher, H.	Oiler	4/- ,,	From Supernumerary Staff, *vice* W. Phillips.
1 ,, ...	M'Ivor, F.	Boilermaker	10/- ,,	From Supernumerary Staff, *vice* J. Warner.
1 ,, ...	Duffy, Joseph	Shop Boy	5/- ,,	From Supernumerary Staff, *vice* M. M'Farlane.
1 Dec. ...	Stewart, William	,,	2/3 ,,	From Supernumerary Staff, *vice* W. Fleming.
1 ,, ...	M'Ivor, Arthur	,,	2/3 ,,	From Supernumerary Staff, *vice* H. Cutter.
1 ,, ...	Chapman, R.	Labourer	6/6 ,,	From Supernumerary Staff, *vice* W. Barlow.
1 ,, ...	Byrne, L.	,,	6/6 ,,	From Supernumerary Staff, *vice* J. Page.
22 ,, ...	M'Laughlin, E.	Cleaner	5/6 ,,	*Vice* A. Gawler.
27 ,, ...	Thomas, George	,,	4/6 ,,	From Supernumerary Staff, *vice* F. Turner.
30 ,, ...	Bird, W. C.	Boilermaker	10/- ,,	From Supernumerary Staff, *vice* W. Sunner.
30 ,, ...	M'Queen, John	,,	10/- ,,	From Supernumerary Staff, *vice* R. Wade.
30 ,, ...	Wallworth, John	Labourer	7/6 ,,	From Supernumerary Staff, *vice* W. J. Knight.
1892.				
1 Jan. ...	Vintzents, Joseph	Apprentice	1/3 ,,	From Supernumerary Staff, *vice* W. Geaney.
14 ,, ...	Earls, John	Cleaner	5/6 ,,	*Vice* R. Timperley.
11 Feb. ...	Walker, William J.	Fitter's Apprentice	-/10 ,,	*Vice* F. McNab.
12 ,, ...	Freckleton, Bertram	Shop boy	1/9 ,,	*Vice* W. Stewart.
16 ,, ...	Quinn, Timothy	Gripman	7/6 ,,	*Vice* H. Fraser.
18 ,, ...	Johnston, John	Lamp Trimmer	3/- ,,	*Vice* W. Attenborough.
19 ,, ...	Thomas, George B.	,,	4/6 ,,	From Supernumerary Staff, *vice* F. Turner.
20 ,, ...	Harkness, Charles	Oiler	3/- ,,	*Vice* J. Weir.
10 Mar. ...	Fraser, Hugh	Labourer	6/6 ,,	*Vice* Montgomery.
18 ,, ...	Campbell, James	Cleaner	6/- ,,	From Supernumerary Staff, *vice* A. Stewart.
13 April ...	Morrison, John D.	,,	6/- ,,	*Vice* A. Gardiner.
15 ,, ...	Sellars, Joseph A.	,,	5/6 ,,	From Supernumerary Staff.
15 ,, ...	Edworthy, Edward	Fitter	10/- ,,	From Supernumerary Staff, *vice* W. Best.
15 ,, ...	Sinclair, Thomas	Labourer	6/6 ,,	From Supernumerary Staff, *vice* J. Moran.
24 ,, ...	M'Laughlin, George	Cleaner	4/6 ,,	*Vice* W. White.
10 May ...	Baker, Edward	,,	6/- ,,	*Vice* B. Poole.
16 ,, ...	Gattenhoff, Percy	Shop Boy	2/6 ,,	*Vice* A. M'Ivor.
31 ,, ...	Olde, George Albert	Apprentice	-/10 ,,	*Vice* Arthur Patterson.
9 June ...	Ryan, Phillip	Labourer	6/6 ,,	*Vice* B. Dooley.
24 ,, ...	Hayes, James	,,	6/6 ,,	From Supernumerary Staff.
24 ,, ...	Aiken, Walter	Apprentice	-/10 ,,	,, ,,
24 ,, ...	Griffiths, William	Labourer	6/6 ,,	,, ,,
24 ,, ...	Waters, Walter	Cleaner	5/6 ,,	,, ,,
24 ,, ...	Hinton, Archibald	,,	5/6 ,,	,, ,,
		TRAMWAYS—TRAFFIC BRANCH.		
1891.				
14 Nov. ...	Smith, Charles	Junior Conductor	5/- per day	*Vice* M. M'Sweeney.
14 ,, ...	Phelps, E.	,,	5/- ,,	*Vice* S. Myers.
1892.				
8 Jan. ...	Andrew, Adam	,,	8/- ,,	From Supernumerary Staff.
8 ,, ...	Audsley, T. R.	,,	7/- ,,	From Supernumerary Staff, *vice* T. Lane.
8 ,, ...	Antonic, Joseph	,,	7/- ,,	From Supernumerary Staff.
8 ,, ...	Brownlow, Edward	,,	8/- ,,	From Supernumerary Staff, *vice* P. Cantwell.
8 ,, ...	Bradley, Robert	Car Cleaner	7/- ,,	From Supernumerary Staff.
8 ,, ...	Brady, John	Junior Conductor	5/- ,,	,, ,,
8 ,, ...	Beverley, Henry	,,	5/- ,,	,, ,,
8 ,, ...	Bagge, Albert	,,	5/- ,,	,, ,,
8 ,, ...	Cowdery, Gilbert	,,	5/- ,,	,, ,,
8 ,, ...	Dorritty, John	,,	8/- ,,	From Supernumerary Staff, *vice* T. Devenny.
8 ,, ...	Dabourn, George	,,	6/- ,,	From Supernumerary Staff.
8 ,, ...	Davidson, James	,,	6/- ,,	From Supernumerary Staff, *vice* C. Hineman.
8 ,, ...	Frappell, Arthur	,,	5/- ,,	From Supernumerary Staff, *vice* J. Lemon.
8 ,, ...	Flanders, Amos	,,	7/- ,,	From Supernumerary Staff, *vice* G. Morgan.

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APPENDIX XLVI—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
		Tramways—Traffic Branch—*continued.*		
1892.				
8 Jan. ...	Golden, Rudolph	Junior Conductor	6/- per day	From Supernumerary Staff.
8 ,, ...	Garnett, John	,,	7/- ,,	,, ,,
8 ,, ...	Herman, Edward	,,	5/- ,,	,, ,,
8 ,, ...	Harper, Charles H.	,,	5/- ,,	,, ,,
8 ,, ...	Horsefield, Joseph	,,	7/- ,,	,, ,,
8 ,, ...	Harland, John H.	,,	7/- ,,	From Supernumerary Staff, *vice* F. A. Cox.
8 ,, ...	Lawler, Thomas	,,	7/- ,,	From Supernumerary Staff, *vice* W. Grono.
8 ,, ...	Hibbert, Thomas H.	Car Cleaner	6/6 ,,	From Supernumerary Staff, *vice* M. Fahy.
8 ,, ...	Healey, Sydney	Junior Conductor	5/- ,,	From Supernumerary Staff.
8 ,, ...	Ironside, F. J.	,,	6/- ,,	,, ,,
8 ,, ...	Johnson, J. H.	,,	8/- ,,	,, ,,
8 ,, ...	Keeshan, Henry R.	,,	6/- ,,	,, ,,
8 ,, ...	Knox, William	,,	7/- ,,	From Supernumerary Staff, *vice* J. Cook.
8 ,, ...	Lester, Hiram	,,	6/- ,,	From Supernumerary Staff.
8 ,, ...	Larmour, Andrew	,,	5/- ,,	,, ,,
8 ,, ...	Maloney, James	,,	8/- ,,	,, ,,
8 ,, ...	Morris, W. J.	,,	8/- ,,	,, ,,
8 ,, ...	Millington, H. E.	,,	6/- ,,	,, ,,
8 ,, ...	Munro, A. F.	,,	6/- ,,	,, ,,
8 ,, ...	M'Mullen, William	,,	6/- ,,	,, ,,
8 ,, ...	Neely, J. A.	,,	6/- ,,	,, ,,
8 ,, ...	Winters, Robert J.	,,	6/- ,,	,, ,,
8 ,, ...	Cummins M. J.	Car Cleaner	6/6 ,,	From Supernumerary Staff, *vice* J. Riley.
8 ,, ...	Lumley, H. F.	,,	7/- ,,	From Supernumerary Staff, *vice* W. Watson.
8 ,, ...	Mullally, William	,,	7/- ,,	From Supernumerary Staff, *vice* S. Hassell.
8 ,, ...	Shoebridge, Arthur	,,	7/- ,,	From Supernumerary Staff, *vice* T. Hinton.
8 ,, ...	Moorehead, A.	,,	7/- ,,	From Supernumerary Staff.
8 ,, ...	Mullens, James	,,	7/- ,,	,, ,,
8 ,, ...	M'Adam, John	,,	6/6 ,,	,, ,,
8 ,, ...	Smith, W. G.	,,	7/- ,,	,, ,,
8 ,, ...	M'Donnell, William	Shunter	8/6 ,,	From Supernumerary Staff, *vice* E. Brooks.
8 ,, ...	Bonner, James	Car Cleaner	7/- ,,	From Supernumerary Staff, *vice* T. Hilliard.
8 ,, ...	Cowdroy, A. A.	,,	7/- ,,	From Supernumerary Staff, *vice* D. Purcell.
8 ,, ...	Perry, Benjamin	Messenger	20/- per week	From Supernumerary Staff.
18 May ...	M'Mullen, William	Junior Conductor	6/- per day	Reinstated.
		Tramways—Maintenance Branch.		
1891.				
20 Aug. ...	Hanton, James	Blacksmith	10/8 per day	*Vice* J. Lowes.
5 Oct. ...	Hunt, Thomas	Labourer	7/6 ,,	From Railways.
1892.				
4 Mar. ...	Kilt, John	,,	7/- ,,	From Supernumerary Staff.
15 April ...	Robinson, William	,,	6/6 ,,	From Supernumerary Staff, *vice* B. Malone.
15 ,, ...	Funnell, Edwin	,,	6/6 ,,	From Supernumerary Staff.
20 ,, ...	Quinn, Timothy	,,	7/6 ,,	From Locomotive Branch, Tramways.
27 May ...	M'Cabe, Patrick	,,	7/- ,,	From Supernumerary Staff, *vice* P. Grady.
17 June ...	Walters, Frederick	,,	7/6 ,,	From Railways.

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APPENDIX XLVII.

RETURN showing the Removals of Tramway Employees, from 1st July, 1891, to 30th June, 1892.

Date.	Name.	Position.	Rate.	Remarks.
		TRAMWAYS—LOCOMOTIVE BRANCH.		
1891.				
6 July ...	Lane, Thomas	Labourer	7/- per day	Resigned.
16 " ...	Kidson, William	Fitter	10/- "	Deceased.
22 " ...	Smith, James	Fireman	7/6 "	Discharged
30 " ...	Mansfield, George	Labourer	7/- "	"
29 Aug. ...	Nell, Henry	Brassmoulder	12/4 "	Resigned.
4 Sept. ...	Smith, Thomas	Cleaner	4/6 "	To Railways.
5 " ...	Pope, John L.	Fitter	13/- "	"
23 Oct. ...	Stewart, Alexander	Shedman	8/- "	Discharged.
29 Nov. ...	Gowler, Arthur	Cleaner	5/6 "	"
10 Dec. ...	Rundel, Charles	Labourer	7/6 "	Resigned.
1892.				
1 Jan. ...	Temperly, Richard	Cleaner	5/6 "	"
2 " ...	M'Nab, Frank	Fitter	9/4 "	"
18 " ...	Callender, Alexander	Apprentice	5/- "	"
31 " ...	Attenborough, William	Lamp Cleaner	4/- "	"
11 Feb. ...	Weir, James	Oiler	5/- "	Discharged.
11 " ...	Stewart, William	Shop Boy	2/6 "	Resigned.
13 " ...	Fraser, Hugh	Gripman	8/- "	Discharged.
13 " ...	Heydon, George	Apprentice	5/- "	"
18 " ...	Matthews, John	Fuelman	6/6 "	To Locomotive Branch, Railways.
23 " ...	Patterson, Arthur	Apprentice	5/- "	Discharged.
8 Mar. ...	White, William	Driver	13/- "	Deceased.
9 " ...	Montgomery, James	Car Lifter	7/6 "	Resigned.
17 " ...	M'Iver, Arthur	Shop Boy	2/3 "	Discharged.
25 " ...	Gardiner, Arthur	Cleaner	7/6 "	"
20 April ...	Quinn, Timothy	Gripman	7/6 "	To Maintenance Branch.
22 " ...	Poole, Benjamin	Driver	11/- "	Discharged.
19 May ...	Dooley, Bronte	Carpenter	9/- "	"
16 June ...	Tinsley, James	Cleaner	7/6 "	"
16 " ...	Rogers, Thomas	Shop Boy	3/- "	Resigned.
23 " ...	Pellitier, John F.	Fireman	9/- "	To Electrical Engineer's Branch.
27 " ...	Olde, George	Apprentice	-/10 "	Discharged.
		TRAMWAYS—TRAFFIC BRANCH.		
1891.				
31 July ...	Sommers, Carl	Conductor	8/- per day	Discharged.
28 " ...	Thomas, Edward	"	9/- "	"
13 Aug. ...	Thomas, Noah	Flagman	7/- "	Resigned.
25 Oct. ...	M'Sweeny, Morgan	Conductor	8/- "	Deceased.
6 Nov. ...	Myers, Sydney	"	9/- "	Resigned.
4 Dec. ...	Pawley, W. H.	"	9/- "	Deceased.
1892.				
2 April ...	Flanders, Amos	Junior Conductor	7/- "	To Property and Estate Branch.
22 " ...	M'Mullen, William	"	6/- "	Discharged.
23 June ...	Snell, Richard	Flagman	7/- "	Deceased.
		TRAMWAYS—MAINTENANCE BRANCH.		
1891.				
5 Aug. ...	Lowes, Joseph	Blacksmith	10/- per day	Discharged.
28 Dec. ...	Malone, R.	Labourer	7/6 "	Deceased.
1892.				
1 Feb. ...	Bott, William	Labourer	7/6 "	Discharged.
16 " ...	Quinn, Timothy	"	7/6 "	To Locomotive Branch, Tramways.
9 June ...	Morgan, Daniel	Ganger	9/- "	Discharged.
9 " ...	Grady, Patrick	Labourer	7/6 "	"

[Ten diagrams—two maps.]

Sydney: Charles Potter, Government Printer—1892.

RAILWAYS.

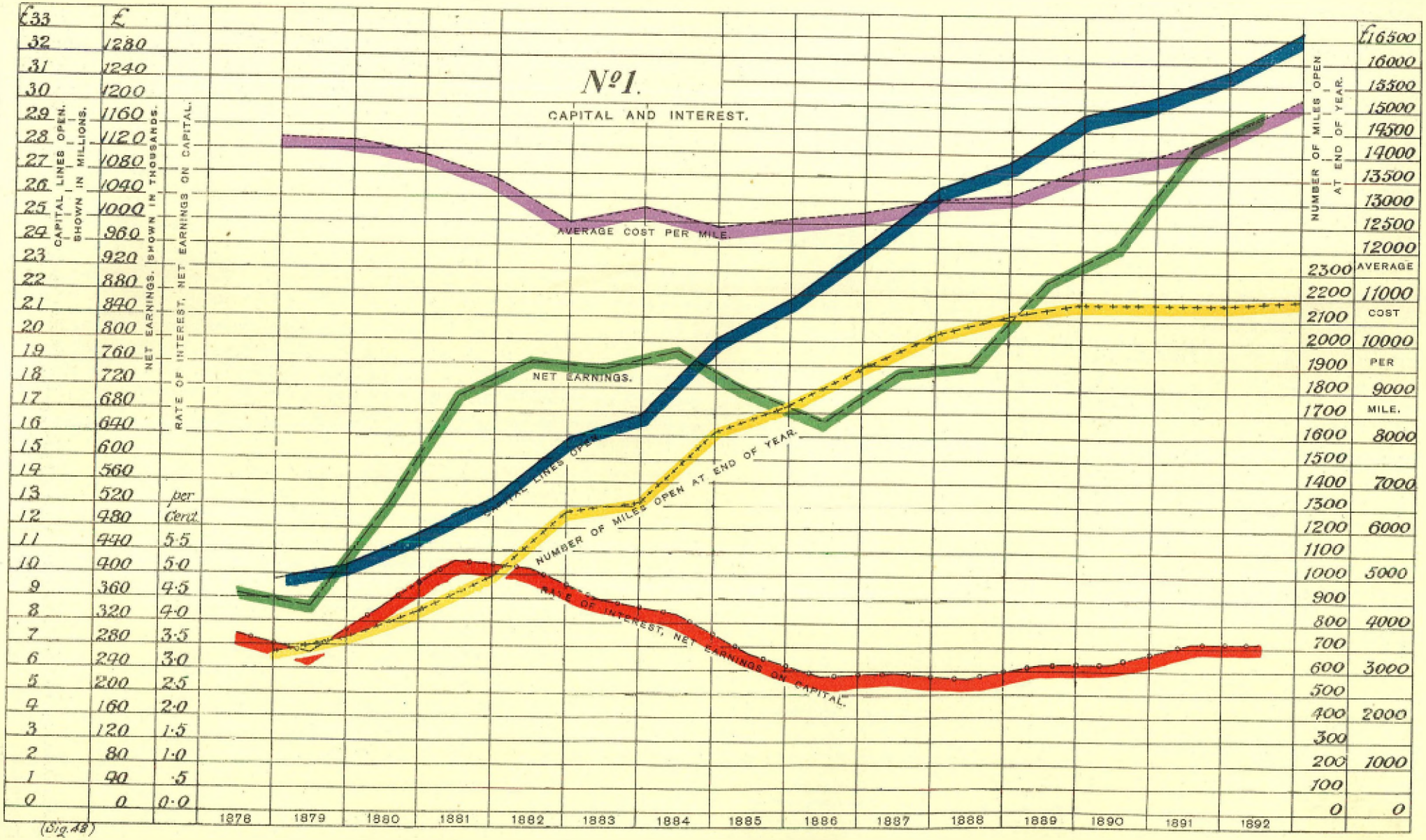

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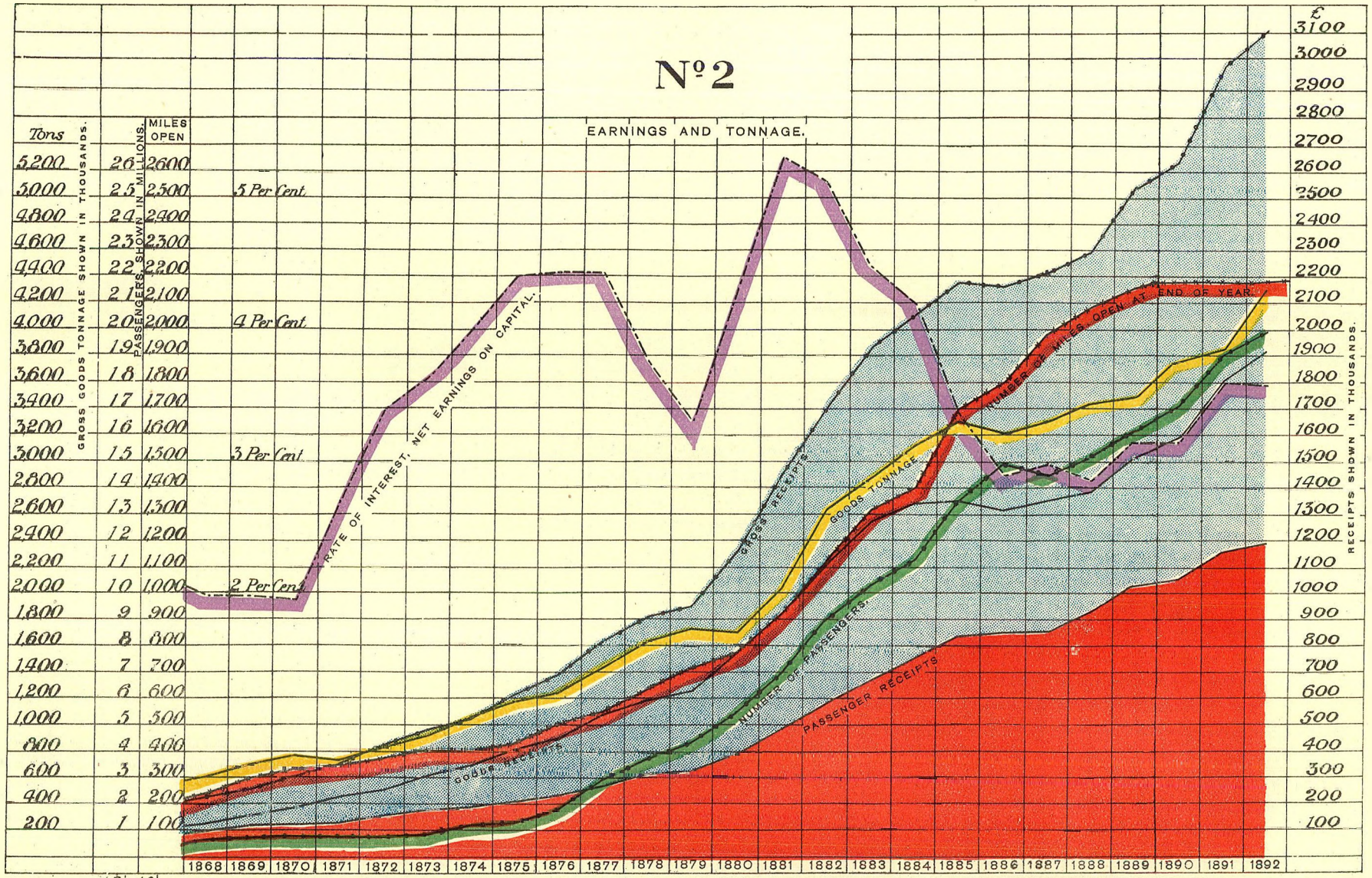
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

RAILWAYS.



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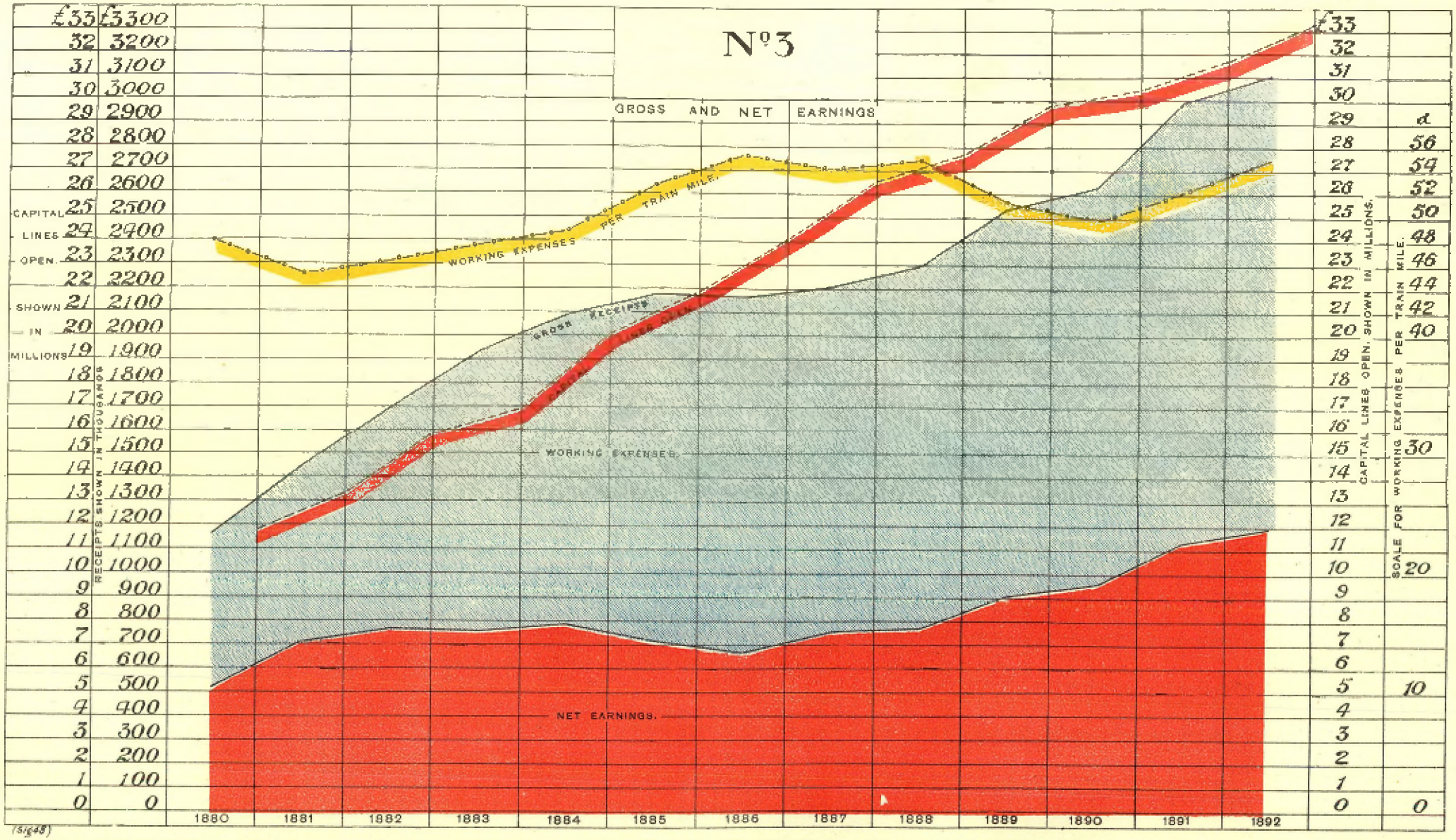
RAILWAYS.



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RAILWAYS.

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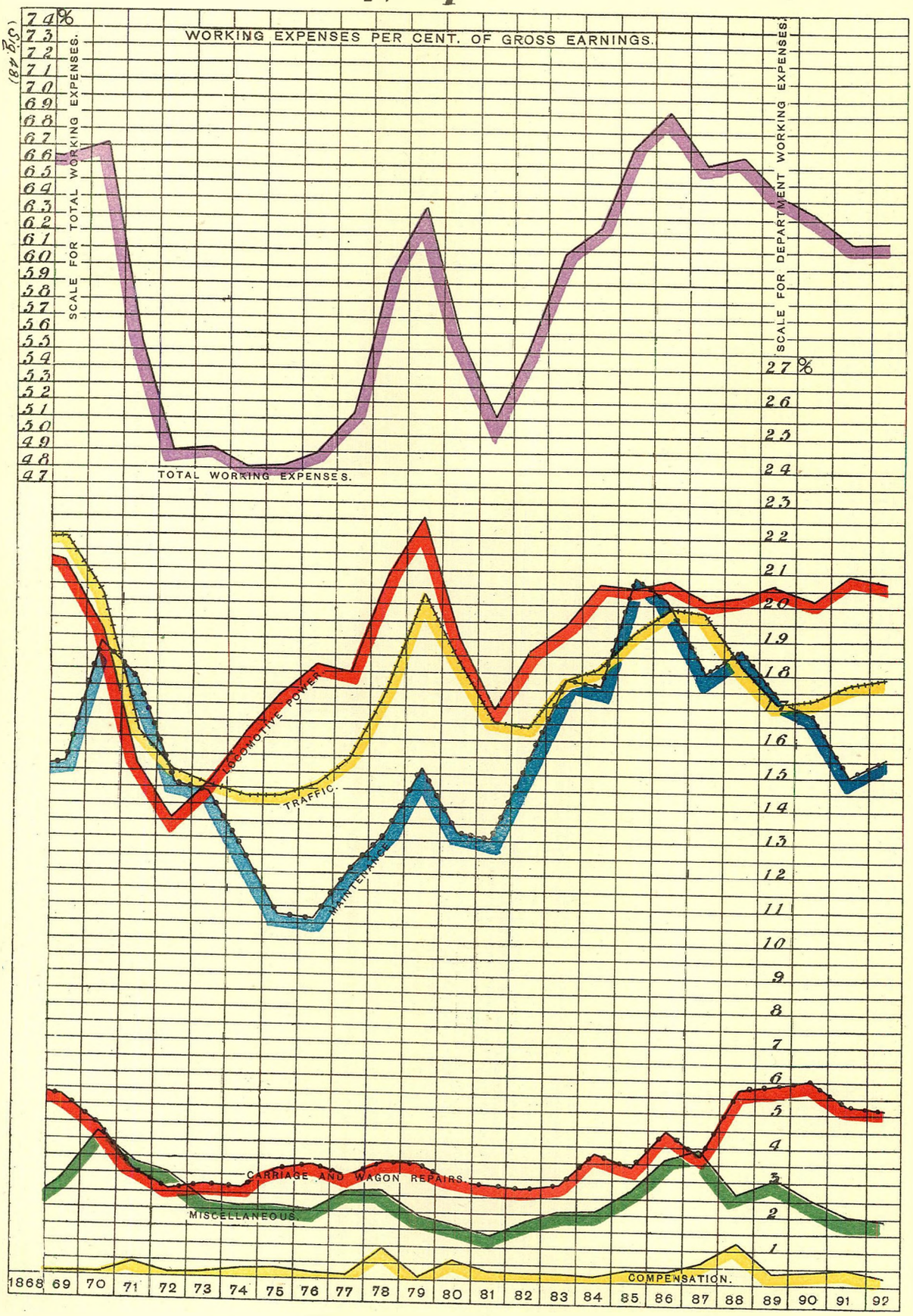

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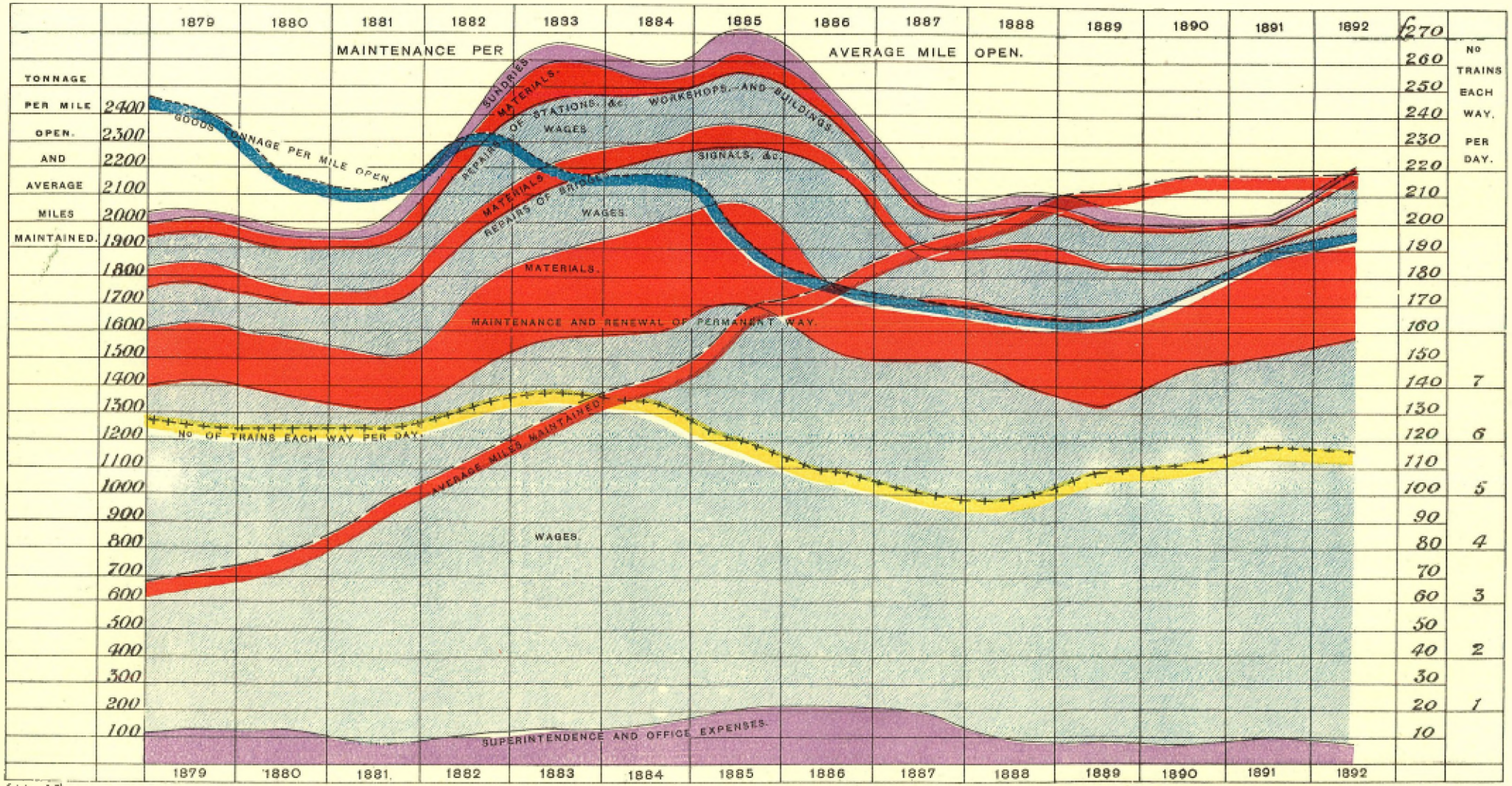
RAILWAYS.

N° 5



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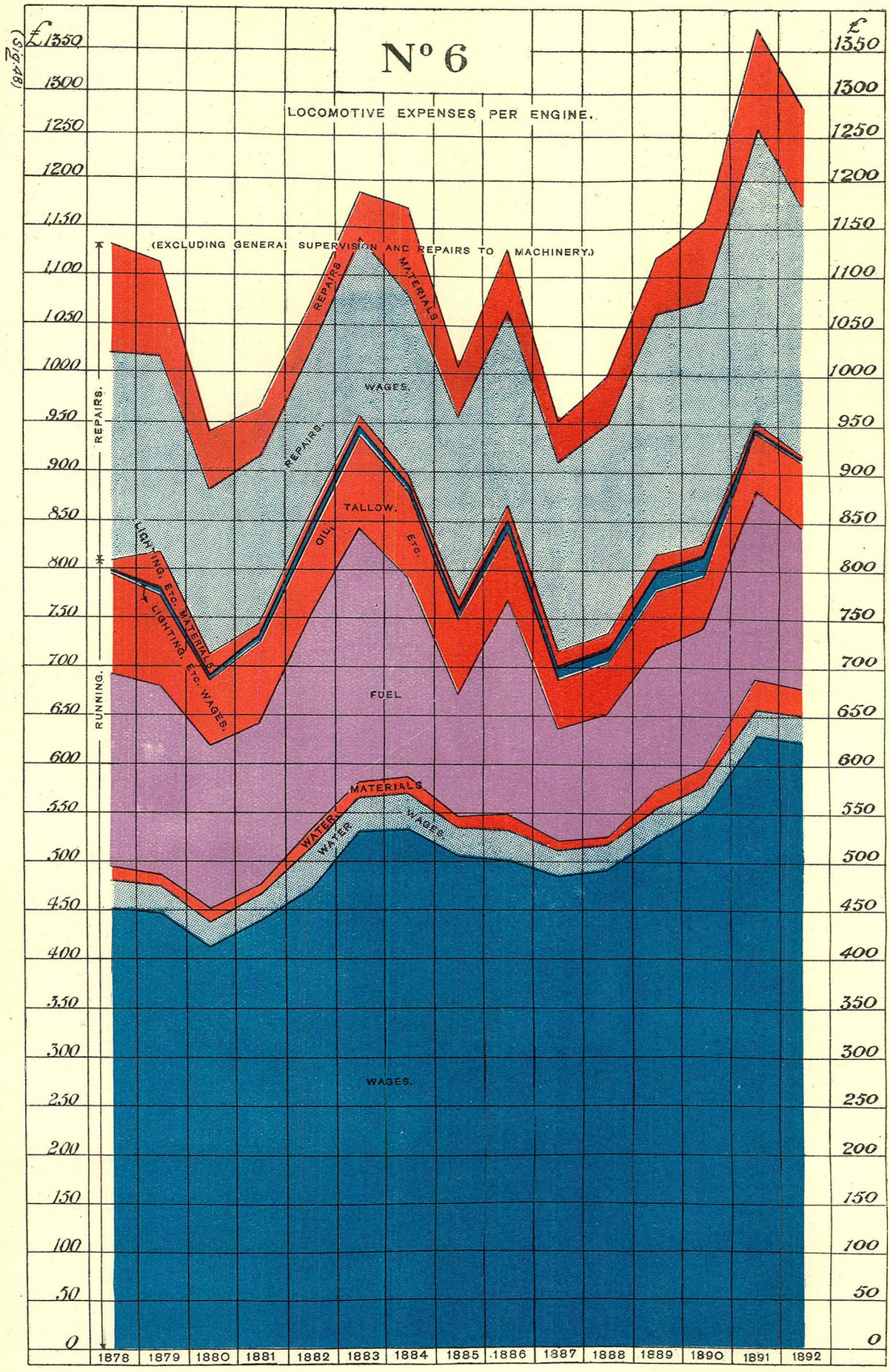
SYDNEY, NEW SOUTH WALES.

RAILWAYS.



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RAILWAYS.

N° 7

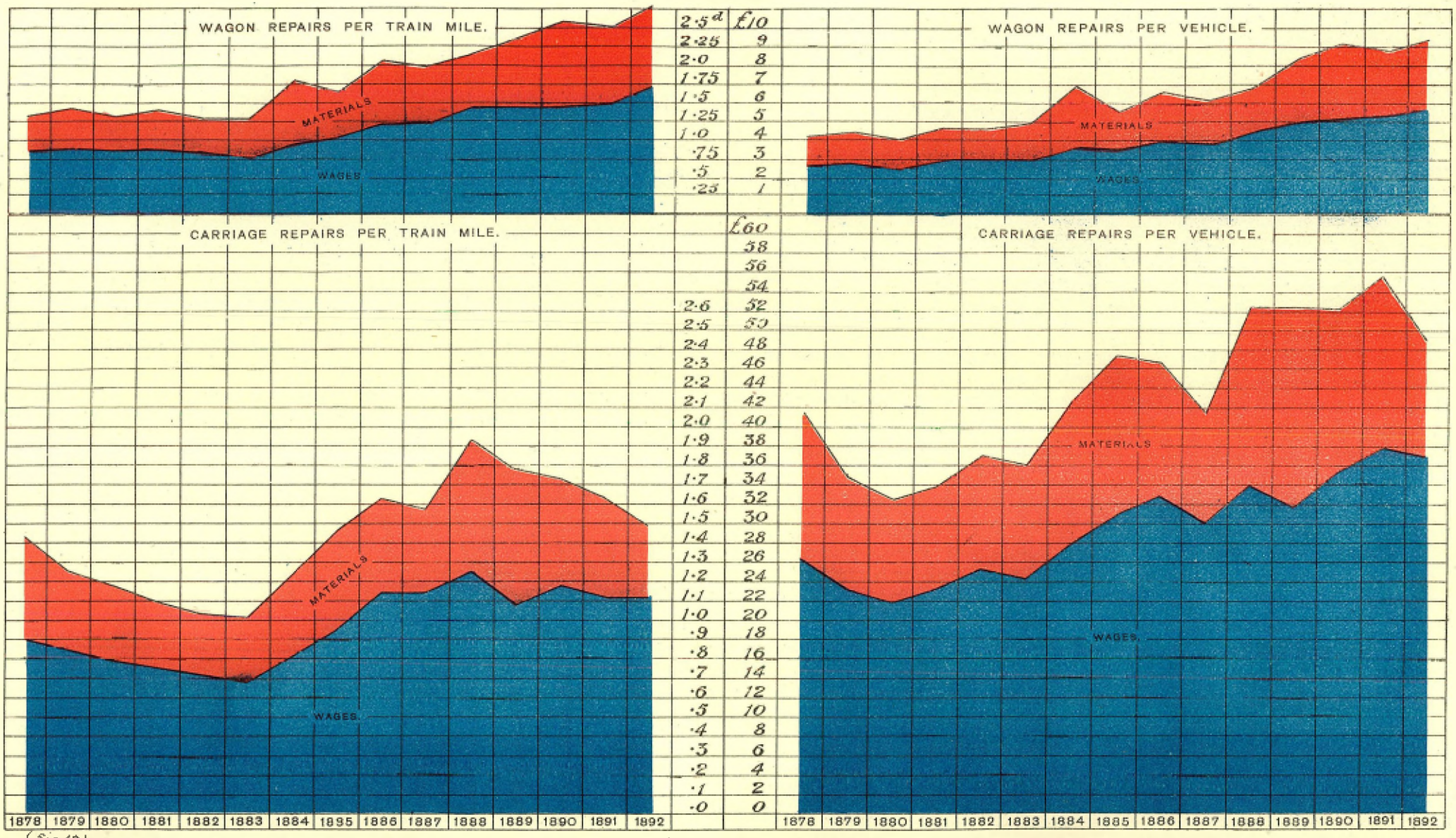

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PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE.
SYDNEY, NEW SOUTH WALES.

(A) N. S. W. R.

WESTERN LINE

DIAGRAM OF GRADES

PENRITH TO BATHURST

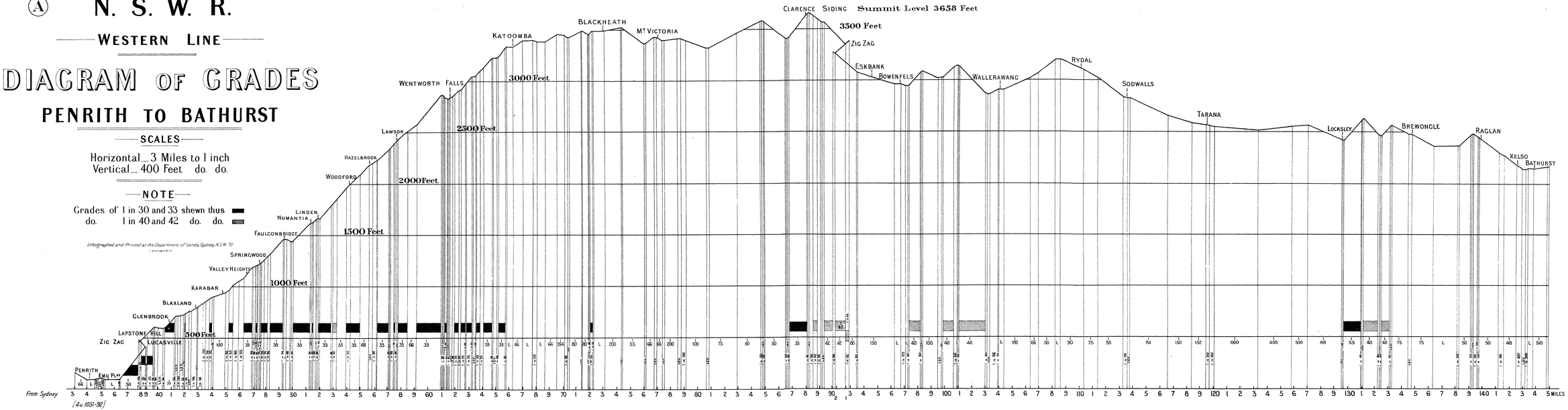
SCALES

Horizontal_3 Miles to 1 inch
Vertical_400 Feet do. do.

NOTE

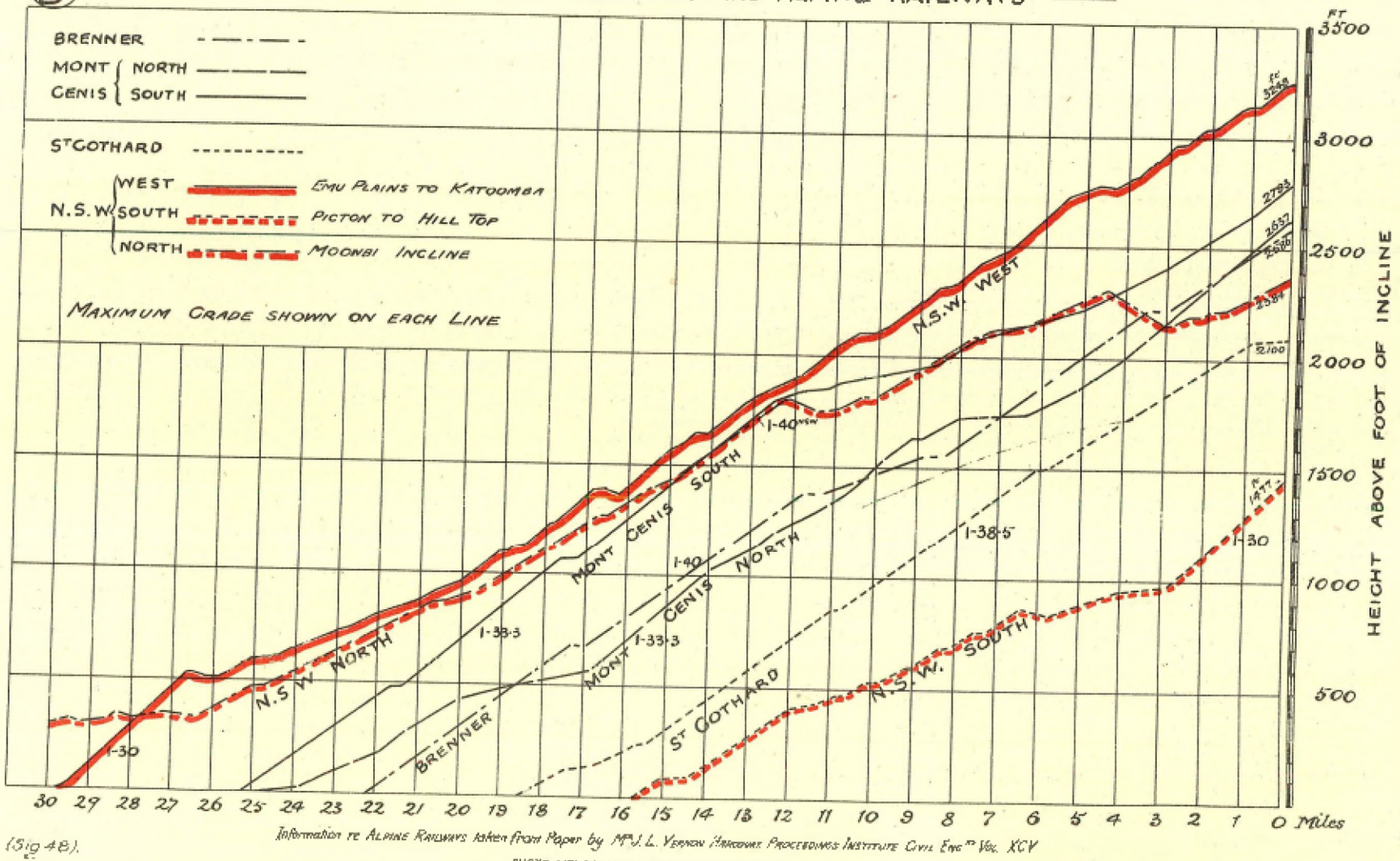
Grades of 1 in 30 and 33 shewn thus ■
do. 1 in 40 and 42 do. do. ▒

Lithographed and Printed at the Department of Lands, Sydney, N.S.W. '92.
[4.u.1051-92]



B'

RELATIVE GRADES N.S.WALES AND ALPINE RAILWAYS



(Sig 48).

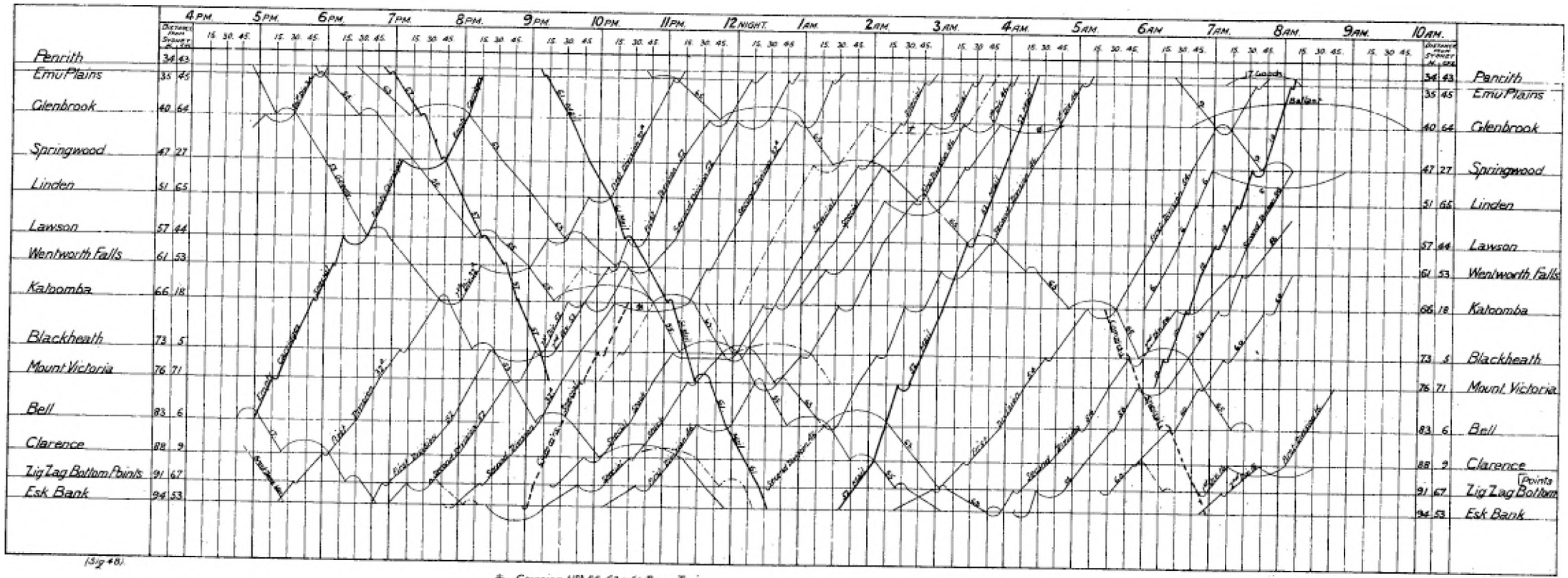
Information re ALPINE RAILWAYS taken from Paper by Mr J. L. VERNON (HARCOURT) PROCEEDINGS INSTITUTE CIVIL ENGRS Vol. XCV

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

Passenger Trains thus
Goods Trains and Stock Trains thus
Light Engines thus
Commrs Specials thus

N.S.W.G.R^VS

DIAGRAM SHEWING RUNNING OF TRAINS BETWEEN PENRITH AND ESKBANK AND VICE VERSA BETWEEN 5PM. ON 27TH AND 8AM. ON 28TH APRIL 1892.



(Sig 48)

+ Crossing N°s 55, 63 & 61 Down Trains.
† Waiting to take forward Live Stock put off by Trains reducing their load at Glenbrook
Ø. Shunting off Coal and picking up Live Stock

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES

1892.

NEW SOUTH WALES.

RAILWAYS AND TRAMWAYS.

(REPORT OF RAILWAY COMMISSIONERS, QUARTER ENDING SEPTEMBER, 1892.)

Presented to Parliament, pursuant to Act 51 Vic. No. 35, sec. 44.

Offices of the Railway Commissioners of New South Wales,
31st October, 1892.

To The Honorable the Minister of Railways,—

Sir,

In accordance with the provisions of the 44th clause of the Railway Act of 1888, 51 Vic. No. 35, we have the honor to submit, for the information of Parliament, our Report, for the quarter ending 30th September, 1892, upon the subjects specified, viz.:—

(I.) "The state of the traffic returns, with the approximate cost and earnings of trains per ton per train mile, in respect of goods and passengers, respectively, carried during the past quarter."

(II.) "The general condition of the lines, and accommodation for the traffic."

(III.) "The special rates (if any) which have been made, and the reasons for making such rates."

(IV.) "The appointments and removals, with the circumstances attending each case."

I.—State of the Traffic.

Railways.	Quarter ending 30th Sept., 1891.	Quarter ending 30th Sept., 1892.
Miles open	2,182	2,266
Revenue — Passenger (1891. £271,778; 1892. 256,337) / Merchandise (1891. £449,570; 1892. 449,014)	£721,348	£705,351
Expenditure	£474,236	£472,248
Train miles run	2,135,757	1,922,504
Earnings per train mile	6/9	7/4
Expenditure per train mile	4/5¾	4/11
Percentage—Expenditure to earnings	65·74	66·95
Number of passengers	4,880,392	4,866,595
Tonnage of goods traffic	1,145,861	971,114
Tonnage of live stock traffic	38,558	36,404

359—A

[1,403 copies—Approximate Cost of Printing (labour and material), £20 4s. 6d.]

Tramways.	Quarter ending 30th Sept., 1891.	Quarter ending 30th Sept., 1892.
Miles open	45½	48
Revenue from all sources	£73,536	£71,414
Expenditure	£65,237	£62,843
Train miles run	445,613	471,263
Earnings per train mile	3/3½	3/0¼
Expenditure per train mile	2/11	2/8
Percentage—Expenditure to earnings	88·71	88·00
Number of fares collected	17,137,184	16,814,144

RAILWAYS.

II.—Condition of the Lines.

A report as to the condition of the lines will be found as an Appendix, pages 3 and 4.

III.—Special Rates.

A statement of the special rates, and the reasons for making the same, will be found attached. [*Appendix*, page 4.]

IV.—Staff.

These returns are given as an Appendix, pages 5 to 9.

General Remarks.

The line from Nyngan to Cobar, a distance of 81 miles, was opened for traffic on 1st July.

The revenue for the quarter shows a decrease of £15,997. Of this sum, £15,441 arises from the coaching or passenger department traffic, the intercolonial traffic alone showing a decrease of over £3,000—£2,767 with Melbourne, and £311 Brisbane.

Coal and other mineral traffic shows a decrease of £12,415, live stock traffic, £6,208, and general merchandise, £9,333, and it is solely owing to the fact that the wool traffic has come forward earlier this year, to the extent of £28,000, that a larger decrease has not arisen.

Every effort is being made to effect economies in all Departments to meet the depression, but in consequence of so large a decrease arising in the passenger traffic, the expenses cannot be proportionately reduced in that branch, as the passenger train service must be maintained, although a shrinkage takes place in the traffic by some of the trains; in fact, the passenger train service has been again materially improved from the 1st August, so as to endeavour to still further develop the business. It is satisfactory to note that the passenger train services are working with the greatest regularity.

The

The policy inaugurated by us of improving the power of the locomotives, and cutting down some of the grades, is assisting materially to meet the depression, the earnings per train mile for the quarter showing an increase of 7d. per train mile as compared with the corresponding quarter of last year, and no less than 11½d. per mile as compared with the September quarter of 1890.

Condition of the Lines and Accommodation for the Traffic.

The work of relaying and reballasting the lines has been continued during the quarter, and the lines generally have been much improved. A great amount of work in this direction, however, still remains to be done, as the bulk of the iron rails laid down twenty to thirty years ago are rapidly becoming worn out. On the Great Northern Line a large amount of resleepering has also become necessary, and considerable progress has been made with this work during the quarter.

The facilities created for dealing with the traffic in various directions during the past three years enables the business to be conducted with much greater satisfaction to the public, and there will be no difficulty in dealing with a considerable expansion of trade.

TRAMWAYS.

The traffic on the Tramways shows a slight decrease; the expenditure has, however, decreased to a slightly greater extent than the traffic.

We have the honor to be,

Sir,

Your most obedient Servants,

E. M. G. EDDY,
Chief Commissioner.

W. M. FEHON,
Commissioner.

CHARLES OLIVER,
Commissioner.

APPENDIX I.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

REPORT on Condition of Lines for quarter ending 30th September, 1892.

Sir, Office of Engineer-in-Chief for Existing Lines, 25 October, 1892.

I have the honor to report, for the information of the Commissioners, that the whole of the Permanent Way and Works have been well maintained during the past quarter.

The very heavy rain recently experienced caused a slip to occur on the Mudgee Line near Brogan's Creek. Slips of less consequence also occurred on the Northern and Western Lines.

Opening of New Lines.

The Nyngan-Cobar Line, 81 miles in length, was opened on the 1st July, and the line from Culcairn to Corowa, a distance of 47 miles, on the 3rd instant.

Relaying and Reballasting.

Satisfactory progress has been made with the work of relaying and reballasting on the Southern and Western Divisions; and on the Northern Division a considerable amount of resleepering has been carried out.

Widening of the Suburban Line, Redfern to Flemington.

With the exception of overbridges at Crystal-street and Liverpool Road, and footbridge at Burwood, the works are practically completed.

Improvement of Grades and Curves.

The works in connection with the cutting out of the Zig Zag at Lapstone Hill are not yet completed, but it is anticipated that the direct line will be opened early in December.

The deviations and improvement of the grades between Muswellbrook and Singleton are approaching completion. A second section was opened for traffic in July, the third section will be opened on the 23rd instant, and the remainder will be completed in about four weeks' time.

I have, &c.,
WILLIAM T. FOXLEE,
Engineer-in-Chief.

The Secretary to the Railway Commissioners.

APPENDIX II.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

STATEMENT, in accordance with clause No. 44 of the Railway Act, showing the Special Rates which have been made, and the reasons for making such rates, quarter ending 30th September, 1892.

Article.	Rate.	Reason for such rate.
Demijohns	Demijohns sent to Sydney from Lithgow to be wickered, at the Up journey rate, on production of a certificate that they are the same which were originally sent to Sydney.	To encourage traffic.
Molasses	Tanks with molasses, from Darling Harbour to Darlington, to be charged "A" rate and conditions.	To secure traffic.
Flour	A concession of 20 per cent. to be allowed on 8-ton consignments of flour forwarded from western stations to Bourke.	To equalise rates.
Leather	Leather in Up transit to be charged at "B" rates if sent in 4-ton lots.	To encourage traffic.
Produce	Produce sent to Newcastle from country stations for sale, and not being disposed of, but reconsigned to the Honeysuckle Point Markets, to be charged 6s. per four-wheeled truck.	To secure traffic.
Wool	Wool carried on Yass Tramway to be charged at the rate of 2s. 6d. per ton.	To equalise rates.
Do	Wool despatched from Cobar to Sydney from squattages that lie to the west of or are intersected by the 145th meridian of longitude, to be charged—Undumped scoured, £4 3s. 8d. per ton; greasy, £3 7s. per ton.	To encourage traffic.
Iron	Wrought-iron railings to be charged 2nd class	Do do

APPENDIX III.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with Clause No. 44 of the Railway Act, showing the Appointments of Employees from 1st July to 30th September, 1892 :—

Date.	Name.	Position.	Rate.	Remarks.
	SECRETARY'S BRANCH.			
	Nil.			
	CHIEF ACCOUNTANT'S BRANCH.			
	Nil.			
	TRAFFIC AUDITOR'S BRANCH.			
	Nil.			
	ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.			
15 July	Martin, Joseph	Labourer	7/- per day	From Supernumerary Staff, *vice* W. Tilly.
15 "	Hutton, James	"	7/- "	*vice* P. Coleman.
15 "	Smith, Richard	"	6/6 "	*vice* R. McBain.
15 "	Ahearne, John	"	6/6 "	*vice* J. Moorby.
15 "	Farnsworth, Edwin	Fettler	7/- "	*vice* J. Harris.
15 "	Mullins, James	"	6/6 "	*vice* M. McDonald
15 "	Shepard, Thomas	"	6/6 "	*vice* G. Sullivan,
15 "	Riley, John	"	7/6 "	*vice* R. Allison.
15 "	O'Shea, Michael	"	6/6 "	*vice* R. Greenwood.
15 "	Sedgers, William	"	7/6 "	*vice* G. Coates.
15 "	Fress, Thomas	"	7/6 "	*vice* J. Green.
22 "	Freeman, Peter	"	6/6 "	*vice* J. Gorman.
22 "	Jackson, James	"	6/6 "	*vice* F. Mottram.
22 "	Rowlands, William	"	6/6 "	*vice* W. Daniels.
22 "	McKenna, Joseph	"	6/6 "	*vice* J. Kavanagh
23 "	Davies, John	"	6/6 "	*vice* T. Barber.
23 "	Stewart, William	"	6/6 "	*vice* C. O'Brien.
23 "	Campbell, James	"	7/- "	*vice* P. Quinn.
24 "	Wilson, Andrew	"	7/- "	*vice* J. Eady.
30 "	Morrisey, Patrick	Labourer	6/6 "	*vice* S. Williamson.
2 Aug.	Fawley, Daniel	"	6/6 "	*Vice* D. M'Grath.
8 "	Meadley, Mark	"	6/6 "	*Vice* J. Spears.
8 "	Ward, John	"	6/6 "	*Vice* G. White.
12 "	Webber, Thomas	"	7/- "	From Supernumerary Staff.
12 "	Rilt, Michael	"	7/- "	" " "
15 "	Foster, John	"	6/6 "	*Vice* J. Stoodman.
15 "	Matheson, Owen	"	6/6 "	*Vice* A. Bunyan.
16 Sept.	Davraux, John	Fettler	6/6 "	*Vice* H. Gray.
16 "	Bradwell, John	"	6/6 "	*Vice* J. Foreman.
16 "	Whitton, George	"	6/6 "	*Vice* P. Maher.
16 "	Cartwright, William	Labourer	6/6 "	*Vice* A. M'Neely.
20 "	Harvey, Andrew	"	6/6 "	*Vice* R. White.
23 "	Purdon, John	"	6/6 "	From Supernumerary Staff, *vice* H. Heness.
23 "	Wren, Timothy	"	6/6 "	*vice* H. Quirk.
23 "	Derley, James	"	6/6 "	*vice* E. Lester.
23 "	Miller, Carl	"	6/6 "	*vice* G. Castlemain.
23 "	Richey, James	"	6/6 "	*vice* J. Harrison.
28 "	Ross, John	Office-boy	7/- "	From Supernumerary Staff.
28 "	Bentley, Alfred	Labourer	7/- "	From Supernumerary Staff, *vice* C. Tiplo.
23 "	Dowling, Thomas	Boy	3/6 "	*vice* F. Martin.
23 "	Estell, Robert	Labourer	6/6 "	*vice* E. Roberts.
23 "	Lelz, Frederick	"	6/6 "	*vice* T. Fox.
23 "	Mills, Joseph	"	7/6 "	*vice* F. Adams.
23 "	Meston, James	"	7/6 "	*vice* W. Condon.
	CHIEF MECHANICAL ENGINEER'S BRANCH.			
1 July	Angus, William C.	Gasman	6/6 per day	From Supernumerary Staff, *vice* T. Pickering
1 "	Cambourn, Walter	Cleaner	5/- "	*vice* P. Chamber
1 "	Higgins, Henry	Storeman	7/- "	*vice* G. Gray.
1 "	Morphy, Edward	Junior clerk	£80 per annum	*vice* G. Roberts.
1 "	Flook, E. A.	Apprentice clerk	£60 "	From Supernumerary Staff.
1 "	Donald, James A.	Clerk	£125 "	" " "
1 "	Mathie, A. J.	Apprentice clerk	£40 "	" " "
1 "	Wilson, E. J.	"	£50 "	From Supernumerary Staff
1 "	Hines, Frederick	Apprentice	/10 per day	*Vice* F. Benning.
15 "	O'Donoghoe, Phillip	Apprentice clerk	£30 per annum	*Vice* J. Geekie.
15 "	Webber, William	Oiler	7/6 per day	From Supernumerary Staff, *vice* J. Fleming.
15 "	Crowe, Daniel	Labourer	7/- "	*vice* A. Ranadge.
15 "	Fiddes, Frederick	Striker	7/- "	*vice* G. Brown.
15 "	Dunstan, Richard	Moulder	10/- "	*vice* E. Burke.
15 "	Long, Michael	Striker	7/- "	*vice* J. Blake.
15 "	Warton, Charles E.	Cleaner	5/6 "	re-employed.
15 "	Wythes, James	"	6/- "	*vice* S. Smith.
15 "	Kilkelly, John	"	6/- "	*vice* T. Stephenson.
15 "	Blackney, Thomas	"	6/- "	*vice* E. Baker.
15 "	Clooney, Thomas	"	5/- "	*vice* D. Wainwright.
15 "	Chapman, George	Fireman	7/- "	*vice* W. Wilson.
15 "	Cracknell, Frederick	Cleaner	5/6 "	*vice* J. Matthews.
15 "	Kitchener, William	Fireman	7/- "	*vice* W. Ainsworth.
15 "	Freeman John	Cleaner	5/- "	*vice* M. Donohoe.
15 "	Hunter, James	"	5/- "	*vice* W. O'Connel.
15 "	Donn, William	Laborer	7/- "	*vice* W. Blanchard.
15 "	Kendelgan, Edward	Cleaner	5/6 "	*vice* J. Norton.
22 "	Worrell, Arthur D.	Laborer	7/- "	*vice* S. Bowland.
29 "	Fenn, John	Car-builder	10/- "	*vice* J. Bond.
29 "	Malarkey, John	Labourer	6/6 "	*vice* R. Billingworth.
12 "	Newton, Frank	Apprentice clerk	£30 per annum	*Vice* J. Geekie.
5 Aug.	Worrell, Frederick	Cleaner	5/- per day	From Supernumerary Staff, *vice* W. Strong.
5 "	Tooker, Herbert F.	Apprentice clerk	£30 per annum	*Vice* J. Geekie.
9 "	King, Mary	Caretaker	8/- per week	*Vice* Mrs. Gould.
10 "	Nicholas, Josiah	Apprentice clerk	430 per annum	*Vice* J. Geekie.
15 "	Dodds, James	Apprentice	5/- per day	Reinstated.
18 "	Vaughn, Arthur	Boy	2/- "	*Vice* J. M'Farlane.
18 "	Powys, C.	Upholsteress	4/- "	*Vice* Miss Leonard.
24 "	Mathews, James	Boy	3/- "	*Vice* T. O'Brien.
30 "	Powys, John	Apprentice	10d. "	*Vice* D. Chapman.

Date.	Name.	Position.	Rate.	Remarks.
	CHIEF MECHANICAL ENGINEER'S BRANCH—*continued.*			
21 July	Butterby, John W.	Cleaner	7/- per day	From Supernumerary Staff, *vice* P. Gallagher.
21 "	Jones, Evan J.	"	7/- "	*vice* G. Pettitt.
1 Sep.	Fryer, William	Blacksmith	10/6 "	*Vice* G. Lutton.
9 "	Kennedy, James	Cleaner	5/6 "	From Supernumerary Staff, *vice* F. Bagga.
9 "	Funnell, Frederick	"	6/- "	*vice* W. Christison.
9 "	Symons, John	"	6/- "	*vice* J. Mahn.
9 "	Corcoran, Peter	Fuelman	7/- "	Re-employed.
9 "	Rimes, Henry	Cleaner	7/- "	*vice* W. Nevison.
9 "	Weeks, Joseph	Fuelman	7/- "	*vice* J. Creswick.
9 "	Farquhar, Alfred	Cleaner	5/- "	*vice* J. Wooley.
26 "	Charlton, James	"	6/- "	*Vice* F. Aubrey.
	CHIEF TRAFFIC MANAGER'S BRANCH.			
25 June	Bennderlin, Mrs. L.	Gatekeeper	2/- per day	*Vice* Mrs. Johnson.
1 July	Hicks, E.	Probationer	2/6 per week.	
1 "	Crowley, Mrs. E.	Gatekeeper	7/- per week	*Vice* Mrs. Pearce.
1 "	Doughan, P.	"	7/- "	*Vice* Mrs. Martin.
1 "	Cogay, Mrs. N.	"	7/6 per week.	
1 "	Welsh, Daniel	Junior porter	3/4 per day	From Supernumerary Staff, *vice* L. Richards.
1 "	Graidon, Walter	Junior clerk	£110 per annum	From Supernumerary Staff.
5 "	Cracknell, Mrs.	Gatekeeper	6/- per week	*Vice* Mrs. Andrews.
5 "	Crowe, Mrs.	"	5/- "	*Vice* Mrs. Lemon.
8 "	Hassell, Mrs.	"	Free house	*Vice* Mrs. Taylor.
8 "	Ryan, James	Junior porter	3/4 per day	*Vice* F. George.
11 "	Alexander, Charles	"	3/4 "	*Vice* J. Hughes.
11 "	Hunton, John	Special Inquiry Officer	3/- "	
11 "	Lewis, F. J.	Junior porter	2/6 "	*Vice* W. Downie.
11 "	Catford, Thomas E.	"	2/6 "	*Vice* R. Faull.
13 "	Montgomery, John	"	2/6 "	*Vice* W. Osborne.
16 "	Wills, E. A.	"	3/4 "	From Supernumerary Staff, *vice* W. Higgins.
21 "	Hottle, Henry	Porter	7/- "	*Vice* A. Murray.
22 "	Harris, Mrs. E.	Gatekeeper	7/6 per week	*Vice* Mrs. Harris.
22 "	Stanton, Samuel	Junior porter	3/- per day	*Vice* H. G. Rose.
25 "	Richards, M.	Caretaker	5/- per week.	
25 "	M'Donald, Donald	Porter	7/- per day	From Supernumerary Staff, *vice* J. Fox.
1 Aug.	Kavanagh, Mrs.	Caretaker	20/- per week	*Vice* Mrs. Connell.
1 "	Coyne, Charles	Shunter	7/- per day	From Supernumerary Staff.
1 "	Minogue, J.	Junior porter	6/- "	" " "
1 "	St. Ledger, T.	Junior clerk	£100 per annum	" " "
1 "	Smith, Frank	Apprentice clerk	£20 "	" " " *vice* J. Tate.
1 "	Carr, Henry	"	£30 "	" " "
1 "	Stanbrook, George	Porter	6/- per day	" " " *vice* T. White.
1 "	Whitley, E.	Apprentice clerk	£30 per annum	" " " *vice* J. Asser.
1 "	Howard, A. E.	Junior porter	2/6 per day	" " " *vice* J. Martin.
1 "	Ellis, Oliver	"	3/4 "	" " " *vice* S. Turner.
1 "	Hoyer, Charles	Porter	7/- "	" " " *vice* P. Schuca.
1 "	Frew, Samuel	Junior porter	3/4 "	" " " *vice* A. Cunneen.
1 "	Jones, J. E.	Porter	7/- "	" " " *vice* W. Cooch.
1 "	Hall, Thomas	"	6/- "	" " " *vice* A. Vermeech
1 "	Gilliard, William	Junior porter	2/6 "	" " " *vice* M. O'Connell
1 "	Moore, George	Junior clerk	£110 per annum	
1 "	Shoobert, H.	Apprentice clerk	£30 "	
2 "	Muirhead, George	"	£30 per annum	From Supernumerary Staff.
3 "	Annersley, Mrs. E.	Gatekeeper	7/- per week	*Vice* Mrs. Mee.
4 "	Allison, Mrs. M.	"	7/- "	" Mrs. Peachey.
5 "	Peek, Mrs.	"	Free house	" Mrs. Newman.
10 "	Herney, Charles	Junior porter	2/6 per day	From Supernumerary Staff, *vice* T. Duffy.
13 "	Kirkland, Mrs.	Gatekeeper	7/- per week	*Vice* Mrs. Annersley.
16 "	Martin, C.	Porter	6/- per day	From Supernumerary Staff.
17 "	Davies, William	"	7/- "	From Tramways, *vice* N. Maffey.
20 "	Markham, Mrs.	Gatekeeper	7/- per week	*Vice* Mrs. Penfold.
26 "	Moore, Mrs.	"	Free house	" Mrs. M'Grath.
28 "	Barton, Mrs.	"	"	
30 "	Cross, Thomas	Junior porter	2/6 per day	From Supernumerary Staff, *vice* J. M'Culloch
1 Sept.	Mulligan, James	Clerk	£105 per annum	" " " " J. Byrnes.
1 "	Hogan, E.	Apprentice clerk	£60 "	" " "
1 "	Brennan, B.	Probationer	2/6 per week.	
2 "	Martin, Mrs. T.	Gatekeeper	7/- "	*Vice* P. Doughan.
4 "	Jones, Mrs. M.	"	Free house	" Mrs. Bray.
6 "	Patterson, Chas. D.	Apprentice clerk	£30 per annum	" A. Lewis.
9 "	Wood, Mrs.	Gatekeeper	7/- per week	" Mrs. Boland.
9 "	James, Mrs. M.	"	7/- "	" Mrs. Lewis.
9 "	Dunne, George	Probationer	2/6 "	
13 "	Johnson, A. E.	Gatekeeper	15/- "	" G. Fox.
14 "	Smith, S.	"	6/- per day	" J. King.
16 "	Bartlett, Mrs.	"	Free house	" Mrs. Hayes.
16 "	Hodgins, A.	"	15/- per week	" W. Martin.
26 "	Hamer, A. T.	Porter	6/- per day	From Supernumerary Staff, *vice* E. Fisher.
26 "	Gamble, Robert	Probationer	2/6 per week	*Vice* A. Flanders.
27 "	Johnson, Mrs.	Gatekeeper	Free house	" Mrs. Gill.
	CONTROLLER OF STORES BRANCH.			
	Nil.			
	SIGNAL AND INTERLOCKING BRANCH.			
23 Sept.	Marshall, Matthew	Tinsmith	9/6 per day	From Traffic Branch.
	PROPERTY AND ESTATE AGENT.			
	Nil.			
	ELECTRICAL ENGINEER'S BRANCH.			
	Nil.			
	TRAMWAYS—LOCOMOTIVE BRANCH.			
12 July	Lamont, John R.	Cleaner	4/6 per day	*Vice* J. Pellitier.
12 "	McNamara, Ernest E.	Apprentice	10d. "	*Vice* A. Callander.
14 "	Clarke, Henry J.	Shop-boy	2/6 "	*Vice* T. Rogers.
22 "	Roberts, James	Painter	8/ "	From Supernumerary Staff,
22 "	Kelly, John	Cleaner	6/ "	" " "
2 Aug.	McKay, Archibald	Apprentice	10d. "	*Vice* G. Heydon.
10 "	Benn, Henry	Shop-boy	2/6 "	*Vice* G. Olde.
15 "	Lancaster, Alfred	Labourer	6/6 "	*Vice* G. Clarke.
16 "	Smith, William V.	"	6/6 "	*Vice* T. Crews.
22 "	Kyle, Hugh	Shop-boy	2/6 "	*Vice* J. Kenyon.
1 Sept.	Hager, John P.	Labourer	6/6 "	*Vice* J. Jarvis.
9 "	Chapman, Charles F.	Apprentice	10d. "	*Vice* A. Boxall.
16 "	Fitzbone, Charles B.	Cleaner	5/6 "	From Supernumerary Staff.
16 "	Stead, William	"	6/ "	" "
16 "	Mole, Leonard	"	6/ "	" "
16 "	Dash, Benjamin D.	"	6/ "	" "
16 "	Meiklejohn, John B.	"	4/6 "	" "
16 "	Gooch, Robert	"	5/6 "	" "
16 "	Coleman, Albert E.	"	6/ "	" "
16 "	Timms, Alfred W.	"	6/ "	" "

Date.	Name.	Position.	Rate.	Remarks.
		TRAMWAYS—LOCOMOTIVE BRANCH—*continued.*		
16 Sept.	Lambert, Frederick	Cleaner	5/6 per day	From Supernumerary staff.
16 ,,	Peglar, Herbert	,,	6/ ,,	,, ,,
16 ,,	Bedford, Edwin	,,	6/ ,,	,, ,,
16 ,,	Cook, James T.	,,	6/ ,,	,, ,,
16 ,,	Brown, Richard	Shop-boy	1/9 ,,	,, ,,
16 ,,	Lyons, James A.	,,	2/3 ,,	,, ,,
20 ,,	Heydon, G. T.	Cleaner	5/6 ,,	Vice R. Hinston.
22 ,,	Trevilben, Thomas	,,	7/6 ,,	Vice W. Tubby.
27 ,,	Atkinson, Archibald	Fireman	7/6 ,,	From Railways.
27 ,,	Thomas, Phillip	,,	7/6 ,,	,,
27 ,,	Dawson, Alexander	,,	7/6 ,,	,,
27 ,,	Morris, James	,,	7/6 ,,	,,
27 ,,	South, Henry	,,	7/6 ,,	,,
27 ,,	Quinn, Henry	,,	7/6 ,,	,,
27 ,,	Warton, Charles E.	,,	7/6 ,,	,,
27 ,,	Kenrigan, Ernest	,,	7/6 ,,	,,
27 ,,	Thompson, John	,,	7/6 ,,	,,
27 ,,	Crawford, Alfred	,,	7/6 ,,	,,
27 ,,	Lellane, Patrick	,,	7/6 ,,	,,
		TRAMWAYS—TRAFFIC BRANCH.		
2 July	Plowman, James	Conductor	8/- per day	From Railways, vice A. Flanders.
8 ,,	Kenny, John	Junior conductor	7/- ,,	,, vice J. Garnett.
12 ,,	Cowley, John	,,	6/6 ,,	,,
12 ,,	Hardie, Robert	,,	7/- ,,	Re-employed.
12 ,,	Campbell, William	,,	5/- ,,	,,
12 ,,	Vermeesch, Adolphus	,,	6/- ,,	,,
14 ,,	Carleton, Thomas	,,	6/6 ,,	,,
14 ,,	Kidd, David B.	,,	6/- ,,	,,
14 ,,	Martin, Henry J.	,,	5/6 ,,	,,
14 ,,	Ashe, Earnest W.	,,	5/- ,,	,,
14 ,,	Stevens, William	,,	7/- ,,	,,
14 ,,	McAnulty, John	,,	7/- ,,	,,
15 ,,	Love, George	,,	6/6 ,,	,,
15 ,,	Garrick, John	,,	5/6 ,,	,,
18 ,,	Ashworth, Herbert	,,	6/6 ,,	,,
18 ,,	Hamby, Arthur C.	,,	6/6 ,,	From Railways.
18 ,,	Dobson, Robert	,,	5/- ,,	Re-employed.
19 ,,	Garrard, George J.	,,	6/6 ,,	From Railways.
19 ,,	Donnellan, Michael	,,	5/6 ,,	Re-employed.
19 ,,	Hoare, Martin	,,	7/- ,,	From Railways.
20 ,,	McClean, Horatio	,,	6/6 ,,	Re-employed.
20 ,,	Stuart, Richard	,,	5/6 ,,	,,
25 ,,	Keane, William T.	,,	7/- ,,	From Railways.
26 ,,	Davies, William	,,	7/- ,,	,, ,,
2 Aug.	Turner, Sydney G.	,,	7/6 ,,	,, ,,
3 ,,	Durbin, John	,,	7/- ,,	,, ,,
10 ,,	Garnett, John	,,	7/- ,,	,, ,,
15 ,,	Retherton, John	,,	7/- ,,	,, ,,
27 ,,	O'Connor, John	Car cleaner	6/6 ,,	Re-employed, vice R. Snell.
22 Sept.	Maffey, N. W.	Junior conductor	7/- ,,	From Railways, vice W. Davies.
		TRAMWAYS—MAINTENANCE BRANCH.		
		Nil.		

APPENDIX IV.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with clause No. 44 of the Railway Act, showing the removals of employees, from the 1st July to 30th September, 1892.

Date.	Name.	Position.	Rate.	Remarks.
		SECRETARY'S BRANCH.		
		Nil.		
		CHIEF ACCOUNTANT'S BRANCH.		
		Nil.		
		TRAFFIC AUDITOR'S BRANCH.		
		Nil.		
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
3 July	Morrison, Charles	Carpenter	10/- per day	Resigned.
4 ,,	Spears, John	Ganger	9/- ,,	Discharged.
4 ,,	Jeffrey, Robert	Labourer	7/6 ,,	Resigned.
6 ,,	Williamson, Stephen	Fettler	7/6 ,,	Discharged.
9 ,,	M'Grath, Darby	,,	7/6 ,,	Resigned.
9 ,,	Wall, John	,,	7/6 ,,	,,
15 ,,	Steadman, James	,,	7/6 ,,	Retired.
15 ,,	White, George	,,	7/6 ,,	,,
21 ,,	Mee, Joseph	,,	7/6 ,,	Deceased.
26 ,,	Hazlewood, George	Labourer	7/6 ,,	Resigned.
28 ,,	White, Robert	Fettler	7/6 ,,	,,
9 Aug.	Bunyan, Alfred	Labourer	7/6 ,,	,,
11 ,,	O'Shea, John	Fettler	7/6 ,,	Retired.
18 ,,	Mallard, John	Boy	2/- ,,	Discharged.
21 ,,	Bray, John	Labourer	7/- ,,	Deceased.
23 ,,	Arthur, Thomas	Ganger	9/- ,,	Retrenchment.
25 ,,	Boyle, James	Fettler	7/6 ,,	Discharged.
30 ,,	Mehaffey, John	Labourer	7/6 ,,	Resigned.
1 Sept.	Boland, John	Fettler	7/6 ,,	,,
3 ,,	Byrnes, Henry	,,	7/6 ,,	,,
3 ,,	Thekner, John	Labourer	7/6 ,,	Discharged.
4 ,,	M'Neely, Anthony	Fettler	7/6 ,,	,,
6 ,,	Passfield, John	,,	7/6 ,,	Deceased.
8 ,,	Rowe, Henry	,,	7/6 ,,	Discharged.
8 ,,	Barber, Henry	Labourer	7/6 ,,	,,
9 ,,	Barber, James	,,	7/6 ,,	,,

Date.	Name.	Position.	Rate.	Remarks.
	Engineer-in-Chief for Existing Lines Branch—continued.			
8 Sept.	Milton, John	Labourer	7/6 per day	Retired.
8 "	Sinaise, John	Fettler	7/6 "	Resigned.
8 "	James, Edward	"	7/6 "	Discharged.
15 "	Moore, William	Labourer	7/6 "	Retrenchment.
15 "	Wadkins, James	"	7/6 "	"
20 "	Gange, Edward	Fettler	7/6 "	Retired.
20 "	Gray, Henry	"	7/6 "	"
21 "	Foreman, Thomas	"	9/- "	"
23 "	M'Glynn, Patrick	"	7/6 "	"
23 "	Rivers, Arthur	"	7/6 "	"
24 "	Buck, John	Inspector	15/- "	Discharged.
27 "	Maher, Patrick	Fettler	7/6 "	Retired.
27 "	Day, John	Ganger	9/- "	Discharged.
29 "	Duggan, Michael	Fettler	7/6 "	Resigned.
	Chief Mechanical Engineer's Branch.			
6 July	Sydenham, Henry	Cleaner	7/- per day	Resigned.
8 "	Morgan, James	Labourer	7/- "	"
9 "	Earp, Joseph	Cleaner	6/- "	"
11 "	Chapman, D.	Fitter	10/- "	"
11 "	Donnelly, Bernard	Fireman	10/- "	Discharged.
21 "	Gould, Mrs.	Caretaker	8/- per week	Resigned.
28 "	Lee, George	Cleaner	5/- per day	Retrenchment.
31 "	Denpister, Roderick	Clerk	£150 per ann.	Resigned.
6 Aug.	Baker, Jesse	Gasfitter	9/- per day	"
7 "	Lutton, George	Blacksmith	10/2 "	Deceased.
7 "	Powys, John	Trimmer	10/- "	"
9 "	M'Quade, Henry	Car-builder	8/- "	Resigned.
9 "	Moore, Alfred	Fireman	10/- "	Discharged.
11 "	Donald, James	"	10/- "	Resigned.
13 "	Holmes, Uriah	Painter's assistant	6/6 "	Discharged.
21 "	Aubrey, Frederick	Fireman	9/- "	Deceased.
24 "	Wood, Peter	Waggon-builder	10/- "	Resigned.
25 "	Lord, Charles	Boiler-maker	10/- "	Discharged.
30 "	Cox, James	Tinsmith	10/6 "	"
31 "	Stevenson, Arthur	Cleaner	7/- "	Resigned.
9 Sept.	Hill, George	Fireman	7/- "	Discharged.
12 "	Clapham, George	Driver	14/- "	Resigned.
24 "	South, Henry	Cleaner	7/- "	To Tramways.
24 "	Warton, Charles E.	"	6/- "	"
24 "	Kendrigan, Ernest	"	6/- "	"
24 "	Crawford, Alfred	"	7/- "	"
24 "	Loghane, Patrick	"	7/- "	"
24 "	Thomas, Philip	"	7/- "	"
24 "	Dawson, Alexander	"	7/- "	"
24 "	Connelly, Thomas	Labourer	7/- "	Discharged.
25 "	Atkinson, Alfred	Cleaner	7/- "	To Tramways.
25 "	Pollock, David	C. and W. examiner	14/- "	Deceased.
28 "	Quinn, Henry	Cleaner	6 "	To Tramways.
28 "	Thompson, John	"	6/- "	"
29 "	Morris, James	"	6/- "	"
0 "	Kibble, William	Driver	16/- "	Retired.
	Chief Traffic Manager's Branch.			
1 July	Burdett, D.	Clerk	£150 per ann.	Discharged.
1 "	Rowan, W.	Night officer	£180 "	"
1 "	Harris, J. E.	Clerk	£180 "	"
1 "	Nicholl, Thomas	Station-master	£180 "	Deceased.
1 "	Farlow, W.	Probationer	2/6 per week	Resigned.
1 "	Johnson, Elizabeth	Gatekeeper	2/6 per day	Discharged.
1 "	Pearce, Maggie	"	7/- per week	Resigned.
1 "	Kiss, J.	Operator	£36 per annum	Discharged.
2 "	Plowman, J.	Assistant guard	8/- per day	To Tramways.
3 "	Guthrie, A.	Gatekeeper	45/- per week	Retired.
4 "	Harriott, E. C.	Junior porter	5/- per day	Discharged.
4 "	Andrews, Mrs. M.	Gatekeeper	5/- per week	Resigned.
4 "	Jelen, Francis	Porter	6/- per day	Discharged.
5 "	Lemon, Mrs.	Gatekeeper	10/- per week	Resigned.
6 "	Ford, Frederick	Porter	7/- per day	Discharged.
8 "	Kenny, J.	"	7/- "	To Tramways.
8 "	Hughes, John	Junior porter	2/6 "	Resigned.
8 "	Taylor, Mrs.	Gatekeeper	Free house	"
9 "	Duffy, Thomas	Porter	7/- per day	Discharged.
10 "	Cowley, John	"	6/6 "	To Tramways.
12 "	Moylan, P.	"	6/6 "	Discharged.
13 "	Osborne, W.	Junior porter	5/- "	Resigned.
13 "	Wilson, Frederick	Porter	6/6 "	Discharged.
13 "	Weeks, J.	"	7/- "	"
13 "	M'Culloch, J.	"	7/- "	Resigned.
13 "	Burrows, Robert	Night officer	£140 per ann.	"
16 "	Murray, Alexander	"	7/6 per day	Deceased.
18 "	Garrard, George	"	6/6 "	To Tramways.
18 "	Hoare, M.	"	7/- "	"
18 "	M'Lean, H.	"	6/6 "	"
18 "	Keene, William	"	7/- "	"
18 "	Humby, A. C.	"	6/6 "	"
20 "	Grobben, William	"	7/- "	Discharged.
20 "	Fox, James	"	7/- "	"
20 "	Lyon, William	"	7/- "	"
21 "	Harris, Mrs. A.	Gatekeeper	7/6 per week	Resigned.
21 "	Love, George	Porter	6/6 per day	Discharged.
22 "	Indien, Lawrence	Junior porter	5/- "	"
22 "	Redshaw, Alfred	"	2/6 "	Resigned.
23 "	Selmon, F.	Porter	6/- "	Discharged.
25 "	Hetherton, J.	"	7/- "	To Tramways.
25 "	Davies, William	"	7/- "	"
27 "	Scott, John	Junior porter	4/2 "	Discharged.
27 "	Gregory, F.	"	3/4 "	"
27 "	Matthews, J.	"	3/4 "	"
28 "	Tilley, Mrs.	Barrack attendant	7/6 "	"
28 "	Northwood, Mrs.	Gatekeeper	7/- per week	"
29 "	Cartwright, William	Porter	7/- per day	"
31 "	Russell, Mrs. M.	Barrack attendant	20/- per week	"
1 Aug.	Collis, W. F.	Operator	£80 per ann.	Resigned.
1 "	Turner, T.	Porter	6/6 per day	To Tramways.
1 "	Derbin, J.	"	7/- "	"
3 "	Mee, Mrs.	Gatekeeper	10/- per week	Resigned.
4 "	Peachy, Mrs. M.	"	10/- "	"
4 "	Croke, M. A.	"	Free house	Discharged.
5 "	Newman, Mrs.	"	"	Resigned.
5 "	Porter, F.	Junior porter	5/- per day	Discharged.
5 "	Pearce, W.	Porter	7/- "	"
5 "	Philson, Mrs.	Gatekeeper	7/- per week	"
7 "	M'Mahon, R.	"	15/- "	"

Date.	Name.	Position.	Rate.	Remarks.
	Chief Traffic Manager's Branch—*continued.*			
2 Aug.	Venables, Frank	Probationer	2/6 per week	Resigned.
8 ,,	Tate, John T.	Clerk	£150 per ann.	Retired.
8 ,,	Woodcroft, E.	Gatekeeper	Free house	Discharged.
8 ,,	George, Allen	Junior porter	5/- per day	Resigned.
9 ,,	Cowan, Thomas	Porter	7/- ,,	Discharged.
9 ,,	Wood, T. A.	Junior clerk	£110 per ann.	,,
10 ,,	Gatuett, J.	Porter	7/- per day	To Tramways.
11 ,,	Annersley, Mrs.	Gatekeeper	7/- per week	Resigned.
11 ,,	Dailey, G. H.	Junior porter	5/- per day	,,
11 ,,	Hartley, Henry	Signal-lighter	10/- per week	Discharged.
12 ,,	Donnellan, P.	Porter	7/- per day	,,
12 ,,	Gosselin, W.	Junior porter	2/6 ,,	Resigned.
13 ,,	Hopkins, Henry	Porter	7/- ,,	,,
15 ,,	Martin, Edward	,,	6/6 ,,	Discharged.
19 ,,	Penfold, Mrs. Sarah	Gatekeeper	7/- per week	Resigned.
20 ,,	Madden, W.	Operator	£95 per ann.	Discharged.
20 ,,	Gabriel, F.	Porter	7/- per day	Resigned.
25 ,,	M'Grath, Mrs.	Gatekeeper	Free house	,,
26 ,,	Johnson, Harold	Clerk	£120 per ann.	Discharged.
28 ,,	Murray Patrick	Operator	£140 ,,	Deceased.
29 ,,	Doughan, John	,,	£110 ,,	Discharged.
30 ,,	White, Thomas	Porter	6/- per day	,,
31 ,,	Lewis, A. T.	Operator	£110 per ann.	Resigned.
1 Sept.	Edmonds, T. D.	Clerk	£200 ,,	Discharged.
1 ,,	Doughan, Patrick	Gatekeeper	7/- per week	,,
2 ,,	Bray, Mrs. M.	,,	Free house	Resigned.
5 ,,	Gassley, J. H.	Porter	7/- per day	Discharged.
8 ,,	Boland, Mrs.	Gatekeeper	7/- per week	Resigned.
8 ,,	Roberts, Emily	,,	7/- ,,	Discharged.
8 ,,	Lewis, Mrs. D.	,,	7/- ,,	Resigned.
10 ,,	Lecky, J. E.	Shunter	9/- per day	Discharged.
13 ,,	Thrift, A. R.	Probationer	2/6 per week	Resigned.
15 ,,	Hayes, Mrs.	Gatekeeper	Free House	,,
16 ,,	Chew, Charles	Porter	7/- per day	Discharged.
19 ,,	Kerton, Henry	Inspector	£140 per ann.	Resigned.
21 ,,	Moffer, N.	Porter	7/- per day	To Tramways.
22 ,,	Dent, E.	,,	6/6 ,,	Discharged.
23 ,,	Marshall, Matthew	Tinsmith	9/6 ,,	To Interlocking Branch.
25 ,,	Gill, Mrs.	Gatekeeper	Free house	Resigned.
26 ,,	Foody, W. J.	Night oilner	£130 per ann.	,,
27 ,,	Meehan, Michael	Porter	6/6 per day	Discharged.
28 ,,	Wills, E. A.	Junior porter	3/4 ,,	To Locomotive Branch.
30 ,,	Turner, Frank	Operator	£110 per ann.	Discharged.
	Comptroller of Stores Branch.			
4 Aug.	Agnew, James B.	Clerk	£225 per ann.	Deceased.
	Signal and Interlocking Branch.			
2 July	Sowell, Thomas	Draftsman	£268 per ann.	Retrenchment.
6 Aug.	Brommell, William	Driller	8/2 per day	,,
18 ,,	Smith, William	Labourer	7/6 ,,	,,
18 ,,	Heaton, John	Blacksmith	10/6 ,,	,,
18 ,,	Traynor, James	,,	10/- ,,	,,
18 ,,	Gillies, Andrew	Striker	7/6 ,,	,,
18 ,,	Reidy, Martin	,,	7/6 ,,	,,
18 ,,	Emmett, William	,,	7/6 ,,	,,
18 ,,	Smith, James	Carpenter	10/- ,,	,,
	Property and Estate Branch.			
	Nil.			
	Electrical Engineer's Branch.			
	Nil.			
	Tramways—Locomotive Branch.			
4 July	Kenyon, John	Cleaner	6/- per day	Resigned.
7 ,,	M'Anulty, William	Boilermaker	9/4 ,,	Retrenchment.
7 ,,	Stevens, John	,,	9/4 ,,	,,
14 ,,	Clarke, George F.	Labourer	7/- ,,	Discharged.
21 ,,	M'Iver, Francis	Boilermaker	10/- ,,	Retrenchment.
3 Aug.	Jarvis, John	Labourer	7/- ,,	Resigned.
17 ,,	Boxall, Arthur	Apprentice	-/10 ,,	,,
17 ,,	Hinson, Robert	Cleaner	5/6 ,,	Discharged.
20 ,,	Tubby, William	Fireman	7/6 ,,	Resigned.
23 ,,	Sales, Alfred	,,	9/- ,,	Deceased.
5 Sept.	Gattenhoff, Percy	Shop boy	2/6 ,,	Resigned.
20 ,,	Edwards, Alfred	Cleaner	4/- ,,	,,
	Tramways—Traffic Branch.			
20 July	Barclay, William	Conductor	3/6 per day	Resigned.
17 Aug.	Davies, William	Junior conductor	7/- ,,	To Railways.
20 ,,	Stewart, Robert S.	Foreman's clerk	9/- ,,	Resigned.
16 Sept.	M'Clean, Horatio	Junior conductor	6/6 ,,	,,
28 ,,	Ashe, Ernest W.	Conductor	5/- ,,	To Locomotive Branch.
30 ,,	Brown, S. N.	Inspector	11/- ,,	Retired.
	Tramways—Maintenance Branch.			
20 July	Brown, J.	Gauger	9/- per day	Resigned.
29 ,,	Fulton, Thomas	Labourer	7/6 ,,	Discharged.
4 Aug.	Fighting, George	,,	7/6 ,,	,,
18 ,,	Feather, John	Gauger	9/- ,,	,,

Sydney: Charles Potter, Government Printer.—1892.

[Cd.]

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MAP
SHEWING THE PRINCIPAL
RAILWAY SYSTEMS
OF
AUSTRALIA
1892
SCALE
STATUTE 50 25 0 50 100 150 MILES
Railway Lines shewn thus

ARAFURA SEA
TORRES STRAIT
CORAL SEA
GULF OF CARPENTARIA
GREAT AUSTRALIAN BIGHT
SOUTHERN OCEAN
BASS STRAIT
PACIFIC OCEAN
Great Barrier Reef
Tropic of Capricorn
NORTHERN TERRITORY
WESTERN AUSTRALIA
SOUTH AUSTRALIA
QUEENSLAND
NEW SOUTH WALES
VICTORIA
CAPE YORK PENINSULA
EYRES PENINSULA

Cape Wessel, Cape Wilberforce, Melville Bay, Cape Arnhem, Caledon Bay, Cape Shield, Groote Eylandt, Limmen's Bight, Sir Ed. Pellew's Group, Sandy Head, Mornington Id., Point Bayly, Bentinck Id., Point Tarrant, Nassau River, Batavia River, Duyfhen Point, Pera Head, Cape Keerweer, Cape York, Prince of Wales Id., Thursday Island, Bank's Id., Mulgrave Id., Endeavour Strait, Oxford Bay, Shelburne Bay, Cape Grenville, Weymouth Bay, Cape Direction, Princess Charlotte Bay, Cape Melville, Lizard Island, Cape Flattery, Cape Tribulation, Port Douglas, Cape Cooper, Double Point, Halifax Bay, Hinchinbrook Island, Cardwell & Rockingham Bay, Cape Upstart, Whitsunday Island, Repulse Bay, Shoal Point, Cape Palmerston, Broad Sound, Shoal Water Bay, Port Bowen, Keppel Bay, Curtis Island, Hervey Bay, Sandy Cape, Great Sandy Id., Double Island Point, Laguna Bay, Moreton Bay, Moreton Island, Stradbroke Island, Point Danger, Brunswick River, Cape Byron, Richmond River, Clarence River, Solitary Islands, Trial Bay, Port Macquarie, Crowdy Bay & Head, Cape Hawke, Port Stephens, Broken Bay & Hawkesbury River, Botany Bay, Jervis Bay, Point Upright, Cape Dromedary, Tathra Head, Cape Howe, Gabo Island, Entrance to Gippsland Lakes, Wilson's Promontory, Cape Liptrap, Cape Otway, Cape Schanck, Port Phillip Bay, Western Port, Port Fairy, Cape Nelson, Cape Jaffa, Lacepede Bay, Cape Banks, Cape Borda, Kangaroo Id., Cape Radstock, Cape Tiumins, Coffin's Bay, Point Whidley, Cape Wiles, Stenford Bay, West Cape, Cape de Coniedie, Vivonne Bay, Foxhers Bay, Spencers Gulf, Gulf St. Vincent, Investigator's Str., Port Adelaide, Port Darwin, Point Blaze, Cape Ford, Cape Hay, Queen's Channel, Cape Van Diemen, Bathurst Id., Melville Id., Clarence Str., Van Diemen Gulf, Point Jahlook, Dundas Str., Port Essington, Cape Croker, Croker Island, De Courcy Head, Goulburn Islands, Junction Bay, Cape Stewart, Castlereagh Bay, Limestone Id., Lake Amadeus, Lake Eyre North, Lake Eyre South, Lake Gregory, Lake Blanche, Salt Lakes, Lake Evaard, Lake Gairdner, Lake Macfarlane, Lake Torrens, Lake Frome, Lake Tyrrell, Lake Mackillop, Lake Blanche, Lake Gregory, Lake Eyre North, Lake Eyre South, Lake Torrens, Lake Macfarlane, Lake Gairdner, Lake Evaard, Lake Frome, Lake Tyrrell, Lake Mackillop, Lake Amadeus, Lake Blanche, Lake Gregory, Lake Eyre North, Lake Eyre South, Lake Torrens, Lake Macfarlane, Lake Gairdner, Lake Evaard, Lake Frome, Lake Tyrrell, Lake Mackillop, Lake Amadeus

PALMERSTON, PINE CREEK, DALY WATERS, CLONCURRY, COLLINGWOOD, MUTTABURRA, GILBERTON, NORMANTON, BURKETOWN, CROYDON, HUGHENDEN, PRAIRIE, CHARTERS TOWERS, TOWNSVILLE & Cleveland Bay, CARDWELL & Rockingham Bay, HERBERTON, CAIRNS & Trinity Bay, MYOLA, PALMER ROAD, LAURA, COOKTOWN & Endeavour River, MITCHELL, PALMER Rs., GILBERT RIVER, NORMAN RIVER, HALDON, DUTHERIA, CUNNINGHAM, WANGARATTA, RAVENSWOOD, MACKAY, MIRANI, ETON, ST LAWRENCE, CLERMONT, COPELLA, EMERALD, MACKENZIE Rs., FITZROY Rs., COMET, SPRINGSURE, LONGREACH, BARCALDINE, SALTERN CREEK, JERICHO, ALPHA, PINE HILL, WESTWOOD, ROCKHAMPTON, GLADSTONE & Port Curtis, TAMBO, PLAINBY, THOMSON RIVER, BARCOO RIVER, DIAMANTINA RIVER, BULLOO RIVER, CHARLEVILLE, MORVEN, ROMA, BALONNE, MILES, WARRA, DALBY, CROW'S NEST, TOOWOOMBA, ALLORA, WARWICK, STANTHORPE, ESK, IPSWICH, NORMANBY, SANDGATE, BRISBANE, SOUTHPORT, KILLARNEY, WALLANGARRA, TENTERFIELD, CASINO, MORREE, INVERELL, DEEPWATER, GLEN INNES, GRAFTON, ARMIDALE, URALLA, WALCHA Rs., TAMWORTH, WERRIS Cs., MURRURUNDI, SCONE, MUSWELLBROOK, SINGLETON, HAMILTON, MAITLAND, NEWCASTLE & Port Hunter, CESSNOCK, WOLLOMBI, WOLLONGONG, KIAMA, NOWRA, MOSSVILLE, BOMADERRY, QUEANBEYAN, MICHELAGO, COOMA, BOMBALA, EDEN & Twofold Bay, BEGA, COLINTON, MORUYA, BUNGENDORE, GOULBURN, TARAGO, YASS, GUNNING, MURRUMBURRAH, BOOROWA, CROOKWELL, YOUNG, CUNNAMULLA, CANOWINDRA, CARCOAR, BLAYNEY, ORANGE, MOLONG, FORBES, PARKES, CONARGO, LYNDHURST, WELLINGTON, NARROMINE, NARNE, CAPERTEE, RYLSTONE, MUDGEE, BATHURST, WALLERAWANG, RICHMOND, WINDSOR, PENRITH, LAWSON, KATOOMBA, GOSFORD, WYONG, SYDNEY & Port Jackson, Botany Bay, HILLSTON, WENTWORTH, BALRANALD, HAY, DARLINGTON POINT, CURRANYEAL, GUNDAGAI, TUMUT, TUMBERUMBA, JUNEE, NARRANDERA, TEMORA, COOTAMUNDRY, COOLAMON, WAGGA WAGGA, HOLBROOK, CULCAIRN, ALBURY, HOWLONG, WODONGA, BULGA, BEECHWORTH, MYRTLEFORD, BENALLA, WANGARATTA, WODONGA, YARRAWONGA, DENILIQUIN, DARLOT, WENTWORTH, SWAN HILL, KERANG, WYCHEPROOF, BOORT, ECHUCA, ECHUCA, MURTOA, CHARLTON, SANDHURST, ELMORE, SEYMOUR, MORTON BAY, BROADFORD, YEA, WHITTLESEA, HEALESVILLE, STRATHBOGIE, BAIRNSDALE, SALE, TRARALGON, PORT ALBERT, Corner Inlet, MELBOURNE, BALLARAT, BALLAN, GEELONG, COLAC, CAMPERDOWN, BRANXHOLME, ARARAT, AVOCA, STAWELL, CASTERTON, PENOLA, MT GAMBIER, BEACHPORT, PORTLAND, WARRNAMBOOL & Bay, PORT FAIRY, BORDERTOWN, KINGSTON, LUCINDALE, MILLICENT, NARACOORTE, PORT MACDONNELL, PORT VICTOR, STRATHALBYN, MURRAY BRIDGE, GLENELG, ADELAIDE, MOUNT BARKER, MORGAN, EUDUNDA, ROSEWORTHY, BURRA, HALLETT, PETERSBURG, QUORN, PORT AUGUSTA, PORT PIRIE, SNOWTON, MUNDOORA, BLYTH, WALLAROO, MOONTA, LAURA, CLARE, STEELTOWN, PORT BROUGHTON, Peninsula, Forster, Port Adelaide, Investigator's Str., Gulf St. Vincent, Spencers Gulf, Foxhers Bay, Cape Radstock, Cape Tiumins, Coffin's Bay, Point Whidley, Cape Wiles, Stenford Bay, West Cape, Cape de Coniedie, Vivonne Bay, Cape Borda, Kangaroo Id., Cape Jaffa, Lacepede Bay, Cape Banks, Cape Nelson, Port Fairy, WARRNAMBOOL & Bay, Cape Otway, Cape Schanck, Port Phillip Bay, Western Port, Cape Liptrap, Wilson's Promontory, Kings Island, Cape Grim, Flinders Island, Cape Barren Id., Eyres Peninsula, Great Australian Bight, Southern Ocean, Bass Strait, Pacific Ocean, Coral Sea, Arafura Sea, Torres Strait, Gulf of Carpentaria, Great Barrier Reef, Tropic of Capricorn, Northern Territory, Western Australia, South Australia, Queensland, New South Wales, Victoria, Cape York Peninsula, Eyres Peninsula

ODNADATTA, ALBERGA, MT DUTTON, Dome Peak Telegraph Str., WARRINA, STRANGWAYS, FARINA, BELTANA, PORT AUGUSTA, QUORN, PETERSBURG, HALLETT, BURRA, EUDUNDA, MORGAN, ROSEWORTHY, ADELAIDE, MURRAY BRIDGE, GLENELG, MOUNT BARKER, STRATHALBYN, BORDERTOWN, KINGSTON, LUCINDALE, MILLICENT, NARACOORTE, PORT MACDONNELL, PORT VICTOR, CHARLOTTE WATERS, ALICE SPRINGS, BURKE, WILCANNIA, COBAR, NYMAGEE, BROKEN HILL (Willyama), MENINDEE, SILVERTON, COCKBURN, OLARY, BURNS, BYEROCK, GLENARIFF, COOLABAH, CIRILAMBONE, NYNGAN, NEVERTIRE, DUBBO, WARREN, MACQUARIE RIVER, CASTLEREAGH RIVER, BOGAN RIVER, BARWON RIVER, GWYDIR RIVER, MACINTYRE RIVER, CULGOA RIVER, WARREGO RIVER, BULLOO RIVER, THOMSON RIVER, BARCOO RIVER, DIAMANTINA RIVER, FINKE RIVER, TODD RIVER, HUGHENDEN, PRAIRIE, RAVENSWOOD, CHARTERS TOWERS, CLONCURRY, FLINDERS RIVER, GREGORY RIVER, LEICHHARDT RIVER, NORMAN RIVER, GILBERT RIVER, CUNNINGHAM, DUTHERIA, HALDON, WANGARATTA, MACKAY, MIRANI, ETON, CLERMONT, COPELLA, EMERALD, MACKENZIE Rs., FITZROY Rs., COMET, SPRINGSURE, LONGREACH, BARCALDINE, SALTERN CREEK, JERICHO, ALPHA, PINE HILL, WESTWOOD, ROCKHAMPTON, GLADSTONE & Port Curtis, TAMBO, PLAINBY, THOMSON RIVER, BARCOO RIVER, DIAMANTINA RIVER, BULLOO RIVER, CHARLEVILLE, MORVEN, ROMA, BALONNE, MILES, WARRA, DALBY, CROW'S NEST, TOOWOOMBA, ALLORA, WARWICK, STANTHORPE, ESK, IPSWICH, NORMANBY, SANDGATE, BRISBANE, SOUTHPORT, KILLARNEY, WALLANGARRA, TENTERFIELD, CASINO, MORREE, INVERELL, DEEPWATER, GLEN INNES, GRAFTON, ARMIDALE, URALLA, WALCHA Rs., TAMWORTH, WERRIS Cs., MURRURUNDI, SCONE, MUSWELLBROOK, SINGLETON, HAMILTON, MAITLAND, NEWCASTLE & Port Hunter, CESSNOCK, WOLLOMBI, WOLLONGONG, KIAMA, NOWRA, MOSSVILLE, BOMADERRY, QUEANBEYAN, MICHELAGO, COOMA, BOMBALA, EDEN & Twofold Bay, BEGA, COLINTON, MORUYA, BUNGENDORE, GOULBURN, TARAGO, YASS, GUNNING, MURRUMBURRAH, BOOROWA, CROOKWELL, YOUNG, CUNNAMULLA, CANOWINDRA, CARCOAR, BLAYNEY, ORANGE, MOLONG, FORBES, PARKES, CONARGO, LYNDHURST, WELLINGTON, NARROMINE, NARNE, CAPERTEE, RYLSTONE, MUDGEE, BATHURST, WALLERAWANG, RICHMOND, WINDSOR, PENRITH, LAWSON, KATOOMBA, GOSFORD, WYONG, SYDNEY & Port Jackson, Botany Bay, HILLSTON, WENTWORTH, BALRANALD, HAY, DARLINGTON POINT, CURRANYEAL, GUNDAGAI, TUMUT, TUMBERUMBA, JUNEE, NARRANDERA, TEMORA, COOTAMUNDRY, COOLAMON, WAGGA WAGGA, HOLBROOK, CULCAIRN, ALBURY, HOWLONG, WODONGA, BULGA, BEECHWORTH, MYRTLEFORD, BENALLA, WANGARATTA, WODONGA, YARRAWONGA, DENILIQUIN, DARLOT, WENTWORTH, SWAN HILL, KERANG, WYCHEPROOF, BOORT, ECHUCA, ECHUCA, MURTOA, CHARLTON, SANDHURST, ELMORE, SEYMOUR, MORTON BAY, BROADFORD, YEA, WHITTLESEA, HEALESVILLE, STRATHBOGIE, BAIRNSDALE, SALE, TRARALGON, PORT ALBERT, Corner Inlet, MELBOURNE, BALLARAT, BALLAN, GEELONG, COLAC, CAMPERDOWN, BRANXHOLME, ARARAT, AVOCA, STAWELL, CASTERTON, PENOLA, MT GAMBIER, BEACHPORT, PORTLAND, WARRNAMBOOL & Bay, PORT FAIRY, BORDERTOWN, KINGSTON, LUCINDALE, MILLICENT, NARACOORTE, PORT MACDONNELL, PORT VICTOR, STRATHALBYN, MURRAY BRIDGE, GLENELG, ADELAIDE, MOUNT BARKER, MORGAN, EUDUNDA, ROSEWORTHY, BURRA, HALLETT, PETERSBURG, QUORN, PORT AUGUSTA, PORT PIRIE, SNOWTON, MUNDOORA, BLYTH, WALLAROO, MOONTA, LAURA, CLARE, STEELTOWN, PORT BROUGHTON, Peninsula, Forster, Port Adelaide, Investigator's Str., Gulf St. Vincent, Spencers Gulf, Foxhers Bay, Cape Radstock, Cape Tiumins, Coffin's Bay, Point Whidley, Cape Wiles, Stenford Bay, West Cape, Cape de Coniedie, Vivonne Bay, Cape Borda, Kangaroo Id., Cape Jaffa, Lacepede Bay, Cape Banks, Cape Nelson, Port Fairy, WARRNAMBOOL & Bay, Cape Otway, Cape Schanck, Port Phillip Bay, Western Port, Cape Liptrap, Wilson's Promontory, Kings Island, Cape Grim, Flinders Island, Cape Barren Id., Eyres Peninsula, Great Australian Bight, Southern Ocean, Bass Strait, Pacific Ocean, Coral Sea, Arafura Sea, Torres Strait, Gulf of Carpentaria, Great Barrier Reef, Tropic of Capricorn, Northern Territory, Western Australia, South Australia, Queensland, New South Wales, Victoria, Cape York Peninsula, Eyres Peninsula

Printed at the Department of Lands, Sydney, N.S.W. 1892


MAP
of
NEW SOUTH WALES RAILWAYS
shewing
COACH AND OTHER ROUTES FROM THE VARIOUS STATIONS
Scale. 60 Miles to an Inch
Explanation
Railway lines marked thus
Coach routes do do
Railways under construction do.
1892
COLONY OF QUEENSLAND
SOUTH AUSTRALIA
COLONY OF VICTORIA
SOUTH PACIFIC OCEAN
MURRAY OR HUME RIVER
MURRUMBIDGEE RIVER
LACHLAN RIVER
DARLING RIVER
BARWON RIVER
BOGAN RIVER
MACQUARIE RIVER
NAMOI RIVER
GWYDIR RIVER
MACINTYRE RIVER
DUMARESQ RIVER
MACLEAY RIVER
MANNING RIVER
HUNTER R.
SHOALHAVEN R.
INDI RIVER
BOURKE
WALGETT
NARRABRI
COONAMBLE
COBAR
DUBBO
ORANGE
BLAYNEY
FORBES
YOUNG
GUNDAGAI
WAGGA WAGGA
ALBURY
DENILIQUIN
MOAMA
SILVERTON
WILCANNIA
MENINDEE
WENTWORTH
BALRANALD
HAY
JERILDERIE
URANA
TEMORA
COOTAMUNDRY
MURRUMBURRAH
YASS
GOULBURN
QUEANBEYAN
COOMA
BOMBALA
BEGA
MOREE
INVERELL
TENTERFIELD
GLEN INNES
ARMIDALE
TAMWORTH
MURRURUNDI
MUSWELLBROOK
SINGLETON
MAITLAND
NEWCASTLE
SYDNEY
WOLLONGONG
KIAMA
MORUYA
GRAFTON
KEMPSEY
LISMORE
Cape Howe
Marrickville to Burwood Road (under construction, length 5 miles)
Lithographed & Printed at the Department of Lands Sydney N.S.W. 1892

1892.

NEW SOUTH WALES.

RAILWAYS AND TRAMWAYS.

(REPORT OF RAILWAY COMMISSIONERS, QUARTER ENDING 30 JUNE, 1892.)

Presented to Parliament, pursuant to Act 51 Vic. No. 35, sec. 44.

Offices of the Railway Commissioners of New South Wales,
29th July, 1892.

To The Honorable the Minister of Railways,—

Sir,

In accordance with the provisions of the 44th clause of the Railway Act of 1888, 51 Vic. No. 35, we have the honor to submit, for the information of Parliament, our Report, for the quarter ending 30th June, 1892, upon the subjects specified, viz. :—

(I.) "The state of the traffic returns, with the approximate cost and earnings of trains per ton per train mile, in respect of goods and passengers, respectively, carried during the past quarter."

(II.) "The general condition of the lines, and accommodation for the traffic."

(III.) "The special rates (if any) which have been made, and the reasons for making such rates."

(IV.) "The appointments and removals, with the circumstances attending each case."

I.—State of the Traffic.

Railways.	Quarter ending 30th June, 1891.	Quarter ending 30th June, 1892.
Miles open	2,182	2,185
Revenue — Passenger (1891. £285,956 / 1892. 291,324)	£663,974	£665,364
Revenue — Merchandise (1891. £378,018 / 1892. 374,040)		
Expenditure	£473,740	£464,325
Train miles run	*2,033,212	1,848,305
Earnings per train mile	6/6¼	7/2⅛
Expenditure per train mile	*4/8	5/0¼
Percentage—Expenditure to earnings	71·34	69·79
Number of passengers	4,841,166	4,942,036
†Tonnage of goods traffic	997,040	965,196
Tonnage of live stock traffic	28,726	39,118

* The difference between these figures and those shown in last year's report is owing to the locomotive coal train mileage being excluded (4774).

† The tonnage of goods traffic formerly included the stores carried for the Service, whereas they are now excluded for both years.

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[1,403 copies—Approximate Cost of Printing (labour and material) £19 8s. 9d.]

Tramways.	Quarter ending 30th June, 1891.	Quarter ending 30th June, 1892.
Miles open	42½	48
Revenue from all sources	£73,498	£76,734
Expenditure	£65,920	£60,947
Train miles run	438,371	466,170
Earnings per train mile	3/4¼	3/3½
Expenditure per train mile	3/–	2/7½
Percentage—Expenditure to earnings	89·69	79·43
Number of fares collected	17,325,036	17,852,621

RAILWAYS.

II.—Condition of the Lines.

A report as to the condition of the lines will be found as an Appendix, pages 3 and 4.

III.—Special Rates.

A statement of the special rates, and the reasons for making the same, will be found attached. [*Appendix*, page 4.]

IV.—Staff.

These returns are given as an Appendix, pages 5 to 12.

General Remarks.

The general depression in the trade of the Colony, which began to manifest itself in the railway traffic last quarter, has unfortunately continued, and we are only able to record a slight increase of £1,390, as against an increase of £81,749 in the corresponding period of last year.

Every effort has been made to control the expenses, so as to meet this state of things. The improved class of locomotive power has materially assisted us in this direction, and we are pleased to show a decrease of £9,415 in the expenses, although the work of improving the permanent-way out of working expenses has been continued.

The earnings per train mile have increased during the quarter by 8¼d., and the assistant engine mileage has also been largely reduced.

The apparently high percentage of expenses to earnings in this quarter arises from the fact that an additional fortnight's pay for the whole of the wages staff is included for convenience of accounts and comparison. The percentage of expenditure to earnings for the twelve months, closed by this report, will be 61·60.

CONDITION OF THE LINES AND ACCOMMODATION FOR THE TRAFFIC.

The condition of the Permanent-way continues to improve, but a heavy expenditure will still be required for some years to come, as the life of the rails and sleepers put into the lines which were first constructed is coming to an end.

The facilities for conducting the traffic have been improved in various ways during the quarter.

TRAMWAYS.

The revenue shows a slight improvement, and the expenses have been reduced, the general result being a reduction of 10 per cent. in the percentage of expenses to earnings as compared with the corresponding quarter of last year.

We have the honor to be,

Sir,

Your most obedient Servants,

E. M. G. EDDY,
Chief Commissioner.

CHARLES OLIVER,
Commissioner.

W. M. FEHON,
Commissioner.

APPENDIX I.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

REPORT on Condition of Lines for quarter ending 30th June, 1892.

Sir, Office of Engineer-in-Chief for Existing Lines, 26 July, 1892.

I have the honor to report, for the information of the Commissioners, that the whole of the Permanent Way and Works have been well maintained during the past quarter.

Relaying and Reballasting.

Considerable progress has been made, and the main lines have been much improved.

Widening of the Suburban Line, Redfern to Flemington.

Very good progress has been made; the whole of the lines have been brought into use, and the works are rapidly approaching completion.

Duplication of Southern Line, Granville to Picton.

Double-line working was established on the 1st instant, and the works are now practically completed.

Raising Line East to West Maitland.

The Down line was opened for traffic over the new embankment on the 5th of June, and the new Up line was opened on the 17th instant.

Improvement of Grades and Curves.

The work in connection with the cutting out of the Zig Zag at Lapstone Hill is progressing slowly, but the contractors are being pressed to proceed more expeditiously.

The deviations and improvement of the grades between Muswellbrook and Singleton have been advanced. One section was opened for traffic in June, and it is expected the others will be finished during the current quarter. The alterations of gradients at Mumbil and Manoa have been completed and opened for traffic.

I have, &c.,
WILLIAM T. FOXLEE,
Engineer-in-Chief.

The Secretary to the Railway Commissioners.

APPENDIX II.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

STATEMENT, in accordance with clause No. 44 of the Railway Act, showing the Special Rates which have been made, and the reasons for making such rates, quarter ending 30th June, 1892.

Article.	Rate.	Reason for such rate.
Empty fruit cases	Empty fruit cases, which are subsequently to be returned full by rail, to be carried free.	To encourage fruit-growers.
Traffic carried over private lines.	A charge of 5s. per four-wheeled truck, to be made on all traffic other than coal delivered at the Mount Keira Junction, in addition to the main line freight, and 5s. demurrage per four-wheeled wagon per day or part of a day, to be enforced on all trucks detained over 24 hours.	To meet traffic.
Cattle	A rate of 25s. per head to be adopted for train loads of 44 wagons, Bourke to Albury, sent at the convenience of the Department. Minimum, 9 animals per truck.	To encourage traffic.
Molasses	For cattle feed in truck loads to be charged "A" rate and conditions.	To encourage traffic.

APPENDIX III.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with clause No. 44 of the Railway Act, showing the Appointments of Employees during April and May, 1892.

Date	Name	Position.	Rate.	Remarks.
		SECRETARY'S BRANCH.		
		Nil.		
		CHIEF ACCOUNTANT'S BRANCH.		
1 April ...	Howell, Price	Statistical Clerk	£250 per annum	From Supernumerary Staff.
		TRAFFIC AUDITOR'S BRANCH.		
1 May ...	Fisher, Jabez A.	Clerk	£150 per annum	From Supernumerary Staff.
16 „ ...	Lackey, James	Apprentice Clerk	£ 30 „ ...	*Vice* N. S. Holden.
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
1 April ...	Moffatt, W. T.	Surveyor	£310 per annum	From Supernumerary Staff.
8 „ ...	M'Crea, Francis	Fettler	6/6 per day	From Supernumerary Staff, *vice* W. Riddle.
11 „ ...	Bray, Albert	Labourer	6/6 „	*Vice* H. Stevens.
15 „ ...	Keevers, Matthew	Labourer	7/6 „	From Supernumerary Staff, *vice* R. Sims.
22 „ ...	Jacobs, James	„	6/6 „	From Supernumerary Staff, *vice* T. Beck.
22 „ ...	Cassell, John	„	6/6 „	From Supernumerary Staff, *vice* J. Crabtree.
22 „ ...	Harding, Robert	„	6/6 „	From Supernumerary Staff, *vice* E. Coll.
22 „ ...	Anderson, Henry	Fettler	6/6 „	From Supernumerary Staff, *vice* B. Trelour.
22 „ ...	Bailey, Chas.	„	6/6 „	From Supernumerary Staff, *vice* S. Jenkins.
22 „ ...	Unwin, William	„	6/6 „	From Supernumerary Staff, *vice* T. Driscoll.
22 „ ...	York, William	„	6/6 „	From Supernumerary Staff, *vice* J. Lowndes.
22 „ ...	Rillett, W.	„	6/6 „	From Supernumerary Staff, *vice* J. Mitchell.
22 „ ...	Farnsworth, Eli	„	7/- „	From Supernumerary Staff, *vice* J. McGann.
22 „ ...	Hartigan, Andrew	„	7/6 „	From Supernumerary Staff, *vice* G. Stacey.
22 „ ...	Swan, George	„	6/6 „	From Supernumerary Staff, *vice* L. Baker.
22 „ ...	Walsh, James	Labourer	6/6 „	From Supernumerary Staff, *vice* R. Ashford.
22 „ ...	Ferry, Simon	„	6/6 „	From Supernumerary Staff, *vice* W. Smith.
22 „ ...	Brennan, Joseph	Fettler	6/6 „	From Supernumerary Staff, *vice* J. McCudden.
22 „ ...	Barrett, John	„	7/6 „	From Supernumerary Staff, *vice* W. Barnett.
22 „ ...	Lawrence, George	„	6/6 „	From Supernumerary Staff, *vice* J. Scanlon.
22 „ ...	Seivers, Frank	„	6/6 „	From Supernumerary Staff, *vice* R. Sherritt.
22 „ ...	Lewis, Alfred	„	6/6 „	From Supernumerary Staff, *vice* J. Gilligan.
29 „ ...	Horan, Martin	Labourer	6/6 „	*Vice* J. Leary.
29 „ ...	Lynch, William	„	7/- „	From Supernumerary Staff, *vice* W. Bowe.
29 „ ...	Riles, Benjamin	Fettler	7/6 „	From Supernumerary Staff, *vice* A. Duggan.
29 „ ...	Howlett, Thomas	Labourer	7/- „	From Supernumerary Staff, *vice* J. McGuire.
29 „ ...	Uhrig, Jacob	„	6/6 „	From Supernumerary Staff, *vice* M. Cahill.
29 „ ...	Parsons, Frederick	Office boy	2/- „	From Supernumerary Staff.
29 „ ...	Broad, Jonathan	Fettler	7/- „	„ „
29 „ ...	Morris, Alfred	„	7/6 „	From Supernumerary Staff, *vice* W. Mills.
29 „ ...	Mitchell, Robert	„	7/- „	From Supernumerary Staff, *vice* R. Johnson.
29 „ ...	McCarthy, Francis	„	7/6 „	From Supernumerary Staff, *vice* P. Cannon.
29 „ ...	Acland, Alfred	„	7/6 „	From Supernumerary Staff, *vice* W. Bell.
29 „ ...	Nugent, Patrick	„	7/6 „	From Supernumerary Staff, *vice* J. McKay.
29 „ ...	O'Shea, Alfred	„	7/6 „	From Supernumerary Staff, *vice* M. Mugivan.
29 „ ...	O'Donnell, Patrick	„	7/6 „	From Supernumerary Staff, *vice* C. Marshall.
29 „ ...	Eggleston, John	„	6/6 „	From Supernumerary Staff, *vice* C. May.
29 „ ...	Williams, James	„	7/6 „	From Supernumerary Staff, *vice* J. Howell.
29 „ ...	Olsen, Alfred	„	6/6 „	From Supernumerary Staff, *vice* H. Archard.

Date.	Name.	Position.	Rate.	Remarks.
	ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH—*continued*.			
29 April	Tanner, Frederick	Fettler	7/6 per day	From Supernumerary Staff, *vice* E. Travers.
29 "	Sherwin, Jno.	"	7/- "	From Supernumerary Staff, *vice* J. Woods.
29 "	Purtill, John	"	7/6 "	From Supernumerary Staff, *vice* P. Joyce.
29 "	Bowman, Henry	"	7/6 "	From Supernumerary Staff, *vice* W. Most.
29 "	Ralph, George	"	7/- "	From Supernumerary Staff, *vice* T. Naylon.
29 "	Hooker, Alexander	"	7/- "	From Supernumerary Staff, *vice* J. Eady.
29 "	Taylor, George	Labourer	7/- "	From Supernumerary Staff, *vice* T. Couldrake.
29 "	Lyle, Frederick	"	7/- "	From Supernumerary Staff, *vice* E. McCarthy.
29 "	O'Donnell, John	"	7/6 "	From Supernumerary Staff, *vice* J. Byrnes.
29 "	Clarke, Michael	Fettler	7/6 "	From Supernumerary Staff, *vice* J. Clifford.
29 "	Davidson, James	"	6/6 "	From Supernumerary Staff, *vice* W. Good.
29 "	McKervey, Patrick	"	7/6 "	From Supernumerary Staff, *vice* T. Davies.
29 "	Thompson, David	"	7/6 "	From Supernumerary Staff, *vice* G. Oram.
29 "	McFadden, John	"	7/6 "	From Supernumerary Staff, *vice* E. Hogan.
29 "	Sweeney, Michael	"	7/- "	From Supernumerary Staff, *vice* R. McDonald.
29 "	McGrath, James	Gangsr	8/6 "	From Supernumerary Staff.
29 "	Gavenlock, James	Fettler	7/- "	From Supernumerary Staff, *vice* John Drinkwater.
29 "	Swan, George	"	7/- "	From Supernumerary Staff, *vice* W. Bowen.
29 "	Alborn, William	"	6/6 "	From Supernumerary Staff, *vice* W. Duggan.
1 May	Melville, W. R. H.	Draftsman (cadet)	£52 per annum	From Supernumerary Staff.
1 "	Moore, A. J.	Clerk	10/- per day	" "
6 "	Conlon, John	Labourer	7/6 "	From Supernumerary Staff, *vice* R. Lampshire.
6 "	Murphy, Patrick	"	6/6 "	From Supernumerary Staff, *vice* E. Stubbs.
6 "	Brown, Richard	Office boy	2/- "	From Supernumerary Staff.
6 "	Maloney, Patrick	Fettler	6/6 "	From Supernumerary Staff, *vice* T. Pettitt.
6 "	Protheroe, William	Labourer	6/6 "	From Supernumerary Staff, *vice* J. Taylor.
6 "	Parkinson, William	"	6/6 "	From Supernumerary Staff, *vice* O. Sherlock.
6 "	Hellerman, Alfred	"	6/6 "	From Supernumerary Staff, *vice* Heyburn.
6 "	Jenkins, Thomas	"	7/6 "	From Supernumerary Staff, *vice* H. Adams.
9 "	Jamieson, Chas.	"	6/6 "	*Vice* P. Larkins.
16 "	Neale, Arthur	"	7/6 "	From Locomotive Branch.
23 "	Horan, James	"	6/6 "	*Vice* E. Puckett.
26 "	McMahon, William	"	6/6 "	*Vice* F. Bouta.
1 June	Light, E. E.	Assistant Engineer	£360 per annum	From Supernumerary Staff.
1 "	Cuckburn, W. J.	Clerk	£125 "	From Supernumerary Staff.
3 "	McConaghy, R.	Office boy	2/- per day	*Vice* Black.
3 "	Dioge, Alfred	Labourer	6/6 "	From Supernumerary Staff.
3 "	Byron, Thomas	"	7/- "	" "
3 "	Scott, James	"	6/6 "	" "
3 "	Harding, John	"	6/6 "	" "
3 "	Duncanson, John	"	6/6 "	From Supernumerary Staff, *vice* W. Condon.
3 "	Digaam, John	"	7/- "	From Supernumerary Staff, *vice* W. Barton.
3 "	Arkinstall, William	"	6/6 "	From Supernumerary Staff, *vice* H. Fuller.
3 "	Harper, Uriah	"	6/6 "	From Supernumerary Staff, *vice* J. Joyce.
3 "	Houghton, Benjamin	"	6/6 "	From Supernumerary Staff, *vice* D. Houghton.
3 "	Silwell, William	"	6/6 "	From Supernumerary Staff, *vice* C. Cahill.
3 "	Jobson, James	"	6/6 "	From Supernumerary Staff, *vice* J. Black.
3 "	Mortlock, George	"	7/6 "	From Supernumerary Staff.
3 "	Williams, William	Painter	8/6 "	From Supernumerary Staff, *vice* W. Stevenson.
3 "	Blogg, Thomas	Labourer	7/- "	From Supernumerary Staff.
3 "	M'Dermott, J.	"	6/6 "	From Supernumerary Staff, *vice* D. Lloyd.
3 "	Trimmer, Henry	"	6/6 "	From Supernumerary Staff, *vice* J. Chitts.
10 "	Hughes, Augustus	"	7/- "	From Supernumerary Staff.

Date.	Name.	Position.	Rate.	Remarks.
	Engineer-in-Chief for Existing Lines Branch—*continued.*			
10 June ...	Bourke, Edward	Fettler	7/- per day	From Supernumerary Staff, *vice* W. Adamson.
10 ,, ...	Parish, William	Labourer	7/- ,,	From Supernumerary Staff, *vice* E. McCormack.
10 ,, ...	Stephens, Alfred	,,	6/6 ,,	From Supernumerary Staff, *vice* J. Cousin.
10 ,, ...	Randall, Alfred	,,	7/- ,,	From Supernumerary Staff.
10 ,, ...	Plowman, Frederick	,,	6/6 ,,	From Supernumerary Staff, *vice* R. Melmouth.
10 ,, ...	Malcolm, Peter	Fettler	7/- ,,	From Supernumerary Staff, *vice* J. Crossingham.
10 ,, ...	Gibson, William	,,	7/- ,,	From Supernumerary Staff, *vice* J. Liddell.
10 ,, ...	Cole, William	,,	6/6 ,,	From Supernumerary Staff, *vice* C. Cole.
10 ,, ...	Taylor, Samuel	Labourer	6/6 ,,	From Supernumerary Staff.
13 ,, ...	Horner, C.	,,	6/6 ,,	From Supernumerary Staff, *vice* J. Chesham.
14 ,, ...	Davis, George	,,	7/6 ,,	From Supernumerary Staff, *vice* R. Riley.
14 ,, ...	Jaques, Thomas	,,	6/6 ,,	From Supernumerary Staff, *vice* R. McAllister.
14 ,, ...	Harding, Francis	,,	6/6 ,,	From Supernumerary Staff, *vice* J. Whalan.
	Chief Mechanical Engineer's Branch.			
9 May ...	Sims, Richard	Cleaner	5/- per day	Re-employed.
11 ,, ...	Gaynor, James	Labourer	7/- ,,	From Supernumerary Staff, *vice* J. Byrnes.
20 ,, ...	Bell, Richard	Striker	7/- ,,	From Interlocking Branch, *vice* J. Cambridge.
30 ,, ...	Reid, Fred	Junior Clerk	£120 per annum	From Traffic Branch, *vice* P. Duffy.
22 April ...	Matthews, George	Fireman	10/- per day	Re-employed.
17 June ...	Broadfoot, Adam	Blacksmith	10/8 ,,	*Vice* D. Harris.
20 ,, ...	Stormont, Robert	Examiner	10/8 ,,	Re-employed.
21 ,, ...	Ford, A. G. H.	Clerk	£130 per annum	From Traffic Branch, *vice* A. Hay.
	Chief Traffic Manager's Branch.			
1 April ...	Shellard, E. C.	Junior Clerk	£110 per annum	From Supernumerary Staff.
1 ,, ...	Parker, F. J.	Junior Porter	2/6 per day	,, ,,
1 ,, ...	Cherry, W.	Porter	7/- ,,	From Supernumerary Staff, *vice* J. Gordon.
1 ,, ...	Wilkie, H.	,,	7/- ,,	From Supernumerary Staff.
1 ,, ...	Parker, H. T.	Junior Porter	2/6 ,,	From Supernumerary Staff, *vice* T. McGinley.
1 ,, ...	Dawes, P. H.	Porter	7/- ,,	From Supernumerary Staff, *vice* D. Nicholas.
1 ,, ...	Dudley, W. A.	,,	6/- ,,	From Supernumerary Staff, *vice* M. Roach.
1 ,, ...	Wilson, F.	,,	6/6 ,,	From Supernumerary Staff, *vice* G. Higginson.
1 ,, ...	Freeman, J.	,,	6/6 ,,	From Supernumerary Staff.
1 ,, ...	Bryan, John	,,	7/6 ,,	From Supernumerary Staff, *vice* S. Davis.
1 ,, ...	Davies, E.	Junior Porter	5/- ,,	From Supernumerary Staff, *vice* W. Lindsay.
1 ,, ...	Osgood, Charles	,,	3/4 ,,	From Supernumerary Staff, *vice* W. Heggarty.
1 ,, ...	Fulton, W.	,,	2/6 ,,	From Supernumerary Staff.
1 ,, ...	Stanley, J.	,,	2/6 ,,	,, ,,
1 ,, ...	Rochester, C.	,,	4/2 ,,	,, ,,
1 ,, ...	Dunn, P.	,,	2/6 ,,	,, ,,
1 ,, ...	Heffernan, Mrs.	Gatekeeper	7/- per week	*Vice* Mrs. Bouveng.
1 ,, ...	Brown, Mrs.	,,	Free House	*Vice* Mrs. Fletcher.
1 ,, ...	Crean, George	Porter	7/- per day	From Supernumerary Staff.
1 ,, ...	Jacobs, George	,,	7/- ,,	,, ,,
1 ,, ...	Reid, Henry	,,	7/- ,,	,, ,,
1 ,, ...	Smee, Frederick	,,	7/- ,,	,, ,,
1 ,, ...	Lloyd, Mrs.	Gatekeeper	7/- per week	*Vice* P. Bush.
1 ,, ...	Hammond, Alfred	Shunter	7/6 per day	From Supernumerary Staff.
1 ,, ...	Jones, Alfred	,,	7/6 ,,	,, ,,
1 ,, ...	Sweeney, Mrs.	Gatekeeper	15/- per week	*Vice* W. O'Brien.
1 ,, ...	Scully, W.	Porter	7/- per day	From Supernumerary Staff, *vice* W. Macpherson.
1 ,, ...	Frost, W. E.	Probationer	2/6 per week	
1 ,, ...	Hooper, J.	Junior Porter	4/2 per day	From Supernumerary Staff.
1 ,, ...	Morgan, E.	,,	2/6 ,,	,, ,,
1 ,, ...	McFadden, E.	Foreman	10/- ,,	From Permanent-way Branch
1 ,, ...	Smith, John	Porter	6/- ,,	From Supernumerary Staff.
1 ,, ...	Doughan, E.	Junior Porter	4/2 ,,	,, ,,
1 ,, ...	Adams, A.	,,	4/2 ,,	,, ,,
1 ,, ...	Kinchella, A.	,,	2/6 ,,	,, ,,
1 ,, ...	Guilmartin, O.	Probationer	2/6 per week	
2 ,, ...	Barclay, T.	,,	2/6 ,,	
4 ,, ...	Gillard, R.	Shunter	6/- per day	,, ,,
4 ,, ...	Marlow, J. S.	,,	7/- ,,	,, ,,

Da		Name.	Position.	Rate.	Remarks.
		Chief Traffic Manager's Branch—*continued.*			
4	April	Keogh, Mrs.	Gatekeeper	7/- per week	
5	"	Scully, John	Messenger	2/6 per day	From Supernumerary Staff.
5	"	Davidson, J.	Porter	7/- "	" "
6	"	Byron, Mrs.	Gatekeeper	7/- per week and house.	*Vice* Mrs. Boyton.
7	"	Lee, Mrs.	"	10/- per week	*Vice* Mrs. Souther.
11	"	Marr, Mrs.	"	5/- "	*Vice* H. Oddy.
12	"	Harrison, Mrs.	"	10/- "	*Vice* L. Kelhear.
12	"	House, John	Probationer	2/6 "	
21	"	Morris, Thomas	Apprentice Clerk	£30 per annum	From Supernumerary Staff.
22	"	Robinson, C.	Junior Porter	4/2 per day	" "
25	"	Marshall, J.	Porter	6/0 "	" "
30	"	Kelly, M.	"	6/6 "	" "
30	"	Coshelloe, W.	Junior Porter	3/4 "	
1	May	Brady, W. J.	Probationer	2/6 per week	
1	"	Tomlinson, W. H.	Delivery Clerk	£250 per annum	" "
1	"	Murphy, S. C.	Apprentice Clerk	£30 "	" "
1	"	Carr, H. S.	"	£30 "	" "
1	"	Verdon, A. L.	Inspector	£350 "	" "
1	"	Adams, A. J.	Apprentice Clerk	£30 "	*Vice* J. Edgar.
1	"	Suggs, George	Porter	7/- per day	From Supernumerary Staff, *vice* F. Benson.
1	"	Morgan, E.	"	7/- "	From Supernumerary Staff, *vice* E. Milgate.
1	"	Griffiths, John	"	6/- "	From Supernumerary Staff, *vice* D. Gower.
1	"	Clay Alfred	"	6/- "	From Supernumerary Staff, *vice* J. M'Phee.
1	"	Freeman W.	"	6/- "	From Supernumerary Staff, *vice* J. F. Walsh.
1	"	Dickson, James	Junior Porter	2/6 "	From Supernumerary Staff, *vice* T. Bonany.
1	"	King, Patrick	Shunter	7/- "	From Supernumerary Staff, *vice* M. Hurford.
1	"	Brownlow, Joseph	Porter	6/- "	From Supernumerary Staff, *vice* T. Allen.
1	"	Elwood, Thomas	Postal Assistant	10/- per week	
12	"	Sheldrick, Jane	Postmistress	10/- "	
13	"	M'Neil, Maurice	Junior Porter	4/2 per day	From Supernumerary Staff, *vice* T. Keilly.
19	"	M'Gee, Mrs.	Gatekeeper	Free house	*Vice* Mrs. Hailey.
20	"	Harburn F.	Shunter	7/- per day	From Supernumerary Staff.
27	"	Newman, Mrs.	Gatekeeper	Free house	*Vice* Mrs. Peck.
30	"	Walsh, Daniel	Junior Porter	3/4 per day	From Supernumerary Staff, *vice* L. Richards.
1	June	Farnell, Mrs.	Gatekeeper	7/- per week	*Vice* Mrs. Hoather.
1	"	Hicks, E.	Probationer	2/6 "	
1	"	Moore, T. H.	"	2/6 "	
1	"	Irving, George	Junior Clerk	£110 per annum	From Supernumerary Staff.
1	"	Sorrell, A.	Porter	6/- per day	From Supernumerary Staff, *vice* J. Donald.
3	"	Meale, Lewis	Gatekeeper	30/- per week	*Vice* T. James.
5	"	Summergreen, Mrs.	"	Freehouse	*Vice* Mrs. Ware.
6	"	Boyle, Mrs.	"	7/- per week	*Vice* Mrs. Osborne.
12	"	Whiteley, Mrs.	"	15/- "	*Vice* R. M'Kenzie.
21	"	Martin, Frank	Junior Clerk	£90 per annum	From Locomotive Branch.
30	"	Stanbrook, George	Porter	6/- per day	From Supernumerary Staff, *vice* T. White.
30	"	Allen, E. L.	Junior Porter	5/- "	From Supernumerary Staff.
		Comptroller of Stores Branch.			
		Nil.			
		Signal and Interlocking Branch.			
23	May	Saunders, John	Striker	7/6 per day	Re-employed.
		Property and Estate Branch.			
2	April	Flanders, Amos	Billposter	7/- per day	From Tramways.
10	May	Vogan, A. J.	Clerk	£150 per annum	From Existing Lines Branch
		Electrical Engineer's Branch.			
23	June	Pollitier, John	Electric Light Attendant	8/- per day	From Tramways, *vice* W. English.
		Tramways—Locomotive Branch.			
13	April	Morrison, John D.	Cleaner	6/- per day	*Vice* A. Gardiner.
15	"	Sellars, Joseph A.	"	5/6 "	From Supernumerary Staff.
15	"	Edworthy, Edward	Fitter	10/- "	From Supernumerary Staff, *Vice* W. Bert.
15	"	Sinclair, Thomas	Labourer	6/6 "	From Supernumerary Staff, *Vice* J. Moran.
24	"	M'Laughlin, George	Cleaner	4/6 "	*Vice* W. White.
10	May	Baker, Edward	"	6/- "	*Vice* B. Poole.
16	"	Gattenhoff, Percy	Shop Boy	2/6 "	*Vice* A. M'Iver.
31	"	Olde, George Albert	Apprentice	-/10 "	*Vice* Arthur Patterson.
9	June	Ryan, Phillip	Labourer	6/6 "	*Vice* B. Dooley.
24	"	Hayes, James	"	6/6 "	From Supernumerary Staff.
24	"	Aiken, Walter	Apprentice	-/10 "	" "
24	"	Griffiths, William	Labourer	6/6 "	" "
24	"	Waters, Walter	Cleaner	5/6 "	" "
24	"	Hinton, Archibald	"	5/6 "	" "

Date.	Name.	Position.	Rate.	Remarks.
		Tramways—Traffic Branch.		
18 May ...	M'Mullen, William	Junior Conductor	6/- per day	Reinstated.
		Tramways—Maintenance Branch.		
15 April ...	Robinson, William.....	Labourer	6/6 ,, ...	From Supernumerary Staff, *Vice* B. Malone.
15 ,, ...	Funnell, Edwin	,, ...	6/6 ,, ...	From Supernumerary Staff.
20 ,, ...	Quinn, Timothy	,, ...	7/6 ,, ...	From Locomotive Branch, Tramways.
27 May ...	M'Cabe, Patrick	,, ...	7/- ,, ...	From Supernumerary Staff, *Vice* P. Grady.
17 June ...	Walters, Frederick.....	,, ...	7/6 ,, ...	From Existing Lines Branch Railways.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with clause No. 44 of the Railway Act, showing the Removals of Employees, during April and May, 1892.

Date	Name.	Position.	Rate.	Remarks.
		Secretary's Branch.		
		Nil.		
		Chief Accountant's Branch.		
		Nil.		
		Traffic Auditor's Branch.		
14 May ...	Holden, Norman	Apprentice Clerk	£30 per annum...	Resigned
		Engineer-in-Chief for Existing Lines Branch.		
1 April ...	Mercer, Robert	Sub-Inspector	£215 per annum.	Retired.
1 ,, ...	McFadden, Frank	Inspector Ballast Trains.....	10/- per day.....	To Traffic Branch.
7 ,, ...	McDonald, William	Fettler	7/6 ,, ...	Resigned.
7 ,, ...	Martin, Thomas	,, ...	7/6 ,, ...	,,
7 ,, ...	Sims, Robert	,, ...	7/6 ,, ...	Deceased.
7 ,, ...	Brook, Oliver	Labourer	7/6 ,, ...	,,
16 ,, ...	Pucket, Edwin	Fettler	7/6 ,, ...	Resigned.
18 ,, ...	Leary, John	,, ...	7/6 ,, ...	Retired.
18 ,, ...	Larkin, Pierce.....	Gauger	9/- ,, ...	Resigned.
22 ,, ...	Lipscombe, R.....	Boy	5/- ,, ...	Deceased.
28 ,, ...	Condon, Thomas	Fettler	7/6 ,, ...	Resigned.
28 ,, ...	Fox, Thomas	,, ...	7/6 ,, ...	,,
29 ,, ...	Johnston, Robert	,, ...	7/6 ,, ...	Discharged.
30 ,, ...	Cruikshanks, William	Sub-Inspector	£230 per annum.	Retired.
30 ,, ...	Paton, John	Inspector	15/- per day.....	Retrenchment.
3 May ...	Shaw, George.....	Fettler	7/6 ,, ...	Resigned.
5 ,, ...	DePatron, John	Carpenter	12/- ,, ...	Retrenchment.
5 ,, ...	Skinner, William	,, ...	11/- ,, ...	,,
5 ,, ...	Bailey, George	,, ...	11/- ,, ...	,,
5 ,, ...	Robertson, Thomas.....	,, ...	11/- ,, ...	,,
5 ,, ...	Nash, William	,, ...	10/6 ,, ...	,,
5 ,, ...	Howe, John.....	,, ...	10/6 ,, ...	,,
5 ,, ...	Stevens, Thomas.....	,, ...	10/6 ,, ...	,,
5 ,, ...	Beaver, John	,, ...	10/6 ,, ...	,,
5 ,, ...	Bennett, A.....	,, ...	9/6 ,, ...	,,
5 ,, ...	Mullis, John	,, ...	9/- ,, ...	,,
5 ,, ...	Martin, Benjamin	,, ...	11/- ,, ...	,,
5 ,, ...	Watkins, Charles	Painter.....	9/6 ,, ...	,,
5 ,, ...	Stunnez, Stephen	,, ...	9/- ,, ...	,,
5 ,, ...	Johnston, L.	,, ...	9/- ,, ...	,,
5 ,, ...	Douglas, Henry	,, ...	9/- ,, ...	,,
5 ,, ...	Clarke, James.....	,, ...	8/8 ,, ...	,,
5 ,, ...	Rigg, George	Carpenter	11/- ,, ...	,,
7 ,, ...	Pont, Frederick	Labourer	7/6 ,, ...	Resigned.
16 ,, ...	Carney, Hugh.....	Fettler	7/- ,, ...	Discharged.
16 ,, ...	Burrows, John	Storeman	8/6 ,, ...	Retrenchment.
16 ,, ...	Lane, Daniel	Mason	11/- ,, ...	,,
16 ,, ...	Willis, Frederick	,, ...	12/- ,, ...	,,
16 ,, ...	Littlejohn, Robert.....	,, ...	12/- ,, ...	,,
16 ,, ...	Parton, Thomas	Bricklayer.....	12/- ,, ...	,,
16 ,, ...	Blacker, John.....	,, ...	12/- ,, ...	,,
16 ,, ...	Castle, George.....	,, ...	12/- ,, ...	,,
16 ,, ...	Gascoigne, James	,, ...	10/- ,, ...	,,
18 ,, ...	Chinner, Henry	Inspector	15/- ,, ...	,,
18 ,, ...	Williams, James.....	Labourer	7/6 ,, ...	Deceased.
21 ,, ...	Jackson, H. O.....	Draftsman	£260 per annum..	Retrenchment.
21 ,, ...	Shaw, G. T.....	,, ...	£200 ,, ...	,,
21 ,, ...	Hall, Sydney	,, ...	£175 ,, ...	,,
21 ,, ...	Welsby, James	Inspector	£310 ,, ...	,,
21 ,, ...	Vogan, A. J.	Draftsman	£150 ,, ...	To Property and Estate Branch.

Date.	Name.	Position.	Rate.	Remarks.
	Engineer-in-Chief for Existing Lines Branch—*continued.*			
25 May	Felton, Joseph	Fettler	7/6 per day	Retired.
25 „	Peachy, John	Ganger	9/- „	Deceased.
27 „	Foley, John	Labourer	7/6 „	Discharged.
30 „	Woodward, Frederick	Fettler	7/6 „	Retired.
4 June	Robinson, Walter	Carpenter	10/6 „	Retrenchment.
4 „	Cook, H. A. G.	Apprentice Clerk	£40 per annum	Resigned.
10 „	M'Dougall, Joseph	Sub-inspector	£200 „	Retrenchment.
17 „	Walters, Frederick	Labourer	7/6 per day	To Tramways.
18 „	May, John	„	7/6 „	Deceased.
22 „	Chambers, George	Carpenter	10/- „	Discharged.
22 „	Lawless, James	„	8/6 „	„
23 „	Jones, Henry	Fettler	7/6 „	Deceased.
30 „	Wyche, Peter	Labourer	7/6 „	Resigned.
	Chief Mechanical Engineer's Branch.			
1 April	Webster, William	Inspector	£350 per annum	Retired.
1 „	Duffy, F. J.	Clerk	£185 „	„
2 „	Byrnes, John	Labourer	7/6 per day	Resigned.
2 „	Leech, George	„	7/- „	Discharged.
4 „	Young, David	Cleaner	5/- „	Retrenchment.
6 „	Benn, Joseph	Boilermaker	12/8 „	Resigned.
7 „	Spence, Arthur	Cleaner	5/6 „	Retrenchment.
7 „	Hughes, George	„	5/- „	„
7 „	Claridge, H. B.	„	5/- „	„
7 „	Pegg, William	„	5/6 „	„
7 „	Carbine, William	„	5/- „	„
7 „	Quinn, Patrick	„	5/- „	„
13 „	Leonard, Elizabeth	Upholsteress	5/- „	Resigned.
17 „	Ireland, Edward	Painter	9/- „	Deceased.
18 „	Woodward, E. R.	Labourer	7/6 „	Discharged.
19 „	Pollard, William	Fitter	10/8 „	Resigned.
21 „	Cooper, John F.	Cleaner	3/3 „	Retrenchment.
21 „	Johnston, Charles	„	5/- „	„
26 „	Webster, William	Fireman	9/- „	Discharged.
27 „	Kerston, C.	Driver	13/- „	Deceased.
29 „	Dodds, James	Apprentice	5/- „	Resigned.
29 „	Smith, Warren	Shed Inspector	£255 per annum	Deceased.
4 May	Hallett, Arthur	Labourer	6/6 per day	Retrenchment.
4 „	Thackall, John	Fuelman	6/6 „	„
5 „	Hay, Alexander	Clerk	£130 per annum	Discharged.
5 „	Donohue, Michael	Cleaner	5/6 per day	Retrenchment.
5 „	O'Connell, William	Cleaner	5/- „	„
5 „	Matthews, J.	„	5/- „	„
5 „	Scott, William	Boilermaker	10/6 „	Discharged.
6 „	Harris, David	Blacksmith	11/2 „	Deceased.
7 „	Stewart, Charles	Stationary Engine Driver	8/- „	Discharged.
14 „	Reid, William R.	Cleaner	5/6 „	Retrenchment.
19 „	Baker, Edward	„	5/6 „	„
19 „	Wainwright, David	„	5/6 „	„
19 „	Murray, Alfred	„	5/- „	„
19 „	Smith, Sydney	„	7/- „	„
19 „	Stephenson, Thomas	„	7/- „	„
19 „	Hawkes, James	Fuelman	8/- „	Retired.
19 „	Peacock, W.	Blacksmith	11/2 „	Resigned.
26 „	McFarlane, John	Striker	7/6 „	„
2 June	Hickson, John	Fitter	10/8 „	Retired.
3 „	Shenniak John	Moulder	11/2 „	Deceased.
16 „	Hardie, R.	Finisher	10/- „	Discharged.
16 „	Bond, John	Car Builder	10/6 „	Resigned.
16 „	Killingback, Robert	Laborer	7/6 „	Deceased.
16 „	Ryan, James	Cleaner	5/- „	Retrenchment.
16 „	Hellyer, Vic	„	5/- „	„
16 „	Martin, Henry J.	„	5/6 „	„
16 „	Lewis, Fred.	„	4/- „	„
16 „	Donnellan, Michael	„	5/6 „	„
16 „	Thorburn, Hugh	„	5/6 „	„
16 „	Welton John	Fuelman	6/6 „	„
21 „	Martin, Frederick	Junior Clerk	£90 per annum	To Traffic Branch.
24 „	Clark, Patrick	Cleaner	6/6 per day	Retrenchment.
25 „	Creswick, James	Pumper	8/- „	Discharged.
27 „	Sharp, John	Trimmer	10/- „	Resigned.
29 „	O'Brien, Thomas	Laborer	7/6 „	Deceased.
20 „	Wooley, William	Cleaner	5/6 „	Retrenchment.
30 „	Ashworth, Herbert	„	5/6 „	„
30 „	Heath, Charles	„	5/- „	„
30 „	Paterson, Charles	Laborer	7/- „	Discharged.
	Chief Traffic Manager's Branch.			
1 April	Peet, Mrs.	Gatekeeper	7/- per week	Resigned.
1 „	Jones, W.	„	30/- „	Retired.
1 „	Fletcher, Mrs.	„	7/- „	Discharged.
1 „	Carpenter, T.	Porter	7/- per day	Retired.
1 „	Mahony, C.	Watchman	7/6 „	„
1 „	Waddups, F.	„	45/- per week	„
1 „	Bouveng, Mrs.	Gatekeeper	7/- „	Resigned.
1 „	M'Guarr, W.	Assistant Guard	8/6 per day	Retired.
1 „	Barry, Mrs.	Gatekeeper	Free house	Discharged.

Date.	Name.	Position.	Rate.	Remarks.
		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
1 April	Williams, Mrs.	Gatekeeper	15/- per week	Retrenchment.
1 "	Brown, W.	"	35/- "	Discharged.
1 "	Menzies, R.	Shunter	8/- per day	Retrenchment.
1 "	Pike, J. C.	Travelling Inspector	£210 per annum	Retired.
1 "	Walsh, Joseph	Night Officer	£130 "	Discharged.
1 "	Cowley, John	Porter	6/6 per day	Retrenchment.
4 "	Lord, W.	Gatekeeper	7/6 "	Retired.
4 "	Eyre, A.	Porter	7/- "	Retrenchment.
4 "	Rein, William	Officer-in-charge	£150 per annum	Retired.
5 "	Carlton, Thomas	Porter	6/6 per day	Retrenchment.
5 "	Ryan, J. J.	Junior Porter	7/- "	"
7 "	Souther, Mrs.	Gatekeeper	10/- per week	Resigned.
7 "	Burke, Thomas	Porter	7/- per day	Retrenchment.
8 "	Phillips, W.	"	7/- "	"
8 "	M'Goldrick, C.	"	7/- "	"
8 "	Boyton, Mrs.	Gatekeeper	17/- per week	Resigned.
8 "	Ormiston, H.	Junior Porter	3/4 per day	"
11 "	Hisking, W.	"	5/- "	Retrenchment.
11 "	Curry, F.	"	5/- "	"
11 "	Oddy, Henry	Gatekeeper	25/- per week	Retired.
13 "	Dunstan, J.	Porter	6/- "	Retrenchment.
14 "	Rankin, W.	Gatekeeper	7/- per day	Deceased.
14 "	Borland, G.	Junior Porter	5/- "	Retrenchment.
15 "	Wynne, E. M.	Porter	6/- "	"
15 "	Mowbray, B.	"	6/6 "	"
15 "	Callaghan, Patrick	Gatekeeper	7/6 "	Retired.
16 "	Willison, A.	Porter	6/6 "	Retrenchment.
16 "	Virgoe, C.	Shunter	7/- "	"
16 "	Smith, S.	Gatekeeper	7/- per week	Resigned.
16 "	Kelhear, L.	"	10/- "	"
17 "	O'Connor, M.	Shunter	7/- per day	Discharged.
17 "	Plunkett, G.	Porter	6/- "	Retrenchment.
17 "	Kidd, Richard	"	6/- "	"
17 "	Baker, J.	"	7/- "	"
18 "	Geelan, Mary	Gatekeeper	10/- per week	Discharged.
21 "	Cahill, Mrs.	"	7/- "	"
22 "	Young, Thomas	"	35/- "	Retired.
23 "	Webster, A.	Junior Porter	5/- per day	Retrenchment.
25 "	Butcher, F.	Gatekeeper	30/- per week	Retired.
28 "	Ross, Mrs.	Charwoman	25/- "	Retrenchment.
28 "	Richards, F.	Gatekeeper	7/6 "	"
30 "	Williams, John	Officer-in-charge	£150 per annum	Retired.
30 "	Squires, J.	Signalman	8/6 per day	"
30 "	Martin, Mrs.	Gatekeeper	7/- per week	Resigned.
30 "	Johnstone, P.	Porter	8/- per day	Retrenchment.
1 May	Gould, E.	"	8/- "	Retired.
1 "	Hawkins, J.	Head Porter	8/6 "	"
1 "	Woods, Moses	Porter	8/- "	"
1 "	Fitzpatrick, C.	Guard	12/- "	"
1 "	Fleming, J.	"	12/- "	"
1 "	Bramwell, Alfred	Porter	6/6 "	Retrenchment.
1 "	Lillycrop, E.	"	6/- "	"
1 "	Walsh, J. F.	"	6/6 "	"
4 "	Agnew, John	Junior Porter	3/4 "	Resigned.
4 "	Bradney, J.	Porter	6/- "	Retrenchment.
4 "	Bolton, W.	Shunter	7/- "	Deceased.
4 "	Morrisey, P.	Junior Porter	5/- "	Discharged.
6 "	Steele, John	Porter	7/- "	"
10 "	Smith, John	"	7/- "	"
11 "	Rose, Charles	Night Officer	£130 per annum	"
14 "	Bottle, Henry	Porter	7/- per day	"
14 "	Hetherton, James	"	6/- "	Retrenchment.
16 "	Mansell, J. C.	Signalman	8/6 "	Discharged.
19 "	Middleton, W.	Porter	7/- "	"
20 "	Hailey, Mrs.	Gatekeeper	Free house	Resigned.
20 "	Jenkinson, J.	Porter	6/- per day	Retrenchment.
21 "	Olsen, C.	Junior Porter	4/2 "	Discharged.
21 "	Smith, George	Porter	6/6 "	Retrenchment.
23 "	Asprey, J.	Junior Porter	5/- "	Discharged.
23 "	Hennessey, W.	"	5/- "	"
23 "	Gray, A. G.	"	2/6 "	"
25 "	Wilson, Albert	Gatekeeper	7/- "	"
26 "	Reid, George	Watchman	45/- per week	Deceased.
26 "	Davidson, J. L.	Porter	7/- per day	Discharged.
27 "	Peek, Mrs.	Gatekeeper	Free house	Resigned.
27 "	Smith, John	Porter	6/- per day	Retrenchment.
27 "	Reid, Fred	Junior Clerk	£120 per annum	To Locomotive Branch.
27 "	Hailey, John	Porter	6/6 per day	Retrenchment.
28 "	Crowe, James	"	7/- "	"
30 "	Wilcox, John	"	7/- "	Retired.
31 "	White, Thomas	Shunter	9/- "	Retrenchment.
31 "	Ware, Henry	Porter	7/- "	Discharged.
1 June	Meers, E.	Gatekeeper	8/6 "	Retired.
1 "	Heathers, Mrs.	"	7/- per week	Resigned.
2 "	Lewis, Henry	Porter	7/- per day	Retrenchment.
2 "	Wilson, Charles	"	6/- "	"
2 "	Holly, John	"	7/6 "	Discharged.
2 "	Croall, A.	"	6/- "	Retrenchment.
2 "	Higgins, H.	Junior Porter	4/2 "	Discharged.

Date.	Name.	Position.	Rate.	Remarks.
	Chief Traffic Manager's Branch—*continued.*			
2 June ...	James, Thomas	Gatekeeper	30/- per week	Retired.
3 „ ...	Howieson, F.	Junior Porter	5/- per day	Retrenchment.
4 „ ...	Field, George	Porter	7/- „	Discharged.
5 „ ...	Ware, Mrs.	Gatekeeper	Free house	Resigned.
6 „ ...	Becker, W.	Porter	6/- per day	Retrenchment.
7 „ ...	Scarson, Edward	Signalman	8/6 „	Discharged.
7 „ ...	Mortimer, Alfred	Officer-in-charge	£140 per annum	„
8 „ ...	Turnidge, W.	Porter	6/- per day	Retrenchment.
9 „ ...	Rose, William	Junior Porter	5/- „	Discharged.
10 „ ...	Weeks, James	Gatekeeper	7/- „	„
11 „ ...	Freeman, John	Porter	6/6 „	Retrenchment.
13 „ ...	Faull, Robert	Junior Porter	3/4 „	Discharged.
13 „ ...	Downey, W.	„	2/6 „	Resigned.
13 „ ...	Brain, Thomas	Station-master	£255 per annum	Retired.
13 „ ...	M'Kenzie, R.	Gatekeeper	30/- per week	Retired.
16 „ ...	Bennett, H.	„	6/- per day	Retrenchment.
16 „ ...	Burtie, W.	„	30/- per week	Discharged.
17 „ ...	Clarke, T.	Porter	6/- per day	Retrenchment.
17 „ ...	Rowan, J.	Night Officer	£130 per annum	Discharged.
19 „ ...	Sheedy, M.	Porter	7/6 per day	Deceased.
19 „ ...	Barrington, F.	„	6/6 „	Discharged.
21 „ ...	Crossman, W. A.	Guard	11/- „	Deceased.
21 „ ...	Ford, A. G. H.	Clerk	£130 per annum	To Locomotive Branch.
23 „ ...	Johnson, W.	Officer-in-charge	£181 „	Discharged.
23 „ ...	Howard, Charles	Clerk	£125 „	Resigned.
24 „ ...	George, F.	Junior Porter	3/4 per day	Discharged.
24 „ ...	Johnson, Mrs.	Gatekeeper	15/- per week	„
25 „ ...	Cooper, James	Signalman	8/6 per day	Retired.
26 „ ...	Poulton, J.	Gatekeeper	6/- „	Retrenchment.
26 „ ...	Kelly, Michael	Guard	10/- „	Deceased.
26 „ ...	Usher, Joseph	Porter	6/- „	Discharged.
27 „ ...	O'Donnell, H.	„	7/- „	„
30 „ ...	Pearce, Mrs.	Gatekeeper	7/- per week	Resigned.
1 May ...	French, Samuel	Night Officer	£130 per annum	Discharged.
	Comptroller of Stores' Branch.			
30 April ...	Wallis, George	Storeman	9/- per day	Retrenchment.
30 „ ...	Haggarty, John	Watchman	7/- „	„
	Signal and Interlocking Branch.			
4 April ...	Cooper, Edward	Striker	7/6 per day	Discharged.
21 „ ...	Best, Edwin	Carpenter	10/- „	Retrenchment.
21 „ ...	Becker, Sebastian	„	10/- „	„
5 May ...	Garrard, George	„	10/- „	„
5 „ ...	Dillon, Michael	Labourer	7/6 „	„
5 „ ...	Saunders, John	„	7/6 „	„
5 „ ...	Wilson, Robert	„	7/6 „	„
5 „ ...	Pratt, Thomas	Signal Fitter	9/- „	„
5 „ ...	Nelson, James	„	9/6 „	„
5 „ ...	Lewis, William	Carpenter	10/- „	„
	Property and Estate Branch.			
	Nil.			
	Electrical Engineer's Branch.			
4 June ...	English, W.	Electric Light Attendant	8/6 per day	Resigned.
	Tramways—Locomotive Branch.			
20 April ...	Quinn, Timothy	Gripman	7/6 per day	To Maintenance Branch.
22 „ ...	Poole, Benjamin	Driver	11/- „	Discharged.
19 May ...	Dooley, Bronte	Carpenter	9/- „	„
16 June ...	Tinsley, James	Cleaner	7/6 „	„
16 „ ...	Rogers, Thomas	Shop boy	3/- „	Resigned.
23 „ ...	Pellitier, John F.	Fireman	9/- „	To Electrical Engineer's Branch.
27 „ ...	Olde, George	Apprentice	-/10 „	Discharged.
	Tramways—Traffic Branch.			
2 April ...	Flanders, Amos	Junior Conductor	7/- per day	To Property & Estate Branch.
22 „ ...	M'Mullen, William	„	6/- „	Discharged.
23 June ...	Snell, Richard	Flagman	7/- „	Deceased.
	Tramways—Maintenance Branch.			
9 June ...	Morgan, Daniel	Ganger	9/- per day	Discharged.
9 „ ...	Grady, Patrick	Labourer	7/6 „	„

[9*d.*]

Sydney: Charles Potter, Government Printer.—1892.

1892.

NEW SOUTH WALES.

RAILWAYS AND TRAMWAYS.

(REPORT OF RAILWAY COMMISSIONERS, QUARTER ENDING 31 MARCH, 1892.)

Presented to Parliament, pursuant to Act 51 Vic. No. 35, sec. 44.

Offices of the Railway Commissioners of New South Wales,
30th April, 1892.

To The Honorable the Minister of Railways,—

Sir,

In accordance with the provisions of the 44th clause of the Railway Act of 1888, 51 Vic. No. 35, we have the honor to submit, for the information of Parliament, our Report, for the quarter ending 31st March, 1892, upon the subjects specified, viz. :—

(I.) "The state of the traffic returns, with the approximate cost and earnings of trains per ton per train mile, in respect of goods and passengers, respectively, carried during the past quarter."

(II.) "The general condition of the lines, and accommodation for the traffic."

(III.) "The special rates (if any) which have been made, and the reasons for making such rates."

(IV.) "The appointments and removals, with the circumstances attending each case."

I.—State of the Traffic.

Railways.			Quarter ending 31st March, 1891.	Quarter ending 31st March, 1892.
Miles open			2,182	2,182
		1891. 1892.		
Revenue	Passenger	£322,725 309,903	£741,134	£755,353
	Merchandise	£418,409 445,450		
Expenditure			£431,870	£445,280
Train miles run			2,083,748	2,028,755
Earnings per train mile			7/1¼	7/5¼
Expenditure per train mile			4/1¾	4/4¾
Percentage—Expenditure to earnings			58·27	58·95
Number of passengers			4,852,759	4,933,413
*Tonnage of goods traffic			1,025,543	987,348
Tonnage of live stock traffic			27,575	34,202

* The tonnage of goods traffic formerly included the stores carried for the Service, whereas they are now excluded in both years.

[1,850 copies—Approximate Cost of Printing (labour and material) £15 9s. 3d.]

Tramways.	Quarter ending 31st March, 1891.	Quarter ending 31st March, 1892.
Miles open	42½	46
Revenue from all sources	£77,307	£76,968
Expenditure	£58,336	£56,851
Train miles run	434,274	454,207
Earnings per train mile	3/6¾	3/4¾
Expenditure per train mile	2/8¼	2/6
Percentage—Expenditure to earnings	75·46	73·86
Number of fares collected	17,859,754	18,110,165

RAILWAYS.

II.—Condition of the Lines.

A report as to the condition of the lines will be found as an Appendix, page 4.

III.—Special Rates.

A statement of the special rates, and the reasons for making the same, will be found attached, Appendix, page 4.

IV.—Staff.

These returns are given as an Appendix, pages 5 to 10.

General Remarks.

During the month of March the traffic received a severe check. For the months of January and February an increase in traffic of £27,339 was recorded; but the quarter closes with an increase of £14,219 only, as against an increase in the corresponding quarter of last year of £126,362.

The first-class passenger traffic shows a decrease of £13,965, and the second-class an increase of £3,601. 80,000 additional passengers were carried, although less money was earned.

Easter falling later this year has had some effect upon the passenger traffic.

In the Merchandise Department the coal and mineral traffic shows a decrease of £8,632; but there is a fair increase in all the other branches, particularly in live stock.

It will be observed that the earnings per train mile have increased in the period under review 4d. per mile, making a total increase of 11½d. per mile as compared with the corresponding quarter of 1890. We are also pleased to state that our policy of employing more powerful engines is largely reducing the amount of assistant engine mileage.

CONDITION OF THE LINES AND ACCOMMODATION FOR THE TRAFFIC.

The general condition of the lines has been still further improved during the quarter, and additional facilities for the traffic have also been brought into use.

In consequence of the improved condition of the Permanent-way, the heavy rainfall during the quarter had but little effect upon the lines or works.

TRAMWAYS.

The City and Suburban Lines show a falling off in the receipts of £961, whilst the other lines show small increases, the net result being a slight decrease of £339. The general depression in trade, a large amount of wet weather (a rainfall of 29·36 inches in the three months as against 13·15 inches last year), and Easter falling in April this year, accounts for this check to the traffic.

The expenditure, however, shows a decrease of £1,485.

We have the honor to be,

Sir,

Your most obedient Servants,

E. M. G. EDDY,
Chief Commissioner.

W. M. FEHON,
Commissioner.

CHARLES OLIVER,
Commissioner.

APPENDIX I.

New South Wales Government Railways.—Report upon conditions of lines for the quarter ending 31st March, 1892.

Sir, Office of Existing Engineer-in-Chief of Lines, 13 April, 1892.

I have the honor to report, for the information of the Commissioners, that the whole of the lines have been kept in good running order during the past quarter.

Relaying and Reballasting.

Steady progress has been made with this work during the past quarter.

Widening Suburban Line between Redfern and Flemington.

The section between Eveleigh and Petersham was opened for traffic on the 3rd instant, and between Petersham and Summer Hill on the 10th instant. The other works will shortly be completed.

Clyde Marshalling Yard.

The whole of the work in connection with these sidings will be finished within the next month.

Widening of Southern Line, Granville to Picton.

The bridge over the Bunberry Curran Creek, between Macquarie Fields and Ingleburn, will shortly be completed, and the double line will then be completed between Liverpool and Campbelltown. The new up line between Glenlee and Menangle was opened on the 3rd instant. Good progress is being made with the alterations of gradients at Glenlee and Spaniard's Hill.

Widening Ryde to Hornsby.

Completed and opened for traffic on the 7th March.

Improvement of Grades and Curves.

Fair progress is being made with the alterations in connection with the improvement of grades between Muswellbrook and Singleton, the cutting out of the Zig Zag at Lapstone Hill, and the alterations of gradients at Mumbil and Minore.

Buildings, &c.

A number of other works and buildings have been completed, and good progress is being made with other works of a necessary character.

WILLIAM T. FOXLEE,

The Secretary to the Railway Commissioners. Engineer-in-Chief.

APPENDIX II.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

STATEMENT, in accordance with clause No. 44 of the Railway Act, showing the Special Rates which have been made, and the reasons for making such rates, quarter ending 31st March, 1892.

Article.	Rate.	Reason for such rate.
Dogs	Sydney and Melbourne, 12s. each	To provide rate.
Workmen's tickets	Sydney and Petersham, at the Sydney to Stanmore rates, viz., 1s. 3d. weekly.	To encourage traffic.
Sheep tongues	In casks, to be charged first-class rates and conditions	To meet a new traffic
Coal	Coal from Companies bringing same by their own engines to Adamstown Station, and marshalling trucks—Rate 8d. per ton to Bullock Island, conditionally on the traffic reaching 250,000 tons per annum.	To increase trade and convenience Department.
Exhibits, Chicago Exhibition.	Half rates on exhibits for Chicago Exhibition to be charged on first journey, and if the goods are returned unsold to be sent back free of charge.	To encourage traffic.
Coal	A reduction of 1d. per ton in freight on coal to be allowed the Waratah Coal Co., provided they hand the coal over at the Junction of the Government line. A minimum quantity of 50,000 tons per annum to be guaranteed.	To increase business and convenience Department.

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APPENDIX III.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with clause No. 44 of the Railway Act, showing the Appointments of Employees from 1st January to 31st March, 1892.

Date	Name.	Position.	Rate.	Remarks.
	Secretary's Branch.			
	Nil.			
	Chief Accountant's Branch.			
28 Jan.	Miller, F. C.	Junior Clerk	£100 per annum	From Traffic Branch.
1 Mar.	Waller, F. A.	Apprentice Clerk	£ 50 "	From Supernumerary Staff, *vice* J. Butler.
	Traffic Auditor's Branch.			
	Nil.			
	Engineer-in-Chief for Existing Lines Branch.			
18 Jan.	Sherritt, Robert	Fettler	7/6 per day	From Locomotive Branch.
1 Feb.	Cole, William	"	6/6 "	*Vice* Charles Cole.
1 "	Helleman, Alfred	Labourer	6/6 "	From Supernumerary Staff, *vice* Hugh Heyburn.
23 "	Houghton, Benjamin	"	6/6 "	*Vice* David Houghton.
1 Mar.	Abigail, F. J.	Clerk	£170 per annum	From Traffic Audit Branch.
10 "	M'Dermott, John	Labourer	6/6 per day	*Vice* David Lloyd, from Supernumerary Staff.
10 "	Dunkinson, John	"	6/6 "	*Vice* William Condon, from Supernumerary Staff.
14 "	Riley, John	Fettler	7/6 "	*Vice* Richard Allison, from Supernumerary Staff.
17 "	Wilson, Allen	"	6/6 "	*Vice* William Lewis.
17 "	Kirk, Edward	Labourer	6/6 "	*Vice* John Cooper.
18 "	Trimmer, Henry	"	6/6 "	*Vice* John Chitts.
19 "	Sidwell, William	"	6/6 "	*Vice* Joseph Cahill.
21 "	Jobson, James	"	6/6 "	*Vice* John Black.
21 "	Tynan, John	"	6/6 "	*Vice* Joseph Bullman.
22 "	Gilligan, Michael	"	6/6 "	*Vice* Thomas Pollyblank.
26 "	Carver, John	"	6/6 "	*Vice* Robert McCoy.
	Chief Mechanical Engineer's Branch.			
7 Jan.	O'Donnell, Frank	Labourer	6/6 per day	*Vice* J. Jolly.
7 "	Crossley, John	Assistant Boilermaker	7/- "	From Supernumerary Staff, *vice* A. Root.
11 "	McEvoy, John	Waggon Builder	10/- "	*Vice* C. Richardson.
12 "	Tideswell, Walter	Apprentice	-/10 "	*Vice* J. Warr.
18 "	McDougall, E. J.	Turner	8/- "	*Vice* J. Parkin.
20 "	Buchanan, James	Fitter	13/- "	
15 Feb.	Milwood, Henry	Coppersmith	10/- "	*Vice* D. Dockman.
15 "	Boland, Thomas	Labourer	6/6 "	*Vice* R. Stormont.
18 "	Matthews, John	Cleaner	5/- "	From Tramway.
21 "	Johnson, William	Striker	7/- "	*Vice* G. Pate.
23 "	Webb, Edward	Apprentice	-/10 "	*Vice* Arthur Beaver.
26 "	Dodds, James	"	-/10 "	*Vice* D. McKenzie.
14 Mar.	Ambrose, Henry	Apprentice Clerk	£30 per annum.	
14 "	Edwards, James	Fitter	11/4 per day.	
	Chief Traffic Manager's Branch.			
1 Jan.	Moore, Susan	Gatekeeper	15/- per week	*Vice* Mrs. Reynolds.
1 "	Pryke, E. B.	Junior Porter	3/4 per day	From Supernumerary Staff.
1 "	Baker, Hubert	"	4/2 "	" "
1 "	Unwin, J.	Porter	6/6 "	" "
1 "	McGlew, Sidney	"	6/- "	" "
1 "	Vermuch, A.	"	6/- "	" "
1 "	Thomas, G. W. D.	Junior Porter	2/6 "	" "
1 "	Lawless, E.	"	4/2 "	" "
1 "	Humbey, A. C.	Porter	6/- "	" "
1 "	Reilly, M.	"	6/- "	" "
1 "	Woollams, F.	"	6/- "	" "
1 "	Hill, A. H.	"	6/- "	" "
1 "	Hull, Sidney	Shunter	7/- "	" "
1 "	McLean, H.	Porter	6/6 "	" "
1 "	Elliott, S.	Junior Porter	4/2 "	" "
1 "	Curran, J. J.	"	5/- "	" "
1 "	Boreland, A.	Porter	6/6 "	" "
1 "	Barrington, F. C.	"	6/- "	" "
1 "	Daly, Thomas	"	7/- "	" "
1 "	Oliver, E.	Junior Porter	4/2 "	" "
1 "	Hargraves, J.	"	5/- "	" "
1 "	Clarke, W. T.	"	3/4 "	" "
1 "	Hall, G. W.	Shunter	7/6 "	" "
1 "	Main, Alexander	"	7/6 "	" "
1 "	Meldrum, R. M.	Porter	6/6 "	" "

Date.	Name.	Position.	Rate	Remarks.
		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
1 Jan.	Humphreys, F.	Junior Porter	3/4 per day	From Supernumerary Staff.
1 "	Lynch, John	Car Washer	7/– "	" "
1 "	Walker, W. J.	"	6/– "	" "
1 "	Warne, F.	"	6/– "	" "
1 "	Bartlett, F.	Junior Car Washer	5/– "	" "
1 "	Brogan, E.	"	5/– "	" "
1 "	Asprey, Joseph	"	5/– "	" "
1 "	Cannon, R.	"	5/– "	" "
1 "	Stokes, James	"	5/– "	" "
1 "	M'Enroe, M.	"	5/– "	" "
1 "	Muir, James	"	5/– "	" "
1 "	Tracey, T.	"	5/– "	" "
1 "	Irwin, C.	"	4/2 "	" "
1 "	Montgomery, A. J.	"	5/– "	" "
1 "	O'Shea, Charles	"	4/2 "	" "
1 "	M'Laren, Charles	"	3/4 "	" "
1 "	Little, William	"	3/4 "	" "
1 "	Reid, Thomas C.	"	3/4 "	" "
1 "	Edwards, J.	"	3/4 "	" "
1 "	Escott, J.	"	3/4 "	" "
1 "	Gregory, F.	"	3/4 "	" "
1 "	Keating, W.	"	2/6 "	" "
1 "	Strange, M.	"	3/4 "	" "
1 "	Potter, Arthur	"	3/4 "	" "
1 "	Matthews, J.	"	2/6 "	" "
1 "	Cox, S.	"	2/6 "	" "
1 "	Clarke, B.	"	2/6 "	" "
1 "	Burns, A.	"	4/2 "	" "
1 "	Kennedy, D.	"	2/6 "	" "
1 "	M'Caffrey, J.	"	2/6 "	" "
1 "	Dauncey, J. A.	"	2/6 "	" "
1 "	Duggan, W.	"	2/6 "	" "
1 "	Colls, Thomas	"	2/6 "	" "
1 "	Gordon, J.	"	2/6 "	" "
1 "	Gibson, W.	"	2/6 "	" "
1 "	M'Dowel, B.	"	2/6 "	" "
1 "	Richards, J. H.	"	2/6 "	" "
1 "	Hennessey, W.	"	5/– "	" "
1 "	Barford, James	"	5/– "	" "
1 "	Wellington, A.	"	4/2 "	" "
1 "	Barry, P.	"	3/4 "	" "
1 "	Cuneen, A.	"	2/6 "	" "
1 "	Ross, E.	"	2/6 "	" "
1 "	Groves, F.	"	2/6 "	" "
1 "	Gray, A. J.	"	2/6 "	" "
1 "	Bavin, G.	"	2/6 "	" "
1 "	Otton, W.	"	2/6 "	" "
1 "	Horrocks, B.	"	2/6 "	" "
1 "	Green, W.	"	5/– "	" "
1 "	Hatton, J.	"	5/– "	" "
1 "	Bennett, G. H.	"	5/– "	" "
1 "	Yeldon, A.	"	5/– "	" "
1 "	Stead, C. H.	"	4/2 "	" "
1 "	Moore, R.	"	4/2 "	" "
1 "	Montgomery, W.	"	5/– "	" "
1 "	Fox, M.	"	4/2 "	" "
1 "	Reid, John S.	"	4/2 "	" "
1 "	Silvester, A.	"	3/4 "	" "
1 "	Salmon, J.	"	3/4 "	" "
1 "	Scott, J. H.	"	3/4 "	" "
1 "	O'Brien, C.	"	3/4 "	" "
1 "	Owen, James	"	2/6 "	" "
1 "	Costello, A.	"	3/4 "	" "
1 "	Hughes, F.	"	3/4 "	" "
1 "	Bedford, A.	"	5/– "	" "
1 "	James, W. C.	"	5/– "	" "
1 "	Turner, J. F.	"	5/– "	" "
1 "	Woodlands, E.	"	3/4 "	" "
1 "	Pimm, J.	"	2/6 "	" "
1 "	Dollen, L.	"	5/– "	" "
1 "	Bloomfield, H.	"	3/4 "	" "
1 "	Duckett, A.	"	2/6 "	" "
1 "	Houston, J.	"	3/4 "	" "
1 "	M'Munns, J. W.	"	5/– "	" "
1 "	Castlemaine, Charles	Shunter	7/– "	From Permanent Way Branch
1 "	Ward, Martin	Car Washer	7/– "	From Supernumerary Staff.
1 "	Date, William	"	6/– "	" "
1 "	Davis, William	"	6/– "	" "
1 "	M'Namarra, W. M.	"	6/– "	" "
1 "	Carleton, T.	"	6/– "	" "
1 "	Thomaswitch, C.	"	6/– "	" "
1 "	Gallaway, J. C.	Junior Car Washer	4/2 "	" "
1 "	O'Brien, Frank	Special Inquiry Officer	£300 per annum.	From Secretary's Branch.
1 "	Mercier, N.	Junior Car Washer	4/2 per day	From Supernumerary Staff.
1 "	Greathead, J.	"	4/2 "	" "
7 "	Adams, Mrs.	Gatekeeper	7/– per week.	
11 "	Cahill, E.	Probationer	2/6 "	
15 "	Clarke, R. M.	"	2/6 "	
18 "	Pryor, H.	Apprentice Clerk	£50 per annum.	From Supernumerary Staff *vice* F. C. Lupton.

Date.	Name.	Position.	Rate.	Remarks.
	CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*			
13 Jan. ...	Evans, W.	Gatekeeper	2/6 per day	*Vice* W. Furby.
15 ,, ...	M'Ginley, W.	Junior Porter	2/6 ,,	*Vice* H. Parker.
21 ,, ...	Gilmore, W.	Probationer	2/6 per week	*Vice* C. Lawrence.
22 ,, ...	Taylor, Mrs.	Gatekeeper	10/- ,,	*Vice* Mrs. Maher.
1 Feb. ...	Edwards, J. H.	Apprentice Clerk	£30 per annum	From Supernumerary Staff.
1 ,, ...	O'Connor, John	Junior Porter	2/6 per day	From Supernumerary Staff, *vice* E. Brickley.
1 ,, ...	Smee, F. W.	Porter	7/- ,,	From Supernumerary Staff, *vice* W. G. Easterling.
1 ,, ...	M'Ardle, P.	Junior Porter	2/6 ,,	From Supernumerary Staff, *vice* E. Stephenson.
1 ,, ...	Beaney, James	,,	3/4 ,,	From Supernumerary Staff.
1 ,, ...	Forward, William	,,	2/6 ,,	,, ,,
1 ,, ...	Colls, F. J.	Porter	6/6 ,,	,, ,,
1 ,, ...	Shoebridge, A.	,,	7/- ,,	,, ,,
1 ,, ...	Bowen, Walter	,,	7/- ,,	From Supernumerary Staff, *vice* J. Webster.
1 ,, ...	Morgan, J. E.	Junior Clerk	£110 per annum	From Supernumerary Staff, *vice* F. C. Miller.
4 ,, ...	Maguire, William	Gatekeeper	15/- per week	*Vice* M. Hall.
4 ,, ...	Bray, Margaret	,,	Free house	*Vice* Mrs. Fewkes.
9 ,, ...	Ali, Mark	Probationer	2/6 per week.	
11 ,, ...	Harris, Amelia	Gatekeeper	7/6 ,,	*Vice* E. Grigg.
12 ,, ...	M'Mahon, M.	,,	5/- ,,	*Vice* M. Whybourne.
18 ,, ...	Touse, F. C.	,,	7/- ,,	*Vice* L. Rees.
19 ,, ...	O'Brien, W.	,,	15/- ,,	*Vice* N. Sweeney.
20 ,, ...	Sullivan, Florence	,,	Free house	*Vice* M. Meaney.
21 ,, ...	Clifford, Mary	,,	7/- per week	*Vice* M. Stapleton.
4 Mar. ...	O'Brien, Michael	,,	12/6 ,,	*Vice* M. O'Brien.
4 ,, ...	Brown, L.	,,	7/- ,,	*Vice* S. Roberts.
4 ,, ...	Northward, Emily	,,	7/- ,,	*Vice* R. White.
9 ,, ...	Lee, L.	,,	7/- ,,	*Vice* E. Heyburn.
11 ,, ...	Dean, James	Watchman	7/- per day	*Vice* W. Scott.
18 ,, ...	Burns, James	Gatekeeper	15/- per week.	
24 ...	Sweeney, M.	,,	15/- ,,	*Vice* W. O'Brien.
25 ...	Stapleton, M.	,,	7/- ,,	*Vice* M. Robertson.
	COMPTROLLER OF STORES BRANCH.			
	Nil.			
	SIGNAL AND INTERLOCKING BRANCH.			
	Nil.			
	PROPERTY AND ESTATE BRANCH.			
	Nil.			
	ELECTRICAL ENGINEER'S BRANCH.			
	Nil.			
	TRAMWAYS—LOCOMOTIVE BRANCH.			
1 Jan. ...	Vintzentz, Joseph	Apprentice	1/3 per day	From Supernumerary Staff, *vice* W. Geaney.
14 ,, ...	Earls, John	Cleaner	5/6 ,,	*Vice* R. Temperley.
11 Feb. ...	Walker, William J.	Fitter's Apprentice	-/10 ,,	*Vice* F. McNab.
12 ,, ...	Freckleton, Bertram	Shop boy	1/9 ,,	*Vice* W. Stewart.
16 ,, ...	Quinn, Timothy	Gripman	7/6 ,,	*Vice* H. Fraser.
18 ,, ...	Johnston, John	Lump Trimmer	3/- ,,	*Vice* W. Attenborough.
19 ,, ...	Thomas, George E.	,,	4/6 ,,	From Supernumerary Staff, *vice* F. Turner.
20 ,, ...	Harkness, Charles	Oiler	3/- ,,	*Vice* J. Weir.
10 Mar. ...	Fraser, Hugh	Labourer	6/6 ,,	*Vice* Montgomery.
18 ,, ...	Campbell, James	Cleaner	6/- ,,	From Supernumerary Staff, *vice* A. Stewart.
	TRAMWAYS—TRAFFIC BRANCH.			
8 Jan. ...	Andrew, Adam	Junior conductor	8/- per day	From Supernumerary Staff.
8 ,, ...	Audsley, T. R.	,,	7/- ,,	From Supernumerary Staff, *vice* T. Lane.
8 ,, ...	Antonie, Joseph	,,	7/- ,,	From Supernumerary Staff.
8 ,, ...	Brownlow, Edward	Junior Conductor	8/- ,,	From Supernumerary Staff, *vice* P. Cantwell.
8 ,, ...	Bradley, Robert	Car Cleaner	7/- ,,	From Supernumerary Staff.
8 ,, ...	Brady, John	Junior Conductor	5/- ,,	,, ,,
8 ,, ...	Beverley, Henry	,,	5/- ,,	,, ,,
8 ,, ...	Baggs, Albert	,,	5/- ,,	,, ,,
8 ,, ...	Cowdery, Gilbert	,,	5/- ,,	,, ,,
8 ,, ...	Dorritty, John	,,	8/- ,,	From Supernumerary Staff, *vice* T. Devenny.
8 ,, ...	Dabourn, George	,,	6/- ,,	From Supernumerary Staff.
8 ,, ...	Davidson, James	,,	6/- ,,	From Supernumerary Staff, *vice* C. Bineman.
8 ,, ...	Frappell, Arthur	,,	5/- ,,	From Supernumerary Staff, *vice* J. Lemon.
8 ,, ...	Flanders, Amos	,,	7/- ,,	From Supernumerary Staff, *vice* G. Morgan.

Date.	Name.	Position.	Rate.	Remarks.
		TRAMWAYS—TRAFFIC BRANCH—*continued.*		
8 Jan.	Golden, Rudolph	Junior Conductor	6/- per day	From Supernumerary Staff.
8 ,,	Garnett, John	,,	7/- ,,	,, ,,
8 ,,	Herman, Edward	,,	5/- ,,	,, ,,
8 ,,	Harper, Charles H.	,,	5/- ,,	,, ,,
8 ,,	Horsefield, Joseph	,,	7/- ,,	,, ,,
8 ,,	Harland, John H.	,,	7/- ,,	From Supernumerary Staff, *vice* F. A. Cox.
8 ,,	Lawler, Thomas	,,	7/- ,,	From Supernumerary Staff, *vice* W. Greno.
8 ,,	Hibbert, Thomas H.	Car Cleaner	6/6 ,,	From Supernumerary Staff, *vice* M. Fahy.
8 ,,	Healey, Sydney	Junior Conductor	5/- ,,	From Supernumerary Staff.
8 ,,	Ironside, F. J.	,,	6/- ,,	,, ,,
8 ,,	Johnson, J. H.	,,	8/- ,,	,, ,,
8 ,,	Keesham, Henry R.	,,	6/- ,,	,, ,,
8 ,,	Knox, William	,,	7/- ,,	From Supernumerary Staff, *vice* J. Cook.
8 ,,	Lester, Hiram	,,	6/- ,,	From Supernumerary Staff.
8 ,,	Larmour, Andrew	,,	5/- ,,	,, ,,
8 ,,	Maloney, James	,,	8/- ,,	,, ,,
8 ,,	Morris, W. J.	,,	8/- ,,	,, ,,
8 ,,	Millington, H. E.	,,	6/- ,,	,, ,,
8 ,,	Munro, A. F.	,,	6/- ,,	,, ,,
8 ,,	M'Mullen, William	,,	6/- ,,	,, ,,
8 ,,	Neely, J. A.	,,	6/- ,,	,, ,,
8 ,,	Winters, Robert J.	,,	6/- ,,	,, ,,
8 ,,	Cummins, M. J.	Car Cleaner	6/6 ,,	From Supernumerary Staff, *vice* J. Riley.
8 ,,	Lumley, H. F.	,,	7/- ,,	From Supernumerary Staff, *vice* W. Watson.
8 ,,	Mullally, William	,,	7/- ,,	From Supernumerary Staff, *vice* S. Hassell.
8 ,,	Shoebridge, Arthur	,,	7/- ,,	From Supernumerary Staff, *vice* T. Hinton.
8 ,,	Moorehead, A.	,,	7/- ,,	From Supernumerary Staff.
8 ,,	Mullens, James	,,	7/- ,,	,, ,,
8 ,,	M'Adam, John	,,	8/6 ,,	,, ,,
8 ,,	Smith, W. G.	,,	7/- ,,	,, ,,
8 ,,	M'Donnell, William	Shunter	8/6 ,,	From Supernumerary Staff, *vice* E. Brooks.
8 ,,	Bonner, James	Car Cleaner	7/- ,,	From Supernumerary Staff, *vice* T. Hilliard.
8 ,,	Cowdroy, A. A.	,,	7/- ,,	From Supernumerary Staff, *vice* D. Purcell.
8 ,,	Perry, Benjamin	Messenger	20/- per week	From Supernumerary Staff.
		TRAMWAYS—MAINTENANCE BRANCH.		
4 Mar.	Kilt, John	Labourer	7/- per day	From Supernumerary Staff.

APPENDIX IV.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with clause No. 44 of the Railway Act, showing the Removals of Employees, from the 1st of January to the 31st of March, 1892.

Date	Name.	Position.	Rate.	Remarks.
		SECRETARY'S BRANCH.		
1892. 1 Jan	O'Brien, Frank	Inspector	£300 per annum.	To Traffic Branch.
		CHIEF ACCOUNTANT'S BRANCH.		
30 Jan	Wickham, F. J.	Accountant	£700 per annum.	Deceased.
		TRAFFIC AUDITOR'S BRANCH.		
29 Feb.	Abigail, F. J.	Clerk	£170 per annum.	To Permanent Way Branch.
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
1 Jan	Castlemain, Chas.	Fettler	7/6 per day	To Traffic Branch.
5 ,,	Knudson, Chris.	Painter	6/- ,,	Discharged.
13 ,,	Anderson, Frederick	Carpenter	8/- ,,	Deceased.
15 ,,	Skidmore, R.	Boy	5/- ,,	Resigned.
22 ,,	Cole, Charles	Fettler	7/6 ,,	,,
24 ,,	Heyburn, Hugh	,,	7/6 ,,	Deceased.
25 ,,	Chitts, John	,,	7/6 ,,	Discharged.
28 ,,	Cahill, Joseph	Labourer	7/6 ,,	Resigned.
29 ,,	Guiry, Patrick	,,	7/- ,,	Deceased.
13 Feb.	Black, John	Fettler	7/6 ,,	Resigned.
13 ,,	Allinson, Richard	,,	7/6 ,,	,,
20 ,,	Black, William	Boy	2/- ,,	,,
23 ,,	Lewis, William	Labourer	7/6 ,,	Discharged.
23 ,,	Bond, William	Blacksmith	11/8 ,,	Resigned.
24 ,,	Cooper, John	Fettler	7/6 ,,	,,

Date.	Name.	Position.	Rate.	Remarks.
	Engineer-in-Chief for Existing Lines Branch—*continued.*			
24 Feb.	Brown, William	Painter	9/– per day	Deceased.
29 „	Canavan, William	Carpenter	11/– „	Retired.
29 „	Wallwork, Daniel	Machinist	9/8 „	„
29 „	Bernconi, Phillip	Carpenter	10/6 „	„
29 „	Smith, Henry	„	10/6 „	Resigned.
29 „	Hicks, Jacob	„	8/6 „	„
29 „	Rute, Giles	Labourer	7/6 „	„
29 „	Hickey, John	Fettler	7/6 „	„
29 „	Bullman, Joseph	„	7/6 „	„
29 „	King, George	Carpenter	10/4 „	„
29 „	Bennett, William	„	10/– „	„
29 „	Dallar, James	Ganger	8/6 „	„
29 „	Willison, George	„	9/– „	„
29 „	Vears, William	Fettler	7/6 „	„
29 „	Leatham, Michael	„	7/6 „	„
2 Mar.	O'Brien, Edward	Plumber	10/8 „	To Locomotive Branch.
3 „	Houghton, David	Ganger	9/– „	Deceased.
3 „	Mottram, Frank	Labourer	7/– „	Resigned.
3 „	Pollyblank, Thomas	„	7/6 „	„
5 „	Carey, Charles	Fettler	7/6 „	Deceased.
7 „	M'Coy, Robert	Labourer	7/6 „	Discharged.
10 „	Lloyd, David	„	7/6 „	Left.
10 „	Condon, William	„	7/6 „	„
11 „	Boola, Frank	Fettler	7/6 „	Discharged.
12 „	Greenwood, George	Ganger	9/– „	Deceased.
18 „	Stevens, Henry	Fettler	7/6 „	Resigned.
21 „	Sullivan, George	„	7/6 „	„
26 „	Curry, Hugh	Labourer	7/6 „	Deceased.
26 „	Kelly, Thomas	Fettler	7/6 „	Discharged.
31 „	Coleman, John	Sub-Inspector	£215 per annum	Retired.
	Chief Mechanical Engineer's Branch.			
1 Jan.	Davies, Evan	Inspector	£300 per annum	Retired.
14 „	Molan, John	Cleaner	7/– per day	Discharged.
15 „	Pate, George	Springmaker	11/8 „	„
16 „	Deckman, David	Coppersmith	11/– „	„
16 „	Sherritt, Robert	Fuelman	7/– „	To Permanent-way Branch.
24 „	Johnston, Robert	Moulder	11/2 „	Deceased.
30 „	Ison, William	Fireman	10/– „	Resigned.
30 „	McKenzie, David	Apprentice	3/6 „	Discharged.
30 „	Duncan, Herbert	Boilermaker	9/4 „	„
31 „	Newton, George	Inspector	£410 per annum	Retired.
31 „	Mulholland, Phillip	Shed Inspector	£290 „	„
4 Feb.	Burridge, Charles	Cleaner	7/– per day	Resigned.
11 „	Gray, Alfred	Boilermaker	9/4 „	Discharged.
11 „	Barton, John	Fireman	8/– „	Resigned.
13 „	Chisholm, Walter	„	9/– „	Discharged.
19 „	Stormont, Robert	C. and W. Examiner	10/8 „	„
21 „	Jenkins, Richard	„	8/– „	Deceased.
16 „	Harrison, Hugh	Assistant boilermaker	7/6 „	„
26 „	Rowatt, John	Driver	14/– „	Resigned.
17 „	Meymott, H. A.	Cadet	£100 per annum	Retrenchment.
10 Mar.	McCann, Mary	Caretaker	8/– per week	Discharged.
1 „	Higgs, Percy	Draftsman	£180 per annum	Retrenchment.
1 „	Thomson, James W.	„	£175 „	„
1 „	Plunkett, W. J.	„	£175 „	„
1 „	Chambers, James	Iron and steel tester	£350 „	„
23 „	Christison, Robert	Cleaner	7/– per day	Discharged.
23 „	Barry, George	Watchman	7/6 „	„
24 „	Whitcombe, William	Driver	14/– „	Resigned.
24 „	Auton, Frederick	Cleaner	5/– „	Retrenchment.
24 „	Tisdale, Henry	„	5/– „	„
24 „	Sims, Richard	„	5/– „	„
28 „	Matthews, George	Driver	14/– „	Discharged.
	Chief Traffic Manager's Branch.			
1 Jan.	Alexander, A.	Porter	6/– per day	Discharged.
1 „	Reynolds, Mrs.	Gatekeeper	15/– per week	Resigned.
1 „	Riddle, James	Night Officer	£120 per annum	Discharged.
1 „	Clarke, Arthur	Officer-in-charge	£130 „	„
1 „	Douglas, C.	Watchman	45/– per week	Retired.
1 „	McFee, J.	Porter	7/– per day	Resigned.
1 „	Collett, Robert	Signal Lighter	7/– per week	Discharged.
4 „	Jacobs, A.	Guard	10/– per day	„
7 „	Tibbs, Robert	Officer-in-charge	£165 per annum	„
9 „	Tuak, W. G.	Junior Clerk	£110 „	„
12 „	Furby, William	Gatekeeper	2/6 per day	Resigned.
15 „	Parker, Henry	Junior Porter	2/6 „	Discharged.
15 „	Walsh, Hugh	Shunter	7/6 „	Deceased.
15 „	Brown, Henry	Gatekeeper	35/– per week	„
16 „	Gower, D.	Porter	6/6 per day	Discharged.
17 „	Doughan, Mrs.	Gatekeeper	10/– per week	„
21 „	Miller, F. C.	Junior Clerk	£100 per annum	To Chief Account Branch.
25 „	Kerrigan, Mary	Gatekeeper	15/– per week	Gates closed.
30 „	Jeavis, Frank	„	15/– „	Discharged.
31 „	Otton, William	Junior Porter	2/6 per day	„
1 Feb.	Hogue, H. F.	Apprentice Clerk	£40 per annum	Resigned.
3 „	Walker, J. H.	Station-master	£180 „	Retired.
3 „	Pocock, E.	Clerk	£235 „	Dismissed.

Date.	Name.	Position.	Rate.	Remarks.
	Chief Traffic Manager's Branch—*continued.*			
4 Feb. ...	Hall, Mary	Gatekeeper	15/- per week	Resigned.
4 ,, ...	Haggarty, William	Shunter	7/6 per day	Discharged.
4 ,, ...	Fewkes, Mrs.	Gatekeeper	Free house	Resigned.
5 ,, ...	Green, Frederick	Guard	10/6 per day	,,
5 ,, ...	Gibbons, G.	Station-master	£165 per annum	Deceased.
5 ,, ...	Payne, Samuel	Porter	7/- per day	Retired.
8 ,, ...	Quinn, John	,,	7/- ,,	Resigned.
10 ,, ...	Grigg, Ethel	Gatekeeper	7/6 per week	,,
11 ,, ...	Morris, George	Assistant Guard	8/- per day	Discharged.
11 ,, ...	Whybourne, M.	Gatekeeper	5/- per week	,,
11 ,, ...	M'Cardell, E.	Operator	5/- per day	,,
11 ,, ...	Nicholas, D.	Officer-in-charge	£130 per annum	,,
15 ,, ...	Lawrence, C.	Clerk	£215 ,,	Retired.
15 ,, ...	Beron, G.	Junior Porter	2/6 per day	Resigned.
17 ,, ...	Rees, L.	Gatekeeper	7/- per week	,,
18 ,, ...	Brand, John	Watchman	7/- per day	Retired.
19 ,, ...	Meaney, M.	Gatekeeper	Free house	Resigned.
20 ,, ...	Winfield, W.	Junior Clerk	£110 per annum	Discharged.
20 ,, ...	Dwyer, M.	Gatekeeper	7/- per week	Retired.
20 ,, ...	Robertson, M.	,,	7/- ,,	Resigned.
21 ,, ...	Maher, Mrs.	,,	7/6 ,,	,,
21 ,, ...	Stapleton, M.	,,	7/- ,,	Discharged.
22 ,, ...	Wright, George	Porter	7/- per day	Retired.
25 ,, ...	Sweeney, N.	Gatekeeper	15/- per week	Resigned.
25 ,, ...	Thompson, W.	,,	45/- ,,	Discharged.
29 ,, ...	Roberts, S.	,,	7/- ,,	Resigned.
29 ,, ...	Heyburn, E.	,,	7/- ,,	,,
1 Mar. ...	Escott, J.	Junior Porter	4/2 per day	Discharged.
1 ,, ...	Humphries, J. C.	Officer-in-charge	£150 per annum	Retired.
3 ,, ...	Smith, T.	Porter	7/- per day	Discharged.
3 ,, ...	O'Brien, Mary	Gatekeeper	12/6 per week	Resigned.
4 ,, ...	White, R.	,,	7/- ,,	,,
9 ,, ...	Scott, W.	Watchman	42/- ,,	Discharged.
12 ,, ...	Callaghan, P.	Gatekeeper	7/6 per day	Retired.
13 ,, ...	Morris, W.	Porter	7/- ,,	Discharged.
15 ,, ...	Arnfield, E.	Gatekeeper	30/- per week	,,
16 ,, ...	Muncaster, A.	Signalman	11/- per day	,,
15 ,, ...	Heaton, John	Guard	12/- ,,	Deceased.
15 ,, ...	Strange, M.	Junior Porter	3/4 ,,	Discharged.
18 ,, ...	Coffey, John	Shunter	7/6 ,,	,,
18 ,, ...	Rowe, W.	Block Lad	15/- per week	,,
19 ,, ...	Murphy, Daniel	Porter	7/- per day	,,
19 ,, ...	Brown, A.	,,	7/- ,,	,,
19 ,, ...	O'Connor, J.	,,	7/- ,,	,,
19 ,, ...	Burleigh, S.	,,	7/- ,,	,,
19 ,, ...	Ryan, J. J.	,,	7/- ,,	,,
21 ,, ...	Meldrum, H.	Gatekeeper	30/- per week	,,
21 ,, ...	Rowe, William	Signalman	11/- per day	,,
23 ,, ...	Bates, George	Points Cleaner	7/6 ,,	,,
24 ,, ...	Price, Kate	Gatekeeper	7/- per week	,,
24 ,, ...	O'Brien, William	,,	15/- ,,	Deceased.
27 ,, ...	Robinson, W. C.	Clerk	£130 per annum	Resigned.
31 ,, ...	Bennett, Stanley	Gatekeeper	49/- per week	Retired.
31 ,, ...	Bush, Percy	,,	15/- ,,	Resigned.
	Comptroller of Stores Branch.			
1 Mar. ...	Jacobs, Jesse	Foreman	£200 per annum	Retired.
	Signal and Interlocking Branch.			
9 Jan. ...	Smith, John R.	Labourer	7/6 per day	Resigned.
22 ,, ...	Hayes, Reuben	Striker	7/6 ,,	Discharged.
	Property and Estate Branch. Nil.			
	Electrical Engineer's Branch. Nil.			
	Tramways—Locomotive Branch.			
1 Jan. ...	Temperly, Richard	Cleaner	5/6 per day	Resigned.
2 ,, ...	M'Nab, Frank	Fitter	9/4 ,,	,,
18 ,, ...	Callender, Alexander	Apprentice	5/- ,,	,,
31 ,, ...	Attenborough, William	Lamp Cleaner	4/- ,,	,,
11 Feb. ...	Weir, James	Oiler	5/- ,,	Discharged.
11 ,, ...	Stewart, William	Shop Boy	2/6 ,,	Resigned.
13 ,, ...	Fraser, Hugh	Gripman	8/- ,,	Discharged.
13 ,, ...	Heydon, George	Apprentice	5/- ,,	,,
18 ,, ...	Matthews, John	Fuelman	6/6 ,,	To Locomotive Branch Railways.
23 ,, ...	Patterson, Arthur	Apprentice	5/- ,,	Discharged.
9 Mar. ...	White, William	Driver	13/- ,,	Deceased.
9 ,, ...	Montgomery, James	Car Lifter	7/6 ,,	Resigned.
17 ,, ...	M'Iver, Arthur	Shop Boy	2/3 ,,	Discharged.
25 ,, ...	Gardiner, Arthur	Cleaner	7/6 ,,	,,
	Tramways—Traffic Branch. Nil.			
	Tramways—Maintenance Branch.			
1 Feb. ...	Bolt, William	Labourer	7/9 per day	Discharged.
16 ,, ...	Quinn, Timothy	,,	7/3 ,,	To Locomotive Branch, Tramways.

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[9d.]

1892–3.

NEW SOUTH WALES.

RAILWAYS AND TRAMWAYS.

(REPORT OF RAILWAY COMMISSIONERS FOR THE QUARTER ENDING 31ST MARCH, 1893.)

Presented to Parliament, pursuant to Act 51 Vic. No. 35, sec. 44.

Offices of the Railway Commissioners of New South Wales,
Sydney, 17 April, 1893.

To The Honorable the Minister of Railways,—

Sir,

In accordance with the provisions of the 44th clause of the Railway Act of 1888, 51 Vic. No. 35, we have the honor to submit, for the information of Parliament, our Report, for the quarter ending 31st March, 1893, upon the subjects specified, viz. :—

(I.) "The state of the traffic returns, with the approximate cost and earnings of trains per ton per train mile, in respect of goods and passengers, respectively, carried during the past quarter."

(II.) "The general condition of the lines, and accommodation for the traffic."

(III.) "The special rates (if any) which have been made, and the reasons for making such rates."

(IV.) "The appointments and removals, with the circumstances attending each case."

I.—State of the Traffic—Railways.

Railways.			Quarter ending 31st March, 1892.	Quarter ending 31st March, 1893.
Miles open ...			2,182	2,314
Revenue ...	1891.	1893.		
	Passenger ... £309,903	£297,930	£755,353	£726,223
	Merchandise ... £445,450	£428,293		
Expenditure ...			£445,280	£383,434
Train miles run ...			2,028,755	1,919,926
Earnings per train mile ...			7/5¼	7/6¾
Expenditure per train mile ...			4/4¾	4/-
Percentage—Expenditure to earnings ...			58·95	52·80
Number of passengers ...			4,933,413	4,990,337
Tonnage of goods traffic ...			987,348	933,859
Tonnage of live stock traffic ...			34,202	40,390

Tramways.	Quarter ending 31st March, 1892.	Quarter ending 31st March, 1893.
Miles open	46	49
Revenue	£76,968	£75,193
Expenditure	£56,851	£51,804
Train miles run	454,207	472,620
Earnings per train mile	3/4¾	3/2¼
Expenditure per train mile	2/6	2/2¼
Percentage—Expenditure to earnings	73·86	68·89
Number of fares collected	18,110,165	17,744,668

II.—Condition of the Lines.

A report as to the condition of the lines will be found as an Appendix, page 6.

III.—Special Rates.

A statement of the special rates, and the reasons for making the same, will be found attached, page 6.

IV.—Staff.

These returns are given as an Appendix, pages 7 to 10.

General Remarks.

The traffic for the past quarter shows a decrease of £29,130. About £8,000 of this decrease arises from the fact that 1892 being Leap-year, there was one working day less in the past quarter than was the case a year ago.

The serious floods in the Hunter River district, which caused the Northern line to be closed for eight days, also considerably affected the traffic. These two causes, and the general depression in the trade of the colonies, brought about the total decrease.

The working expenses have been materially reduced, a saving of £61,846 having been effected. A reduction of 109,000 miles in the train mileage run was also made, although the passenger train service was not curtailed. The accumulated decrease in mileage run from 1st July, 1892, to 31st March, 1893, is—

	Miles.
Train mileage	632,980
Engine mileage (Includes train mileage, assisting trains with a second engine, shunting, &c., &c.)	1,963,316

The

The improvements effected in the lines since we assumed office, and particularly the introduction of the more powerful class of locomotives, have assisted us materially in making the great saving in mileage and working expenses generally.

The net earnings, after paying working expenses, for each train mile run during the quarter, stand at 3s. 6¾d., as against 3s. 0½d. for the corresponding quarter of last year. The percentage of working expenses to earnings for the quarter stands at the low figure of 52·80 per cent. of the gross earnings.

As the efficient and economical working of the Railways is a matter of great moment to the country at the present time of depression, it will be of general interest to look at the main points in connexion with the position of the property at the present time.

The true test to apply to railway working when considering its success or failure (after seeing that the property has been well maintained and the public well served), is to ascertain the earnings of the trains run, and particularly the net earnings after payment of working expenses, and also the percentage the working expenses bear to the gross earnings of the railway. The following table will show the position of the New South Wales Railways in this respect :—

Train Earnings per mile run.

Year ending	Gross earnings. s.	d.	Net earnings after paying working expenses. s.	d.
December, 1885...	6	6	2	1¾
„ 1886...	6	8	2	0¾
„ 1887...	6	9¾	2	3¾
June, 1888...	6	10¼	2	3½
„ 1889...	6	7¾	2	4¼
„ 1890...	6	6¾	2	5
„ 1891...	7	1	2	8¾
„ 1892...	7	5¼	2	10¼
To Mar. 31, 1893...	7	11¾	3	4½

Percentage of Working Expenses to Gross Earnings.

Year ending	
December, 1885	67·06
„ 1886	69·12
„ 1887	66·01
June, 1888	66·69
„ 1889	64·39
„ 1890	63·26
„ 1891	61·57
„ 1892	61·60
Expected result, 30 June, 1893	59·00

From the year ending June, 1888 (the year preceding the Railway Commissioners taking office), to the 30th June, 1892, the working expenses have been reduced by 5 per cent.—equivalent to about £155,000 per annum—and it is expected that the year ending June, 1893, will show a further reduction of expenses of about 3 per cent., or a total of 8 per cent., at the same time the value of the rolling-stock and permanent-way has been considerably increased out of working expenses.

4

STAFF.

The retrenchment of staff and the effecting of economy in various ways which has been going on continuously for a long time past has been continued during the quarter, and very considerable savings have been effected.

The following comparative statement of the salaried staff in the chief offices, in October, 1888, when the Commissioners took office, and at the present time, will show what a considerable sum of money is being saved in the administration :—

Office.	October, 1888.		April, 1893.	
	No. employed.	Amount of salary per annum.	No. employed.	Amount of salary per annum.
		£		£
Commissioners' Office (Secretary's)	50	10,614	27	5,485
Chief Accountant's	43	11,520	45	10,915
Traffic Auditor's	67	11,644	71	10,673
Chief Traffic Manager's	37	8,411	20	4,850
Chief Mechanical Engineer's	32	7,100	27	5,808
Comptroller of Stores'	41	7,646	29	4,670
Engineer for Existing Lines, and Divisional Engineer for Metropolitan District	72	16,337	45	11,320
TOTALS	347	£73,272	264	£53,721
DECREASE			83 persons.	£19,551 per annum.

The following figures show the total number of persons employed on the Railways and Tramways, October, 1888, and March, 1893 :—

	October, 1888.	March, 1893.
Railways and Tramways (Number employed) ...	11,394	11,152
	30 June, 1888.	31 December, 1892.
Gross traffic for preceding 12 months ...	£2,531,643	£3,332,057

CONDITION OF THE LINES AND ACCOMMODATION FOR THE TRAFFIC.

The work of re-laying and re-sleepering has been continued during the quarter. Very serious damage was done to the Northern line at various points between Newcastle and Muswellbrook—a distance of 80 miles—by the serious floods at the beginning of the month of March. The Northern line was closed for eight days, but by making temporary provision for passing the trains around and over the most serious obstructions through communication was restored immediately it was possible for the trains to pass through the flood waters between Maitland and Farley. All the officers and men engaged during the flood period worked with admirable enthusiasm, and looking at the difficulties that had to be surmounted, communication was restored in a remarkably short space of time.

TRAMWAYS.

TRAMWAYS.

The tramway traffic shows a decrease of £1,775, but the working expenses have been reduced by a sum of £5,048.

The relaying and wood-blocking of the lines in Oxford-street has been completed, and other necessary work of a like nature has been authorised.

We have the honor to be,
Sir,
Your most obedient Servants,

E. M. G. EDDY,
Chief Commissioner.

W. M. FEHON,
Commissioner.

CHARLES OLIVER,
Commissioner.

APPENDIX I.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

REPORT on Condition of Lines for quarter ending 31st March, 1893.

Sir, Office of Engineer-in-Chief for Existing Lines, 14 April, 1893.

I have to report, for the information of the Commissioners, that during the past quarter the whole of the Permanent Way and Works have been well maintained. Very heavy rains fell during the early part of last month, and several of the lines were damaged, but the Northern line, between Newcastle and Muswellbrook, where the rainfall was phenomenal, suffered most severely. At Newcastle 11 inches of rain fell in 24 hours, between the 7th and 9th ultimo, and long sections of the Northern line were covered with flood-waters; between Waratah and Thornton, to a depth of 8 feet; at West Maitland, to a depth of 12 feet; between Whittingham and Singleton, to a depth of 2 feet; and at Glennie's Creek, to a depth of 4 feet. The most serious damage occurred between East and West Maitland, where the embankment was scoured away for a length of about 15 chains; at the bridge over Glennie's Creek, where several piles were carried away, and at mileage 61 miles 20 chains, where a portion of the embankment was washed out for a length of about 10 chains, and one pier of the bridge was also carried away, rendering a temporary diversion of the line necessary to enable the permanent repairs to be effected. At Powman's Creek the embankment was also damaged for a considerable length, and slips and washaways of a less serious nature occurred at many other points between Newcastle and Muswellbrook, and the repairs have involved a considerable outlay. Although everything was done to restore communication at the earliest possible moment the traffic was blocked for eight days, but the lines are now in fair order and the trains are running as usual, excepting in the case of the bridge and embankment at 61 miles 20 chains, where the repairs are still proceeding. Damage of a less serious nature also occurred on the Illawarra, North Coast, and Mudgee lines.

Relaying and Reballasting.

The relaying on the main Western line has progressed satisfactorily. On the other divisions the work of relaying and reballasting has made good progress.

I have, &c.,
WILLIAM T. FOXLEE,
Engineer-in-Chief.

The Secretary to the Railway Commissioners.

APPENDIX II.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

STATEMENT, in accordance with clause No. 44 of the Railway Act, showing the Special Rates which have been made, and the reasons for making such rates, quarter ending 31st March, 1893.

Article.	Rate.	Reason for such rate.
Tallow and sheep-skins.....	Tallow in 6-ton lots, and sheep-skins in 4-ton lots, from Hay to Darling Harbour, 50s. per ton. If the traffic is delivered by the Commissioners to the consignee's stores, or to the ship's side, 2s. per ton to be charged for the service.	To encourage traffic.
Catering material	Catering material sent from Sydney to country stations to be charged at half-fares on the return journey if returned within a week of being despatched from Sydney.	Do do
Ingot copper	Ingot copper, Jennings to Newcastle, to be charged at the rate of £2 per truck in lots of 6 tons per 4-wheeled truck.	To secure traffic.
Wheat	Wheat from stations on the Culcairn-Corowa line (Corowa excepted) to Albury, and reconsigned in the shape of flour, bran, or pollard, to Darling Harbour, or any Station short of it on the Up journey, the usual rebate—that is, the difference between the two local rates and the through Up-journey rate from these stations via Albury to Darling Harbour, or other stations in the up direction, plus 1s. 9d. per ton—will be allowed.	Do do
Produce	A charge of 6s. per 4-wheeled truck to be made for produce hauled from Darling Harbour to Redfern for sale which has in the first instance been incorrectly consigned to Darling Harbour.	To provide a rate.
Bags	Empty second-hand bags, whether returns or not, are to be charged at special rates "A" for actual weight carried, subject to smalls minimum, except in cases where very small consignments are sent, in which case they are to be carried at empty return rates.	Do do
Shells	Shells for poultry gravel are to be charged at B rates.....	Do do
Coal	Coal from the East Greta Company to Bullock Island to be charged at 1s. 3d. per ton if the traffic amounts to 50,000 tons per annum.	
Goods, Yass Tramway	1st, 2nd, and 3rd class goods carried on the Yass Tramway are to be charged 2s. 6d. per ton. Minimum for smalls, 9d.	To secure traffic.
Cream of Tartar	Cream of tartar to be charged at B rates and conditions, on up journey.	To equalise rates.
Calcium chloride.....	Calcium of chloride to be charged at B rates and conditions	do
Trees	Trees from Gosford to Cobar and Bourke to be charged at the rate of £30 per cattle-waggon fully loaded. Smaller quantities to be charged at actual weight.	To encourage traffic.
Cream	Cream carried by goods trains to be charged at B rates, and by passenger trains at half parcel rates.	To equalise rates.

APPENDIX

APPENDIX III.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with Clause No. 44 of the Railway Act, showing the Appointments of Employees from 1st of January to the 31st of March, 1893 :—

Date.	Name.	Position.	Rate.	Remarks.
1893.		SECRETARY'S BRANCH.		
1 Feb.	Fullwood, Walter S.	Clerk	£180 per annum	From Locomotive Branch.
10 Mar.	Ambler, Percy V.	Messenger to Railway Solicitor.	5/- per day	From Traffic Branch.
		CHIEF ACCOUNTANT'S BRANCH.		
17 Jan.	Harrigan, Thomas J.	Apprentice Clerk	£30 per annum	Vice W. Bartholomew.
		TRAFFIC AUDITOR'S BRANCH.		
Jan.	Bolger Simson F.	Clerk	£150 per annum	Exchanged with J. Fisher, from Traffic Audit Branch.
1 ,,	Patterson, Thomas	Inspector	£290 ,,	Transferred from Supernumerary Staff.—Positions retrenched on Supernumerary Staff.
1 Mar.	McCauley, John	Apprentice Clerk	£30 ,,	
1 ,,	Furness, Arthur	,,	£30 ,,	
1 ,,	Carter, Frederick	,,	£30 ,,	
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
1 Jan.	Watson, Henry J.	Clerk	£185 per annum	.....
1 ,,	Train, William	Apprentice Clerk	£40 ,,	.....
13 ,,	Pearson, Thomas	Labourer	6/6 per day	Vice E. Fairbanks
13 ,,	Cranney, William	,,	6/6 ,,	Vice O. Mulheron
20 ,,	Gale, Richard	Fettler	7/- ,,	Vice J. Miller
26 ,,	Tangye, Matthew	Labourer	6/6 ,,	Vice G. O'Reilly
27 ,,	Dunn, William	,,	6/6 ,,	Vice J. Milton
9 Feb.	Jansen, Francis	,,	6/6 ,,	Vice A. Yeomans
10 ,,	Dumbrell, Edmond	,,	6/6 ,,	Vice A. Rivers
17 ,,	Madin, Bernard	,,	6/6 ,,	Vice R. Mattson
17 ,,	Taylor, Alfred	,,	6/6 ,,	Vice C. Davies
17 ,,	Trunley, John	,,	6/6 ,,	Vice E. Gouge
17 ,,	Moran, Denis	,,	6/6 ,,	Vice F. Maher
17 ,,	Winterbine, Alfred	,,	6/6 ,,	Vice W. Walsh
17 ,,	Hanson, Gerard	,,	7/- ,,	Vice F. Pont
17 ,,	Williams, Caleb	,,	6/6 ,,	Vice J. Purcell
17 ,,	Sullivan, Timothy	Fettler	6/6 ,,	Vice J. Wall
17 ,,	Jenkins, Daniel	,,	6/6 ,,	Vice M. Duggan
24 ,,	Miller, Thomas P.	Office boy	2/- ,,	.....
24 ,,	Reilly, Michael	,,	3/- ,,	.....
4 Mar.	Broderick, John	Labourer	6/6 ,,	Vice W. Bickerton
4 ,,	Maxwell, James	,,	6/6 ,,	Vice D. Kemp
24 ,,	Prendergast, M.	,,	6/6 ,,	Vice J. West
		CHIEF MECHANICAL ENGINEER'S BRANCH.		
1 Jan.	Mills, Henry C.	Labourer	7/- per day	Vice E. Leavey
1 ,,	Partridge, Thomas	Striker	7/- ,,	Vice J. Harris
1 ,,	Stanton, Josiah	,,	7/- ,,	Vice D. Smith
1 ,,	Vaughan, A. E.	Boy	2/- ,,	Vice R. McFarlane
1 ,,	Mussell, Stephen	Boilermaker's assistant	7/- ,,	Vice H. Morales
1 ,,	Newlands, Ernest	Apprentice	3/6 ,,	Vice J. Newlands
1 ,,	Shanstone, Frank	,,	3/- ,,	Vice A. Vernon
1 ,,	Baker, Arthur	,,	2/- ,,	Vice J. Wardrop
1 ,,	McConville, James	Cleaner	5/6 ,,	Vice W. Peterkin
6 ,,	Bentley, Thomas	Fireman	9/- ,,	Vice F. Dodds
6 ,,	Dearing, Henry	Cleaner	6/- ,,	Vice M. Bourke
6 ,,	Harper, John	,,	6/- ,,	Vice W. Sinclair
6 ,,	Hall, Henry	,,	6/- ,,	Vice R. Stafford
6 ,,	Balthouse, James	,,	6/- ,,	Vice C. Winnicombe
6 ,,	Coffin, Allen	,,	6/- ,,	Vice C. Byrne
6 ,,	McCrankeu, Thomas	,,	4/- ,,	Vice G. H. Byrd
6 ,,	Laxton, Charles	,,	6/- ,,	Vice J. A. Smith
6 ,,	McLean, Alexander	,,	5/- ,,	Vice P. Cooper
6 ,,	Saunders, George	,,	6/- ,,	Vice H. Dunk
6 ,,	Cavanagh, Richard	,,	5/6 ,,	Vice W. Thiele
6 ,,	Salt, E. M.	,,	7/- ,,	Vice J. Tickle
6 ,,	Munday, John	,,	7/- ,,	Vice J. Wilson
6 ,,	Blatch, Arthur	,,	7/- ,,	Vice C. Holliday
6 ,,	Hellyer, Vincent	,,	5/- ,,	Vice A. Faulkner
6 ,,	Brown, Henry E.	,,	5/6 ,,	Vice T. Blakeney
6 ,,	Sproule, Leslie A.	,,	5/- ,,	Vice C. Jenkins
6 ,,	Wills, E. A.	,,	5/- ,,	Vice A. Farquhar
13 ,,	Warren, Charles	Blacksmith	10/3 ,,	Reinstated. Vice S. Williams.
31 ,,	Tunridge, W. S.	Clerk	6/- ,,	.....
1 Feb.	Nicholls, Fred. H.	Apprentice Clerk	£40 per annum	.....
9 ,,	M'Kinley, William	Fitter	10/- per day	Vice W. Jeffrie
9 ,,	Guthrie, Robert	Boy	5/- ,,	Vice W. Chandler
16 ,,	Noon, Fred. W.	Cleaner	5/6 ,,	Vice J. Mears
16 ,,	Ames, William	,,	7/- ,,	Vice F. Barker
16 ,,	Sutton, William	Labourer	7/- ,,	Vice A. Brown
16 ,,	Bryant, Thomas	Fireman	7/- ,,	Vice J. Crane
23 ,,	Sharp, William	Turner	10/- ,,	Vice J. Powys
23 ,,	Gallop, Joseph	Apprentice	9/- ,,	Vice S. Morris
2 Mar.	Gamble, William	Turner	10/6 ,,	Vice C. Lord
2 ,,	Watkins, Edward	Boilermaker	10/- ,,	Vice A. Gray
2 ,,	Sheddon, Richard	Fireman	9/- ,,	Vice G. Orknie
2 ,,	Jarvis, William	Cleaner	7/- ,,	Vice R. Lightfoot
9 ,,	Lewis, Fred.	,,	6/- ,,	Vice W. Brown
9 ,,	Smith James	,,	5/- ,,	Vice A. J. Cain
29 ,,	Roberts, F. W.	Clerk	£150 per annum	From Permanent-way Branch—Vice D. Mitchell.
		CHIEF TRAFFIC MANAGER'S BRANCH.		
1 Jan.	Roberts, A. E.	Junior Clerk	£130 per annum	Transferred from Supernumerary Staff.—Position retrenched on Supernumerary Staff.
1 ,,	Carney, J.	,,	£ 80 ,,	Transferred from Supernumerary Staff, vice R. Tibbs. Position retrenched on Supernumerary Staff.
4 ,,	Fisher, Jabez A.	Clerk	£150 ,,	Exchanged with S. Bolger, from Traffic Branch.
9 ,,	Goodwin, Mary Ann	Gatekeeper	7/- per week	Vice Mrs. Butts.
9 ,,	M'Beath, William	Porter	7/- per day	Reinstated.
10 ,,	Higgins, Ellen	Gatekeeper	Free house	Vice Mrs. Webb.
13 ,,	Doyle, M.	Lad wool-checker	1/8 per day	Transferred from Supernumerary Staff.—Positions retrenched on Supernumerary Staff.
13 ,,	Hanrahan, J.	,,	1/8 ,,	,, ,,
13 ,,	M'Pherson, J.	,,	1/8 ,,	,, ,,
13 ,,	Davey, David	,,	1/8 ,,	,, ,,
16 ,,	Madden, Julian	Probationer	2/6 per week	

Date.	Name.	Position.	Rate.	Remarks.
1893.		CHIEF TRAFFIC MANAGER'S BRANCH—*continued*.		
19 Jan.	Birrell, Alexander	Porter	7/- per day	Reinstated.
23 "	Mullane, Patrick	Junior Porter	3/4 "	"
24 "	Rahley, Joseph	Probationer	28 per week	Vice A. Elston.
24 "	Hartley, Fanny	Gatekeeper	Free house	Vice Mrs. Moriarty.
30 "	Roberts, George	Lad, wool checker	1/8 per day	Transferred from Supernumerary Staff. Position retrenched on Supernumerary Staff.
1 Feb.	Robinson, Francis	Gatekeeper	7/- per week	Vice Mrs. Smith.
2 "	Green, Mary E.	"	Free house	Vice Mrs. Franklin.
3 "	Kerr, J. R.	Postal Assistant	10/- per week	Vice T. Elwood.
6 "	O'Rourke, Frank	Probationer	2/6 "	Vice R. M'Kean.
9 "	Treay, Ellen	Gatekeeper	7/6 "	Vice Mrs. Miller.
10 "	Williams, W. J.	Clerk	£160 per annum	Exchanged with W. Nowland, of Electrical Branch.
17 "	Taylor, Kate	Gatekeeper	7/6 per week	Vice A. Spillane.
21 "	Connell, Andrew E.	Probationer	2/6 "	Vice R. Clarke.
22 "	Hartmann, A.	"	2/6 "	"
25 "	Mayne, Mrs.	Gatekeeper	7/- "	Vice T. Naylon.
2 Mar.	Lyneham, Christina	"	Free house	Vice Mrs. Coleman.
3 "	Edwards, Margaret	"	"	Vice Mrs. Meikle.
20 "	Fleming, W.	Probationer	2/6 per week	Vice G. W. Cock.
26 "	Gibbons, Mrs.	Gatekeeper	Free house	Vice Mrs. Barton.
28 "	Bell, Susan Ann	"	7/- per week	Vice Mrs. Lyneham.
		COMPTROLLER OF STORES BRANCH.		
		Nil.		
		SIGNAL AND INTERLOCKING BRANCH.		
		Nil.		
		PROPERTY AND ESTATE BRANCH.		
1 Jan.	Huffam, Arthur	Clerk	£145 per annum	Transferred from Supernumerary Staff. Positions retrenched on Supernumerary Staff.
1 Mar.	Murray, John	Surveyor	£250 "	
1892.		ELECTRICAL ENGINEER'S BRANCH.		
2 Sept. 1892.	Colless, E. H.	Probationer	£6/10/- per ann.	From Traffic Branch, vice H. Shoobert.
1 Mar.	Nowland, W.	Operator	£130 "	Exchanged with W. J. Williams, of Traffic Branch.
		TRAMWAYS—LOCOMOTIVE BRANCH.		
7 Mar.	Rice, William	Fireman	6/8 per day	Re-employed, vice R. Robins.
9 "	Dennison, Oliver	Labourer	6/6 "	Re-employed, vice W. Smith.
10 "	Perkes, Thomas	Driver	11/- "	From Railways, vice E. Gates.
17 "	Cooper, Percy	Cleaner	7/6 "	From Traffic Branch, Tramways, vice J. M'Sinvick.
20 "	Insull, William	Labourer	6/6 "	Vice G. Haydon.
25 "	O'Connell, William	Boy, labourer	3/- "	Vice F. Wayman.
4 Jan.	Holden, Edward A.	Draftsman	£130 per annum	From Railways.
13 "	Weine, Ernest C.	Shop boy	2/3 per day	Vice C. Hodgson.
8 Mar.	Egan, Patrick	Labourer	6/6 "	From Railways, vice A. Woodford.
		TRAMWAYS—TRAFFIC BRANCH.		
21 Jan.	Cooper, Percy	Junior Conductor	5/- per day	Re-employed for further extension of Balmain Line.
30 "	Morrison, Ernest R.	"	5/- "	Vice Henry J. Martin.
13 Feb.	Blakeney, Patrick T.	"	5/- "	Vice J. Bourke.
16 "	Freeman, John F.	"	5/- "	Vice R. Hardie.
		TRAMWAYS—MAINTENANCE BRANCH.		
		Nil.		

APPENDIX IV.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with clause No. 44 of the Railway Act, showing the removals of employees, from the 1st January to 31st March, 1893.

Date.	Name.	Position.	Rate.	Remarks.
1893.		SECRETARY'S BRANCH.		
28 Feb.	Burbidge, Alfred J.	Clerk	£170 per annum	Retrenchment.
		CHIEF ACCOUNTANT'S BRANCH.		
21 Jan.	Bartholomew, William	Apprentice clerk	£90 per annum	Resigned.
		TRAFFIC AUDITOR'S BRANCH.		
1 Jan.	Fisher, James A.	Clerk	£150 per annum	Exchanged with S. Bolger, from Traffic Branch.
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
5 Jan.	Miller, John	Ganger	9/- per day	Resigned.
5 "	Simpson, William	"	9/- "	Deceased.
7 "	Yeomans, Alfred	Fettler	7/6 "	"
12 "	Furbanks, Ernest	Labourer	6/6 "	Discharged.
12 "	Mulheron, Owen	"	6/6 "	"
16 "	Bickerton, William	"	7/6 "	Resigned.
16 "	Trounce, Edward	"	7/6 "	Retrenchment.
16 "	Costelloe, Phillip	"	7/6 "	"
24 "	Kemp, Daniel	Fettler	9/- "	Retired.
25 "	O'Reilly, George	Labourer	8/- "	Discharged.
28 "	Ferguson, Sydney	Carpenter	11/- "	Retrenchment.
28 "	Burnett, John	Labourer	8/- "	"
28 "	Beddington, Frank	Bricklayer	13/- "	"

Date.	Name.	Position	Rate.	Remarks.
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH—*continued.*		
1893.				
22 Jan.	Packman, John	Carpenter	10/- per day	Retrenchment.
28 ,,	Clay, Henry	Bricklayer	13/- ,,	,,
28 ,,	Morton, James	Rough Carpenter	7/6 ,,	,,
28 ,,	Fawcett, William	Carpenter	9/- ,,	,,
31 ,,	Wood, Thomas	Draftsman	£140 per annum	,,
31 ,,	Nixon, William	,,	£250 ,,	,,
31 ,,	Breakall; F. H.	,,	£225 ,,	,,
31 ,,	Tickle, Samuel	,,	£225 ,,	,,
31 ,,	Moffitt, W. T.	,,	£210 ,,	,,
31 ,,	Valentine, Henry	,,	£126 ,,	,,
9 Feb.	Jamieson, William	Fettler	7/8 per day	Discharged.
9 ,,	Muldoon, Thomas	,,	7/6 ,,	,,
10 ,,	Lidden, William	Sub-Inspector	£225 per annum	Deceased.
12 ,,	West, John	Fettler	7/6 per day	Discharged.
28 ,,	Hedges, John	Clerk	£180 per annum	Retrenchment.
28 ,,	Blinco, John	Sub-Inspector	£230 ,,	,,
28 ,,	Butler, James	Junior Clerk	£75 ,,	,,
28 ,,	Higgins, R. M.	,,	£75 ,,	,,
28 ,,	Thackeray, Charles	,,	£75 ,,	,,
28 ,,	Warn, E. J.	,,	£80 ,,	,,
1 Mar.	Denshire, Percy	Office-boy	4/- per day	,,
4 ,,	Lodge, William	Labourer	7/6 ,,	Discharged.
8 ,,	Davies, Peter	Carpenter	10/- ,,	Retrenchment.
10 ,,	Souter, William	Labourer	7/8 ,,	Discharged.
10 ,,	Schons, Nicholas	,,	7/6 ,,	,,
10 ,,	Bell, William	Fettler	7/6 ,,	,,
14 ,,	Skelly, Henry	,,	7/8 ,,	Deceased.
16 ,,	England, Charles	Carpenter	12/- ,,	Retrenchment.
16 ,,	Miller, Carl	Labourer	6/6 ,,	,,
16 ,,	Moston, James	,,	7/6 ,,	,,
16 ,,	Thomas, Jacob	,,	7/6 ,,	,,
16 ,,	Atkins, Thomas	,,	7/- ,,	,,
16 ,,	Walsh, James	Fettler	7/6 ,,	,,
16 ,,	Bailey, Thomas	Labourer	7/6 ,,	,,
16 ,,	Ferry, Simeon	,,	7/6 ,,	,,
17 ,,	Christenson, John	Fettler	7/6 ,,	Deceased.
18 ,,	McMahon, Thomas	Labourer	7/6 ,,	Discharged.
18 ,,	Chettle, W. A.	Surveyor	£260 per annum	Retrenchment.
20 ,,	Erith, Samuel	Fettler	7/8 per day	Resigned.
20 ,,	Catto, Richard	,,	7/6 ,,	,,
29 ,,	Roberts, F. W.	Clerk	£150 per annum	To Locomotive Branch; position retrenched.
31 ,,	Hawkes, James	Inspector	£300 ,,	Retrenchment.
31 ,,	Light, E. E.	Assistant Engineer	£300 ,,	,,
31 ,,	Cockburn, W. J.	Clerk	£125 ,,	,,
31 ,,	Lee, Henry	Sub-Inspector	£200 ,,	,,
		CHIEF MECHANICAL ENGINEER'S BRANCH.		
1 Jan.	Willoughby, J. R.	Driver	14/- per day	Deceased.
1 ,,	Holden, E. A.	Draftsman	£130 per annum	To Tramways.
5 ,,	Shaw, Ammon	Labourer	7/- per day	Retired.
7 ,,	Morris, Sydney	Apprentice	3/- ,,	Resigned.
9 ,,	Lightfoot, Richard	Fuelman	7/6 ,,	Retrenchment.
13 ,,	Dodds, James	Apprentice	5/- ,,	,,
21 ,,	Rose, Edward	Cleaner	6/- ,,	,,
29 ,,	Snipe, James	Driver	14/- ,,	Deceased.
31 ,,	Robinson, Henry	Inspector	£3 per week	Retrenchment.
31 ,,	Thomas, John	Striker	7/6 per day	Resigned.
31 ,,	Buchanan, James	Fitter	18/- ,,	,,
1 Feb.	Houghton, R. H.	Labourer	7/- ,,	,,
1 ,,	Fullwood, W. S.	Clerk	£180 per annum	To Secretary's Branch.
2 ,,	Wallace, George S.	Cleaner	5/6 per day	Retrenchment.
2 ,,	Slade, Daniel	Bricklayer	11/- ,,	Resigned.
2 ,,	Halligan, Edward	Boilermaker's Assistant	7/- ,,	Deceased.
7 ,,	Graham, David	,, ,,	7/- ,,	Discharged.
9 ,,	Kearney, David	Cleaner	7/- ,,	Resigned.
15 ,,	Watson, Fergus	,,	5/6 ,,	Retrenchment.
15 ,,	Rose, William	Driver	12/- ,,	Resigned.
15 ,,	Shearer, Henry	Fuelman	7/- ,,	Retrenchment.
16 ,,	Freel, James	Cleaner	6/6 ,,	,,
16 ,,	Kilkelly, John	,,	7/- ,,	,,
17 ,,	M'Queen, James	Driver	14/- ,,	Deceased.
28 ,,	Milroy, Richard	Apprentice	5/- ,,	Resigned.
3 Mar.	Mitchell, D. R.	Clerk	£145 per annum	Discharged.
3 ,,	Barker, Henry	Boilermaker's Assistant	7/- per day	Retrenchment.
4 ,,	King, Mrs.	Caretaker	8/- per week	,,
10 ,,	Parry, George	Assistant Storeman	7/6 per day	Deceased.
10 ,,	Perkes, Thomas	Fireman	10/- ,,	To Tramways.
14 ,,	Landrigan, Patrick	Fuelman	7/- ,,	Retrenchment.
23 ,,	King, William	Fireman	9/- ,,	Resigned.
23 ,,	Crawford, John	Cleaner	5/- ,,	Retrenchment.
24 ,,	Campbell, John	,,	5/- ,,	,,
24 ,,	Hudson, Percy	Fuelman	6/- ,,	Resigned.
		CHIEF TRAFFIC MANAGER'S BRANCH.		
1892.				
1 Dec.	Ong, John S.	Junior Clerk	£120 per annum	Retrenchment.
1893.				
1 Jan.	Rolston, Mrs.	Gatekeeper	20/- per week	Resigned.
1 ,,	Pass, Samuel	Station-master	£260 per annum	Retired.
1 ,,	Roach, A.	Operator	£80 ,,	Retrenchment.
1 ,,	Clarke, Richard	Probationer	2/6 per week	Discharged.
1 ,,	Bolger, Simeon	Clerk	£150 per annum	Exchanged with J. Fisher from Traffic Audit Branch.
2 ,,	Elwood, T.	Postal Assistant	10/- per week	Discharged.
3 ,,	Ewing, E.	Apprentice Clerk	£80 per annum	Retrenchment.
4 ,,	Lawton, Ellen	Barrack Attendant	7/6 per week	,,
6 ,,	Marsh, A. W.	Porter	6/6 per day	,,
6 ,,	Davies, Henry C.	Junior Clerk	£120 per annum	Resigned.
6 ,,	Kelly, Martin	Porter	6/6 per day	Retrenchment.
6 ,,	Swift, Ruth	Caretaker	5/- per week	,,
6 ,,	Lucas, A.	Apprentice Clerk	£70 per annum	,,
7 ,,	Fairhall, H. H.	Junior Clerk	£120 ,,	,,
8 ,,	Butts, J.	Gatekeeper	7/- per week	Resigned.
10 ,,	O'Connell, Michael	Porter	7/- per day	Retrenchment.
10 ,,	Webb, Mrs.	Gatekeeper	Free house	Resigned.
11 ,,	Morgan, E.	Porter	6/6 per day	Retrenchment.
18 ,,	Edwards, George	Guard	10/6 ,,	Resigned.
23 ,,	Tarrant, James	Porter	7/- ,,	Retrenchment.
23 ,,	Blaikie, J.	,,	7/- ,,	,,
23 ,,	Moriarty, Mrs.	Gatekeeper	Free house	Resigned.
24 ,,	O'Connor, William	Night Officer	£140 per annum	Retrenchment.
24 ,,	Johnson, John	Junior Porter	5/- per day	,,
31 ,,	Smith, Annie	Gatekeeper	7/- per week	Resigned.
1 Feb.	Doherty, D.	Clerk	£200 per annum	Retrenchment.

Date.	Name.	Position.	Rate.	Remarks.
1893.		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
1 Feb.	Franklin, Mary	Gatekeeper	Free house	Resigned.
6 "	Reardon, J. J.	Night Officer	£120 per annum	Retrenchment.
7 "	Cook, George W.	Probationer	2/6 per week	Resigned.
10 "	Newland, W.	Clerk	£136 per annum	Exchanged with W. J. Williams, of Traffic Branch.
10 "	Clark, Priscilla	Gatekeeper	7/- per week	Retrenchment.
11 "	Killingley, Alfred	Porter	7/6 per day	"
11 "	Usher, Joseph	"	6/6 "	"
12 "	Tulip, Mrs.	Gatekeeper	10/- per week	"
12 "	Brain, Thomas	Station-master	£225 per annum	Retired.
13 "	Tomlinson, W. H.	Clerk	£250 "	Deceased.
18 "	Farnham, Joseph	Junior Clerk	£110 "	Retrenchment.
18 "	Taylor, Mary Ann	Gatekeeper	10/- per week	Resigned.
21 "	Lansdowne, C. H.	Printer	11/- per day	Retrenchment.
21 "	Hickey, John	Officer-in-charge	£130 per annum	"
24 "	New, W.	Shunter	7/6 per day	"
25 "	Usher, James	Porter	7/- "	"
24 "	Naylon, Thomas	Gatekeeper	15/- per week	Resigned.
23 "	Cowan, James	Head Porter	9/- per day	Retrenchment.
28 "	Kirkman, John	Junior Clerk	£90 per annum	"
28 "	Rhynehardt, George	"	£120 "	"
2 Mar.	Meikle, Emily	Gatekeeper	Free house	Resigned.
2 "	Willis, Clarence	Apprentice Clerk	£40 per annum	Retrenchment.
2 "	Coleman, Eleanor	Gatekeeper	Free house	Resigned.
5 "	Cotthardt, R.	Signalman	8/8 per day	Retrenchment.
6 "	Egan, Patrick	Porter	7/- "	To Tramways.
6 "	Barton, Mrs.	Gatekeeper	Free house	Resigned
10 "	Ambler, P.	Junior Conductor	5/- per day	To Secretary's Branch.
10 "	Huxtable, J. P.	Guard	10/6 "	Deceased.
24 "	Lyneham, Christina	Gatekeeper	7/- per week	Resigned.
28 "	Esther, Herbert	Junior Clerk	£100 per annum	Retrenchment.
28 "	Hubbard, James	Porter	7/6 per day	"
30 "	Campbell, William	"	7/- "	"
31 "	Murphy, S. C.	Apprentice Clerk	£40 per annum	"
31 "	Blain, David	Officer-in-charge	£140 "	"
		COMPTROLLER OF STORES BRANCH.		
		Nil.		
		SIGNAL AND INTERLOCKING BRANCH.		
5 Jan.	Sydenham, C.	Painter	7/- per day	Retrenchment.
5 "	Banyard, C.	Carpenter	10/- "	"
5 "	Bowes, H.	"	10/ "	"
		PROPERTY AND ESTATE BRANCH.		
		Nil.		
		ELECTRICAL ENGINEER'S BRANCH.		
1 Mar.	Williams, W. J.	Operator	£150 per annum	Exchanged with W. Newland, of Electrical Branch.
		TRAMWAYS—LOCOMOTIVE BRANCH.		
10 Jan.	Nolan, Stephen	Fireman	7/- per day	Resigned.
13 "	Smith, William	Labourer	6/0 "	Discharged.
27 "	Robins, Reuben	Fireman	6/0 "	Resigned.
28 "	Heydon, George T.	Shop-boy	5/- "	"
13 Feb.	Weyman, Frederick C.	Boy labourer	4/- "	"
2 Mar.	M'Stravick, James	Fireman	9/- "	"
2 "	Gates, Edward	Driver	13/- "	"
8 "	Volk, Francis	"	14/- "	Left the service.
8 "	Bell, James	Fireman	8/- "	Resigned.
18 "	Irvine, Alexander	"	8/- "	Deceased.
22 "	Swain, Daniel	"	9/- "	Left the service.
23 "	Chapman, Charles F.	Apprentice	-/10 "	Resigned.
25 "	Meadows, James	Cleaner	5/6 "	Left the service.
		TRAMWAYS—TRAFFIC BRANCH.		
16 Mar.	Cooper, Percy	Junior Conductor	5/- per day	To Locomotive Branch, Tramways.
		TRAMWAYS—MAINTENANCE BRANCH.		
14 Feb.	Burden, Thomas	Gangor	9/- per day	Resigned.

Sydney: Charles Potter, Government Printer.—1893.

[9d.]

1892-3.

NEW SOUTH WALES.

RAILWAYS AND TRAMWAYS.

(REPORT OF RAILWAY COMMISSIONERS FOR THE QUARTER ENDING 31ST DECEMBER, 1892.)

Presented to Parliament, pursuant to Act 51 Vic. No. 35, sec. 44.

Offices of the Railway Commissioners of New South Wales,
30th January, 1893.

TO THE HONORABLE THE MINISTER OF RAILWAYS,—

Sir,

In accordance with the provisions of the 44th clause of the Railway Act of 1888, 51 Vic. No. 35, we have the honor to submit, for the information of Parliament, our Report, for the quarter ending 31st December, 1892, upon the subjects specified, viz. :—

(I.) "The state of the traffic returns, with the approximate cost and earnings of trains per ton per train mile, in respect of goods and passengers, respectively, carried during the past quarter."

(II.) "The general condition of the lines, and accommodation for the traffic."

(III.) "The special rates (if any) which have been made, and the reasons for making such rates."

(IV.) "The appointments and removals, with the circumstances attending each case."

I.—STATE OF THE TRAFFIC.

Railways.			Quarter ending 31st Dec., 1891.	Quarter ending 31st Dec., 1892.
Miles open			2,182	2,314
		1891.	1892.	
Revenue	Passenger	£316,226	305,875	£965,231	£903,958
	Merchandise	£649,005	598,083	
Expenditure			£530,411	£484,183
Train miles run			2,343,279	2,008,669
Earnings per train mile			8/2¾	9/-
Expenditure per train mile			4/6½	4/9¾
Percentage—Expenditure to earnings			54·95	53·56
Number of passengers			5,162,175	5,182,594
Tonnage of goods traffic			1,058,078	858,581
Tonnage of live stock traffic			33,352	36,666

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Tramways.	Quarter ending 31st Dec., 1891.	Quarter ending 31st Dec., 1892.
Miles open	46	49
Revenue	£77,852	£76,915
Expenditure	£65,556	£61,699
Train miles run	457,071	484,485
Earnings per train mile	3/5	3/2
Expenditure per train mile	2/10½	2/6½
Percentage—Expenditure to earnings	84·21	80·22
Number of fares collected	18,367,978	18,157,072

II.—Condition of the Lines.

A report as to the condition of the lines will be found as an Appendix, page 5.

III.—Special Rates.

A statement of the special rates, and the reasons for making the same, will be found attached, page 5.

IV.—Staff.

These returns are given as an Appendix, pages 6 to 10.

General Remarks.

The line from Culcairn to Corowa, a distance of 47½ miles, was opened for traffic on the 3rd of October. The traffic upon this line is of the most meagre character.

The general depression in the trade of the Colony seriously affected the railway revenue during the past quarter, the traffic showing a decrease of £61,273.

The Passenger Department traffic shows a decrease of £10,351, and the traffic of the Merchandise Department a decrease of £50,922. In all branches of the Merchandise Department decreases are shown, but the heaviest falling off arises with the coal and general mineral traffic, there being a decrease of about 171,000 tons and £15,833 in revenue. The revenue from wool shows a shrinkage of £15,300, and general merchandise £17,246.

The working expenses have been materially reduced, a saving of £46,228 having been effected; at the same time a considerable sum in excess of what was spent last year has been devoted to improving the permanent-way.

Although the passenger train service is superior to that which was in operation in the corresponding period of last year, a reduction in the total number of train miles to the extent of 334,610 has been effected in the quarter, and the earnings have been raised from 8s. 2¾d. to 9s. per train mile. The expenditure per train mile has increased to the extent of 3½d., but this still leaves an increase in the net earnings per train mile of 5¾d.

The percentage of working expenses to earnings for the quarter stands at the low figure of 53·56 per cent.

CONDITION OF THE LINES AND ACCOMMODATION FOR THE TRAFFIC.

The work of relaying, resleepering, and reballasting the lines has been continued, and considerable improvements effected.

The principal change that has taken place in regard to facilities for the traffic has been the opening of the deviation to avoid the Lapstone Hill Zig Zag, and the bringing into use of the deviations north of Singleton to cut out the 1 in 33 grades. Both of these changes have been of much service in facilitating the working.

TRAMWAYS.

The extension of the line from Merton-street, Balmain, to Gladstone Park, a distance of 1 mile 8 chains, was opened for traffic on the 24th October.

The tramway traffic shows a falling off of £937. The expenditure, however, has been reduced by £3,857.

This result is satisfactory, when it is considered that we are at present burdened with lines made at a capital cost, including rolling stock, of £97,000, the total revenue from which amounts to about £9,000 per annum only, and the working expenses to £13,600, exclusive of the interest on the capital cost.

As other lines are in course of construction, and we have been notified that it is decided to construct three additional lines, namely, an extension of the Five Dock line to Abbotsford, a line from George-street West, *via* Regent-street, to intersect the Botany tram-line at the junction of Botany and Redfern streets, and from Bondi to Bondi Beach, all of which will be a burden upon the working in the future, we deem it right to point out that it will be impossible to continue to make the Tramways pay if unprofitable lines such as those referred to are constructed.

When we assumed office the Tramway property was returning less than 2 per cent. upon its capital, and the rolling stock was in a most dilapidated condition. This has all been changed and the Tramway property is now returning over 5 per cent. on its capital. We have also built 75 new tram-cars out of revenue, and also much improved the permanent way. It is to be regretted that the continuance of this improved state of affairs, brought about after much trouble, should be jeopardised by extensions which, if not at present wholly unnecessary, might with advantage be deferred until more pressing matters have been dealt with.

We would draw attention to our Annual Reports for 1891 and 1892, wherein we pointed out that the facilities in connection with the existing tramways were being curtailed, and the business was carried on under great difficulties, owing to the limited space in the Bridge-street yard and the crowded condition of Elizabeth-street, and asked that a cable line between the Circular Quay and Redfern Station should be constructed. This line would undoubtedly be remunerative and until this relief is afforded, facilities we wish to extend to some of the suburbs cannot be given.

STAFF.

As the question of retrenchment is occupying so seriously the attention of the country at the present moment, we think it may be of interest to state the position of the Department under our control in this respect.

When

When we assumed office in October, 1888, the Railway and Tramway services employed a staff of 11,394 persons. The total revenue derived from the Railways and Tramways for the year ending 30th June, 1888, amounted to £2,531,000, and for the year ending 30th June, 1892, the total revenue amounted to £3,412,000, an increase of £881,000, or 35 per cent.

The total staff employed in December last numbered 11,400, so that, practically, although the mileage of the railways has increased by 187 miles and the tramways by 10½ miles, and the traffic by 35 per cent., the business is being conducted without any increase in the number of the employees.

With regard to the administrative offices, viz., the Commissioners' and Secretary's, Chief Accountant's, Traffic Auditor's, Chief Traffic Manager's, Chief Mechanical Engineer's, and Comptroller of Stores, the enlarged business is being carried on at a reduction in salaries of £13,736 per annum, the saving of staff in the Commissioners' and Secretary's office alone amounting to £5,569 per annum.

The question of adjusting the expenses to meet the changing character and volume of the traffic is kept continually in view, and economies effected from time to time where practicable.

As some misapprehension appears to exist in regard to the amount of money the Civil Service Pension Fund has to pay in connection with the compulsory retirement of officers on that Fund by the Railway Commissioners, we beg to state that the amount per annum that has to be paid by the Civil Service Fund on account of compulsory retirements amounts to £4,386 per annum. Many of these payments the Commissioners had no wish to incur, but the regulations of the Civil Service Pension Fund, to which the officers had contributed 4 per cent. of their salaries, entitled them to the amount.

We have the honor to be,
Sir,
Your most obedient Servants,

E. M. G. EDDY,
Chief Commissioner.

W. M. FEHON,
Commissioner.

CHARLES OLIVER,
Commissioner.

APPENDIX I.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

REPORT on Condition of Lines for quarter ending 31st December, 1892.

Sir, Office of Engineer-in-Chief for Existing Lines, 18 January, 1893.

I have to report, for the information of the Commissioners, that the whole of the Permanent Way and Works have been well maintained during the past quarter.

Relaying and Reballasting.

Fair progress has been made with the work of relaying, resleepering, and reballasting on the Northern and Western, as well as on the Metropolitan, Division; and on the Southern Division a considerable quantity of rerailing has been done during the quarter.

Widening of the Suburban Line, Redfern to Flemington.

The whole of these works are practically complete.

Improvement of Grades and Curves.

The deviation at Lapstone Hill doing away with the Zig Zag was opened for traffic on the 18th December last.

The deviations and improvement of the grades between Muswellbrook and Singleton have been completed.

I have, &c.,

WILLIAM T. FOXLEE,

The Secretary to the Railway Commissioners. Engineer-in-Chief for Existing Lines.

APPENDIX II.

RETURN of Special Rates approved for quarter ending 31st December, 1892.

Article.	Rate.	Reason for rate.
Stock	The rates for live stock between Toowoomba and stations north to Flemington to be reduced by 10 per cent. for through consignments.	To encourage traffic.
Casks	Casks sent to Orange to be filled with gold crude ore for shipment to England to be charged at the empty return rate, viz., 9d. each.	do
Wool	Ten per cent. rebate to be allowed on the scoured and greasy Thurlugoona clip of wool forwarded from Bourke to Darling Harbour by rail.	do
Shunting charge	A shunting charge of 10s. per four-wheeled truck to be made for placing traffic for Bourke Meat Preserving Works in the siding at the Bourke stock-yards.	To equalise rate.
	A charge of 5s. per four-wheeled truck to be made for transferring goods from the main line for conveyance over the Rosehill Company's line. Minimum charge, £1 per shunt.	do
Coal	Small coal carried in Commissioners' trucks between South Clifton colliery and the Bulli Coke Company's siding to be charged 1s. per ton.	To meet traffic.
Traffic at Irondale Siding	Rate for 1 mile in addition to mileage rate, to be charged for placing traffic in or taking traffic out of Irondale siding.	To meet traffic for this siding.
Empty cases	New empty boxes from Sydney to country stations to be carried free, provided that they are returned subsequently by rail filled with butter.	To encourage traffic.
Oils	First-class rates (subject to a minimum of 2 tons per four-wheeled truck) to be charged for the carriage of mixed lots of machine oils and refined kerosene oil from Joadja Siding to Sydney, Granville, or Parramatta.	do

APPENDIX III.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with Clause No. 44 of the Railway Act, showing the Appointments of Employees from 1st of October to the 31st of December, 1892 :—

Date.	Name.	Position.	Rate.	Remarks.
1892.		SECRETARY'S BRANCH.		
1 Oct.	Mathieson, Kenneth	Messenger	30/- per week	Transferred from Supernumerary Staff.
1 "	Hayward, John	"	8/- per day	" " " "
		CHIEF ACCOUNTANT'S BRANCH.		
1 Nov.	Bartholomew, William	Apprentice Clerk	£20 per annum	Transferred from Supernumerary Staff.
		TRAFFIC AUDITOR'S BRANCH.		
1 Nov.	Wolinski, Dry	Apprentice Clerk	£20 per annum	Transferred from Supernumerary Staff.
1 "	Lackey, James	"	£30 "	" " " "
		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
23 Sept.	Wilkinson, Richard	Labourer	6/6 per day	Vice G. Glover.
7 Oct.	Yates, John	"	6/6 "	Vice J. Claridge.
8 "	Morris, Samuel	"	6/6 "	Vice R. Wilde.
21 "	M'Mahon, James	"	7/- "	Vice C. Convoy } Positions retrenched on Supernumerary
21 "	Shaw, James	"	6/6 "	Vice W. Moore } Staff.
21 "	Grigg, James	"	7/- "	Transferred from Supernumerary Staff.
21 "	Bailey, Samuel	"	7/- "	" " " "
7 Nov.	Barnes, John	"	6/6 "	Vice John Donnelly.
18 "	Larkins, Patrick	"	6/6 "	Vice J. Hicks.
25 "	Hawthorn, Frank	"	7/- "	Vice E. Rowe } Positions retrenched on Supernumerary
25 "	Hickey, Daniel	"	7/- "	Vice D. Mitchell } Staff.
25 "	Chaseling, Amos	"	7/6 "	Vice J. Worthington }
13 Dec.	Blackett, G. H.	"	6/6 "	Vice J. Jacobs.
16 "	Wilkinson, Edward	"	6/6 "	Transferred from Supernumerary Staff.
16 "	Sweeney, Edward	"	6/6 "	Vice J. Barlow }
16 "	Castles, James	"	6/6 "	Vice G. Shaw }
16 "	Sullivan, Ernest	"	6/6 "	Vice R. Jeffrey }
16 "	Atkins, Thomas	"	6/6 "	Vice J. Sloane } Positions retrenched on Supernumerary
16 "	M'Aviney, James	"	6/6 "	Vice J. Boland } Staff.
23 "	Bradley, John	"	6/6 "	Vice J. Garner }
23 "	Schmeer, Charles	"	6/6 "	Vice P. Collin }
		CHIEF MECHANICAL ENGINEER'S BRANCH.		
1 Oct.	Argent, George	Fireman	6/8 per day	Vice G. Hill }
6 "	M'Farlane, Allen	Gas-fitter's Assistant	5/- "	Vice J. Somers }
6 "	O'Brien, William	Wagon-builder	10/- "	Vice J. Bishop }
6 "	Hansen, James	Shunter	7/- "	Vice T. O'Brien }
6 "	Hunter, Henry	Painter's Assistant	5/- "	Vice W. Holmes }
6 "	Burdett, Charles	Labourer	6/6 "	Vice P. Lennard }
6 "	Fitzhenry, Fred.	Crane-driver	7/- "	Vice H. Reid }
6 "	Johnston, George W.	Fitter	10/- "	Vice H. Ingram }
6 "	Morris, Francis	Fireman	7/- "	Vice J. Dann }
6 "	Wadley, John	"	7/- "	Vice J. Craine } Positions retrenched on Supernumerary
6 "	Barton, Fred.	Lighter-up	7/- "	Vice J. Hinchey } Staff.
6 "	Gilbert, Joseph	Cleaner	6/- "	Vice A. Richards }
6 "	Pedlar, Joseph	"	7/- "	Vice H. Sydenham }
6 "	Egan, Patrick	"	6/- "	Vice T. Ashbury }
6 "	Hutchinson, Samuel	"	7/- "	Vice J. Donald }
6 "	Ryan, Edward	"	6/- "	Vice G. Lee }
7 "	Scott, W. C.	"	4/- "	Vice W. Reid }
7 "	Landrigan, Patrick	Fireman	7/- "	Vice J. Brownliffe }
13 "	Nixon, Ralph	Cleaner	5/6 "	Vice F. Aubery }
13 "	Proud, A. B.	Laborer	7/- "	Vice J. Byrnes }
1 Nov.	Fullwood, W. S.	Clerk	£180 per annum	Transferred from Supernumerary Staff.
4 "	Moses, George V.	Cleaner	6/- per day	Vice J. Thompson }
4 "	Bradwyn, George	Fireman	7/- "	Vice J. Chisolm }
4 "	Jones, John	Cleaner	5/6 "	Vice P. Leehane }
11 "	Bell, Thomas	Laborer	7/- "	Vice G. Gee }
11 "	Scribner, Henry	"	7/- "	Vice F. Suter }
11 "	Forgie, James A.	Boilermaker's Assistant	7/6 "	Vice W. Wills }
11 "	Davies, John D	"	7/- "	Vice H. Harrison }
11 "	Gleeson, Jeremiah	Striker	7/- "	Vice R. Thompson }
11 "	Tyson, Richard	Boy	3/6 "	Vice A. Bailey }
11 "	Aitkenhead, Arthur	Coppersmith	10/- "	Vice T. Hampton }
11 "	McClure, James	Boy	4/- "	Vice G. Hutchinson }
11 "	Morgan, Joseph	Boilermaker's Assistant	8/- "	Vice J. Lerry }
11 "	Went, Arthur W.	Fitter	10/- "	Vice L. Gutteridge }
11 "	Lusk, James G.	"	10/- "	Vice C. Wrightson }
11 "	Innis, Robert	Laborer	7/- "	Vice J. Scott }
11 "	Clack, John F.	"	7/- "	Vice F. Peters }
18 "	Blackwall, Henry	Carbuilder	10/- "	Vice C. Hamming } Positions retrenched on Supernumerary
18 "	Macrae, Frank	"	10/- "	Vice P. Wood } Staff.
18 "	Congdon, Fred.	Wagon builder	10/- "	Vice J. Matthews }
18 "	Burrows, John	"	10/- "	Vice H. Hough }
18 "	Baldock, William	Painter	10/- "	Vice E. Ireland }
18 "	Prichard, Frederick	Painter's assistant	7/- "	Vice A. Calman }
18 "	Greatrex, William	Cleaner	5/6 "	Vice G. Hill }
18 "	Laycock, Joseph	Boilermaker's assistant	7/- "	Vice W. Peacock }
18 "	Woodward, Henry	Fireman	7/- "	Vice D. M'Kellar }
18 "	Sinclair, Albert	Cleaner	4/- "	Vice W. Griffen }
18 "	Crawford, John	"	5/- "	Vice E. Swan }
18 "	Goodwin, Patrick	"	6/- "	Vice W. Freeman }
18 "	Evans, Thomas	"	5/6 "	Vice J. M'Millan }
18 "	Schubert, Edwin	"	5/- "	Vice J. Moody }
18 "	Robertson, John	"	6/- "	Vice A. Greaves }
18 "	Rose, Edward	"	5/- "	Vice E. Funnell }
18 "	Price, Nelson	"	6/- "	Vice F. Thomas }
18 "	Hamilton, Reginald	"	6/- "	Vice G. Clapham }
1 Dec.	Newman, John G.	Cadet	2/- "	Transferred from Supernumerary Staff.
8 "	Holloway, Benjamin	Fireman	9/- "	Vice J. Smith } Positions retrenched on Supernumerary
8 "	Carruthers, A. J.	Cleaner	5/6 "	Vice R. Mays } Staff.
13 "	Abigail, Frank	Clerk	£170 per annum	From Existing Lines Branch.
22 "	Mitchell, Alexander	Cleaner	5/6 per day	Vice J. Thomas }
22 "	Bond, James H.	"	7/- "	Vice W. Carnbourn }
22 "	Passfield, John	"	6/- "	Vice A. Sheldrick } Positions retrenched on Supernumerary
22 "	Freel, James	"	6/- "	Vice J. Kelly } Staff.
22 "	Watson, Fergus	"	5/6 "	Vice G. Smith }

Date.	Name.	Position.	Rate.	Remarks.
1882.		**Chief Traffic Manager's Branch.**		
30 Aug.	Boehme, Gustave	Wool Delivery Inspector	£300 per annum	Transferred from Supernumerary Staff.
28 Sept.	Sognies, Ann	Gatekeeper	7/- per week	*Vice* S. Wilson.
4 Oct.	Witherspoon, J.	,,	7/- ,,	*Vice* E. Bruton.
4 ,,	Dear, Joseph E.	Junior Porter	2/6 per day	*Vice* J. Ryan.
7 ,,	Wilson, W. T.	Steam Crane Driver	12/4 ,,	From Locomotive Branch.
7 ,,	George, James	,, ,,	10/- ,,	,, ,,
7 ,,	Edwards, J.	,, ,,	10/- ,,	,, ,,
10 ,,	Kenna, M.	Gatekeeper	7/- per week	
14 ,,	Fairburn, Mrs.	,,	17/6 ,,	*Vice* W. Fairburn.
14 ,,	Weatherhead, F.	,,	10/- ,,	*Vice* E. O'Brien.
14 ,,	Jenkins, Mary	,,	7/- ,,	*Vice* J. Witherspoon.
15 ,,	Sullivan, Anne	,,	Free house	*Vice* F. Sullivan.
17 ,,	Messer, Mrs.	,,	7/- per week	*Vice* W. Castles.
17 ,,	Cole, Eliza	,,	Free house	*Vice* Mrs. Mengles.
20 ,,	Mills, Henry	Probationer	2/6 per week	*Vice* J. Harris.
20 ,,	O'Donnell, W.	Gatekeeper	Free house	*Vice* Ann Holloway.
20 ,,	Gazeley, H.	Porter	7/- per day	Reinstated.
20 ,,	Roberts, Mrs. E.	Gatekeeper	7/- per week.	
24 ,,	Morgan, Sarah	,,	5/- ,,	*Vice* M. E. Jones.
26 ,,	Mortlock, Mary	,,	7/- ,,	*Vice* H. Foley.
1 Nov.	Wilson, Henry	Junior Porter	5/- per day	*Vice* C. Cutford. Position retrenched on Supernumerary Staff.
1 ,,	Hensbergh, Annie	Gatekeeper	7/- per week	*Vice* L. Brown.
1 ,,	Hynes, J.	Junior Clerk	£70 per annum	*Vice* A. Dugdale. ,, ,, ,, ,,
3 ,,	Simley, Mary	Gatekeeper	Free house	*Vice* Mrs. McGovern.
4 ,,	Kelly, Annie	,,	,,	*Vice* Mrs. Spears.
7 ,,	Baker, Robert	,,	15/- per week	*Vice* A. Spillane.
8 ,,	Corrigan, Kate	,,	7/- ,,	*Vice* J. Collins.
13 ,,	O'Donnell, Patrick	Probationer	2/6 ,,	*Vice* A. R. Thrift.
14 ,,	Weaver, Sydney	,,	2/6 ,,	
19 ,,	Cook, G.	,,	2/6 ,,	
21 ,,	Bailey, W. A.	,,	2/6 ,,	
1 Dec.	Henson, H. P.	Apprentice Clerk	£40 per annum	Transferred from Supernumerary Staff.
1 ,,	Taylor, Elizabeth	Gatekeeper	7/- per week	*Vice* M. Meskill.
12 ,,	Meikle, Emily	,,	Free house	*Vice* M. Grantham.
14 ,,	Handley, Edward	,,	6/- per day	*Vice* Mrs. Shaw.
22 ,,	Doyle, William	,,	26/- per week	*Vice* J. Mackay.
28 ,,	Connors, M.	,,	5/- ,,	*Vice* E. Cracknell.
31 ,,	Morris, Amy	,,	7/- ,,	*Vice* C. Airs.
		Comptroller of Stores Branch.		
1 Oct.	Sproule, Wallace C.	Apprentice Clerk	£50 per annum	*Vice* J. B Agnew.
17 Nov.	Irvine, Robert F.	,,	£20 ,,	*Vice* W. Sproule.
1 Dec.	Downing, Daniel J.	,,	£30 ,,	
		Signal and Interlocking Branch.		
4 Oct.	Heaton, John	Blacksmith	10/6 per day	*Vice* T. Parker.
		Property and Estate Branch.		
18 Nov.	Larmour, Alfred W.	Apprentice Clerk	£30 per annum	From Traffic Branch.
		Electrical Engineer's Branch.		
10 Oct.	Elston, A. R.	Apprentice Clerk	£30 per annum	From Traffic Branch.
		Tramways—Locomotive Branch.		
4 Oct.	Murphie, Alexander	Labourer	7/- per day	*Vice* A. Sales.
6 ,,	Olde, George A.	Shop boy	6/- ,,	*Vice* P. Gattenhoff.
8 ,,	Ryan, James	Cleaner	5/6 ,,	From Traffic Branch, Railways.
9 ,,	Acres, Randell	Fireman	7/6 ,,	From Railways.
11 ,,	Martin, Henry J.	Cleaner	6/- ,,	From Traffic Branch.
24 ,,	Aldrich, Robert	Shop boy	2/- ,,	*Vice* H. Benn.
29 ,,	Hardy, Robert	Turner	10/- ,,	Transferred from Supernumerary Staff.
29 ,,	Merrifield, Albert R.	Cleaner	6/- ,,	*Vice* P. Quinn.
31 ,,	Harland, Thomas	Fireman	8/- ,,	From Railways, *vice* J. Hollingsworth.
1 Nov.	Catford, Charles E.	Cleaner	4/6 ,,	From Traffic Branch, Railways.
19 ,,	Meadows, James	,,	4/6 ,,	From Traffic Branch, Railways, *vice* J. Tinsley.
19 ,,	Montgomery, John	,,	4/6 ,,	From Traffic Branch, Railways.
23 Dec.	Robins, Reuben	,,	6/6 ,,	*Vice* C. Shepherd.
23 ,,	Cunningham, William	Fireman	7/6 ,,	Transferred from Supernumerary Staff.
23 ,,	Stable, David	,,	7/6 ,,	,, ,,
23 ,,	Botterill, John	,,	7/6 ,,	,, ,,
23 ,,	Snape, Charles	,,	7/6 ,,	,, ,,
23 ,,	Fairbairn, Joseph H.	Cleaner	6/- ,,	,, ,,
23 ,,	Tideswell, Percy	,,	6/- ,,	,, ,,
23 ,,	Hazzard, George	Boy Labourer	4/- ,,	,, ,,
23 ,,	Monro, Robert G.	,,	3/- ,,	,, ,,
23 ,,	Weaver, William	Cleaner	6/- ,,	,, ,,
23 ,,	Swan, George A.	,,	6/- ,,	,, ,,
23 ,,	McVie, Alfred E.	,,	5/6 ,,	,, ,,
23 ,,	Irwin, Michael	,,	5/6 ,,	,, ,,
23 ,,	Stephenson, Thomas W.	,,	6/- ,,	,, ,,
		Tramways—Traffic Branch.		
29 Oct.	Blackstone, Frank E.	Junior Conductor	5/- per day	Transferred from Supernumerary Staff.
29 ,,	Pooley, Charles W.	,, ,,	5/- ,,	,, ,,
29 ,,	Wilson, Ernest	,, ,,	5/- ,,	,, ,,
29 ,,	Ramus, Fred. E.	Car cleaner	6/6 ,,	,, ,,
29 ,,	Steel, William	,,	6/6 ,,	*Vice* J. Garnett. Position retrenched on Supernumerary Staff.
29 ,,	Carmody, John	,,	6/6 ,,	Transferred from Supernumerary Staff.
29 ,,	Lawson, George	Junior Conductor	8/- ,,	*Vice* J. Rogers. Position retrenched on Supernumerary Staff.
29 ,,	Lewis, William A. B.	,, ,,	5/- ,,	,, C. Sonmer. ,, ,, ,, ,, ,,
1 Nov.	Blackstone, Fred.	Clerk	£140 per annum	Transferred from Supernumerary Staff.
15 Dec.	Wilson, Robert	Car cleaner	6/6 per day	*Vice* J. Barlow.
		Tramways—Maintenance Branch.		
		Nil.		

APPENDIX IV.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with clause No. 44 of the Railway Act, showing the removals of employees, from the 1st October to 31st December, 1892.

Date.	Name.	Position.	Rate.	Remarks.
	SECRETARY'S BRANCH.			
	Nil.			
1892.	**CHIEF ACCOUNTANT'S BRANCH.**			
21 Nov.	Bell, P. J.	Junior clerk	£120 per annum	Left the Service.
	TRAFFIC AUDITOR'S BRANCH.			
	Nil.			
	ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.			
23 Sept.	Glover, George	Ganger	9/- per day	Retired.
27 ,,	Hicks, James	Fettler	7/6 ,,	Discharged.
29 ,,	Donnelly, John	,,	7/6 ,,	,,
1 Oct.	Wilde, Richard	Labourer	7/6 ,,	Retired.
3 ,,	Matthews, James	Clerk	£160 per annum	Discharged.
6 ,,	Richards, Henry	Carpenter	9/- per day	Retired.
6 ,,	Claridge, John	Fettler	7/6 ,,	,,
11 ,,	Jacobs, James	Labourer	7/- ,,	Discharged.
12 ,,	Smith, Walter	,,	7/6 ,,	Retrenchment.
15 ,,	Fleming, William	,,	7/6 ,,	,,
16 ,,	Payne, Joseph	,,	7/- ,,	,,
20 ,,	Lewis, William	Fettler	7/6 ,,	Discharged.
25 ,,	Nugent, William	Labourer	7/6 ,,	,,
29 ,,	Duffy, James	,,	7/6 ,,	,,
31 ,,	Minns, George	Foreman plumber	£260 per annum	Retrenchment.
31 Nov.	Taylor, Thomas	Carpenter	10/ per day	,,
11 ,,	Devereaux, James	,,	9/- ,,	,,
11 ,,	Wood, Frederick	,,	9/- ,,	,,
11 ,,	Kenyers, Frederick	Bricklayer	9/- ,,	,,
12 ,,	Lewis, William	Boy	5/- ,,	,,
12 ,,	Stone, Henry	Plumber	9/6 ,,	,,
12 ,,	Martin, John R.	Improver	7/- ,,	,,
12 ,,	Elver, William	Machinist	8/- ,,	,,
12 ,,	Heinsworth, James	Labourer	7/6 ,,	,,
12 ,,	Smith, James	,,	7/6 ,,	,,
12 ,,	Dowse, Thomas	Carpenter	8/- ,,	,,
12 ,,	Davies, Peter	,,	10/- ,,	,,
14 ,,	Cocking, William	Fettler	7/6 ,,	Retired.
15 ,,	Flemming, Alfred	Painter	9/6 ,,	Retrenchment.
15 ,,	Bruce, Edward	,,	9/- ,,	,,
15 ,,	Burt, William	Bricklayer	10/- ,,	,,
15 ,,	Burt, Frederick	Labourer	7/- ,,	,,
16 ,,	Lindsay, Benjamin	Plumber	9/6 ,,	,,
18 ,,	M'Kay, Alexander	Fettler	7/6 ,,	Resigned.
19 ,,	Sweeney, Michael	,,	7/6 ,,	,,
22 ,,	Caunt, Richard	,,	7/6 ,,	,,
23 ,,	Butts, George	,,	7/6 ,,	,,
1 Dec.	Carter, Joseph	Labourer	7/6 ,,	Retrenchment.
1 ,,	Mester, Overed	Fettler	7/6 ,,	Resigned.
5 ,,	Pye, William	Labourer	7/6 ,,	,,
9 ,,	Blankett, John	,,	7/6 ,,	,,
10 ,,	Shaw James	,,	6/6 ,,	Discharged.
13 ,,	Abigull, Frank	Clerk	£170 per annum	To Locomotive Branch.
16 ,,	Stanbridge, Joseph	Labourer	7/6 per day	Discharged.
17 ,,	Wood John	Carpenter	9/- ,,	,,
22 ,,	Hewling, James	Fettler	7/6 ,,	Resigned.
23 ,,	Clark William	,,	7/6 ,,	,,
23 ,,	Elbourne, Arthur	Labourer	7/6 ,,	Deceased.
24 ,,	Maloney, Richard	Inspector	12/- ,,	Retrenchment.
29 ,,	Elston, William	Labourer	7/6 ,,	Resigned.
31 ,,	Higgison, John	Officer in Charge of Ballast Trains.	£256 per annum	Discharged.
31 ,,	Wells, F. B. S.	Draftsman	£125 ,,	,,
	CHIEF MECHANICAL ENGINEER'S BRANCH.			
1 Oct.	Mays, Robert	Cleaner	7/- per day	Discharged.
6 ,,	Acres, Randall	,,	7/- ,,	To Tramways.
6 ,,	Alexander, Vincent	Dresser	8/- ,,	Discharged.
7 ,,	Morrison, E.	Apprentice	6/- ,,	,,
7 ,,	Wilson, William	Steam crane driver	12/4 ,,	To Traffic Branch.
7 ,,	Edwards, John	,,	10/- ,,	,,
7 ,,	George, James	,,	10/- ,,	,,
8 ,,	Caldwell, George D.	Apprentice	5/- ,,	Discharged.
13 ,,	Johnston, John	,,	5/- ,,	,,
13 ,,	Griffin, William	Fireman	10/- ,,	Resigned.
21 ,,	Smith, James	Driver	14/- ,,	Deceased.
22 ,,	Whyte, James	Cleaner	6/- ,,	Retrenchment.
22 ,,	Hill, George R.	,,	5/6 ,,	,,
27 ,,	Greeves, Arthur	,,	5/6 ,,	,,
27 ,,	Freeman, John	,,	5/- ,,	,,
27 ,,	Handy, John	,,	5/6 ,,	,,
27 ,,	McMillan, John	,,	5/- ,,	,,
27 ,,	Funnell, William	,,	5/6 ,,	,,
27 ,,	Swan, E. A.	,,	6/- ,,	,,
29 ,,	Quinn, James	,,	6/- ,,	,,
29 ,,	Faulkner, Alfred	,,	6/- ,,	,,
29 ,,	Blakeney, Thomas	,,	8/- ,,	,,
29 ,,	Jenkins, Mish.	,,	5/6 ,,	,,
31 ,,	Harland, Thomas	,,	5/6 ,,	,,
5 Nov.	Catt, Samuel	Fireman	10/- ,,	To Tramways.
7 ,,	Leaney, Edward	Apprentice	5/- ,,	Discharged
8 ,,	Taylor, Alfred	Boilermaker's assistant	7/- ,,	Retrenchment.
8 ,,	White, David	Fitter	10/- ,,	,,
10 ,,	Watson, William	Apprentice	5/- ,,	Discharged.
17 ,,	Wilson, James	,,	5/- ,,	,,
17 ,,	Tickle, Joseph	Cleaner	6/- ,,	Retrenchment.
17 ,,	Campbell, William	,,	6/- ,,	,,
17 ,,	Farquhar, Alfred	,,	5/- ,,	,,
17 ,,	Vinnicombe, Charles	,,	6/- ,,	,,
21 ,,	Dunk, Henry	Head cleaner	7/- ,,	,,
29 ,,	Sykes, George	Tinsmith	8/- ,,	Deceased.
29 ,,	Smith, James H.	Driver	9/- ,,	Retrenchment.
30 ,,	Neale, D. H.	Mechanical Engineer	13/- ,,	Deceased.
30 ,,	Cashourne, W.	Cleaner	£560 per annum	Resigned.
1 Dec.	Cooper, Percy	,,	6/- per day	Retrenchment.
1 ,,	Kelly, James H.	,,	7/- ,,	,,
1 ,,	Smith, George D.	,,	5/6 ,,	,,
		,,	5/6 ,,	,,

Date.	Name.	Position.	Rate.	Remarks.
1892.		CHIEF MECHANICAL ENGINEER'S BRANCH—*continued.*		
1 Dec.	Masters, Henry	Driver	13/- per day	Resigned.
1 ,,	Lovesey, Thomas	Driller	8/- ,,	,,
5 ,,	Means, Henry	Fireman	10/- ,,	Deceased.
8 ,,	Toms, John	Labourer	7/- ,,	Resigned.
9 ,,	Jeffries, William	Washer out	10/- ,,	,,
14 ,,	Warren, Charles	Blacksmith	10/8 ,,	Retrenchment.
16 ,,	Cathro, W.	Cleaner	7/- ,,	,,
16 ,,	Crane, James	Fuelman	7/6 ,,	Retired.
20 ,,	Brown, A.	Labourer	7/6 ,,	Resigned.
26 ,,	Crawford, Robert	Cleaner	6/- ,,	Retrenchment.
26 ,,	Watson, John	,,	6/- ,,	,,
28 ,,	Barker, Frank	,,	5/3 ,,	,,
28 ,,	Orkhie, George	Fireman	10/- ,,	Discharged.
28 ,,	Ryan, Edward	Cleaner	7/- ,,	Retrenchment.
28 ,,	King, Charles	,,	7/- ,,	,,
28 ,,	Curran, James	Fuelman	7/- ,,	,,
29 ,,	Brown, W.	Fireman	10/- ,,	Discharged.
31 ,,	Nichols, John	Travelling Inspector	£280 per annum	Retired.
		CHIEF TRAFFIC MANAGER'S BRANCH.		
8 Sept.	Smith, Mrs. T.	Gatekeeper	Free house	Resigned.
28 ,,	Wilson, Sarah	,,	7/- per week	,,
30 ,,	Curtain, J. J.	Probationer	2 6 ,,	,,
1 Oct.	Caplin, J.	Porter	7/- per day	,,
1 ,,	Turner, F.	Operator	£110 per annum	Discharged.
2 ,,	Middlebrook, G.	Porter	7/ per day	Resigned.
3 ,,	Brutan, Eliza	Gatekeeper	7/- per week	,,
3 ,,	Robinson, F.	District Superintendent	£500 per annum	Deceased.
8 ,,	Ryan, James	Junior Porter	3/4 per day	To Locomotive Branch, Tramways.
9 ,,	Baldry, Thomas	Porter	7/- ,,	Deceased
10 ,,	Elston, A. R.	Probationer	2/6 per week	To Electrical Branch.
10 ,,	Taylor, E.	Clerk	£150 per annum	Discharged.
11 ,,	Sullivan, Florence	Gatekeeper	Free house	Resigned.
12 ,,	Smith, Robert	Station-master	£105 per annum	,,
13 ,,	Allen, William	Gatekeeper	10/- per week	Retrenchment.
13 ,,	Fairburn, W.	,,	7/6 ,,	Discharged.
13 ,,	Jones, Mary Ellen	,,	Free house	Deceased.
13 ,,	O'Brien, Elizabeth	,,	10/- per week	Resigned.
13 ,,	Witherspoon, J.	,,	7/- ,,	Discharged.
14 ,,	Snelling, Theophilus	Porter	7/- per day	Resigned.
17 ,,	Butler, John	,,	6/6 ,,	Deceased.
19 ,,	Holloway, Anne	Gatekeeper	Free house	Resigned.
20 ,,	Long, J.	Lamp lighter	8/- per week	Discharged.
21 ,,	Payne, C.	Officer cleaner	4/2 per day	Retrenchment.
21 ,,	Ball, Elizabeth	Gatekeeper	7/- per week	Discharged.
21 ,,	Jones, Walter	Junior Porter	5/- per day	,,
25 ,,	Foley, Harriett	Gatekeeper	7/- per week	Resigned.
31 ,,	Brown, Louisa	,,	7/- ,,	,,
1 Nov.	Catford, C. E.	Junior Porter	2/6 per day	To Tramways.
1 ,,	Ogden, J.	,,	6/- ,,	Resigned.
1 ,,	M'Kean, R.	Probationer	2/6 per week	,,
2 ,,	Toohey, T.	Apprentice Clerk	£60 per annum	Discharged.
3 ,,	Sirkett, F.	Junior Porter	4/2 per day	Resigned.
4 ,,	Spears, Mrs.	Gatekeeper	Free house	,,
4 ,,	M'Guiren, Mrs.	,,	,,	,,
5 ,,	Standen, T. G.	Porter	7/- per day	Retrenchment.
6 ,,	Spillane, Agnes	Gatekeeper	7/6 per week	Resigned.
7 ,,	Jackson, Peter	Porter	6/- per day	Discharged.
8 ,,	O'Connor, B.	,,	7/- ,,	Retrenchment.
8 ,,	Clay, A.	,,	6 6 ,,	,,
8 ,,	Griffiths, John	,,	6/6 ,,	,,
8 ,,	M'Namara, M.	,,	7/- ,,	,,
8 ,,	Collins, Jane	Gatekeeper	Free house	Resigned.
9 ,,	Thomaswitch, Charles	Porter	6/6 ,,	Retrenchment.
9 ,,	Beddall, Joseph	,,	6/6 ,,	,,
9 ,,	Stanbrook, G.	,,	6 6 ,,	,,
9 ,,	Smith, E. L. G.	Shunter	7/6 ,,	,,
9 ,,	Clarke, Gordon	Porter	7/- ,,	Discharged.
10 ,,	Glover, John	,,	7/6 ,,	Retrenchment.
10 ,,	Brown, Harold	Junior Porter	4/2 ,,	,,
10 ,,	M'Closkey, Owen	Porter	7/6 ,,	,,
10 ,,	Gooch, W.	,,	6/6 ,,	,,
10 ,,	Finlay, George	Signalman	11/- ,,	Retired.
11 ,,	Blackett, George	Porter	6/- ,,	Retrenchment.
12 ,,	Sorrell, A.	,,	6/6 ,,	,,
12 ,,	Wilson, James	,,	6/6 ,,	,,
15 ,,	Hill, Arthur H.	Junior Porter	5/- ,,	Resigned.
15 ,,	Paull, Joseph	Porter	7/6 ,,	Deceased.
15 ,,	Menzies, Mary	Gatekeeper	10/- per week	Retired.
16 ,,	Bernasconi, V.	Porter	6/6 ,,	Resigned.
16 ,,	Irvine, Robert	Apprentice Clerk	£30 per annum	To Stores Branch.
16 ,,	Griffiths, Edward	Porter	7/- per day	Retrenchment.
17 ,,	Pucker, W.	,,	6/6 ,,	,,
17 ,,	Harper, H. J.	,,	6/6 ,,	,,
17 ,,	Middleton, A.	Coal Guard	5/6 ,,	Deceased.
17 ,,	Gould, Albert	Porter	6/6 ,,	Discharged.
18 ,,	Larmour, Alfred W.	Apprentice Clerk	£30 per annum	To Property and Estate Branch.
18 ,,	Montgomery, John	Junior Porter	2/6 per day	To Tramways.
18 ,,	Castles, W.	,,	6/- ,,	Retrenchment.
18 ,,	Kurnane, James	Shunter	7/- ,,	Discharged.
21 ,,	Pentherer, J.	Porter	6/6 ,,	Retrenchment.
22 ,,	Tansey, M.	,,	7/- ,,	,,
22 ,,	Quinn, John	,,	7/- ,,	Resigned.
23 ,,	Furby, E.	,,	7/- ,,	Retrenchment.
23 ,,	Reid, Thomas	Junior Porter	4/2 ,,	,,
23 ,,	Duggan, William	,,	4/2 ,,	Resigned.
23 ,,	Ward, Martin	Porter	7/- ,,	Retrenchment.
23 ,,	Timewell, Thomas	,,	6/6 ,,	,,
23 ,,	Johnstone, S.	,,	7/- ,,	,,
24 ,,	Hutton, J.	Junior Porter	5/- ,,	Retrenchment.
24 ,,	Blake, John	Porter	7/- ,,	Discharged.
24 ,,	Butler, F.	,,	7/- ,,	Retrenchment.
25 ,,	M'Beath, W.	,,	7/6 ,,	Discharged.
26 ,,	Mullens, Mrs.	Caretaker	12/6 per week	,,
26 ,,	Parker, Clara	,,	12/6 ,,	,,
26 ,,	Grantham, Mary	Gatekeeper	Free house	Resigned.
26 ,,	De Lockie, C.	Station-master	£232 per annum	Discharged.
27 ,,	Dennison, O.	Porter	7/- per day	Retrenchment.
28 ,,	Sudden, P.	,,	7/- ,,	,,
29 ,,	Rice, W.	,,	7/- ,,	,,
30 ,,	Haner, A. T.	,,	6/6 ,,	,,
30 ,,	Twyman, Albert	,,	7/- ,,	,,
30 ,,	Meskill, Michael	Gatekeeper	15/- per week	Discharged.
1 Dec.	Dyer, J.	Porter	6/- per day	Retrenchment.
1 ,,	Airs, C.	Gatekeeper	7/- per week	Resigned.

Date.	Name.	Position.	Rate.	Remarks.
1898.		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
1 Dec.	Bartlett, F.	Porter	6/- per day	Retrenchment.
1 ,,	Downing, Daniel J.	Apprentice Clerk	£30 per annum	To Stores Branch.
1 ,,	Birrell, Alexander	Porter	7/- per day	Discharged.
2 ,,	Foggan, J. M.	,,	7/- ,,	,,
2 ,,	Tate, Robert	Shunter	7/6 ,,	,,
2 ,,	Arnold, E.	Porter	7/- ,,	Retrenchment.
5 ,,	M'Namara, M.	,,	6/6 ,,	Discharged.
10 ,,	Davies, Edgar	Junior Porter	6/- ,,	Resigned.
12 ,,	O'Connor, M.	Porter	7/- ,,	Retrenchment.
12 ,,	Thompson, H.	Junior Porter	5/- ,,	Discharged.
13 ,,	Mullane, P.	,,	3/4 ,,	Retrenchment.
15 ,,	Dwyer, Henry	,,	5/- ,,	,,
16 ,,	Shaw, Mrs.	Gatekeeper	Free house	Resigned.
16 ,,	Lynch, J.	Porter	7/- per day	Discharged.
16 ,,	Benson, J.	Junior Porter	4/2 ,,	Resigned.
19 ,,	St. Ledger, T.	Junior Clerk	£100 per annum	Discharged.
20 ,,	Mackay, James	Gatekeeper	20/- per week	Deceased.
20 ,,	Turner, Walter	Porter	7/6 per day	Resigned.
20 ,,	Guthrie, Peter	,,	7/- ,,	Deceased.
23 ,,	O'Donnell, M.	Apprentice Clerk	£40 per annum	Resigned.
28 ,,	Cracknell, E.	Gatekeeper	5/- per week	,,
28 ,,	Crawford, J.	Porter	7/- per day	,,
		COMPTROLLER OF STORES BRANCH.		
1 Oct.	Dobson, K. J.	Storekeeper	£250 per annum	Left the Service.
12 Nov.	Sproule, Wallace C.	Apprentice Clerk	£30 ,,	Deceased.
		SIGNAL AND INTERLOCKING BRANCH.		
13 Dec.	Parker, Thomas	Blacksmith	11/2 per day	Retired.
21 ,,	Parish, John	Boltsmaker	8/3 ,,	Resigned.
		PROPERTY AND ESTATE BRANCH.		
20 Oct.	Flanders, Amos	Bill poster	7/- per day	Resigned.
		TRAMWAYS—LOCOMOTIVE BRANCH.		
1 Oct.	Bean, Henry	Shop Boy	3/- per day	Discharged.
4 ,,	Quinn, Patrick	Boiler washer out	8/6 ,,	Deceased.
18 ,,	Hollingsworth, John	Driver	13/- ,,	Resigned.
7 Nov.	Nicolle, Jules A.	Car-fitter	10/2 ,,	Discharged.
11 ,,	Campbell, William	Fireman	9/- ,,	Retired.
5 Dec.	Shepherd, Charles	,,	8/- ,,	Discharged.
16 ,,	Woodford, Arthur A.	Labourer	6/6 ,,	,,
22 ,,	Hudgson, Charles	Cleaner	6/- ,,	,,
		TRAMWAYS—TRAFFIC BRANCH.		
9 Oct.	Hardie, Robert	Junior Conductor	7/- per day	Resigned.
11 ,,	Martin, Henry J.	,,	5/6 ,,	To Locomotive Branch.
11 ,,	Barlow, Joseph	Car-cleaner	7/- ,,	Resigned.
13 Dec.	Bourke, James C.	,,	7/- ,,	,,
		TRAMWAYS—MAINTENANCE BRANCH.		
4 Oct.	Bell, William	Labourer	7/6 per day	Resigned.
		ELECTRICAL ENGINEER'S BRANCH.		
26 Oct.	Quinn, J.	Operator	£80 per annum	Discharged.
31 ,,	Hastings, H.	,,	£100 ,,	,,

Sydney: Charles Potter, Government Printer.—1898.

[9d.]

1892.

NEW SOUTH WALES.

REPORT

OF THE

ROYAL COMMISSION

OF

INQUIRY INTO THE ALLEGED DEFECTIVENESS AND UNSUITABILITY

OF THE

BALDWIN LOCOMOTIVES.

APPOINTED MARCH 15, 1892.



Presented to Parliament by Command.

SYDNEY: CHARLES POTTER, GOVERNMENT PRINTER.

[10s.] 6—a 1892.

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Appendices to Statement of Chief Railway Commissioner:—

A. Diagram of Grades, Penrith to Bathurst.
B 1. Relative Grades New South Wales and Alpine Railways (diagram).
B 2. Do do do do (tabulated).
C. Diagrams showing Running of Trains between Penrith and Eskbank and *vice versa*.
D 1. Drawing of Baldwin Consolidation Goods Engine.
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F 1. Diagram showing profile of Baldwin Engine in connection with existing Railway Structures.
F 2. Diagram showing "Mann" Car.
G. Do of Engine No. 132, Class J.
H. Weights of Rails and Express Passenger Engines.
I. Appendix to Report of Messrs. Kidd and Pollock—Diagram of Grade.
J. Tractive-power and horse-power of locomotives indicated at various rates of speed.

Commission.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, and so forth,—

To our trusty and well-beloved—

FRANCIS EDWARD ROGERS, Esquire, One of Our Counsel learned in the Law, President.

WILLIAM HENRY WARREN, Esquire, Member of the Institute of Civil Engineers, Professor of Engineering of the University of Sydney.

ALEXANDER BROWN, Esquire, a Justice of the Peace of Our Colony of New South Wales.

Greeting:—

KNOW ye, that We, reposing great trust and confidence in your ability, zeal, industry, discretion, and integrity, do by these presents authorise and appoint you, or any two of you, as hereinafter mentioned, to make a diligent and full inquiry into the allegations made, that the recently imported Baldwin Locomotives are defective and unsuitable to the Permanent Way of the Railways of Our said Colony of New South Wales, and are not rendering that service which was expected of them: And We do, by these presents, grant to you, or any two of you, at any meeting or meetings to which all of you shall have been duly summoned, full power and authority to call before you all such persons as you may judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such books, papers, writings, and all other documents as you may deem expedient, and to visit and inspect the same at the offices or places where the same or any of them may be deposited, and to inquire of the premises by all lawful ways and means: And We do give you power, at your discretion, to procure such clerical and other assistance as you may deem necessary for enabling you duly to execute this Our Commission: And Our further will and pleasure is, that you do within two months after the date of this Our Commission, certify to Us, in the office of Our Colonial Treasurer, under your or any two of your hands and seals, what you shall find touching the premises: And We hereby command all Government officers and other persons whomsoever within Our said Colony that they be assistant to you and each of you in the execution of these presents: And We appoint you the said FRANCIS EDWARD ROGERS, Esq., to be President of this Our Commission, which said Commission We declare to be a Commission for all purposes of the Act 44 Victoriæ No. 1, intituled, "*An Act to regulate the taking of evidence by Commissioners under the Great Seal.*"

In testimony whereof, We have caused these Our Letters to be made Patent, and the Great Seal of Our said Colony of New South Wales to be hereunto affixed.

Witness, Our Right Trusty and Right Well-beloved Cousin and Councillor, VICTOR ALBERT GEORGE, EARL OF JERSEY, Knight Grand Cross of Our Most Distinguished Order of Saint Michael and Saint George, Our Governor and Commander-in-Chief of Our Colony of New South Wales and its Dependencies, at Government House, Sydney, in New South Wales aforesaid, this fifteenth day of March, in the fifty-fifth year of Our Reign, and in the year of Our Lord one thousand eight hundred and ninety-two.

(L.S.) JERSEY.

EXTENSION OF COMMISSION.

WHEREAS it is necessary to extend the time by which the Commissioners are to make their report in the above matter: Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the said Commissioners are to make such report until the fifteenth July next.

Given under my hand at Government House, Sydney, this twelfth day of May, one thousand eight hundred and ninety-two.

JERSEY.

By His Excellency's Command,
F. B. SUTTOR.

BALDWIN LOCOMOTIVES INQUIRY COMMISSION.

MINUTES OF MEETINGS.

TUESDAY, 5 *APRIL*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The Commission was read.

Edward George Jorrom was appointed messenger to the Commission at a weekly salary of £2 2s.

Resolved,—That the times of meeting be from 2 to 5 o'clock on Tuesday and Wednesday afternoons, and from 2 to 4·30 o'clock on Thursday afternoon.

The Chief Commissioner of Railways was called in and questioned briefly with regard to the general nature of the allegations made in Parliament and elsewhere in respect of the Baldwin Engines.

The Secretary was instructed to summon Mr. Henry Hoyle, M.P., as the witness for the following Tuesday.

TUESDAY, 12 *APRIL*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

A letter was read from Messrs. R. Towns & Co., agents for New South Wales for the Baldwin Locomotive Co., requesting that the Company might be allowed to have a representative at the inquiry.

The Chief Commissioner of Railways asked, on behalf of himself and colleagues, permission to employ legal assistance at the inquiry.

The President stated that the inquiry would be conducted in public, and that, therefore, there would be no objection to the presence of any person. Those interested in the inquiry might, during the proceedings, take counsel with legal friends. It was not, however, thought desirable that witnesses should be examined except by the gentlemen composing the Commission, who would, at suitable times, ask any pertinent questions that might be suggested to them.

Mr. Henry Hoyle, M.P., was sworn and examined.

WEDNESDAY, 13 *APRIL*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined:—Mr. David Carnegie Simpson, Divisional Engineer in the Metropolitan District; Mr. Edward Millar Gard Eddy, Chief Commissioner of Railways; Mr. Deodatus Hilin Neale, A.M.I.C.E., Mechanical Engineer on the staff of the Railway Commissioners.

THURSDAY, 14 *APRIL*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined:—Mr. Deodatus Hilin Neale, A.M.I.C.E., Mechanical Engineer on the staff of the Railway Commissioners; Mr. William T. Foxlee, M.I.C.E., Engineer-in-Chief for Existing Lines; Mr. William Thow, M.I.C.E., Chief Mechanical Engineer.

WEDNESDAY, 20 *APRIL*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined:—Mr. Henry B. Howe, Workshop Manager; Mr. Henry H. Park, Shed Foreman, Penrith; Mr. William Wilson, Locomotive Inspector, Bathurst.

THURSDAY,

THURSDAY, 21 *APRIL*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

Mr. William Wilson amended the evidence given by him on the previous day.

The following witnesses were examined:—Mr. William Pilford, Shed Inspector, Newcastle District; Mr. Isaac Gregory, Shed Foreman, Penrith; Mr. Henry Robinson, on the staff of the Locomotive Superintendent; Mr. Charles Baggs, Sub-inspector Locomotive Department, Esk Bank; Mr. Henry Deane, Engineer-in-Chief to the railways of New South Wales.

TUESDAY, 26 *APRIL*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined:—Mr. Edward Molloy Halligan, Divisional Engineer in the Northern Division; Mr. John Love, Steam-shed Inspector, Junee; Mr. John Fullerton, Engine-driver; Mr. Charles Hursthouse Stanger, Outdoor Locomotive Superintendent, in charge of the Northern and Western Divisions; Mr. Thos. Rhodes Firth, Chief Assistant Engineer in the Construction Branch; Mr. Stanley Alexander.

WEDNESDAY, 27 *APRIL*, 1892.

PRESENT:—

Francis Edward Rogers Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J. P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined:—Mr. G. Cowdery, Civil Engineer, and Mr. J. Hordern, Engine-driver.

The Commission proceeded on a visit of inspection to the Locomotive sheds at Evelcigh returning to the Colonial Secretary's Office too late in the afternoon to hear further evidence.

At its rising the Commission adjourned to Tuesday the 3rd May to enable Mr. Hoyle to visit the scene of the disastrous railway accident that had occurred that morning near Tarana.

TUESDAY, 3 *MAY*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq. J. P.

The minutes of the previous meeting were read and confirmed.

Mr. Thomas Midelton, Mechanical Engineer, was examined.

WEDNESDAY, 4 *MAY*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J. P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined:—Mr. Thomas Midelton, Mr. Joshua Rushworth.

THURSDAY, 5 *MAY*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined:—Henry Joseph Moses, Engine-driver; William Wilson, Ganger; Walter Marshall Foote, Steel-worker.

TUESDAY, 10 *MAY*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined:—Charles Augustus Goodchap, late Commissioner for Railways; George Cowdery, late Engineer for Existing Lines; James Isaac Haycroft, Engineer for the Borough of Woollahra; Alexander Duff.

WEDNESDAY.

WEDNESDAY, 11 *MAY*, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined :—Jeremiah Tuites, Manager for Messrs. Proudfoot and Co., Tarana; Alexander Ferrier Watson, Divisional Engineer; Henry H. Park, Shed Inspector; William Nield, Driver; Alexander Page, Driver; William Young, Driver; Patrick Hayes, Ganger; John Sloane, Ganger; James Walsh, Ganger.

THURSDAY, 12 *MAY*, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined :—Samuel Joseph Pollitzer, Consulting Engineer; James Dunbar, Manager for Messrs. Proudfoot & Co., Bathurst; Frederick Elliott, engine driver; Patrick Dwyer, ganger; George Frederick Evans, locomotive fireman; George Yates, shed foreman, Dubbo; William Rhodes, mechanical engineer for the Baldwin Locomotive Company.

FRIDAY, 13 *MAY*, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

William Rhodes, mechanical engineer for the Baldwin Locomotive Company, was further examined.

SUNDAY, 15 *MAY*, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E.

The minutes of the previous meeting were postponed.

The Commission proceeded with a trial train to Picton, and during the day various tests were made with Baldwin passenger engine No. 447.

The first trial was from Picton to Picton Lakes, up a gradient of 1 in 40, and the load hauled was 179 tons. The engine returned tender first to Picton, and again traversed the 1 in 40 gradient between there and Picton Lakes, this time with a load of 157 tons 12 cwt.

From Picton Lakes the engine proceeded to Hill Top, the load being 121 tons 14 cwt., and the gradient 1 in 30; and after returning tender first to Picton Lakes, again took the incline of 1 in 30, the load on this occasion being 144 tons 2 cwt.

Subsequently, as a test of speed, the engine travelled with a load of 157 tons 12 cwt. from Picton to Thirlmere.

TUESDAY, 17 *MAY*, 1892.

PRESENT :—

Alexander Brown, Esq., J.P., Acting President.
Professor Warren, M.I.C.E.

The minutes of the previous meeting were read and confirmed.

Samuel Joseph Pollitzer, C.E., made a voluntary statement in regard to the evidence given by him on Thursday the 12th instant.

Albert Leahy, C.E., was examined.

Mr. Hoyle intimated that he had no further evidence to call, and at the request of Mr. Felton the proceedings were then adjourned to the following day.

WEDNESDAY, 18 *MAY*, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E. | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

Edward Millar Gard Eddy, A.I.C.E., Chief Railway Commissioner of New South Wales, made a statement preparatory to the calling of witnesses by the Railway Commissioners.

THURSDAY, 19 *MAY*, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined :—Hugh M'Lachlan, Secretary to the Railway Commissioners; John Grady, ganger on the New South Wales Railways; John Berghoffer, ganger on the New South Wales Railways; Charles Lowe, ganger on the New South Wales Railways; John M'Peak, ganger on the New South Wales Railways; William King, Sub-Inspector of Permanent way on the New South Wales Railways; Edward Robins, Inspector of Permanent way on the New South Wales Railways.

WEDNESDAY,

WEDNESDAY, 25 MAY, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined :—Richard Waring, Chief Inspector on the New South Wales Railways ; James Fraser, assistant to the Engineer-in-Chief for Existing Lines ; William T. Foxlee, M.I.C.E., Engineer-in-Chief for Existing Lines.

THURSDAY, 26 MAY, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were called and examined :—Mr. William Thow, M.I.C.E., Chief Mechanical Engineer in the service of the New South Wales Railways ; Mr. Charles Harsthouse Stanger, Out-door Locomotive Superintendent in the service of the New South Wales Railways.

FRIDAY, 27 MAY, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were examined :—William Thow, M.I.C.E., Chief Mechanical Engineer in the service of the New South Wales Railways ; Edwin Molloy Halligan, Shed Foreman, Newcastle ; Robert Pollock, Consulting Engineer ; Howell Bland, Assistant Receiving Foreman at Eveleigh : John Chudleigh, Engine-driver on the New South Wales Railways ; W. W. Young, Engine-driver on the New South Wales Railways ; Henry Robinson, Civil Engineer in the service of the New South Wales Railways ; Deodatus Hilin Neale, Assoc. M.I.C.E., Mechanical Engineer in the service of the New South Wales Railways.

TUESDAY, 31 MAY, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The following witnesses were further examined :—Henry Deane, Chief Engineer in the Railway Construction Branch ; Deodatus Hilin Neale, Assoc. M.I.C.E, Mechanical Engineer in the service of the New South Wales Railways.

WEDNESDAY, 1 JUNE, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

George Cowdery, C.E., made a voluntary statement in regard to the evidence given by him when previously before the Commission.

Edward Millar Gard Eddy, Chief Railway Commissioner, was examined by Mr. Brown Mr. Hoyle, in consequence of statements made by Mr. Eddy, refusing to cross-examine him.

THURSDAY, 2 JUNE, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The Commission proceeded to the consideration of the Report.

THURSDAY, 9 JUNE, 1892.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.

The Commission further considered the Report.

THURSDAY, 16 *JUNE*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.
The Report was further considered.

FRIDAY, 17 *JUNE*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C. President.

Professor Warren, M.I.C.E., | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.
The following witness was examined:—Mr. William Thow, M.I.C.E., and M.I.M.E., Chief Mechanical Engineer in the service of the New South Wales Railways.

WEDNESDAY, 22 *JUNE*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

Professor Warren, M.I.C.E. | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.
The Report was further considered.

TUESDAY, 28 *JUNE*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
Professor Warren, M.I.C.E.

The minutes of the previous meeting were postponed.
The Report was further considered.

WEDNESDAY, 29 *JUNE*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

Professor Warren, M.I.C.E. | Alexander Brown, Esq., J.P.

The minutes of the two previous meetings were read and confirmed.
The Report was further considered.

THURSDAY, 30 *JUNE*, 1892.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

Professor Warren, M.I.C.E. | Alexander Brown, Esq., J.P.

The minutes of the previous meeting were read and confirmed.
The Report was adopted.

THURSDAY, 14 *JULY*, 1892.

PRESENT:—

F. E. Rogers, Esq., Q.C., President.

Professor Warren, M.I.C.E., | The Hon. Alex. Brown, M.L.C.

The minutes of the previous meeting were read and confirmed.
The balance sheet was produced and read.
The accounts were passed.

14 July, 1892.

F. E. ROGERS,
President.

BALDWIN ENGINES COMMISSION.

REPORT.

To His Excellency The Right Honorable VICTOR ALBERT GEORGE, EARL OF JERSEY, a Member of Her Majesty's Most Honorable Privy Council, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

MAY IT PLEASE YOUR EXCELLENCY,—

We, the Commissioners appointed by Your Excellency on the 15th day of March, 1892, "to make a diligent and full inquiry into the allegations made, that the recently imported Baldwin Locomotives are defective and unsuitable to the Permanent-way of the Railways of your said Colony of New South Wales, and are not rendering that service which was expected of them," have the honor to submit the following Report:—

It appears that about the month of August, 1890, and prior to the ordering of the Baldwin locomotives, various negotiations for the supply of engines to be built in the Colony had failed, and English locomotive builders were unable to promptly supply engines sufficient for the then requirements of the Railway Service of the Colony. Under these circumstances, the Railway Commissioners, finding that the exigencies of traffic (especially that anticipated in wool during the then approaching wool season) demanded the immediate supply of further engine power, appointed a committee of responsible officers in the New South Wales Railway Service, consisting of Mr. D. H. Neale (Mechanical Engineer), Messrs. Loughry and Stanger (Outdoor Locomotive Superintendents), and Mr. Howe (Workshop Manager), to report upon the merits of the 10-wheel American express passenger and the consolidation goods engines, the information to hand regarding which was that such engines had been tried with most satisfactory results in the United States on railway lines resembling in many respects those of New South Wales. This Committee had before them the specification of an engine which had been supplied by the Baldwin Co. to the Baltimore and Ohio Railroad Co., and which appeared to the Committee to be suitable in every respect for the railways of New South Wales. After careful consideration, the Committee advised the Railway Commissioners to order from the Baldwin Co. engines of a similar character to that described in the specification, subject to certain modifications in construction, which they considered would render the engines more suitable to the conditions existing in the Colony, and these modifications appear to your Commissioners, as far as the evidence enables them to judge, to have been judicious. In consequence of the Report twelve passenger engines were ordered and obtained from the Baldwin Co., and subsequently twenty engines for goods traffic were ordered and obtained from the same company (including two engines on the compound system, which were ordered by way of experiment, and which need not be considered in this Report). Report, 1 September, 1890 (page 302).

The sufficiency and merits of the passenger and goods engines so obtained are the matters respecting which your Commissioners are directed to inquire.

AS TO THE ALLEGED DEFECTIVENESS OF THE BALDWIN LOCOMOTIVES.

Soon after the locomotives were imported and allowed to run, various defects developed themselves, all of which, it is stated, have been remedied at the expense of the Baldwin Co. Of the defects which manifested themselves it now seems only important to draw attention to the very grave one shown by the undue heating and eventual breaking of certain bogie and tender axles, which, on being tested, proved to have been made of very inferior iron. On their being informed of the breakages, the explanation of the Baldwin Co. was that the axles had been obtained by them from a manufacturer whose product had been hitherto largely used with good results, and that as the axles were supposed to be made of selected scrap-iron, no test had been prescribed, as no test of scrap-iron axles is conclusive. Subsequent events showed that it was most unfortunate that no test was made by the Baldwin Co., as most probably it would not then have been left for the above mentioned breakages to lead to the discovery that the material used in these axles was most unsuitable for its purpose. Unquestionably the Railway Commissioners would, if possible, have had an inspection of these engines during their construction similar to the practice in that respect which is observed in England when engines are there manufactured for the Railway Service of this Colony, and, as a matter of fact, they authorised Mr. Thow, the Chief Mechanical Engineer in the New South Wales Railway Service, who was about to visit America on his way from England to this Colony, to have an inspector appointed if he deemed it desirable; but, on reaching America, Mr. Thow appears to have consulted with the most reliable authorities in that country, from whom he ascertained that it was very unusual to appoint an inspector over engines built by such a firm as the Baldwin Co.; and as it had been left to the Baldwin Co. to do their best to supply thoroughly efficient and serviceable engines which would do credit to their builders, and as Mr. Thow was not in a position to give a specification or set of drawings to an inspector, such an officer could not have been of any practical use, especially under a contract which did not provide for the supervision, or in any way recognise the authority of an inspector. And it seems that Mr. Thow very properly concluded that the appointment of an inspector would be more likely to relieve the Baldwin Co. of the responsibility which rested upon them than be of any practical service. The construction of the locomotives was, therefore, carried through without the employment of an inspector, and after their completion and arrival in this Colony they were erected and put into steam under the supervision of an engineer sent for that purpose by the Baldwin Co. No test of the material in the engines was at that time applied in this Colony. Any test that could have been applied would have involved the destruction of the parts tested, and the Railway Commissioners had not then any reason to doubt the sufficiency of the material in all parts of locomotives supplied by a firm of the standing and reputation of the Baldwin Co. It is to be borne in mind that it was only after the Baldwin Co. had been told of the breakages that the Railway Commissioners were informed by them of the facts relating to the supply of the axles, and that no test of them had been prescribed. As soon as the defectiveness of the axles was established all the bogie and tender axles were removed, steel ones were substituted at the expense of the Baldwin Co., and the locomotives were again put into service. Since then three tires of tender wheels have broken, and in some twelve or fifteen cases engine wheels have worked loose on their axles. As such occurrences are unusual on engines which have only given the service which has been obtained from these locomotives, your Commissioners cannot too strongly approve of the recent determination of the Railway Commissioners to forthwith remove the wheels and axles of all the passenger locomotives, with a view of having them properly tested, which has rendered unnecessary a recommendation to that effect which your Commissioners would otherwise have felt it their duty to make. Since that decision was arrived at, the tires and axles have been tested under the supervision of Professor Warren, whose report (appended hereto) shows that the steel of which the tires are made is not sufficiently uniform in quality, and is too hard and brittle, and thus renders them very liable to fracture. The testing of one of the driving-axles under the falling weight showed that its material is defective and unsafe for passenger traffic, but whether the remaining axles may suffice for use in goods traffic, where the slower rate

Letter, 15th February, 1892 (page 314).

See Mr. McLachlan's letter of 22nd Sept., 1890 (page 304), and Mr. Thow's reply thereto, dated 8th Dec., 1891 (page 317).

rate of speed observed renders them less liable to fracture, can only be decided when further tests shall have been made—such as tensile and bending tests on specimens cut from the axle fractured by the process above mentioned.

AS TO THE ALLEGED UNSUITABILITY OF THE BALDWIN LOCOMOTIVES TO THE PERMANENT-WAY OF THE NEW SOUTH WALES RAILWAYS.

The permanent-way consists at present of six kinds of rails: Iron rails, double-headed, originally weighing 75 lb. to the yard; flat-based Vignole or T rails, weighing 71½ lb. per yard; steel rails, bull-headed and flat-based, weighing 80 lb. per yard; double-headed steel rails, weighing 75 lb. per yard; flat-based steel rails, weighing 71½ lb. per yard. Since the Railway Commissioners came into office over 200 miles of the lines have been laid with 80-lb. steel rails on ironbark sleepers, which average in weight 2 cwt. 1 qr., placed 2 ft. 7 in. from centre to centre. It is proposed by them that the whole of the Western Line shall consist of steel rails, weighing on different portions 80 lb., 75 lb., 71½ lb. to the yard, on ironbark sleepers similarly spaced. A great deal of the line originally laid down, and which may be called the old road, consists at present of iron rails worn at the present time to probably about 70 and 73½ lb. per yard, laid upon ironbark sleepers placed from 3 ft. to 3 ft. 1 in. from centre to centre. This old road has been strengthened on curves, and on some other portions, by additional sleepers.

The evidence of the Chief Commissioner of Railways and of Mr. Rhodes, an engineer representing the Baldwin Company, and Mr. Neale (before mentioned), on the weight of rails and the maximum loads on the driving-wheels of engines which pass over them, shows that heavier engines run upon steel rails which are lighter than the lightest rails in use in New South Wales. For example, in America the Baltimore and Ohio Co.'s Railway use a 67-lb. steel rail to carry an axle load of 15 tons 14 cwt., and a total weight of engine and tender of 93 tons 6 cwt. The Eastern Railway of France employ engines carrying a load of 16 tons 2 cwt. on rails weighing from 69 to 89¼ lb. per yard. The rails are 39 feet long, and are carried on sixteen sleepers. (Q.) 6600 to 6621; 6086 to 6122-7925.

In America the average spacing of the sleepers is 2 feet from centre to centre, but the timber is soft and frequently of inferior quality. The ironbark sleepers used in this Colony are superior in hardness and in every other respect to the American sleepers. Sir John Fowler and Sir Benjamin Baker, most eminent engineers in England, are of opinion that a 70-lb. rail on ironbark sleepers, laid 3 feet from centre to centre, is perfectly safe for axle loads of 16 tons, provided that the ballasting is well maintained and the permanent-way in good order. It must be concluded, therefore, that, assuming the material to be good and the conditions last-named to exist, the old road of the New South Wales Railways is perfectly safe for such axle loads as are carried by the Baldwin locomotives, the weight of which amounts to 15 tons 5½ cwt. on the passenger, and 15 tons 9 cwt. on the consolidation engines, and inference to the contrary is not to be drawn on account of the breaking of the rail which caused the recent deplorable accident near Tarana, as at the point of fracture an old flaw was discovered which extended from the base upwards for about half the depth of the rail, the existence of which was not disclosed till after the accident. Your Commissioners recognise the fact that, since their accession to office, the Railway Commissioners have done their utmost, with the means at their disposal, to effect improvement, by relaying a large portion of the lines; and it is most desirable that provision should be made to enable them to continue their efforts in this direction, which, apart from other considerations, are to be commended on economic grounds. A great deal of evidence was given with the view of showing that the platforms were altered to accommodate the Baldwin engines, but your Commissioners think that the proper conclusion to be drawn is that the alterations were made for the purpose of bringing the platforms to the standard gauge, and would have been carried out in any event; probably their completion was very properly accelerated in view of the anticipated use of the Baldwin engines. The strength of the various bridges, in regard to their capacity to carry the Baldwin engines, forms the subject of a special report by Professor Warren, from which it will be seen that some of the existing bridges and viaducts, especially the Solitary Creek bridge, on the Western Line, and the

Wollondilly

Wollondilly bridges, on the Southern Line, as well as the viaduct near Wagga Wagga, are now subjected to stresses considerably in excess of that which would be regarded as safe according to the best English practice; and it is therefore satisfactory to observe that the Commissioners are taking steps to have these structures strengthened, and also that Mr. Deane, the Engineer-in-Chief for Railway Construction, has designed stronger types of timber viaducts, in view of the increased weight of the engines now used on the New South Wales Railways. The new viaduct at Glenlee (designed by Mr. Foxlee, Engineer-in-Chief for Existing Lines) is another example of the increased strength of the timber structures which has become necessary in consequence of the increased weight of engines. It is a well-known fact that the increase in the weight of locomotives, and the strengthening of bridges and viaducts to carry them safely, have been most marked during the last ten years in all parts of the world, and it is not to be supposed that structures intended to carry engines considerably lighter than those now in use should be safe to carry loads greatly in excess of those for which they were originally designed.

See Professor Warren's report (page vii).

As to the general effect of the Baldwin locomotives on the permanent-way, it does not appear that the wear and tear is greater than in the case of other engines; on the contrary, their flexibility renders them less likely to spread the road than the more rigid engines of English manufacture.

AS TO THE ALLEGATIONS THAT THE BALDWIN ENGINES ARE NOT RENDERING THAT SERVICE WHICH WAS EXPECTED OF THEM.

To ascertain what was really expected of these engines it is necessary to consider the evidence of Mr. Neale and Mr. Stanger rather than the correspondence, because it will be found on reference to the latter that, in consequence presumably of alterations suggested in a letter by the Secretary to the Railway Commissioners, on the 2nd September, 1890, the Baldwin Co. declined to give a definite guarantee of speed. An extract from the Company's letter to their New South Wales agents, Messrs. Towns & Co., is in these terms:—"We have carefully considered the conditions of service for which these locomotives are intended, viz., to haul 152 to 176 gross tons of cars and load at a speed of 22 miles per hour up long grades of 136 feet per mile, combined with severe curvature, and to haul up grades of 176 feet per mile, with easier curvature, loads of 120 to 144 gross tons. We note that the sharpest curves are of 528 feet radius, but it is not stated that this is the radius of the curves in combination with the 130 feet grade. Our calculations indicate that the engines will have sufficient tractive force to haul these loads, but we prefer not to make a definite guarantee of the speed, as it is more or less dependent upon conditions of which we are not fully informed, such as the quality of the coal, the wheel-base of rolling-stock, condition of track, &c."

See letter from Messrs. Towns & Co. to the Railway Commissioners of the 15th Dec., 1890 (page 317).

According to Mr. Neale, the Railway Commissioners had in their letter put the required speed very high, and he states that therefore he was not at all alarmed at the refusal of the Baldwin Co. to guarantee the speed; in point of fact what it was really expected the engines would be required to do was less than the Baldwin Co. were asked to guarantee.

The results of trials of these engines will be found in appendices hereto, and they demonstrate their great hauling power and show that the passenger engines are capable, under favourable conditions, of hauling trains weighing 152 tons up a long grade of 1 in 40, at a speed of 19½ miles an hour after the engines have settled down to their work, and when all their inertia has been eliminated. The reports also show that an average speed of about 21 miles an hour with such a load could be obtained over the whole length of the grade above referred to. It is to be remembered that the chief purpose for which the Baldwin engines were imported was to draw heavy loads over lines of railway most exceptional in their character, on which steep gradients and sharp curves are of frequent occurrence, especially on the Western line, which is stated to be more difficult to work than any of the Alpine railways.

See reports of Messrs. Richardson, Stanger, and Neale (page 367), Professor Warren (page i), Messrs. Pollock and Kidd (page 347).

In conclusion, your Commissioners have the honor to report that in their opinion the Baldwin engines are not unsuitable to the Permanent-way of the Colony, they are not defective in design, and when the objectionable tires and axles have been replaced by others of approved quality, there is no reason to doubt that they will be capable of rendering the service which was expected of them.

RECOMMENDATIONS.

RECOMMENDATIONS.

As the Baldwin Co. were, considering their reputation, very naturally relied upon to furnish engines of high class material, and as, so far, much disappointment and many failures have resulted from that reliance, your Commissioners think it would be prudent :—

(*a*) That the driving axles of the Consolidation engines should be sufficiently tested to prove their suitability or otherwise for goods traffic;

(*b*) That the Otis steel axles supplied by the Baldwin Co. to replace the iron axles of the bogies and tenders should also be tested;

(*c*) That the system of inspection which is carried out in the case of engines constructed for this Colony in England should be adopted in all cases.

Your Commissioners have the honor to recommend :—

(1.) That provision be made to enable the Railway Commissioners to carry out their intention with regard to the strengthening of the Wollondilly and Solitary Creek bridges, and the renewal or strengthening of the Wagga Wagga viaduct, and similar timber structures as soon as possible.

(2.) That provision be made to enable the Railway Commissioners to continue their efforts in reballasting and relaying the necessary portions on the Western and Southern lines.

(3.) That the twelve passenger engines be supplied with new axles and tires of suitable quality before they are restored to passenger service.

We have the honor to be,

Your Excellency's most obedient Servants,

(Signed) F. E. ROGERS,
PRESIDENT.

W. H. WARREN.

ALEXANDER BROWN.

Dated, Sydney, the 4th day of July, 1892

Trial of American Ten-wheeled Passenger Engines.

It was decided to leave Sydney with a trial train at 8·20 a.m. on Sunday, 15th May, and to commence the trials from Picton at 10·30 a.m.

The first trial to be with a load of 176 tons, up a gradient of 1 in 40, to Picton Lakes, returning tender first to Picton, and next making second trial with 152 tons again to Picton Lakes. In each of these trials the train will be set back to the north side of Picton Station, sufficiently far to enable the train to attain a speed of 20 miles per hour when passing Picton Station, this being about the ordinary speed of the regular express.

The trials up a 1 in 30 gradient to be commenced from Picton Lakes, first trial being with 120 tons, which will be taken to Hill Top; after returning tender first to Picton Lakes, the second trial up 1 in 30 gradient, with a load of 144 tons, will be made to Hill Top, thence returning tender first to Picton, arriving at about 4 p.m., turning the engine there, and arriving in Sydney at 6·8 p.m.

It is not proposed to attempt to take the quantity of coal used in each of these trials, but the quantity used between the commencement of the first trial and the completion of the day's work in Sydney will be ascertained.

In addition to the person nominated by those conducting the trials for noting the pressure of steam only, one officer of the Department, in addition to the representative of the Baldwin Company, should be allowed to ride on the engine, in order that the enginenman and fireman shall be perfectly unhampered in their movements.

Professor Warren's Report on the Tests of the Baldwin Passenger Engine between Picton and Hilltop.

The tests of the power developed by the passenger engines when hauling trains up steep gradients were made on the 1 in 40, 1 in 33, and 1 in 30 grades between Picton and Hilltop.

The object of these tests was to ascertain whether these engines were capable of doing the work which was expected of them, viz.—to haul a passenger train weighing 152 gross tons up long grades of 130 feet per mile (1 in 40) at a speed of 22 miles per hour.* The train actually used consisted of Pullman sleeping cars and first-class lavatory carriages weighing in the tests over the 1 in 40 grade, Nos. 2 and 5, 157 tons 12 cwt. 2 qr. or 5 tons 12 cwt. 2 qr. in excess of the stipulated loads.

The day was fine and the rails dry, and the conditions in every way most favourable. The speed of the train in the various tests was ascertained by observing the time taken to travel over each quarter-mile by means of stop watches specially made for this class of work, and kindly let by Mr. F. M. Allcock, Haymarket, George-street, Sydney.

The indicator diagrams were taken by Messrs. Pollock and Kidd, who were specially employed by the Railway Commissioners to do this work,† and the areas of these diagrams were accurately measured by means of a planimetre, the tractive force and the horse-power calculated. All these measurements and calculations have been made independently, and the results are recorded in the following table:—

Number of Test.	Grade.	Tractive force in pounds.	Indicated horse-power.	Total load hauled in tons.	Speed in miles per hour.	Grade resistance in pounds per ton hauled.	Train resistance in pounds per ton hauled.	Train resistance calculated by Searle's formula.	Remarks.
1	1 in 40	18,184·4	817	272	16·8	56·0	10·8	12·46	
2	1 in 40	17,801·1	899	240	18·9	56·0	15·5	14·65	
3a	1 in 33	16,313·4	884	211	20·3	67·9	9·4	17·14	Short grade engine had not settled down to its work.
3b	1 in 30	18,690·3	849	211	17·0	74·6	14·0	13·63	
4a	1 in 33	18,177·8	849·6	231	17·5	67·9	10·7	13·26	Short grade engine had no settled down to its work.
4b	1 in 30	19,647·9	771·7	231	14·7	74·6	10·4	10·93	
5	1 in 40	17,305·2	924·7	243	19·4	56·0	15·2	14·36	

The diagrams appended to this report have been selected from the forty-five taken during the various tests, and they represent in each case the work done in the cylinders when the engine was exerting its maximum horse-power for the particular test under consideration. The total resistance in pounds per ton offered by the train is found by dividing the tractive force in pounds by the load hauled in tons. The train resistance is found by subtracting the grade resistance from the total resistance.

The

* *Vide* letter from the Secretary of the Railway Commissioners to the Baldwin Company, September 22, 1890, p. 304.
† *Vide* Messrs. Pollock and Kidd's report, p. 347.

ii

The train resistance, calculated from Searle's formula and recorded in the foregoing table, may be expressed as follows:—

Let R = the train resistance in pounds per ton.
" V = the velocity of the train in miles per hour.
" w = the weight of the engine and tender in tons.
" W = the total weight of train, including the engine and tender.

Then—

$$R = 5{\cdot}4 + {\cdot}00V^2 + \frac{{\cdot}000V^2 w^2}{W}$$

The weight of the engine and tender, including coal, water, and men on the engine, differed in the various tests in consequence of the weight of the coal burnt and the water evaporated. Thus,—in test No. 1 the weight was approximately 93 tons; in test No. 2, 91 tons; in test No. 3, 89 tons; in test No. 4, 87 tons; and in test No. 5, 85 tons.

In tests No. 3*a* and No. 4*a*, which were made on the 1 in 33 grade, and recorded in the foregoing table, the actual train resistances are considerably below those calculated from Searle's formula, which is due to the fact that the grade was short and the engine had not settled down to its proper speed; consequently, the recorded speed is greater than would have been the case if the grade had been longer. In the remaining tests the grades were long enough to completely eliminate the inertia of the train at the foot of the grade, and the actual resistances agree closely with those calculated by Searle's formula.

In tests Nos. 1 and 2, the results are somewhat lower than might have been expected, owing probably to the fact that the fire had become dead, and the short run from Picton to the fact of the grade was insufficient to ignite it.

Again the long pipes leading from the ends of the cylinder to the indicator must have caused a reduction in the pressures recorded by the indicator, and the mean effective pressures, tractive force, and horse powers recorded are probably 5 per cent. too low.

The maximum horse power recorded during the trials was 924·7, which increased by 5 per cent. is 971.

The horse power necessary to haul a train weighing 152 tons on a grade of 1 in 40 at 22 miles an hour may be calculated by the following formula:—

Let W = the weight of the train including the engine and tender.
" f = the total resistance in pounds per ton.
" s = the speed in miles per hour.
" H = the horse power.

Then:— $$H = \frac{W\ f\ s}{375} = \frac{244 \times 72 \times 22}{375} = 1030$$

This result is about 6 per cent. higher than the maximum obtained during the trials, and it is doubtful if the engines would develop this work under any circumstances whatever. As the Baldwin Company refused to guarantee the speeds, the results recorded must be considered satisfactory.

The tractive force developed in No. 4*b* test as well as in the Wallerawang trials is worthy of note, as it demonstrates the great hauling power of these engines, which appears to be quite as great as those obtained from the Baltimore and Ohio engine, which has a greater weight upon its driving-wheels. The trials demonstrate that the engines will haul the stipulated loads, but that the speed on the 1 in 40 grade with a load of 152 tons is not greater than 19½ miles an hour when the engine has settled down to its work, but the average speed on the whole length of the 1 in 40 incline is about 21 miles an hour under the most favourable conditions.

The coal and water records for these trials gave the following results:—

Consumption of coal per mile run ... ... 82·38 pounds
Consumption of water per mile run ... ... 560·78 pounds
One pound of coal evaporated 6·809 pounds of water.

The tractive force appears to have been properly proportioned to the adhesion of the driving-wheels, and the design generally embodies the characteristic features of American practice. The engines run steadily, and take the curves without undue oscillation.

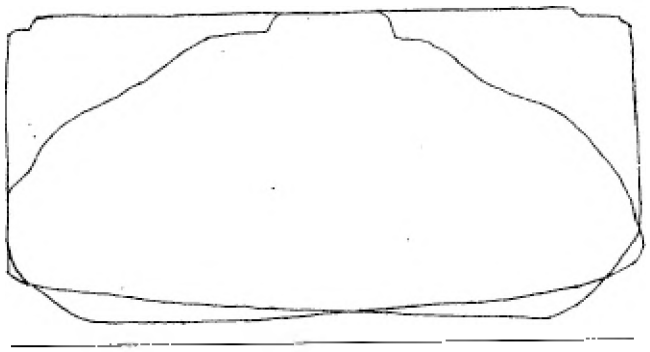
Professor

INDICATOR DIAGRAMS

TAKEN MAY 15, 1892. FROM

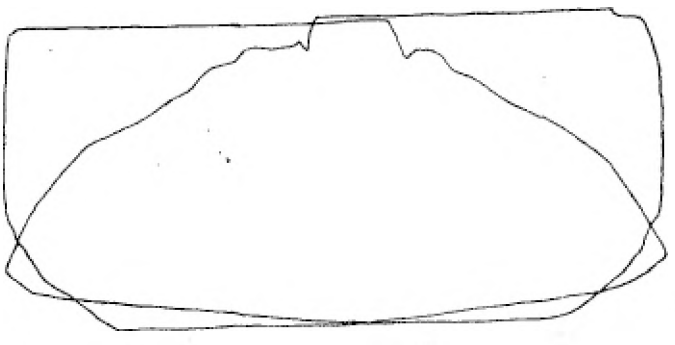
THE BALDWIN PASSENGER ENGINE. NO. 447.

Scale 80 lbs to an Inch.



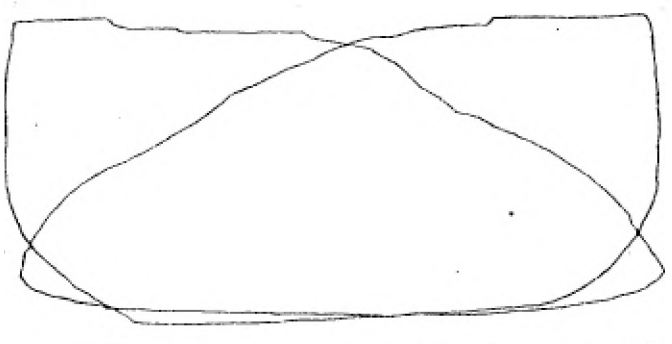
Card No. 5.
At 55 6/8 Miles
Grade 1 in 40
Speed 16.8 Miles
Revs. per Min 92.6
B. P. 150 lbs.
M.E.P. 106.4 lbs
I. H. P. 817

TRIAL No. 1.

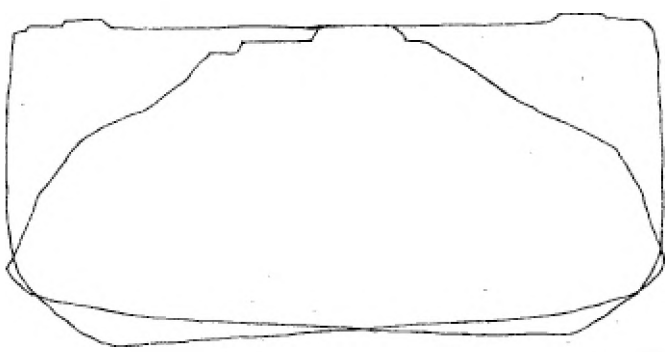


Card No. 13.
At 55 3/8 Miles.
Grade 1 in 40
Speed, 18.9 Miles.
Revs. per Min. 104.1
B. P. 150 lbs.
M. E. P. 104.1 lbs
I. H. P. 899

TRIAL No. 2



Card No 18
At 66 3/8 Miles.
Grade 1 in 33
Speed 20.3 Miles
Revs. per Min, 111.8
B. P. 150 lbs.
M. E. P. 95.4 lbs.
I. H. P. 884



Card No. 22
At 67 7/8 Miles
Grade 1 in 30
Speed 17 Miles
Revs. per Min, 93.7
B. P. 155 lbs
M. E. P. 109.3 lbs.
I. H. P. 849.2

TRIAL No. 3

(5196)

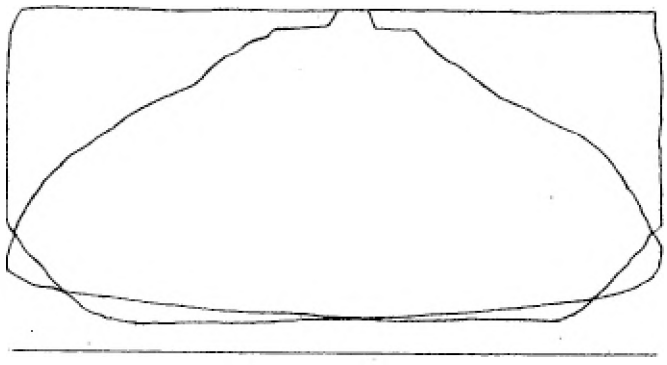
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

INDICATOR DIAGRAMS

TAKEN MAY 15, 1892. FROM

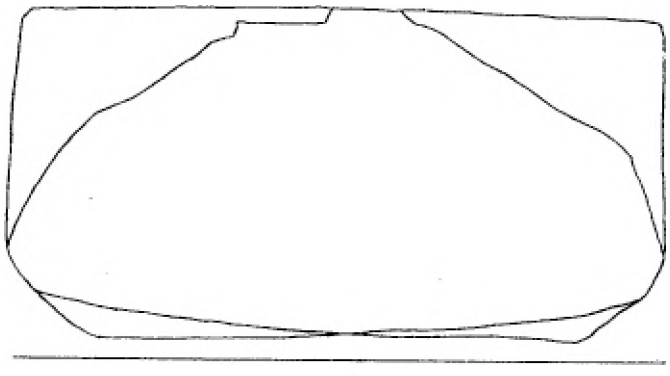
THE BALDWIN PASSENGER ENGINE No. 447

Scale 80 lbs to an Inch.

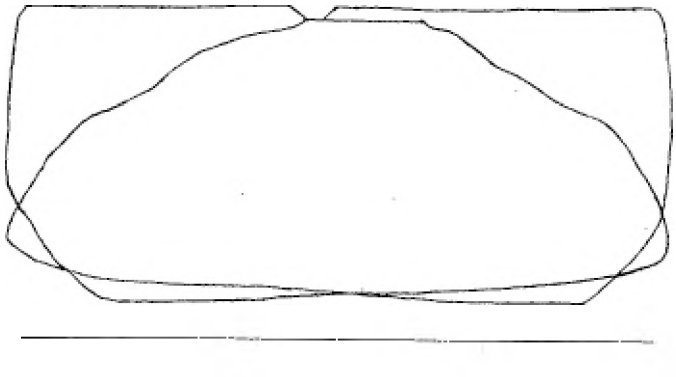


Card No 28
At 66 5/8 Miles
Grade 1 in 33
Speed 17.5 Miles
Revs per Min. 96.4
B. P. 155 lbs
M. E. P. 106.3 lbs.
I. H. P. 849.6

TRIAL No. 4



Card No 35
At 68 3/8 Miles
Grade 1 in 30
Speed 14.7 Miles
Revs per Min 81.0
B. P. 155 lbs.
M. E. P. 114.9 lbs
I. H. P. 771.7



Card No 42
At 55 5/8 Miles.
Grade 1 in 40
Speed 19.4 Miles.
Revs. per Min 110.2
B. P. 155 lbs
M. E. P. 101.2 lbs
I. H. P. 924.7

TRIAL No. 5

(Sig 6).

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

v

Professor Warren's Report on the Axles and Tires of the Baldwin Engines.

Axles.

The stress and strains in axles are very complex. The loads resting upon the journals while they are rotating develop stresses, which alternate between tension and compression, ultimately producing fatigue of the material.

An axle is also subjected to torsional stresses—as, for example, when running round sharp curves, or when, from unequal wear of brake blocks, the brake pressure applied to the wheels is not equally divided between them, or from insufficient lubrication between the journals and their bearings.

The shocks produced by the irregularities of the road, which cannot be entirely overcome by the action of the springs upon the engines and rolling stock, and which increase in frequency and intensity with the speed of the train, the unequal loading of axles, oscillations, and other causes, combine with those already referred to in producing fatigue of the material, and tend to commence and ultimately complete the destruction of the axle. The capacity of an axle to carry its load and to resist the other stresses developed by the causes above enumerated will depend upon its form and dimensions, and upon the physical properties of the material used in its manufacture. The sizes and proportions of the axles of the Baldwin engine are sufficient for their purpose, provided that the iron is of suitable quality. The driving-axles are exceptionally large, viz., 8½ inches in diameter.

The failure of these axles on the bogie and tender wheels, and the results of the tensile and drop tests which were subsequently made upon them, clearly demonstrate the inferior character of the material, and their unsuitability for railway traffic.* The Baldwin Company have admitted this, and have supplied axles of Otis steel to replace the iron axles on the bogie and tender wheels, and have offered to bear the cost of replacing them.

It was stated in evidence "that the large driving axles were not made by the same firm as the bogie and tender axles, and as there was nothing to show that they were of inferior quality," they were allowed to run until recently. On the 23rd of June one of these axles was tested on supports 4 feet apart, centre to centre, and subjected to blows from a ram weighing 1 ton, falling from a height of 20 feet, the axle being reversed after each blow. The first blow produced a deflection of three-quarters of an inch; the second blow produced a deflection of seven-eighths of an inch in the reverse direction. The axle was then tested with a drop of 28 feet, which broke it, showing a coarse crystalline fracture. These results are unsatisfactory, and suggest the desirability of replacing these axles with others of suitable material. Meanwhile specimens should be cut out of the fractured axles for further tests in tension and bending. When these tests have been completed it will be possible to say whether the remaining axles may be allowed to run on goods trains, where the slower rate of speed renders them less likely to fracture. It is also suggested that the Otis steel axles supplied by the Baldwin Company should be thoroughly tested before they are again allowed to run on passenger trains.

Tires.

With regard to the tires: The quality of the material in the tires is quite as important as that in the axles, and the failure of the tires on two of the passenger engines and one of the consolidation engine tender wheels, and the looseness of many of the wheels upon their axles, at once decided the Railway Commissioners in withdrawing them from service, and authorising a series of tests in order to prove their suitability or otherwise for railway traffic. Before referring to these tests it is necessary to quote the opinion of competent authorities on the quality of the material considered suitable for tires.

Sir Benjamin Baker,† probably the highest authority on this subject, tested half a dozen pairs of tires from as many leading makers at home and abroad, and submitted them to the following tests:—

1. A steady bending pressure, to ascertain the elastic resistance of the tire to collapse.
2. Two successive blows from a weight falling 5, 10, 15, 20, 25, and 30 feet, to determine the endurance of the tires under shocks and blows.
3. A steady pulling stress to ascertain the ultimate tensile strength and elongation of samples of steel cut from the tires.

The results of these tests are recorded in the following table:—

Distinguishing letter and number.	Approximate elastic resistance to collapse.	Permanent set under 40 tons in inches.	Ultimate tensile strength in tons per square inch.	Percentage of elongation in length of 5 inches per cent.	Extent of bending under falling weight.		
					After 3rd blow, in inches.	After 5th blow, in inches.	After 8th blow, in inches.
a_1	38 tons	0·05	49·50	14·0	$2\frac{3}{4}$	$6\frac{7}{8}$	$13\frac{7}{8}$
a_2	not taken	.....	49·48	14·0	$2\frac{3}{4}$	$6\frac{7}{8}$	$13\frac{7}{8}$
b_1	38 tons	0·05	46·43	18·6	3	$7\frac{11}{16}$	$15\frac{3}{8}$
b_2	not taken	.....	40·90	23·6	3	$7\frac{1}{2}$	$15\frac{3}{4}$
c_1	,,	.....	44·21	8·0	$3\frac{5}{16}$	broke at 4th	.....
c_2	36 tons	0·07	42·48	5·0	$4\frac{1}{2}$	broke	.....
d_1	not taken	.....	42·51	19·6	broke	.....	.....
d_2	33 tons	0·18	37·36	5·8	broke at 2nd	.....	.....
e_1	36 tons	0·05	38·85	24·4	$3\frac{3}{4}$	broke	.....
e_2	not taken	.....	38·01	25·0	4	$10\frac{1}{4}$	$20\frac{3}{4}$
f_1	,,	.....	34·67	14·5	$5\frac{5}{16}$	broke	.....
f_2	29 tons	0·60	32·25	12·0	$5\frac{1}{2}$	$11\frac{7}{8}$	$24\frac{3}{4}$

The percentages of elongation on 2 inches may be approximately obtained from the above results by multiplying the percentages of elongation on 5 inches by 1·4.

Sir Benjamin Baker states that c_1 and c_2 have a dangerously low rate of elongation, and that failure quickly resulted under the drop test. Also that d_1 and d_2 are very untrustworthy as shown by the wide difference in ultimate strength and elongation of the two tires, and by the snapping of both with a slight blow under the drop test. He also considers e_1, e_2, f_1, and f_2 unsuitable for tires.

The

* See table of tests, page 312.

† Proceedings of the Institution of Civil Engineers, Vol. 67, page 353.

The tensile strength of the steel in the twelve tires ranged from 32·25 to 49·5 tons per square inch, and the extension measured on 5 inches from 5 to 25 per cent., whilst under the "drop test," one tire might fail at the second blow of a weight of 1 ton falling 10 feet, and the next only do so at the twelfth blow from the increased height of 30 feet, the respective bendings before fracture varying from no less than $\frac{9}{16}$ of an inch to 28 inches in the 3 feet tire.

Sir Benjamin Baker concludes that the strength of tire steel should probably be limited from 46 to 50 tons per square inch, but that the bending under the drop test is probably the best method of testing the endurance of the tires. Messrs. Vickers & Sons (Ltd.), well-known English makers, quote the following figures for testing their "Australia" brand tires:—

1. Drop test (for safety).—Any tire in its natural state, as laid down from the rolls (without being annealed or otherwise treated), should deflect at least one-sixth of its inside diameter—except in the case of small tires (say) of less than 3 feet internal diameter, when a deflection of one-eighth of its diameter is sufficient—without showing any sign of fracture when placed under the drop in a running position on a solid foundation of at least 10 tons, and subjected to repeated blows from a 20-cwt. "Tup" falling from heights of 10 feet, 15 feet, 20 feet, 25 feet, and upwards.
2. Tensile Test (for durability).—After the tire has stood the drop test as above a test piece ¼ square inch area and 2-inch effective length, machined cold out of the solid portion, should (without any reheating or other manipulation) show a tensile strength of not less than 47 tons per square inch, with an elongation of not less than 10 per cent. on 2 inches.

Mr. Thow, M.I.C.E., Chief Mechanical Engineer, New South Wales Government Railways specifies as follows:—

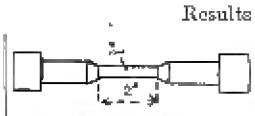
Specification for Tires.

The tires are to be made of the best Siemens-Martin or open hearth cast-steel, produced from the best hematite ore. One additional tire in every fifty is to be provided free of cost, for testing. It will be selected indiscriminately from the bulk by the Inspecting Engineer's assistant, and will be taken to represent the average quality of the fifty tires in the lot from which it may be selected. The tire selected for test is to be placed in a vertical position without being annealed, reheated, or otherwise manipulated for test purposes, on a solid metal foundation of at least 10 tons, and subjected to repeated blows from a 1 ton tup falling from a height of 10, 15, 20, and 25 feet, or upwards; and it must be flattened at least one-sixth of its diameter without showing any sign of fracture. In the case of small bogie tires of less than 3 feet external diameter a deflection equal to one-eighth of the diameter will be expected. From the tire thus treated test pieces of an original area of half a square inch (·798 diameter) and an effective length between datum points of 2 in. are to be machined cold, and tested in the presence of the Inspecting Engineer's assistant without reheating or other manipulation for purposes of the test. They must show a tensile strength which shall lie between 46 and 50 tons per square inch with an elongation of 15 per cent. and a contraction of area of 25 per cent.

RESULTS of testing Baldwin engine tires with blows from a falling weight.

No. of Engine.	Whether Engine or Tender Wheel.	Diameter of tire in feet and inches.	Extent of bending under falling weight in inches.				Remarks.
			1st blow.	2nd blow.	3rd blow.	4th blow.	
		ft. in.	in.	in.	in.		
452	Tender	2 6⅞	¼	$\frac{13}{32}$	$\frac{17}{32}$	Broke ...	Each blow was from 5 ft.
448	"	2 7	¼	Broke ...	.....	.....	1st blow, 6 ft.; 2nd blow, 10 ft.
456	Engine	4 6⅞	¼	" ...	.....	.....	1st blow, 5 ft.; 2nd blow, 10 ft.
.....	Tender	2 6⅞	¼	" ...	.....	.....	1st blow, 5 ft.; 2nd blow, 10 ft.
416	"	2 6⅞	¼	" ...	.....	.....	1st blow, 5 ft.; 2nd blow, 10 ft.

TENSION OR PULLING STRESS.

Test Number.	Description.	Original Dimensions.			Strain in Pounds.		Strain in Tons.	Limit of Elasticity.	Contracted Dimensions.			Contraction of Area per cent.	Elongation per cent.	Remarks.
		Breadth.	Thickness.	Area.	Total.	Per square inch.	Per square inch.		Breadth.	Thickness.	Area.			
	Results of testing specimens cut from steel tire of Tender-wheel of Engine No. 448.													
T.T. 1 448	 Turned specimen.	0·75" diameter.		0·44178	56,000	126,759	56·5	30·2	Not measureable.				7·5	Elongations measured on 2"
T.T. 2 448	" "	0·75" diameter.		0·44178	59,000	133,550	59·6	30·3	0·726 diameter.		0·4139	6·3	11·0	Elongations measured on 2"
	Results of testing Messrs. Vickers & Son's tire steel.													
VTS	" "	0·75" diameter.		0·44178	46,000	104,124	46·5	26·2	0·606 diameter.		0·2884	34·7	20	Elongations measured on 2"
VTS 2	" "	0·75" diameter.		0·44178	47,000	106,387	47·4	25·2	0·615 diameter.		0·2968	32·8	19	Elongations measured on 2"

The results of the drop-test on the Baldwin engine tires, and the appearance of the various fractures, show that the material is too hard and unyielding, and possesses very slight endurance under the blows of the drop hammer.

The results of the pulling test show that the tensile strength is too great, and the ductility too low and unequal; also that the material is not uniform in quality, and consequently very likely to fracture. Comparing the results of the tests on the Baldwin tires with a_1 a_2 b_1 b_2 recorded by Sir Benjamin Baker, it will be seen that the Baldwin tires are most unsuitable for railway traffic.

Professor Warren's Report on the strength and stability of the Glenlee Bridge, on the Southern Line, at 37 miles 75 chains.

Description. THE Glenlee viaduct consists of eleven spans of 21-foot centres, and two spans of 14-foot centres at ends. Each span is constructed with three compound beams of ironbark timber resting on corbels over timber trellis piers.

The compound beams consist of two 12 in. x 12 in. beams bolted together, with wedges 3 in. x 1½ in. in section between the beams and corbels at ends.

Transverse timbers, 8 in. x 9 in., are fixed to the top of the compound beams, upon which are fixed the longitudinal rail-bearers, 12 in. x 7 in. in section. Two guard timbers are provided, each 6 in. x 6 in. section. The piers consist of five piles, 12 in. x 12 in. in section, driven a considerable distance into the ground; a monkey weighing 1 ton appears to have been used for this purpose with a drop of 10 feet, the set produced by the last blow being quarter of an inch. The maximum height of the pier from ground to rail levels is 34 feet 9 inches, and the width at ground level 20 feet 7 inches. The three inner piles are carried up vertically to support the three compound beams, and the two outer piles have a batter of 1 in 6. The top headstock and bottom sill are each 12 x 12 inches in section, and the horizontal and diagonal bracing on each side of the piles are 12 x 6-inch section. The piles, headstock, sill, and bracing are securely bolted together.

Inspection. The inspection of this viaduct showed that it was constructed with good ironbark timber, and both the piles and superstructure were in good order. The maximum span of the compound beams is 21 feet 6 inches.

Testing. The viaduct was tested with one of the heaviest Consolidation engines, weighing 97 tons, and the stress produced at the centre of the beams was equivalent to a uniformly-distributed load of 4 tons per lineal foot.

Four tests were made, the first with the four driving wheels of the engine on the span, so as to produce the greatest effect, and the deflection observed was ·25 inch. The second test consisted in running the engine and Pullman car at full speed over the viaduct, and the deflection observed was ·33 inch, or an increase due to the dynamic effect of the live load of about 30 per cent. The third and fourth tests were made to ascertain the amount of the longitudinal and transverse oscillations during the passage of a train at full speed, and also with a full application of the brake on the bridge. The oscillations observed were exceedingly small, and in no case exceeded ·02 inch.

Calculations of the strength of the superstructure. The dead load of the superstructure including rails, sleepers, transomes, and compound beams is ·4 ton per foot run of viaduct, producing a bending movement in the centre of the compound beams of 23 foot-tons or 276 inch-tons.

The bending movement in the centre of the compound beams produced by the loads concentrated by the four pairs of driving-wheels of the engine in their worst position is 2188 inch-tons, which, increased by 33 per cent. for dynamic effect is 2823 inch-tons. The total bending movement in the centre due to live and dead loads is, therefore, 3099 inch-tons.

The moment of resistance of the six single beams is about 10,000 inch-tons; and since the strength of a compound beam with corbels arranged, as in the Glen Lee viaduct, has been proved by the experiments made by the Railway Bridges Inquiry Commission *to be at least 50 per cent. greater than the sum of the strengths of the two beams, we have the moment of resistance of the three compound beams, at least 15,000 inch-tons. The longitudinal rail bearers will add at least 10 per cent. to this moment of resistance, making a total of 16,500 inch-tons.

Hence the factor of safety is at least

$$\frac{16,500}{3,099} = 5{\cdot}3.$$

The factor of safety with the Baldwin passenger engines is at least 7.

Calculations of the stability of the viaduct against wind pressure. In order to ascertain the stability of the viaduct against wind pressure, calculations have been made on the stability of the railway carriages themselves, with the result that 30 lb. per square foot of surface exposed would just be on the point of overturning the carriage. Hence 30 lb. per square foot has been taken over the viaduct and train. The weight of one span and one pier of the viaduct and its load is 52,195 lb., acting with a leverage of 9·75 ft. Hence the moment of stability is 508,892 foot-lb. The moment of wind pressure is 301,455 foot-lb.

Hence the factor of safety is $\frac{508892}{301455} = 1{\cdot}69$. The calculation takes no account of the resistence which the piles would offer to overturning and drawing out of the ground, as there never can be any tension on the piles.

The stability of the viaduct itself, without the train, with a wind pressure of 56 lb. per square foot of surface exposed, is greater than that shown by the foregoing calculations, and the factor of safety is about 2½.

Longitudinal stability. The maximum retarding force producing longitudinal stress on the viaduct when an emergency stop is made upon it, at a speed of 35 miles an hour, with a train weighing 300 tons, is well within the longitudinal stability of the viaduct, and the observed longitudinal oscillations confirm the calculations made on this point.

Hence

* *Vide* Report of the Railway Bridges Inquiry Commission, pages 97 and 98.

Conclusions.

Hence the viaduct is strong enough to carry safely the heaviest loads which will pass over it, and it possesses sufficient stability to safely resist the greatest hurricane which is ever likely to occur in its neighbourhood.

It is suggested that in future viaducts of this character, the spans may be increased to 24 or 25 feet, if thought desirable, and the rails laid directly upon transverse beams 10 x 6, spaced 16 inches centre to centre.

The longitudinal rail bearers may be omitted with advantage, and wedges inserted between the beams which are capable of resisting the maximum horizontal shearing stress, with slightly larger bolts at the ends.

Professor Warren's Report on the strength of the Bridges on the New South Wales Railways when loaded with the heaviest Baldwin engine hauling its maximum load.

In 1884 a Royal Commission was appointed to make a diligent and full inquiry into the stability of certain iron bridges constructed on the existing lines of railway, and also of the timber approaches to the bridge over the Murrumbidgee River at Wagga Wagga.

The bridges investigated by the above Commission will be first considered in this report with regard to their capacity to carry safely the recently imported Baldwin engines, and the engines manufactured by Messrs. Beyer and Peacock, of Manchester, England.

In the appendices attached to the report of the Railway Bridges Commission on the strength of the various bridges will be found complete detailed calculations and stress diagrams, showing the strength of these bridges when loaded with the heaviest engines which existed at that time, and it is only necessary, in this report, to refer to the capacity of these bridges to carry one of the heaviest Baldwin engines when hauling its maximum load.

The calculations show that the Penrith, Menangle, Bathurst, Wellington, and Aberdeen Bridges are subjected to smaller stresses in the main girders when loaded with the Baldwin engine train than those recorded in the report of the Railway Bridges Inquiry Commission, and smaller than would be the case with two-coupled engines hauling the same load as one Baldwin engine. The cross girders of all the bridges are, however, subjected to slightly greater stresses with the Baldwin engines.

These bridges need not therefore be further referred to, as the conclusions arrived at, and the recommendations made with regard to them, apply without modification to the conditions existing with the present traffic. Such bridges as those over the Parramatta River on the Northern line, the Dubbo, and George's River Bridges, are fully up to the strength necessary to carry the increased engine and train loads which are ever likely to pass over them. They are the best designed bridges on the New South Wales Railways.

The bridges over the Solitary Creek on the Western line, and the Wollondilly Bridges on the Southern line, are nearly all constructed with spans of 60 feet, and they consequently receive their maximum stress when the loads concentrated by the wheels of one engine pass over them. These bridges have now to carry loads fully 25 per cent. greater than those for which they were tested by the Railway Bridges Inquiry Commission, and the calculations appended to their report show that the Wollondilly Bridges were stressed up to 5·4 tons per square inch in tension, also that the Solitary Creek Bridges were stressed up to 6·75 tons per square inch in tension. The joints in the flange plates of the Wollondilly Bridges are inferior to those over the Solitary Creek, so that the actual strength of these bridges may be safely taken as approximately equal.

Calculations on the strength of these bridges when loaded with the Baldwin engine train show that in the case of the Solitary Creek the tensile stress in the bottom flanges is nearly 9 tons per square inch, which result was corroborated by the evidence of Mr. H. Deane, M.I.C.E., Engineer-in-Chief for Railway Construction. The experiment on the fatigue of iron when subjected to repeated loads made by Herr Wöhler and Professor Spangenberg, and recently confirmed by Professor Bauschinger, of Munich, show that the ultimate breaking load of such iron as that used in the construction of these bridges is about 15 tons per square inch, although the statical strength may have been from 21 to 22 tons per square inch. The ultimate factor of safety is, therefore, only 1·6. Such a small factor of safety is considerably below what is considered safe for a railway bridge. The Board of Trade regulations limit the intensity of working stress in tension to 5 tons per square inch, and experienced bridge designers would adopt even a smaller working stress than this in such bridges as the Solitary Creek, where the ratio of the maximum to the minimum stress is as 1 to 0.27. It is necessary to point out that the Railway Commissioners appear to have fully realized the necessity of strengthening these bridges, and the methods explained by Mr. Foxlee in his evidence would, if adopted, render them perfectly safe to carry the maximum loads which pass over them.

The timber approaches to the bridge over the Murrumbidgee at Wagga consist of openings of 29 feet 6 inches span from centre to centre.

With the wheel loads concentrated by the recently imported consolidation engines, calculations show a factor of safety of about 4, which is not sufficient for an old viaduct like that at Wagga Wagga, although it is probably sufficient for a new viaduct constructed with the best ironbark timber. The Baldwin passenger engine or the Beyer and Peacock engine would produce smaller stresses than the consolidation engine, and there would result a correspondingly higher factor of safety. In this case, also, it is satisfactory to note that the Railway Commissioners recognize the necessity of providing stronger timber structures to carry the increased weight of locomotive engines, as illustrated in the case of the Glen Lee viaduct, which is the subject of a special report.

Mr. Deane also has designed stronger types of timber viaducts.

With regard to the bridges built since the Report of the Railway Bridges Inquiry Commission and before the Commissioners took office the following remarks are necessarily confined to the Warren Girder Bridges between Parramatta and Penrith, as the writer has not investigated the strength of the other bridges.

The

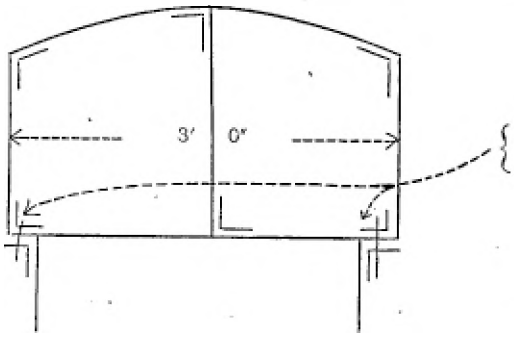
The strength of the Warren Girder Bridges referred to is fully considered in a report ordered to be printed by the Legislative Assembly, November 1, 1888.* These bridges are constructed with spans of 42 feet, and like the Solitary Creek and Wollondilly Bridges they receive their maximum stresses when one of the heaviest engines passes over them. In the calculations appended to the report referred to it will be seen that the maximum stress produced with the heaviest engines which were in use at that time occurs in the end lattice bars, and was 4·3 tons per square inch in tension, the maximum tensile stress in the bottom flanges was 3·82 tons per square inch. There are several defects in design which are considered in the report, which reduce the strength of these bridges below that which would be inferred by the figures quoted. These stresses are increased by at least 25 per cent. with the Baldwin engines, and a careful consideration of the calculations will show that they are over-stressed by this amount. It is necessary, therefore, to examine these bridges from time to time in order to ascertain if the increased stresses develop weaknesses at any part. They should also be carefully tested with one of the Baldwin consolidation engines, and the deflections compared with those recorded on page 8 of the report referred to.

With regard to the various bridges and viaducts built since the Railway Commissioners took office, the calculations and the results of testing these bridges by Mr. Foxlee which are appended to this report show that they are fully up to the standard of strength necessary to carry safely the heaviest engines which pass over them.

New South Wales Government Railways,
Sydney, 26 April, 1892.

Herewith I beg to enclose list of bridges constructed under the lines since the Railway Commissioners took office. In calculating the stresses the heaviest Baldwin engines have been dealt with.

With regard to Professor Warren's inquiry, as to the strengthening of Penrith Bridge, the recommendation of the Royal Commission upon Railway Bridges, which sat in 1884, to cut out the ¾-inch rivets connecting the webs to the booms for a length of 40 feet from each abutment, and substituting 1-inch rivets has not been carried out, owing to the difficulty of doing the work satisfactorily, in consequence of the smallness of the cells in the top and bottom booms, which renders it next to impossible to hold up the rivets. This is recognised by the report itself. (See pages 92 and 93.)



¾-inch rivets proposed to be cut out and substituted by 1-inch rivets.

But this recommendation, as well as that relating to the distribution of weight over the cross-girders, appears to refer to the line when duplicated; at present it is a single road. With regard to the bridges over Solitary Creek and the Wollondilly, the strengthening of these is under consideration. In the meantime every precaution has been taken to ensure absolute security for the traffic.

With regard to the testing of bridges and other structures: in accordance with the Commissioners' directions similar tests are invariably made to those that are made for the Board of Trade, in England, by their inspecting officers, prior to railways being authorised to be opened for traffic.

WILLIAM T. FOXLEE,
Engineer-in-Chief.

To the Secretary for Railways.

List of Bridges of 20-ft. span and over, constructed under the line by the Railway Commissioners.

Position of Bridge.	Span.	No. of Spans.	Deck or Through Bridge.	Material used in		Actual working stresses in tons per square inch.						Tests—Average Deflection.	Remarks.
				Piers.	Superstructure.	Face Girder.		Inner Girder.		Cross Girders.			
						Top.	Bottom.	Top.	Bottom.	Top.	Bottom.		
	ft. in.											in.	ft. in.
Burren-street	55 0	1	Through	Brick.	Iron	3·95	4·83	3·68	4·58	3·5	4	·3	Cross girders, 8 0 apart.
Liberty-street	51 0	1	"	"	"	3·86	4·55	1·08	4·90	3·6	4	·2	" 8 0 "
Canterbury Road	52 6	1	"	"	"	3·92	4·06	3·96	4·66	3·5	4	·2	" 8 0 "
Long Cove Creek viaduct	87 10	3	Deck	"	"	4·00	4·63	....	....	4·3	5	·608	" 8 10 "
Burwood Road	67 0	1	Through	"	"	3·42	4·07	....	....	3·9	5	·325	" 8 0 "
Powell's Creek	57 0	1	Deck	"	"	3·46	4·00	....	....	....	....	....	
Rochester-street subway	30 0	1	Through	"	"	4·09	5·09	4·01	5·01	1·5	2·9	....	
Clyde Yards	30 0	1	"	"	"	4·00	5·00	4·01	5·01	1·5	2·9	....	
Duck River	70 0	2	Deck	"	"	3·00	3·09	....	....	....	....	·18	Continuous.
Bunbury Curran	40 0	5	"	"	"	3·74	4·11	....	....	....	....	·22	"

* Professor Warren's report on the bridges on duplicated line between Parramatta and Penrith.

Timber

X

Timber Bridges.

Position of Bridge.	Span.	No. of Spans.	Deck or Through Bridge.	Material used in		Factor of safety in Girders.	Tests.			
				Piers.	Superstructure.		Transverse Deflection.	Lateral Movement.	Length Movement.	
m. ch.	ft. in.						in.	in.		
35 25 Southern Line	21 0	7	Deck ..	Ironbark	Ironbark	7·5				
35 60 ,, ...	21 0	4	,, ,,	,,	,,	7·5				
36 20 ,, ...	21 0	6	,, ,,	,,	,,	7·5				
37 34 ,, ...	21 0	8	,, ,,	,,	,,	7·5				
37 75 ,, ...	21 0	11	,, ,,	,,	,,	9·57	·305	·07	Nil.	Up side.
Meeangle Approaches	26 0	62	,, ,,	,,	,,	7·1	·59	.....	.....	
43 58 Southern Line	22 6	1	,, ,,	,,	,,	9·4				
46 25 ,, ...	23 0	5	,, ,,	,,	,,	6·0				
77 46 ,, ...	26 0	6	,, ,,	,,	,,	7·0				
77 78 ,, ...	30 0	3	,, ,,	,,	,,	8·0				
39 30 ,, ...	21 0	9	,, ,,	,,	,,	7·5				
39 18 Lapstone Hill Devn...	24 0	3	,, ,,	,,	,,	7·92				
39 27 ,, ...	24 0	3	,, ,,	,,	,,	7·92				
Wallis Creek East to West Maitland.	26 0	4	,, ,,	,,	,,	7·0				

Brick Bridges.

Position of Bridge.	Span.	No. of Spans.	Rise of Arch.	Thickness of Arch.	
M. ch.	ft. in.		ft. in.	ft. in.	
17 45 Southern Line	20 0	6	5 0	1 6	All these bridges are built of brick work in cement.
19 4 ,, ...	20 0	17	5 0	1 6	
20 26 ,, ...	20 0	6	5 0	1 6	
20 30 ,, ...	20 0	17	5 0	1 6	
22 40 ,, ...	25 0	11	6 0	1 10½	
23 3 ,, ...	24 0	3	6 0	1 10½	
23 20 ,, ...	24 0	6	6 0	1 10½	
26 33 ,, ...	30 0	6	7 6	2 3	
26 73 ,, ...	30 0	6	7 0	2 3	
29 18 ,, ...	24 0	9	6 0	1 10½	

NOTE.—The intensity of the working stresses and the factors of safety are calculated for the greatest loading by the Baldwin engines.

W.T.F., 26/4/92.

ERRATA.

Q. 2484. *Read* "up a grade of 1-30, &c,"

Q. 5912. *Read* "And are these heavier engines running, &c,"

Q. 5938. *Read* "The engine has to brake the whole train, &c."

Q. 5964. *Read* "It is running over the Bound Brook Road, &c."

Q. 5950. *Read* "efficiency" *for* "deficiency"

Q. 5988. *Read* "Philadelphia is east of Baltimore"

Q. 6146. *Read* "1,300 horse-power" *for* "1,100 horse-power"

Q. 6167. *Read* "1,300 horse-power" *for* "1,100 horse-power"

Q. 6172. *Read* "20 lb. horse-power" *for* "20 tons horse-power"

Q. 6193. The last words should *read* "8 tons 10 cwt. on the driving-wheel" *not* "6 tons 16 cwt."

Q. 6394. Remarks on Messrs. Kidd and Pollock's report apply as follows:—"Length of gradient 2⅓ miles, and several curves of 16 chains radius" *to* "gradient of 1-40"; and "about two miles of 1-30, &c." *to* "gradient of 1-30."

Q. 6594. Mean speed on whole length of gradient should be "16·71 miles per hour on fourth trip," *instead of* "15·17 miles per hour"

Q. 6608. *Read* "1890 Edition" *instead of* "90th edition, Railway Appliances."

Q. 8391. *Read* "May 11" *for* "May 15"

BALDWIN LOCOMOTIVES INQUIRY COMMISSION.

MINUTES OF EVIDENCE.

TUESDAY, 5 APRIL, 1892.

[*The Commission met at 2·30 p.m., in the Board-room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E., | ALEXANDER BROWN, Esq., J.P.

Edward Miller Gard Eddy, A.I.C.E., Chief Commissioner of Railways, being in attendance, was interrogated by the Members of the Commission with regard to the allegations that the Baldwin locomotives were defective and unsuitable to the permanent ways of the railways of New South Wales.

Mr. Eddy, A.I.C.E. 5 April, 1892.

1. *President.*] Can you inform us, Mr. Eddy, what are the charges which this Commission is authorised to investigate? I am quite at a loss to know. The Railway Commissioners are waiting to see who it is that is to make the charges against the Baldwin engines, and what the charges are. All we know is that Mr. Hoyle and other Members of Parliament have made all kinds of statements with regard to them, and that these statements were made without any degree of responsibility, in the Legislative Assembly. So far as this inquiry is concerned we are waiting to see who will come forward and formulate distinct charges.

2. About what date were these statements made by Mr. Hoyle? They were made I believe at the end of August or the beginning of September last year. I was out of the Colony at the time, but I can give the Commission copies of *Hansard* containing the debates, and also the minutes thereon drawn up by the Commissioners and forwarded to the Minister. [*Mr. Eddy then retired and subsequently returned with copies of the Debates and minutes in question.*]

3. You produce these papers? Yes; they are copies of the debate of the 20th August, 1891. What happened was this. The Minister of the day, Mr. Bruce Smith, forwarded to the Commissioners this speech by Mr. Hoyle, and certain notes thereon, and the Commissioners in reply forwarded the minutes [*produced*] to the Minister, dealing with each of the statements made by Mr. Hoyle. This speech is contained in *Hansard* in extenso. There are also other minutes attached to the paper as subsequently the Minister asked for some further information, and these minutes were then sent by the Commissioners in reply to their request.

4. *Mr. Brown.*] Since that time I understand these allegations have been repeated? Yes. No doubt you have seen in the Press at different times that the Baldwin engines have been referred to in various terms.

5. *Professor Warren.*] Some people, I believe, have written letters, I do not know whether we have their names, but I have no doubt we can get them? Yes. It is not for me to suggest to the Commission the course it should take, but it appears to me that the proper method to adopt would be to to get the gentlemen who made these charges in the first place to repeat them before the Commission with a sense of responsibility attaching to what they may say. Then the Commission will be able to deal with these charges definitely.

5½. *President.*] That is exactly what we desire to do, and it is the reason why we have sent for you;—we do not know who made the allegations, and we want to get these people here so that we may hear all about them. It is said that these engines are defective, and it is the duty of such persons to show that the facts are as alleged, but since we do not know who made the charges in question we have sent for you with the hope that you will be able to tell us about them, and perhaps of others also? With the exception of the name of Mr. Hoyle I do not know that of any other gentleman. There have been letters in the newspapers making charges against the engines, but I have not seen any with names attached to them. I remember one letter under the *nom de plume* of "Penrith" making all sorts of charges, but on the other hand there have been letters from a number of people who have seen the performances of the engines, and benefited by them, speaking in quite an opposite strain.

6. *Mr. Brown.*] So far as you are concerned there will be no obstacle placed in the way of the officers of the department coming forward to give evidence before the Commission? Oh, certainly not.

7. You will give them every freedom so far as you are concerned? Certainly; every information we can give the Commission we shall be glad to give it. The only thing we would ask is that the scope of the inquiry be confined as much as possible to the matters which the Commission is directed to investigate.

8. *President.*] Yes; that is quite right. Are there any letters, contracts, or any correspondence with the Baldwin Engine Company, or whoever may be the manufacturers of the locomotives, showing the Commission what kind of engine was required? Oh, yes.

9. Is there any objection to the production of these? We shall produce anything you may require after you may hear what the charges are. But first of all I think you must hear the charges. This Commission, I take it, is not charged with an explanation of, or inquiry into, the acts of the Commissioners with regard to the ordering of these locomotives, but simply to inquire into the question of the suitability or otherwise of the Baldwin engines for running upon our railways, and also as to their performing the work which they were expected to do.

Mr. Eddy, A.I.C.E. 5 April, 1892.

10. That is exactly the point; and I think that as to the work expected from them, it would be shown by what you ordered? We shall be able to show you that, and also what they are doing to-day.
10½. We want to see what were ordered, and also to ascertain whether the engines are doing the work expected of them according to the orders? We will give you copies of the correspondence bearing upon these points.
11. *Mr. Brown.*] Then I understand that the Railway Commissioners will furnish us with copies of the correspondence between it and the Baldwin Engine Company? Yes.
12. *President.*] And I take it that in the event of our wanting you we shall be able to secure your presence, or at least that during the sittings we shall be able to have one of the Commissioners present, if we desire to be enlightened on any point? Certainly; there is generally one in town.

TUESDAY, 12 *APRIL*, 1892.

[*The Commission met at 2 o'clock in the Board-room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

13. *President.*] I have received a letter from the agents of the Baldwin Engine Company, asking that they might be allowed to have a representative at this inquiry. By that I understand them to mean a legal representative. I would now ask if there are any other applications of the same character. Am I to understand that there are not? The members of the Commission wish it to be understood that they cannot accede to the application. So far, however, as we have any control over these proceedings, we shall permit the public to have free access to them, and the representatives of the Baldwin Company, or anyone else, can come here and listen to what is going on, and if they choose to do so send in any question they would like to have asked. Then, if it should be material to the issue, and within the scope of the inquiry, we shall in our discretion ask it from the witnesses. But to let counsel or solicitor or any advocate appear for each of the parties concerned or the different persons interested would, I think, be impracticable. In the first place I might refer to the enormous time it might take, next to the fact that this inquiry is in the interests of the public, its object being to find out, as set forth in our Commission, certain matters with regard to the Baldwin engines, and for that purpose we do not want anybody here who would cross-examine or anything of that kind. Therefore we think it better that no legal representatives of any kind whatever should appear. As I have stated, the Commissioners will be glad to put any questions which may be submitted to them, and which they think fit to be asked.
14. *Mr. Eddy.*] Do your remarks, sir, apply to the Railway Commissioners?
15. *President.*] Yes, to everyone concerned in this inquiry. The Railway Commissioners may hear the evidence, and may afterwards make any statement they wish. Of course we could not allow the Railway Commissioners to be represented unless we allowed other persons also to be represented.
16. *Mr. Eddy.*] There were applications, we understood, from outside parties. The Railway Commissioners are here practically on their trial, and we do not associate ourselves with outside parties in this matter.
17. *President.*] I cannot accept the view that the Railway Commissioners are here upon their trial. Our Commission is as follows:—[*The Commission was here read.*] Every opportunity will be given to the Railway Commissioners to say what they may desire, and to explain and defend in every way their position with regard to the Baldwin engines, to show what was expected of these engines, and what services they have rendered; but we cannot see that they should be allowed to be represented either by counsel or solicitor who might perhaps want to cross-examine witnesses. Our endeavour will be to find out what are the facts with regard to the allegations that may be made as to these locomotive engines being defective and unsuitable, and not rendering the service that was expected from them. If any questions are suggested to us we shall be only too glad to put them. So far as this Commission is concerned we wish it to be as open as possible both with regard to the legal advisers of the Railway Commissioners and to anyone else who may come here to listen to its proceedings, but we cannot allow them to take part in the inquiry.
18. *Mr. Hoyle.*] Mr. President, I should like to ask if you have decided whether you will allow any barrister or legal gentleman to sit by the side of the Railway Commissioners. I am here as the person who made the speech in Parliament. I have no legal adviser or anything of that kind. As the onus of proof will rest upon me, I do not think it would be fair for a barrister to sit by the side of the Railway Commissioners and advise them of such questions as his legal knowledge might suggest.
19. *Mr. Eddy.*] I think the Railway Commissioners stand in a very different position from that of any other persons present. Distinct and deliberate charges have been made against us, and I myself do not profess to be trained to deal with witnesses giving evidence of the nature which will perhaps be produced here; therefore I think that in ordinary justice we should be permitted to place ourselves in the hands of persons skilled in eliciting facts from hostile witnesses. We have not gone out of our way to make charges, therefore we do not ask for any protection on our own account and with regard to our own actions, but we do think we are entitled to protection against persons who have deliberately and with malice aforethought made charges against us. That is the position in which we stand.
20. *President.*] I do not think that at present at all events, Mr. Eddy, you should say that charges have been made against the Railway Commissioners with malice aforethought. As to your not being represented by legal advisers, I think you may well leave that to us in the case of witnesses whose evidence may be of the kind you point out. You may safely leave the Commission to deal with witnesses whose evidence may be of the character you anticipate. The Commission is constituted of gentlemen of common sense to whom I think you may safely leave such matters. I cannot help who may sit at the table. If Mr. Eddy has any friend here who may suggest questions to him, whether he is a lawyer or not, I cannot help that, nor do I understand that any danger is to be feared from that. I cannot prevent anyone from sitting at the table so long as he behaves himself.
21. *Mr. Hoyle.*] I presume I may question Mr. Eddy and the witnesses I shall call?
22. *Mr. Eddy.*] I am satisfied, Mr. President. You may, perhaps, later on think fit to review your decision in this matter.

23.

23. *President.*] I do not think so. Personally I would rather let everybody concerned appear or be represented—it would take a great deal of responsibility off my shoulders; but I do not think it was intended that in an inquiry of this kind there should be counsel present to cross-examine the witnesses. We want to find out the truth, and I do not know that that would be the best way of getting at it. I thought when I received this Commission that there might be applications from the Railway Commissioners and Mr. Hoyle to be represented by counsel, and, therefore, I have not adopted this course without taking it into full consideration.

Henry Clement Hoyle, being sworn, said:—

Mr. Hoyle, M.P. 12 April, 1892.

24. Previous to giving any evidence, I desire to make an explanation to the Commission, and also to make a statement. In the first place, I desire to say that in the speech I delivered, and which is recorded in *Hansard*, I made no charges against any persons. I was particularly anxious, in consequence of certain things ——

25. *President.*] Are you giving this as evidence, or is it your opening speech? I wish to make a statement first.

26. You are now sworn to appear before us to give evidence;—do you make this statement as part of that evidence? Yes; I will make it as part of my evidence. In making the speech referred to I spoke from a pure desire to do my duty as a public man. From a long experience of fifteen years in the Railway Department of the country, and from a close study of all that has been going on in the railway system here, and from what I have read of the railway systems in other parts of the world, I was convinced that a certain order had been sent out of the Colony, the result of which was the importation of certain locomotives, known as the Baldwin locomotives. When those locomotives came here they were decidedly defective. They had material in them, the use of which was an absolute danger to the lives of the travelling public. From my knowledge of what had passed in the railway service of this Colony, and from my reading with regard to the railway systems of other countries, I knew that it was a special point in the manufacture of locomotives that the best and safest material should be put into them. From a personal examination of these engines when they arrived, I was convinced that the best material had not been used in their manufacture, but that on the other hand they contained in their construction material which was an absolute danger to the lives of the public who travelled in the trains drawn behind them. As a public man, and having had experience in this particular line of business, I considered that if I remained silent in my place as one of the people's representatives, I should be doing wrong. Believing conscientiously that I was acting in the best interests of the people of the Colony, I felt that if I had kept silent I would have been a traitor to the trust imposed in me by those who had placed me in Parliament. I was careful in my speech, to say that I made no charge against anyone, but that I believed some officer in the Railway Department had been guilty of a gross blunder, and I desired that a full investigation should be held to find out by whom the blunder had been committed, and to insure that he should be punished. This Commission is the result of my speech. I was so convinced of the propriety of the position I had taken up that I interviewed the present Premier and the Minister for Railways since that, and urged the Government to appoint a Select Committee of the Legislative Assembly. That, however, was refused on the ground that it was thought better that a Commission, such as is now appointed, should investigate this matter. I received various refusals from the late administration, but since then the present Government have come into power, and I again repeated my request that this inquiry should be held, since which the Railway Commissioners themselves, in consequence of what has appeared in the Press, and certain statements which have been made from time to time, have also asked for an inquiry on this matter. That inquiry is now, I presume, in a fair way to be held. Now, Mr. President, I propose to lay my charges before you. Mr. Eddy, when he appeared before the Commission at the last meeting, said he did not know what these charges were, and that he wanted someone to come forward and make deliberate, specific charges against these locomotives, and that persons would come here and take upon themselves the responsibility of those charges. Well, I am here to make the charges, and to take the responsibility of them, and I make them from a pure and honest belief that I am doing what I am in the best interests of the people of this country. I do this from a sense of public duty, and not from any desire to cast imputations upon the Railway Commissioners, or subject them to any unnecessary inconvenience. I have been very careful to avoid that since I have been in public life. Since it is desired that the charges should be distinctly formulated, I have drawn them up in order. The first charge I have to make is:—

(1.) "That, in consequence of the extra width of the Baldwin passenger engines or their great length, the platforms on various parts of our lines have had to be altered."

(2.) "That the Baldwin passenger engines are not required, and should not have been imported, as orders had already been sent out of the Colony for sufficient engines to meet all the requirements of the Railway Department, and that the money thus spent was therefore an unnecessary expenditure of public funds."

27. That is quite outside the scope of this inquiry. We are directed by our Commissions that the recently imported Baldwin engines are defective and unsuitable for the permanent-way. That is what we have to inquire into. We have nothing to do with whether these engines were an extraordinary order or not. What we have to consider is, these engines as ordered, are they defective or unsuitable or not? I understood this Commission was to inquire into the charges I made in Parliament.

28. I know nothing about what took place in Parliament; I am simply going on what our Commission says, but outside of that I cannot go. In this I think my colleagues agree with me? My third charge is:—

(3.) "That the safety of the draw-gear will be in danger if the Baldwin passenger engines or the Baldwin consolidation goods engine draw the loads that it is stated by the Railway authorities they are intended to draw."

I desire to make it clear that in my opinion if they haul the load they are brought here to draw, they will endanger the draw-gear of the rolling stock.

29. *Mr. Eddy.*] Mr. President—Am I to understand that that charge is admitted, surely it has nothing to do with the question, it is altogether a matter of railway management. What is advanced is that we are putting motive power to our trains that they are not strong enough to bear, that has nothing to do with the locomotives, it is altogether a question of railway management, and one I think, the Commission has nothing to do with. I take it you do not propose to go into the question of the draw-gear in the carriages and waggons. This would open up the whole question of railway administration.

30.

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30. *Mr. Hoyle.*] This is a fair question and contains a very serious charge. I say that these engines will endanger the safety of the draw-gear, that is to say the safety of the public, and if the Baldwin engines are going to do the work they were brought here to do, and thereby endanger the lives of passengers, I think this matter should be investigated. I say again that the loads these engines are going to draw will be dangerous to the draw-gear. I may refer the Commission by way of example to the Bathurst accident. That was caused by the draw-gear breaking, and the train breaking away from the engine, travelled back and came in collision with another passenger train. If these loads are put on them the safety of the gear would be endangered, and perhaps bring about a similar mishap to that referred to.

30½. *Mr. Eddy.*] I say that that is a sensational statement.

31. *Mr. Hoyle.*] I ask your ruling, Mr. President, as to whether Mr. Eddy is permitted to insult me by referring to what I have said as a sensational statement.

32. *President.*] Please confine yourselves to the bald bare question whether this charge which Mr. Hoyle seeks to make is within the scope of our inquiry.

32½. *Mr. Eddy.*] I contend it is not. Your Commission is to inquire into the defects, if any, of the Baldwin engines and their unsuitability for the permanent-way of the New South Wales Railways, and also that the engines are not accomplishing the work they were expected to accomplish. This Commission has nothing to do with the strength of the draw-gear on our carriages. So far as the draw-gear is concerned, if it had broken, every passenger train is fitted with an automatic brake, and the result would be that the train would be brought to a stop. With regard to the goods stock, every weak draw-bar has been removed by the order of the Commissioners, and stronger draw-gear supplied.

33. *President.*] The question now is, not whether you can make the draw-gear perfect or not, but whether we can go into the question of draw-gear at all.

33½. *Mr. Eddy.*] I desire to point out to you that the draw-gear is no part whatever of the Baldwin engines, and your Commission deals with the engines themselves only, and also the permanent-way of the railways of the Colony.

34. *President.*] By a majority the Commission think that this charge had better be allowed.

35. *Mr. Hoyle.*] My fourth charge, Mr. President is—

(4.) "That there are engines already in use on our railway system that are as powerful as the Baldwin passenger engines, and therefore another type of engine has been added to our stock, thus increasing the already too many types of engines in existence."

36. *Mr. Eddy.*] I must again object. This charge (No. 3) opens up the whole question of railway management.

37. *President.*] It has been decided, and I cannot hear you any more. It has been decided by a majority of the Commission to admit the charge (3).

38. *Mr. Hoyle.*] (Repeated the fourth charge). It has been said in inspired paragraphs to the Press, that we had no engines here powerful enough to do anything like what these engines can do. I say that we have engines quite powerful enough for that purpose.

39. *President.*] That is entirely outside the scope of this inquiry;—I understand you to say that the Commissioners have ordered something that is clearly unnecessary;—the question is whether they have received what they ordered or not; whether these engines were necessary or not does not matter;—that can be no charge? What I am doing is with a strong desire to help the Commission.

My next charge is—(5) "That the Baldwin passenger engines and the Baldwin consolidation goods engines are faulty in design, and that certain parts—the axles of the bogies and tenders—were dangerous, and gross neglect was shown by allowing the engines to run before the parts in question were removed."

The sixth charge is—(6) "That in consequence of the great weight of these engines (the Baldwin passenger and consolidation) the safety of the permanent-way is likely to become endangered. Our standard rail being 71 lb. per yard, whereas the above-mentioned engines were designed for an 80 lb. rail." These are all the charges that I have to make, Mr. President.

40. Now I suppose you will go on and give evidence in support of these charges? I would prefer persons being called by the Railway Commissioners, bringing their evidence to rebut these charges first.

41. *Mr. Eddy.*] Certainly not.

42. *President.*] Allegations have been made that these locomotives are defective, and those who make the allegations have to prove them, therefore you must go on and give evidence in support of your charges? Very well, I shall deal with them in the order I have stated. Now, Mr. President, my first charge is that in consequence of the extra width of the Baldwin passenger engines, or their great length, the platforms on various parts of our lines have had to be altered. I stated that these platforms had to be altered to allow these engines to pass.

43. *Mr. Brown.*] Have you yourself seen any of these platforms? Yes, I wish to say that these platforms were altered, and a great deal of expense in connection with the alterations was unnecessary.

44. *President.*] If you can show that the platforms had to be altered because of the width or length of the Baldwin engines, that is the whole point.

45. *Professor Warren.*] You could do that by simply giving the dimensions? In the first place I might state that after these engines came here the platforms were altered. No attempt was made to alter them until the Baldwin engines came to the country. When they came here, gangs of men were put on to do this work, and I am told that they worked night and day to get the platforms altered to permit these engines to pass.

46. *Mr. Brown.*] You believe you say? I can give you the numbers of the shop orders. They were 351 a, 352 a, 353 a. They were the orders issued by the Permanent Way Department.

47. *Mr. Eddy.*] The witness is speaking of what he has been told, or of what has appeared in the newspapers. Personally I know nothing of legal proceedings, but I thought that the rule was that a witness should speak of his own knowledge.

48. *President.*] I understand him to refer to certain orders that were given, and I presume they will presently be produced? These platforms were altered, and this I saw with my own eyes. I saw the Newtown platform undergoing alteration, and also that at Granville. These two I have seen myself, when the work was going on.

49. What kind of alteration was it? The brickwork was chipped away, and in the case of the Newtown station the coping was taken up and set back on to the platform, and the brickwork chipped away, to allow the

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the cylinder of the engine to clear the platform. This was done to meet the case of the Baldwin engines. An engine was sent along the northern lines, with a plate bolted on to the buffer-stop—a beam across the front of the engine. A plate was bolted across this, and ran along the line as a gauge, and wherever that gauge struck the platform, it had to be altered.

50. Do you know that? I do not know it, but I can call evidence to show that it was so.

51. You must keep to the facts within your own knowledge. As to the statements you have heard, they will not be taken as evidence unless you substantiate them by the statements of someone who actually knows them? However these platforms were altered. It has been said in the Press that the alteration was made because a certain carriage in which Mr. Eddy was travelling, on a tour of inspection, struck the platforms, and it was then found that the platforms were out of gauge, and orders were issued that they should be brought into uniformity. I speak to the best of my belief when I say that the platforms were not altered until the Baldwin engines came to the country.

52. Do I understand from that that you do not know whether they were altered on account of the Baldwin engines, or that they never were altered until the arrival of those engines? They were altered after the arrival of the Baldwin engines. It was after the arrival of the engines that the order was given to alter the platforms of the suburban line. I cannot swear to how many were altered, but I can swear to the two I saw going on. The order that was given to alter these platforms was given at a time when orders had been issued for the quadruplication of the suburban line. If it is true, as asserted in the Press, that these platforms were altered to make them uniform, why were the platforms altered on the suburban line, when they had afterwards to be demolished, because every platform altered on the suburban line, with, perhaps, the exception of Granville, was afterwards pulled down.

53. I do not want to stop you, Mr. Hoyle, but only to point out to you the futility of the course you are taking. You can produce evidence to show the alterations of these platforms, but it does not necessarily show that because the platforms were altered after the Baldwin engines arrived, that consequently they were altered on account of them; neither is it any argument that these platforms were, as you say, altered, the scheme for quadruplication being in force at the very time of such alteration. You may state the fact shortly, that the alterations did not take place until after the Baldwin engines came here, and that the alterations did take place, although the whole system of the suburban railway line was at that time undergoing a change? Then I will state, as a fact, that these platforms were chipped and altered to the point where the quadruplication was going to be made, and that afterwards these alterations were destroyed, in order to make room for the new system.

54. *Professor Warren.*] Would you kindly tell me the width of the platforms or the width for the cylinder to pass? I cannot.

55. Do you not see that this could be settled at once by dimensions? That is a matter I will deal with later on. I propose to bring evidence to show the dimensions of these engines, and also that these platforms were altered to suit them. I do not swear absolutely that the alterations I have referred to were made for this particular purpose; but I swear that the platforms were altered, and since the locomotives came here, and it is yet to be proved that they were altered for these locomotives.

56. *President.*] If there is no ground for these charges, the responsibility you undertake is not very great, since you are protected from any action in giving your evidence before this Commission, and if you throw this matter out as an insinuation, and it can be proved as Professor Warren states by dimensions, it appears to me that it should be so proved? I have not power to make these measurements—I have not power to take them. I once wrote for permission to the Colonial Secretary to examine them, and he sent a letter to the Commissioners. They sent a reply stating that if I knew anything about defects in the engines they would cause inquiry to be made. One day, whilst I was in the works, I was asked by an officer by whose authority I was there, and I was told that Members of Parliament were not allowed to go into the works. I had therefore no opportunity of making these measurements.

57. I desire to give you every latitude, but I do not think it is fair that you should make insinuations about things which can be absolutely proved; they can be proved just as well as we can find out the exact measurement of this table by using a tape line;—the Baldwin engines may be badly constructed, and if we consider them to be proved to be so, we shall at once state our opinion, but I shall not allow you any more than I would allow Mr. Eddy to insinuate a thing which is capable of being proved to demonstration? The next charge is that the safety of the draw-gear will be endangered by the Baldwin engines being used. We find, from a paper laid before Parliament containing correspondence respecting the establishment of locomotive works in the Colony, certain recommendations were made. We find Mr. Neild, one of the locomotive engineers, made certain recommendations in a letter to the Railway Commissioners. After examining certain figures that were submitted by a certain firm in England, who were prepared to establish these works, he went on to show what should be the weight of a standard train. [*He proceeded to quote from the correspondence in question.*]

58. *Mr. Brown.*] Is this on the question that the Baldwin engines are defective? What I want to show is that we have heard of a standard goods train, and my contention is that if we increased that weight we would endanger the safety of the traffic.

59. *President.*] You say among other things that the locomotives are unsuitable because they are so heavy. If that is so, cannot you call these gentleman to show that they are unsuitable on account of their weight. Surely the correspondence you have read is no evidence. An inferior officer might make a report, and if it were thought correct it might be acted upon, but if not, it would probably be torn up? He is still an officer in the place.

60. It does not follow that the Commissioners adopt his report. It would however be very strong for you if you could get a competent gentlemen to say that the engines were too heavy? Then this is not admissable.

61. How can it be, because someone not here makes a report to the Commissioners, which report does not appear to have been admitted, you cannot regard that as evidence. You can surely get the gentleman himself to come here.

62. *Professor Warren.*] What is the maximum pull which the Baldwin engines can exert? I do not know.

63. Well there is the whole question? It is not a question of what they can pull, it is a question of what they can pull without breaking the draw-gear.

64. But it seems to me we can settle this question in this way. We first find out the maximum pull exerted on the draw-gear in the ordinary work, and then whether the draw-gear is sufficient to resist the pull. That can be ascertained with absolute certainty? Yes.

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65. *President.*] We cannot take what someone has said. Call him, and if he proves it, well and good. If he comes here and makes a statement at variance with what he has written, the Commission can then question him on it.
66. *Mr. Brown.*] I understand from you that the estimated weight that these engines are to draw would break the draw-gear? The draw-gear which has been drawn by these engines has already broken. Draw-gear of additional strength has had to be procured. The draw-gear first supplied to these engines has been broken, and stronger draw-hooks have been supplied in their place.
67. *President.*] If a stronger engine, that is to say a more powerful one than hitherto used in the Colony, whether the Baldwin engines or not, were imported, would the draw-gear at present in use be necessarily suitable. Would not the draw-gear for a lighter engine be necessarily unsuitable for a heavier engine. Would they not have to put in stronger draw-gear? These engines were brought here to draw a certain load, and should have been equipped with draw-gear sufficient to draw that load. The draw-gear sent by the people who provided the engines has been broken, and additionally strong gear has had to be supplied. Again, with regard to our goods traffic, to put on a greater load than is considered to be a safe one, whatever that would be, and I was going to quote what Mr. Neild said was a safe load, would be very dangerous.
68. *Mr. Brown.*] This is not evidence, this is all argument.
69. *Professor Warren.*] How many cases do you know of in which draw-gear has been broken? I have not seen any broken, therefore I cannot enumerate the cases. That must come out from the reports kept by the Department—at least, so I understand. The witness I wish to call will be the Locomotive Superintendent at Penrith shops. I would call him to give evidence as to whether these things have or have not been broken, and with this view I would like to ask the Commission to adjourn the inquiry this week, on account of the holidays.
70. *Mr. Eddy.*] We are prepared to place every officer and man at the disposal of the Commission without the delay of a day. We would rather not have the delay of an hour. Charges have been made against the Department and are injurious to it until this matter is settled.
71. *Mr. Hoyle.*] My fifth charge, Mr. President, is that the Baldwin passenger engines and the Baldwin consolidation engines are faulty in design and contain parts, namely, the axles of the bogies and tenders, which were dangerous, and that gross neglect was shown by the Department in allowing these engines to run before the parts referred to were removed. I shall have to call witnesses to prove this, and I shall call them not from my side but from the officers of the Department. I desire to take no undue advantage of the Department, nor to put it to any inconvenience. No person directly in the Department has given me the information I have based these charges on. They are based on my own information and experience whilst in the service. I am not in league with any men of the Department. I say distinctly that the axles were defective, and I would like to produce the *Australian Star* ——
72. *President.*] What has the *Australian Star* got to do with it? There was a report in the *Australian Star* of the 29th October, wherein it is stated that when one of these Baldwin engines was coming into the Sydney Station the axle of the engine broke, and had it not been for the cow-catcher, which is very heavy, probably the engine would have turned over. I do not know that, but I say the axle broke.
73. Do you yourself know of this accident? I know it from the *Australian Star*, and from the fact that I believe the axle was in the office of the Department.
74. I shall do anything I can so far as our power permits us to enable you to state your case, but I think your course would be to ask the *Australian Star* people from whom they got their information, and such person could then give his evidence, but we cannot receive here what is stated in the papers. Most outrageous things sometimes appear in the papers. How can you think it is evidence—what appeared in some newspaper?
75. *Mr. Eddy.*] We are quite prepared to admit that an axle did break, and we are prepared to admit that a number of the axles have been removed; indeed, we have removed the whole of them at the cost of the Baldwin Engine Company.
76. *President.*] Because such a thing appeared in the newspaper it is not consequently true, and cannot be taken as evidence, unless you get the person who saw it to come here and prove it. On what date was this, Mr. Eddy?
77. *Mr. Hoyle.*] It corresponds with the date in the paper.
78. *Mr. Eddy.*] Yes, I think so, the 29th October. It was arranged that every one of the bogie axles should be withdrawn, and they were replaced with steel ones at the expense of the Baldwin Engine Company.
79. *Mr. Hoyle.*] I desire to draw attention to this. That gross negligence was shown by the Department in not ascertaining before that these bogie axles were not steel, they should have ascertained that before the accident took place. This axles, I believe, was attached to the engine drawing the Melbourne express train, it broke when the train was going at a slow rate, and broke on account of excessive heating during the journey, and it was only by the interposition of Divine Providence that a great accident did not happen.
80. *Mr. Brown.*] The Commissioners admit that—is that the only one that broke?
81. *Mr. Eddy.*] That was the only one. We went into a most exhaustive test with regard to the iron of which the axles were made, and it was arranged in order to avoid the slightest risk to replace every one of the axles, and they were replaced at once, and temporarily the engines were put to goods work instead of being kept to passenger work. I would like you to understand that altogether three axles broke.
82. *President* (to witness). You say that this axle was very hot? I do not know, but I can produce evidence from an American paper to show that the gentleman who was here in charge of these engines putting them together, wrote and admitted it, and he made a statement which was not true in that letter.
83. It is perfectly shocking to my limited legal sense that what was contained in an American paper should be regarded as evidence. I think on that point I would rather take any Australian paper than an American paper? This was a scientific paper.
84. I do not know about that, I can only go by the rules of evidence? At all events the axles broke. I understand that is admitted, and having broken, I think it is evidence that they were dangerous.
85. *President.*] It is evidence that that particular axle was dangerous.
86. *Professor Warren.*] What about the other defects? The piston head is excessive in weight, and it is wearing out the cylinder. By reason of the enormous weight also of the cross head and the connecting rod

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rod the slides were worn, and since these engines have been here brass liners have been put into the slides, thus creating new costs for repairs which are unjustifiable. The piston head has no relief. Most of our engines have a bar coming through the end of the cylinder gland to carry the weight of the piston-head, and thus to prevent friction in the cylinder itself. These engines have no such bar to the piston.

87. Is not the piston-rod continued from the gland itself? No, the connecting rods are not connected with the first wheel, they are coupled with the trailing or driving wheel.

88. Have you not got a drawing, a model, or a photograph?

89. *Mr. Eddy.*] A number of plans have been prepared.

90. *Mr. Hoyle.*] I believe the principle of the engine to be good, and I believe the company could build engines just as well as any company in the world; but I am complaining that by continual friction on these cylinders the piston would have to be renewed shortly.

91. *Professor Warren.*] You mean the cylinders would have to be re-bored? Yes; and the axle-boxes are wearing into the boss of the wheel. The connecting-rod is of a very great length, and, consequently, very heavy. [*Here a photograph was produced and the witness pointed out the alleged defect.*] The wheels are made by a new process, and, in my opinion, they are dangerous; they are stamped, and not forged, as in England. They are iron stamped under a new process. They are iron wheels with steel tyres, and the driving-wheel is exceedingly light. It has defects.

92. What do you mean by defects? The fusion of the iron has not been carried out successfully.

93. *Mr. Eddy.*] What is the number of the engine you are speaking about? It was at Penrith I saw it; I did not take the number of the engine.

94. I must ask some little regard to evidence being paid. All sorts of statements are being made about these wheels being defective. I ask for the number of the engine and it cannot be given. I think that in the interests of the public there should not be such rash statements made. If there is an engine let us know the number of it.

95. *President.*] Do you say that the defect is in the wheels of all the engines? The passenger engines.

96. You say they have all that defect? They have all the defects of being too light, through being made by this process. They are too light, and, therefore, dangerous and liable to collapse.

97. *Mr. Eddy.*] He says distinctly that the engine wheels show flaws, so that at any time there may be a collapse, and an accident caused. I ask that the number of the engine be given, and that alarm should not be given to the public by a statement not capable of proof.

98. *President.*] How many engines are there?

99. *Mr. Eddy.*] Twelve.

100. *Mr. Brown.*] Any statements made upon this point may be refuted by you later on. We cannot refute unless we have some data to go upon.

101. *President.*] Could it not be arranged that some of us could see these engines for ourselves?

102. *Mr. Eddy.*] They are all over the country between here and Dubbo and could not be stopped without creating great inconvenience. Some do not come to Penrith at all.

103. *Professor Warren.*] Could you arrange for me to have a trip on one of these engines? Certainly.

104. *Professor Warren.*] You say, Mr. Hoyle, that the wheels are defective because they are made by a defective process. I want you to say what evidence you have of the defects of the wheels themselves? I believe they are defective because made by this process. In some portions of the wheels there are flaws.

105. *President.*] That is to say in the one engine you have seen and of which you do not know the number? No; I did not see the number.

106. When did you see it? Last Friday.

107. Was anyone with you? No one was with me when I was examining it.

108. Would the stationmaster at Penrith know the number? I presume the Locomotive Superintendent would. I left Sydney by the 1·30 train. I was due to arrive at 3 o'clock, and I left again by the 5·22 train.

109. *Mr. Eddy.*] Would you kindly get Mr. Hoyle to state whom he saw at the shed at Penrith? Well I was talking to the foreman, his name is Howell, but he was not with me when I was looking at that engine. He gave me no information about it.

110. *President.*] Can you tell me whether there was more than one Baldwin engine there? Yes, there were one consolidation and two passenger engines there.

111. And had they these defects you speak of? I had only time to examine one of the two passenger engines there. I found also the boss, which in my opinion is too light, had been bored larger so as to admit of the larger axle, and that a wrought-iron ring had been put on to strengthen the face of the boss, which in my opinion was a thing never done before in any locomotive. It is a thing never done; to shrink a wrought iron ring on to a boss. Again in the consolidation engine the wheel was wearing into the feed-cock, and I noticed in the engine that I looked at that the feed-cock was worn about from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch, and if that defect is not remedied soon the cock will have to be taken away and replaced.

112. Is that very material? Yes, very, if it became worn out whilst carrying you could not feed the boiler, consequently the engine would come to a stand still and become temporarily useless and have to be towed home to the shops again. Again the axle-box is wearing into the inside boss of the wheel and already a brass liner has been put in between the inside boss and the axle-box.

113. *Professor Warren.*] Do you mean sideways? Yes. This boss has been worked into, and such a defect ought not to appear for many years, certainly not as soon as this. If the axle-box works into the boss, the axle will become loose and a fault like this is most serious indeed. I have explained the weight of the piston on the cylinder, and the weight of the cross head. I propose to call evidence to show that what I state is so. In the axle-box in question there was a play of $\frac{1}{8}$ of an inch. I will show the axles were loose and linings had to be put in place, also that the whole of the iron axles were taken out and renewed with steel axles. Whether the Baldwin Engine Company are replacing them I do not know, all I desire to show is that gross negligence was exhibited by the Officer-in-Charge, when he permitted iron to be used instead of steel. The axle should be of the very best quality of steel. It was gross negligence of this gentleman not to find out the fact. In the case of the express train from Melbourne——

114. *Mr. Eddy.*] May I ask Mr. Hoyle when one of the axles broke on one of the express trains from Melbourne? I believe it was about the 29th October.

115. We are getting a number of statements that have no truth in them.

116. I must ask you to protect me against these insults.

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117. *President.*] The impression left on my mind was that this was the case referred to in the *Australian Star*, but you do not know as a fact the axle did break; you did not see it? To the best of my belief it was on the engine attached to an express train; it may have been an express train coming from the south.

118. *Mr. Eddy.*] Do I understand that the axle broke with the train with the Melbourne to Sydney express?

119. *President.*] Do you as a matter of fact state that the axle broke with the express train from Melbourne? I have been given to understand that it was an express train.

120. Whatever one does in this country, should he occupy a prominent position, will be open to comment; but it is, I think, very wrong that all the sweepings of the street should be collected here. You must get the persons who saw these things? Then we must get the reporter of the *Australian Star* who wrote the report.

121. I did not understand that the *Australian Star* stated that the axle of the train belonged to the express from Melbourne?

122. *Mr. Eddy.*] It was the axle of the train running into the Sydney Station, but not the Melbourne to Sydney express; that I admit? The fact remains that the axle did break whilst the engine was attached to the train. Again, the tubes in the boiler of the engine I saw were working loose, and that, I understand, was on account of the length of the boiler, and I will call evidence to show that. I propose to call evidence to show that these tubes have been decidedly defective since the engines came here.

123. *President.*] I am giving you all sorts of latitude, Mr. Hoyle. Every question you want asked will be put, but you are not giving evidence and should not make these statements? Considering that I made this speech in Parliament, I am taking this course for the guidance of the Commission in order to enable them to make a full and searching inquiry.

124. We will call any witness you want to substantiate these charges, but you do not substantiate them by saying that you have been told this or that? Also new reversing gear has been supplied to these engines.

125. Do you know that? I know that new reversing gear has been made, and I will call evidence to show that the work is going on to make new reversing gear for these engines. In my charges I have said these engines will not do the work they are calculated to do, and I propose to bring evidence to show that the weight on the wheels is not sufficient to secure adhesion on the rails. The cylinder is made to draw a certain load, and if the wheels under the cylinder are not sufficiently heavy they cannot draw the load on the rails.

126. *Professor Warren.*] That is a question as to the tractive force and the adhesion;—we can get all that? I wish to explain to the other members of the Commission what I meant by this. It is this way, there must be a certain adhesion on the rails to make the wheels grip. Now these wheels have been made lighter than they should have been. They were made lighter in America, to suit our lines. That I believe has been admitted in the public Press.

127. I submit that admissions in the public Press have nothing whatever to do with this matter, the engines are perfect in their design as the members of the Board will be able to see. You will have evidence to show that the engines are well proportioned.

128. The cylinder has greater power than the weight on the wheels will enable them to grip the rails.

129. *Professor Warren.*] Do you mean that there is a great excess in the cylinder power? I say that the engines are not sufficiently weighty in accordance with the rule for the power of the cylinder. The last charge I have to make is that, in consequence of the great weight of these engines the permanent-way is likely to be unsafe. Our standard of weight is only 71 lb., and if what I have said were brought about, the permanent-way would have to be relaid. That would be a source of great expenditure and one which ought not to be incurred. [*Presenting a book.*] This is what is popularly known as the "Engineer's Prayer Book"—Molesworth's pocket-book of engineering formulæ. One of these engines is weighted on the left side on the leading bogie-wheel 3 tons 9 cwt. 3 qrs., on the trailing bogie-wheel 3 tons 7 cwt. 3 qrs., on the leading coupling-wheel 7 tons 6 cwt., on the driving-wheel 8 tons, on the trailing bogie-wheel 7 tons 14 cwt. 2 qrs., making a total of 29 tons 6 cwt. 3 qrs. On the right-hand side the weight of the leading bogie-wheel is 3 tons 10 cwt., of the trailing bogie-wheel 3 tons 11 cwt. 3 qrs., the leading coupling-wheel 7 tons 4 cwt., on the driving-wheel 7 tons 9 cwt., the trailing-wheel 7 tons 4 cwt., making a total of 28 tons 18 cwt. and 3 qrs., hence leaving a difference between the two sides of 9 cwt.

130. May I ask where this information comes from, and what reliability is to be attached to these figures?

131. It does not matter we can check them.

132. You cannot correct a thing which is not in your possession.

133. How did you get the data for your calculations?

134. I got them by the power of the cylinder.

135. That has nothing to do with the weight of the engines;—I would like to know how Mr. Hoyle got these figures? I must decline to say where I got them.

136. I think I must press this question, I desired some information from the locomotive engineer the other day and I was informed the papers had disappeared from his office;—I would like to know how Mr. Hoyle got this information? I hope the Chief Commissioner does not impute that I have stolen the papers.

137. *President.*] No of course not, I think it is a pity such a thing should be said. Do you decline to say where you got this information? I want to say this that there is a recognised rule defining the weight that should be on the driving-wheels in order to make them grip, and if we make these engines the weight that their cylinders are calculated for then we will depart from the rule of all engineers as to the stability of the line required. According to all the rules of engineering the weight at present is not sufficient, but if we make it sufficient then the permanent way will be in danger.

138. Now where do you get these weights from. Where is the evidence that these are reliable data, how do I know that your figures are right? I would not press the matter, but I say that if the engines are weighted in a proper manner they should be quite equal to these weights.

139. You should have some one here to say "I have seen these engines and I have calculated the proper weights". For example, if you wanted to bring as evidence something I had said it would not do to say "I saw Mr. Rogers and he told me so", but I should have to come into the box and give evidence, on the same reasoning you cannot say these are the weights, because some one told me they were. I do not think you understand me.

140.

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140. I believe you have some data from persons whose names you cannot give—you cannot make use of that data? All I wanted to show was that if the engines were loaded up to the power of their cylinder they would be too weighty for our permanent-way.

141. *Mr. Eddy.*] How could anything which is said be of value unless the weight of the engines were put before you to demonstrate that it is too heavy for the line. This is an attack upon the Department and the evidence should be produced before the Commission to justify the statements made. It is impossible for me to say what the weight is, unless they are weighed. I say that if these engines are weighted up to the power of their cylinder to the amount they ought to carry they would be too heavy for our road, if they are not weighted up to that power then they have not sufficient weight to grip the rails.

142. *Professor Warren.*] In order to settle this we shall require drawings of the engines with the weights of the leading driving and trailing wheels, then it can be seen whether the cylinder power is in excess of the adhesion? Yes, that will be settled by experts; I presume the Commissioner will make certain inquiries; that they will order these engines to be weighed and then ascertain if what I have stated is true, and if experts think them to be correct. I say that according to the rules of all engineers these engines if properly weighted would be too heavy for the permanent-way, and will necessitate its being relaid. I say it is for the Commission to get these weights and then call experts to say whether they are too heavy or not.

143. *President.*] I do not understand that because a man makes a charge it therefore lies on the other side to refute it. There must be something in support of that charge. I am not sufficiently an engineer to know whether, from the size of the cylinders, wheels, &c., a presumption is raised against these engines; but unless the mere fact does arise from such presumption, we have nothing to show that the engines are bad. I am not aware that any privilege is given to any man to make a charge and not support it, otherwise a man might come to me and say, "You are guilty of murder; prove you are not."

144. *Professor Warren.*] Will you give us a list of the witnesses? Yes; I propose to call the Metropolitan Divisional Engineer (Mr. D. C. Simpson) relative to the widening of the platforms, the Locomotive Superintendent at Penrith, relative to the breaking of the coupling.

145. *Mr. Eddy.*] You mean Mr. Park, locomotive foreman;—you know who is in charge there? I do not. I know that Mr. Park is in the service, but in what part I could not say. I will call then Mr. H. H. Park, also Mr. Thow, relative to the bogie axles breaking, to prove these axles did break.

146. Would it not do if we admitted that the bogie axles did break, and that they were replaced by the Baldwin Engine Company.

147. *President.*] Do you want Mr. Thow for anything else? Yes.

148. I do not want to limit either side in this matter, but if both agree to admit a certain thing, then I presume it will be unnecessary to call evidence as to it? I would also like to call Mr. D. H. Neale on the question of the Baldwin engines, the breaking of the axles, and relative to the charge of neglect with reference to the material of the axle. I would also like to ask Mr. George Cowdery, late Engineer for Existing Lines, some questions.

149. *Mr. Eddy.*] Are these witnesses to be called as Mr. Hoyle's, and be cross-examined? *President:*—They will be examined by us. Mr. Hoyle will, I have no doubt, suggest to the Commission what questions he wishes to be asked, and you will also be able to ask what questions you desire through the Commission.

150. I will also call Mr. Thomas Midelton, the late Locomotive Engineer.

151. *President* (to Mr. Eddy).] Do you wish to ask Mr. Hoyle any questions? I would like you to ask Mr. Hoyle what his experience of railway and locomotive work is.

152. What is your experience of locomotive engines, Mr. Hoyle? My experience is as follows:—First of all I was in the service of the Department for fifteen years as a mechanic, and had opportunities of observing the various locomotives in the Department, and also opportunities of reading upon this subject.

153. *Mr. Eddy.*] Were you in the erection shop? No; I was in the inter-locking department.

154. *President.*] Were you engaged in the locomotive department in any shape or form? No; but the locomotive shops and our shops were practically together. Practically we worked in the same workshops. It was simply the name that distinguished the class of work.

155. I would like to ask the witness why he did not respond to the invitation of the Commissioners to give them the information he said he had in his possession.

156. *President.*] I do not say that you are not entitled to ask this, but I do not think it is of very much weight. Suppose Mr. Hoyle had furnished all this information, perhaps he might have rendered himself liable to some proceeding.

157. Not at all. Mr. Hoyle has said that he would have been untrue to his trust if he had not acted immediately he found there was some defect in these engines. We invited Mr. Hoyle on the 3rd of August, to indicate to us any defects he might know of, so that we also might be true to our trust.

158. *President* (to Mr. Hoyle.)] Did you get a copy of that letter? Yes; I got a copy of that letter, and the reason I did not give the information was because I felt I had been so discourteously treated when I asked for permission through the Colonial Secretary to go through the workshops; the Commissioners would not grant me permission; I therefore thought I had been treated discourteously.

159. Did you write a letter dated the 29th July, stating the engines were defective, of which this is a copy [*copy produced*]? Yes; I have no doubt that is the copy.

160. How many engines were there at work? If I remember rightly there were very few—I cannot say how many. It was from certain things I then heard I desired to examine these engines. I had heard that any Member of Parliament who went through the workshops, would be ordered off, and that was the reason I wrote.

161. *Mr. Eddy.*] Although the engines were due on that date, you are not prepared to state that one engine was at work? I am not prepared to say whether there were any engines working then or not.

162. It has been said that the attack on the Department was made in the Legislative Assembly on the 20th August, 1891;—will Mr. Hoyle tell me whether all the engines were at work at that time? I believe they were, and you will see that Mr. Scott, the Member for Newcastle, made certain charges against the engines at that time. He said that one of the engines had been lifted three times.

163. *President.*] Do you call him as a witness? No. I do not know whether what he says is hearsay or not; but we might call the Superintendent at Newcastle.

164. Where do you say this charge was made? In the Legislative Assembly.

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165. Then it is in *Hansard*;—is this the speech:—
"I rise to contribute my quota to the condemnation of the railway engines referred to by the honorable Member for Redfern. It is not my intention to take up the time of the House by referring in detail to the defective parts of the engines; but I wish to tell the Government that if they should decide to appoint a Select Committee, they will find the honorable Member for Redfern, Mr. Hoyle, has not painted the picture too black. The engine that was sent from Sydney north was lifted four times after she left Sydney until she came back. She was lifted, I believe, at Gosford, she was lifted at Newcastle, at Singleton, and at Werris Creek, and she was lifted again at Newcastle on the homeward journey. She came back to Newcastle with one of the eccentrics disconnected, the motion link was bent, and a new pin had to be put in. The honorable Member for Redfern forgot to refer to the defective part of the link motion, and to state that the rocking shaft had to be taken off the engine, and put into the lathe. If a Committee were appointed practical men could prove to the satisfaction of some of the keenest experts in the country that the material in these engines is not what it ought to be."
166. I suppose you know it is not unusual for hot boxes to occur on the railways;—in fact hundreds occur every week? Yes; I am quite aware of that; but I am not aware that the axles have been caused to break by that.
167. *President.*] You are referring to the case of the axle breaking; did the heating referred to cause the axle to break upon this journey to Newcastle? I did not refer to that. It was a remark of Mr. Scott's.
168. With regard to the statement made by Mr. Scott, are you in a position to state that the incidents he refers to were the cause of the axle breaking? I know nothing about that particular incident. Mr. Scott might know.
169. *Mr. Eddy.*] Perhaps you would not be surprised to hear that on the day you made the speech in Parliament, on the 20th August, that several of the engines had not been placed on the line.
170. *President.*] At the time you made the speech in Parliament were the whole of the engines on the line? No; I believe they were not. Some of the engines were, but some of the others were not, I believe. I cannot say how many were.
171. *Mr. Eddy.*] The charges the Commission are to inquire into were made on the 20th August. It appears to me me that a great many of the statements made by Mr. Hoyle had reference to what he discovered last Friday at Penrith. Has he been trying to find defects in these engines recently so as to endeavour to support his original charges?
172. *President.*] I do not think I can allow that question, Mr. Eddy? I do not press it.
173. *Mr. Eddy.*] With regard to the alteration of the platforms you stated that orders were given for the work to be done and gangs of men put on day and night after the Baldwin engines had arrived, and that those orders were not in existence prior to the arrival of the Baldwin engines.
174. *President.*] No; I do not think he said that. No; I did not say that.
175. All I understood was that, inasmuch as after the arrival of the Baldwin engines he discovered that the platforms were being altered, he inferred that the alteration was necessitated by the Baldwin engines.
176. Would you kindly ask Mr. Hoyle to distinctly state what is his charge in that respect, because it is very important that it should be clear and definite?
177. Yes; what is the specific charge you made about the platforms being altered, the bricks chipped away, and so on?
178. That in consequence of the extra width of the Baldwin engines (passenger) or their great length (possibly on account of the oscillation) various parts of the platforms were altered, but I did not say that the orders were issued before or after the engines arrived.
179. *Mr. Eddy.*] You do say, however, that the alterations were made after the Baldwin engines arrived, but not that it was in consequence of the Baldwin engines being placed on the lines.
180. *President.*] Yes; that is an inference of his, but he says that he does not know when the orders for the alterations were given.
181. *Mr. Eddy.*] I would like to have this quite clear. Does Mr. Hoyle distinctly say that had not the Baldwin engines been ordered by the Commissioners the alterations of the platforms that have been made would not have been made? No; I said nothing of the kind. Mr. Eddy must know that I said nothing of the kind.
182. I do not know, though I certainly understood that you wished it to be inferred that the fact that the platforms had been altered because of the length or the width of the engines. You did say, however, that you could not prove that it was so by other evidence that the fact that platforms were altered after the engines arrived here.
183. I said that I did not know when the orders were issued, but that I did know that the platforms were altered after the engines came here.
184. But no doubt you intended to convey the impression that the alterations had been made because of the extra width of the Baldwin engines.
185. *President.*] That at all events the platforms had been chipped to suit the dimensions of the Baldwin engines.
186. *Mr. Hoyle.*] Quite so.
187. *Mr. Eddy.*] Then would you be surprised to hear that the Commissioners have been putting these defects in the platforms right ever since they came into office, and that the alterations to which you refer had nothing to do with the Baldwin engines.
188. *President.*] You can give substantive evidence of that later on, Mr. Eddy.
189. *Mr. Eddy.*] I would ask that Mr. Hoyle should be requested to state whether there are not and have not been on these lines for some years, engines as wide over the cylinders as the Baldwins ordered by the Commissioners? I am not aware that that is so. Some engines carry their cylinders higher than others. If the cylinders of an engine are high they are less likely to come into contact with platforms than they would be if the cylinders are low. If an engine is carrying its cylinder low it would be much more likely to strike the platform by reason of the shape of the platform itself, but that depends largely upon the position of the cylinders.
190. And in regard to vehicles, are you aware that before the Railway Commissioners took office a vehicle was ordered to run on these lines that is wider even than the cab of a Baldwin engine. We are charged

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charged distinctly, Mr. President, as I wish to make clear to you, that the engines have been ordered and that they are unsuitable to pass the structures of the railway. In railway work we have a structure of gauge, and we have a rolling stock gauge, and by attending to certain other principles we are allowed to make our rolling stock up to what should clear our structural gauge. Mr. Hoyle has charged us with having engines put on the line that will not come within the structural gauge.

191. *President.*] I do not object to your question, Mr. Eddy. What do you want to ask Mr. Hoyle?

192. I would like to ask him whether the cab is wider than the cylinders are; whether there is not a carriage running on the lines at this moment that is wider even than the cab of the Baldwin locomotives? I do not know whether that is so or not, but it must be understood that the cab of a locomotive has no bearing upon the question of chipping of the platforms away.

193. *Mr. Eddy.*] The question in regard to the engines and cylinders dispose of the allegations in regard to the platforms.

194. *President.*] Well, to your last answer, Mr. Eddy, Mr. Hoyle says that he does not know whether there is such a carriage or not, that is all the answer that is necessary. Then he goes on and gives some further evidence as explanatory to me, I suppose, but his answer to your question is, I do not know. Is not that so? Yes.

195. *Mr. Eddy.*] In regard to the Baltimore and Ohio rails spoken of, you told the Commission that the locomotives as though they were confined to running between Baltimore and Ohio. Do you not know that engines of this width and of much greater weight are running in all directions in America? I do not know that.

196. It is so.

197. *Mr. Hoyle.*] As a matter of fact I can amend that answer. I did not know that engines of the weight of the passenger locomotives are running, but what I stated here was that that particular engine is running on the Baltimore and Ohio railway, and that it is running on an 80-lb. rail, and I make that statement upon the authority of the *Railroad Gazette* in which I saw the facts published.

198. *Professor Warren.*] The *Railway Gazette* of what date? I will bring it to you to-morrow.

199. *President.*] You admit that you are aware that heavier engines do run in America, but you say that in that case the rails are heavier.

200. *Mr. Eddy.*] What is your authority for saying that the rails on the Baltimore and Ohio railroad are heavier than those used in this Colony? It is stated in *Pool's Manual*, and in the description given of this particular engine in the *Railroad Gazette*, the rails are described as 80-lb. rails.

201. Would you be surprised, then, to hear that we have had it on authority from America that the Baltimore and Ohio rail is a 67-lb., and not an 80-lb. rail? No; I do not know that, and I do not see how this can be evidence.

202. I am prepared to put it in evidence, and in that way to prove that it is so.

203. At all events, you do not know what the weight of the rails between Baltimore and Ohio is except from what you have read in the *Railroad Gazette?* As I stated, the *Railway Gazette* distinctly says that they are 80-lb. rails.

204. *Mr. Eddy.*] In America there is an association or a committee called the Master Mechanics' Association. The Master Mechanic of America holds a similar position to the Locomotive Superintendent of English Railways, and the Master Mechanics' Association is a very important body, and deals with very important questions in regard to the general administration of locomotive departments of the different States. I would like to ask if Mr. Hoyle is aware that that body has considered the question of what weight in locomotives rails of a certain weight bear? I am aware of the existence of such a body, but I am not aware that they have taken this matter into special consideration, or, at all events, of any report that they have drawn up upon it.

205. Therefore I take it that you are not aware that they consider it safe for a rail of over 60 lb. to bear a locomotive of 16 tons?

206. *Professor Warren.*] What weight?

207. *Mr. Hoyle.*] I do not know that such a weight has ever been put on the lines in America, but I do know that it is against all rules of railway management.

208. *Mr. Brown.*] Do you know that as far back as 1891 that an experiment was made between New York and East Buffalo, and that on that occasion a distance of 430 miles was performed in 425 minutes, that the weight of the engine was, with full tenders, 100 tons, and the total weight of the train was 230 tons, showing that for speed and weight in a long distance journey the record had been surpassed, and the engines run were similar to the Baldwin engines? No; I have not heard of that.

209. *Mr. Eddy.*] Of course the Commissioners have a great amount of responsibility and anxiety in connection with any new departure made by them in a question of this kind; and as Mr. Hoyle has stated what ought and what ought not to be done, I should like to ask him whether he would be surprised to hear that I had consulted Sir Benjamin Baker and Sir John Fowler, two of the greatest engineers in England, as to whether a 70-lb. rail, such as they know exists here, would bear a locomotive weighing 16 tons and a pair of drivers.

210. *President.*] How can he know unless you have told him?

211. *Mr. Hoyle.*] I would like to ask Mr. Eddy why, under those circumstances, he is laying down 80-lb. rails on the lines in New South Wales? In that case we prefer to pay £1 to save £5. It has been stated that a 60-lb. rail is the standard rail. Is not Mr. Hoyle aware that since the Commissioners came into office for the purposes of economy, and for other purposes, they have adopted an 80-lb. rail?

212. I am aware that you have done it on the suburban lines?

213. And on all lines. The rails throughout the Colony are being altered to 80-lb. rails.

214. I am aware that 80-lb. rails have been laid on the suburban lines, but I am not aware that 80-lb. rails are being laid throughout the Colony, and if they are I shall certainly have something to say about it on the question of unjustifiable expenditure.

215. Mr. Hoyle has stated that unless the alteration in the platforms was made to accommodate the Baldwin locomotive the order was given unnecessarily, at least so far as the suburban lines were concerned, inasmuch as it had previously been decided to quadruple them. I should like to ask how, if that alteration had not been made, the engines would have run along the suburban lines?

216. *President.*] As I understand Mr. Hoyle, he says that there was never any bother before the Baldwin engines arrived. He says he never knew of the platforms being altered before the Baldwin

engines

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engines arrived, but that they have been altered since those engines came to the Colony. He does not say positively as a fact that it was to accommodate the Baldwin engines that the platforms were altered, but he asks that it should be inferred from the time that the alteration was made that it was made for that purpose,

217. *Professor Warren.*] He also states that the Newtown platform was altered, and afterwards removed altogether, for the purpose of making a fresh station.

218. *Mr. Hoyle.*] I should like the President to ask how it was that the Railway Commissioners thought it justifiable to alter these platforms if they had previously decided to demolish them.

219. *President.*] Questions of that nature may be put to the Railway Commissioners at a later stage of the inquiry.

220. *Mr. Eddy.*] With regard to the draw-gear of the engines to which Mr. Hoyle has referred as having been changed, does he know that that change was made at once, because the Baldwin people had unfortunately overlooked a detail in the specifications, and that the draw-gear was changed at their expense, and not because any mistake had been made in the designs.

221. *Mr. Hoyle.*] It is utterly impossible for me, or any man outside the Railway Commissioners, to know what was done elsewhere. All I can say is that it was a defect, and so much has been admitted by Mr. Eddy.

222. *Mr. Eddy.*] Mr. Hoyle appears to have an intimate knowledge of the details of railway management, that one would have thought that he would have known of an important fact such as this.

223. *President* (to Mr. Eddy).] If you can prove that it demolishes that part of the charge up to the present; however, an allegation has been made that the drawing-gear has been altered, and from that fact it is sought to draw a hostile inference. It is useless, however, for you to ask Mr. Hoyle if he knows the reason for which you altered the draw-gear was so-and-so. He cannot tell you, but if you can prove the reason for which the draw-gear was altered when you give your evidence that settles the whole thing.

224. *Mr. Eddy.*] With regard to the engines themselves, Mr. Hoyle has made all kinds of theoretical suggestions. I would like to ask him whether the best answer to all that he has stated would not be a statement as to the practical work that these engines are doing every day. He talks of the engines not being properly adjusted and of their slipping? Would evidence to the effect that these engines slip less than any other on the New South Wales Railways be the best answer to this.

225. *President.*] Have you any further questions to suggest to us to put to Mr. Hoyle? I do not wish to ask any more questions.

226. *Mr. Brown* (to Mr. Hoyle).] You have never been in America have you? No.

227. Would you be surprised to learn that half the railways in the world are in America? I am quite aware of that.

228. And that the Baldwin Locomotive Company is one of the largest manufacturers in the world? Yes, and one of the best.

229. *Mr. Eddy.*] I would like to ask one more question. Mr. Hoyle made some allusion to the draw-gear of the rolling-stock and stated that hauling power of the locomotive was in excess of the strength of the draw-gear.

230. *President.*] Yes, he did.

231. I should feel obliged if you would ask Mr. Hoyle if he is not aware that the whole of the rolling-stock of the passenger department is fitted with an automatic brake, and if the draw-gear did break the only consequence would be that the train would be brought to a standstill? Yes; I am aware of that and I am sorry in giving my evidence I omitted to draw a sufficiently marked distinction between the goods and passenger engines. If the passenger draw-gear did break away no doubt the result would be what Mr. Eddy has said, but if the draw-gear on a goods train broke the train not being fitted with automatic air brakes it would be very likely to lead to a serious accident.

232. *President.*] In other words that there would be danger to any trains not fitted with automatic brakes if the draw-gear did happen to give way? Yes.

WEDNESDAY, 13 APRIL, 1892.

[*The Commissioners met at 2 o'clock in the Board-room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

David Carnegie Simpson, being sworn, said:—I am divisional engineer for the Metropolitan district.

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233. *President.*] Do you know anything about the alteration of the platforms, more especially the suburban platforms? Yes, sir.

234. Can you tell me when these alterations were made? They began about June, 1891.

235. Was that when the Baldwin engines had been received in this Colony? Well, I cannot tell you the exact date of the arrival of the Baldwin engines.

236. Can you tell us as a fact whether that work was done before or after the Baldwin engines arrived here? Before.

237. Were the alterations in the platform, such as I understand the chipping away of the brick-work and alterations to the coping stones, made in consequence of the Baldwin engines owing to their length or breadth or dimensions generally because they (the Baldwin engines) could not otherwise pursue the traffic? The question of the adjustment of the railways to the platforms standard gauge had been under consideration for some time, and had then been decided upon.

238. Was it on account of these engines in particular? No; for the rolling stock generally.

239. Then it was not in consequence of the Baldwin engines only? No; it was on account of the Baldwin engines and other rolling stock in the Colony.

240. Can you tell us whether it was done especially on account of the Baldwin engines? No; I was simply under instructions at the time, and I know the work was done.

241. Who would know about this matter? The Engineer-in-Chief, Mr. Foxley.

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242. *Professor Warren.*] Did you alter the Newtown platform? Yes; the Newtown platform was altered.
243. Did you know at the time that it was subsequently to be removed, and a new station to be built somewhere else? I had nothing to do with it; I was simply in charge of the existing line: I had nothing to do with the design.
244. *President.*] Do you know at the time the alterations were about to be made, entirely new stations were about to be built? I knew of the alterations, but I did not know the exact site where the buildings were to be erected.
245. *Professor Warren.*] Do you know the width of the platforms before you altered them, and the width of the altered platform? I could give the case of Newtown Station—it went, I believe, from 0 to 1½ inches its whole length.
246. What I wanted was the original width between the walls? I have had no time to prepare my information, but I could get it. I only got my notice to appear at this Commission at 10 o'clock last night. I should have prepared my answers if I had known the line of examination that would be taken.
247. *Mr. Eddy* (to the President).] If you would ask the witness at what gauge he put it you would then arrive at the figures you require.
248. *Mr. Hoyle.*] I must object to any prompting on the part of the Commissioner. I have some questions to ask him, and I think as he is an engineer of some repute, he might be left without prompting.
249. *President.*] I do not think that this is prompting. I understand the Chief Commissioner for Railways did not intend to prompt, but only to suggest a question. He may put a question in a more intelligible way than I would, because I do not know anything of engines or railway lines. To what gauge did you alter these respectively—the line of the platform? They were altered to 5 feet 1 inch from the centre of the road.
250. *President.*] If there are any questions you would like to put, they must be considered as put through me. If there are any questions which I think you ought not to put, then I shall stop you.
251. *Mr. Hoyle.*] The witness has said that the work on the suburban line was done in June last. Will the witness swear that the alterations to the platforms on suburban line were done and completed in June last? No, I cannot swear that; because I was absent on leave during the month of June, and during my absence the work was carried out.
252. *President.*] When did you come back? I came back on the 27th June.
253. Was it begun in June? Yes, and it was going on for some time. We had to see to it. The object was to bring the platforms to the standard gauge.
254. Were they not at a uniform gauge before? Oh, no; the line was built before Mr. Whitton's advent here, so that the gauges are of different widths.
255. I understand the gauge to be a fixed distance from the middle of the line to the flush, the vertical flush of the platform? Yes.
256. *Mr. Hoyle.*] I would like to ask the witness whether in making arrangements about the gauge he would swear that the rails had not been moved in those cases where the necessity was to alter the platform:—will you swear that the distance in the 6-foot was not more than 6 feet, that the alterations could not have been made by moving the rail back? We would use the most expedient way, if necessary to cut the platform away we would do it.
257. Will you swear that the rail was not too close to the platform, and that by the slewing the rail back the alteration of the platform would have been obviated? I will not swear to any exact dimensions. It would not be less than 6 feet.
258. Do I understand that the witness does not know what the dimensions were when these alterations were brought about? I have measurements of all the platforms before and after the alterations.
259. Did you ever hear in your capacity as engineer of any of the vehicles being used in the traffic striking the platforms previous to these alterations being made;—will you swear that you ever heard that any of the vehicles used in the traffic ever did strike the suburban platform? I never heard of any vehicles striking.
260. Will you be prepared to produce the shop orders issued when instructions were given to carry out this work?
261. *Mr. Eddy* (to the President).] Is it not rather irregular to have this cross-examination on his own witness by Mr. Hoyle?
262. *President.*] It is put in the form of cross-examination, I admit, regarding the witness as Mr. Hoyle's own witness, but he has only to alter the question a little and ask him if he can to produce the shop orders. It is a matter of manner rather than of words. (To Mr. Hoyle): Have you got the shop orders for the alterations? Which are they?
263. *Mr. Hoyle.*] In the locomotive department you have shop-orders, but in your department each job has a number. I want to know the numbers for all the work done in your district authorising the work to be commenced, and I also want to know when the work was commenced. Will you place these papers before the Commission? I think that is for Mr. Eddy to say.
264. *Mr. Eddy.*] Would it not be more convenient for the Commission, rather than going into details that whenever a platform was altered, to have the particular facts placed before you with regard to the alterations, and the decision of the Commission that certain alterations should be carried out as rapidly as possible.
265. *President.*] I do not know what Mr. Hoyle may want these orders for, but I suppose these orders are particular orders to do certain work. I do not know whether they are called shop orders or not.
266. *Mr. Eddy.*] It is troubling the Commission with a lot of unnecessary detail.
267. *President.*] If Mr. Hoyle thinks it right to have these orders, it would not be correct for the Commission to stop them. If these shop orders are merely a preface to something else it will be better to have them. I take it that Mr. Hoyle intends to show that these alterations were made in consequence of the Baldwin engines.
268. *Mr. Hoyle.*] The reason I am asking these orders is that I do not intend to bring any witnesses here other than the officers of the Department. I have no communication with the men in the railway service. My charge will be made on very broad grounds. I had no communication with the men, and I ask this question because it is only through the officers of the Department that I desire to prove my case.
269. *President.*] I do not know what the shop orders are, and I therefore cannot express an opinion as to their admissibility.

Mr. D. C. Simpson. 13 April, 1892.

270. *Mr. Hoyle* [to witness.] Will you swear that it was not your belief that the alterations were made, when they were made to meet the necessities of the Baldwin engines?
271. *President.*] His belief has nothing to do with the matter. Supposing that some orders were given by the head of a department, and supposing his clerk forms an opinion as to why that order is given, is that opinion to prevail, although it may be quite erroneous? No matter about the opinion, what you want to know is what was done.
272. *Mr. Hoyle.*] Are you aware than when the quadruplication was made between Eveleigh and Sydney, that on what is now the eastern outline a retaining wall stood before the alteration was made.
273. *Professor Warren.*] What are you referring to?
274. *Mr. Hoyle.*] I am referring to the Eveleigh Station;—are you aware that when the line was laid down a wall was built up on the eastern side, making, in fact, the eastern side of the new platform? Yes.
275. Will you swear that wall was not pulled down and another erected in its place? I have nothing to do with it.
276. Will you swear that that wall was not pulled down? I do not understand you.
277. *President.*] Ask him if he knows it as a fact.
278. *Mr. Hoyle.*] Do you know then, as a fact, that the eastern wall, after being first erected, was subsequently pulled down and re-built? I am not aware of it.
279. Were you aware that when the work of quadrupling the line was ordered to be carried out, you being engineer of the district, that the platforms which had been altered in the suburban line were demolished? I had nothing whatever to do with the site of the new building, I was simply in charge of the existing works.
280. How many of the platforms were altered? You must give me time to prepare an answer—I did not know the question would be put, or I would have supplied the information.
281. *Professor Warren.*] If Mr. Simpson will supply us with a list of the platforms, and details of the alterations performed after that ought to be sufficient.
282. *Mr. Eddy.*] How much did it cost for altering the platforms at Newtown?
283. *President.*] Do you mean chipping away bricks and coping? Yes.
284. In the case of Newtown it was about £10.
285. *Mr. Brown.*] How much did it cost in the suburban area? I do not know, but I will supply the information.
286. *Mr. Hoyle.*] Was the Granville platform altered? Yes, it was altered.
287. There are four platforms, I believe? There are three really, but they answer the purposes of the four roads; so far as my memory is concerned, I believe they were all altered.
288. *Mr. Eddy.*] An answer was given in Parliament in regard to these alterations of platforms, which answer has been characterised in a speech I saw, as a deliberate falsehood. I would like to ask the witness whether he, in conjunction with the Engineer-in-Chief, made the estimate for bringing the platforms to the standard gauge, and whether he provided the information for the Railway Commission, in conjunction with the Engineer-in-Chief, but approximately the cost would be £50.
289. *President.*] Is that so? Yes, that is so.
290. *Mr. Brown.*] What I understand from you, Mr. Simpson, is this—that you cannot give any information to the Commission with regard to the alterations, from your own knowledge; you only know that they were altered in connection with the general vehicular traffic, and not particularly with regard—so far as you know—for the purposes of the Baldwin engines.
291. *Professor Warren.*] They were altered for the purposes of uniformity, and to bring everything to a standard gauge? Yes.
292. *Mr. Hoyle.*] I would like now to have the Chief Commissioner sworn; I have some questions to ask him on this particular letter—I would like to have him sworn in.
293. *Mr. Eddy.*] I do not think that would be quite fair, and I hope the Commission will not fall in with that proposal. I think that before I give my evidence I should hear the charges, and that we should have all the evidence that is to be produced against the Commissioners.
294. *President.*] I wish you to understand this—it appears that Mr. Hoyle desires you to be called to substantiate some ground of charge, just as if you were in a Court as one of his witnesses, so you may answer these questions, and the Commission may call you again.
295. *Mr. Eddy.*] I am prepared to give evidence as a witness, but not to be subjected to cross-examination.
296. *President.*] The questions to be put to you are to be put through me, but I shall refrain from repeating them, in order to save time.

Edward Miller Gard Eddy, being sworn, said:—

Mr. Eddy, A.I.C.E. 13 April, 1892

297. I am Chief Commissioner on the Railways of New South Wales.
298. *Mr. Hoyle.*] I wish to ask you is it customary for you to hold conferences with the officers on any matters connected with the Department. Is it the custom of the Commissioners to call their officers together in conference when anything is going to be done in connection with the management of the railways?
299. *Mr. Eddy.*] We hold conferences with regard to the management of the railways, and some times special meetings are held with regard to proposed works; it depends upon what we consider is the importance of the matter.
300. *Mr. Hoyle.*] Had any conferences relative to the importation of these engines been held.
301. *President.*] Had any conference been held by the Commission with its officers relative to the importation of the Baldwin engines? Yes, there was a conference held.
302. *Mr. Hoyle.*] Was there any objection raised by any of the officers called together at that conference relative to the importation of these engines? No.
303. *Mr. Hoyle.*] I wish to ask the Chief Commissioner did he make a speech on the 21st of January last at a meeting in connection with the Railway Ambulance Corps. I will quote part of the speech, and ask him if he used those words.
304. *President.*] You can ask him if in a speech he delivered before the Ambulance Corps did he say such and such words.

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305. *Mr. Hoyle.*] Then did you in the speech delivered at the Railway Institute, on or about the 20th of January last, say the following words:—"One question is that of the Baldwin engines—the ten-wheeled American engines. All kinds of stories were current as to mistakes in their design, the alterations of the line, and so on, and it was well the facts should be known. The engines had no mistake in their design; they were fitted as they were intended to be with regard to their size, and the alterations made upon the lines had no bearing upon the Baldwin engines. Before the Baldwin engines were ordered the Commissioners found, on making their inspection trips over the lines that through various mishaps the works were in many places out of gauge, that in maintenance or construction of the lines the rails had been shifted in towards the fixed structure, causing the original standard of Mr. Whitton to be encroached upon. They had simply given orders for everything to be brought back to gauge. When the Baldwin engines were ordered, as they were to be made to the maximum size, the Commissioners had directed that this work should be pushed on, and it was completed by their arrival. The necessity was put down to the new engines. There was an erroneous idea that the cost of this work had been something great, but the total expenditure had been for altering stations and platforms, £2,478, and for slewing lines, £112—a total of £2,590 for the whole of the railways of the Colony." I would ask Mr. Eddy did he use these words—is that a substantially correct report of what you said?

306. *Mr. Eddy.*] I would respectfully decline to answer a question of that kind. It is too far back for me to remember the words I used in January last. If Mr. Hoyle will divide the points he wished me to answer, I shall do what I can to reply to them.

307. *President* (to Mr. Hoyle).] You will state particular parts of the speech you wish to refer to.

308. *Mr. Hoyle.*] Is it a fact that in the maintenance or construction of the lines the rails had moved in towards the fixed structures, which was it. Were the rails put back in their proper places or were the platforms altered?

309. *President.*] It is said Mr. Eddy in your speech the rails had been shifted;—what have you to say as to that? I would have been more correctly reported if I had said in this speech that either the rails in the maintenance had been moved nearer to the fixed structure or the structures had been erected too close to the rails. In some cases it arose in the former way, and in other cases in the latter.

310. *Mr. Hoyle.*] Were the platforms altered or the rails put back where they ought to have been? In some cases it was found possible to slew the rails out from the structure, in others it was found impossible to do so, and therefore it was more desirable to chip the platform, which in many instances was an exceedingly small thing, and in some cases only one end of the platform was out of gauge. I might mention a great difficulty, for instance, at Petersham, where the station was erected in such a manner that there was not a proper clearance. It was always a tie upon the railway, and that has been known for years, and has curtailed the working power. It was a most difficult thing to manage, and the only way of pulling things to a standard gauge was to reduce the 6 ft. way to 5ft. 9 in. It was known for years that that place was inches out of position.

311. *Professor Warren.*] It was built so? Yes; it was built so. The majority of the cases where these difficulties have arisen are where the structures have been built since the railways were opened, and have not been built to gauge. I have with me a minute which was drawn up on the subject of the difficulties experienced owing to the want of a standard guage in working the railways. The minute is dated the 8th of April, 1892, and in it it is stated that "Owing to the want of a standard gauge any work carried out by the divisional engineers was built as they individually thought best, as was discovered when the Manu car made a trial-trip to Albury, on which I went. Many platforms were found to be very much within the gauge, and these were in all cases, except one, those that had been constructed by the Existing Lines Department. Petersham was one of these, the platform walls of which only gave a clearance of 3½ in. x 2 in., and to enable the car to pass with safety the roads had to be pulled over, so that there is only 5 ft. 9 in. in the 6 ft.; and the same thing happened at Croydon, Menangle, Douglas Park, and Picton, where alterations had to be made to the platforms; and it might here be mentioned that between Sydney and Albury the height of platforms varied 1 ft. 1¾ in., and the distance from rail varied 7¼ in." With reference to the overbridges, these were so low that it was necessary to keep a gauge at some bridges to prevent fettlers packing the road too high. It is that we have been trying to put right.

312. *Mr. Hoyle.*] I would like to know how many platforms the carriage in which Mr. Eddy was riding when he made his first inspection struck against? Not one.

313. *Mr. Hoyle.*] Did it come in contact with any one of them? No; not one. The carriage had been reduced some years before—a piece having been cut out of it in order to make it run on the line. I believe that in one of the series of inspections an inspector was knocked off the step of the carriage at the end of the train by a lamp-post which had been put too near the line. In going up a short branch near Newcastle the side of the carriage was slightly damaged. When we were coming down the line cautiously at one place, we could not get on till we had cut down a large part of a gate post in order to get past. Coming from the Mountains also we came into collision with a water column, which was too close to the line.

314. *Mr. Hoyle.*] Was it a fact, then, that the carriage in which you were did not strike any of the platforms? It did not come prominently before me in that way.

315. *Mr. Hoyle.*] Even if your carriage did not strike any of the platforms, did you not think that, nevertheless, they were unsafe, and that it was unsafe to run carriages on that line? Anything that happened to our carriage had no bearing whatever on this question. The question was under consideration in 1879, and here is a list of places that were under review at that time, it was reported that the platform at Clarence Siding would require 3-inch cutting; that at Bowenfells, the road in front of the platform, would require slewing 5 inches; that the platform at Eskbank would require 8 inches cutting off; that the road in front of the platform at Wallerawang would require slewing 3 inches; that at Rydal, the road in front of the station would require slewing 2½ inches; at Tarana, the road in front of the platform required slewing 2 inches; and that in front of the station at Macquarie Plains required slewing 4½ inches; at Raglan, also, the road required slewing 4½ inches; at Bathurst, the road in front of the platform required slewing 3 inches, and so also with Newbridge and Blayney. These were a few of the cases in question, and a lot of the work was done; but in thinking out our work we found that the line was still materially out of gauge. Here is a *précis* made for the late Commissioner before we took office, pointing out how the whole thing was wrong, and that rolling stock could not be properly utilised in consequence of not knowing what the gauge was. The memo. says: "The first notice I have been able

to

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to obtain, and it was only unearthed at Existing Lines, after much inquiry and trouble, is a minute by Mr. Scott, asking Mr. Cowdery for the height of the bridges at Erskinville Road and Newtown, and if the road in the former place would bear lowering." Then as to Petersham, it says: "Locomotive Engineer minuted that heretofore the Petersham platform had been our great difficulty, but he found by the diagram that there were in the north platforms which projected at top 3½ inches more than Petersham, the available width being thus reduced by 7 inches." These quotations were taken from a *précis* of papers up to 1888. That was just before we came into office, and certain engines were not allowed to run on certain parts of the line because they were too wide. Here is one quotation: "Date, April, 1889. Mr. Halligan writes Engineer for Existing Lines (also referring to a previous communication in 1888), pointing out that the large type of engines in use in the Sydney district could not be run on the Northern Line." Again, "December, 1890. The Commissioners inquired into the reason for the apparently unnecessary assistant mileage on the Northern Mail Train. Mr. Stanger replied that it is due to the platforms being too narrow to permit of engines of a more powerful type (304 class) being run in the northern district. Engineer is then pressed to complete the alterations to the platform already asked for by Mr. Stanger, to allow the 304 class of engine to pass."

316. Was that before the Baldwin engines came? Yes; the first engine of the Baldwin Company was put in steam on the 28th July, 1891.

317. The work was commenced in June. Mr. Simpson said the platform work commenced on the suburban line in June.

318. *President.*] Was the order first given in anticipation of the Baldwin engine coming? The order was not given in consequence of the Baldwin engine. The order was given, as I have tried to explain, because the whole of the system was out of gauge, and it is only one of the dozen other things the Railway Commissioners have been trying to put straight since they have come into office. True, they have not published to the world the disorganised state of the railways, and this is only one of the things requiring reform. I have papers here showing the state of the lines in 1879, and I will show from original papers that it was a very prominent question in 1888, before we took office. A *précis* of the whole question came before the late Commissioner, as I have already stated, and then it came before us in various ways, but we had such an enormous amount of work in hand that we could not put our engineers thoroughly at work on this question until some little time had passed; then it was brought up again, particularly when the line from Sydney to Newcastle was opened in 1889. I believe the Hawkesbury Bridge was opened in May of that year. It was then Mr. Halligan, the District Engineer in the North, wrote pointing out that the large type of engines in use in the south could not be run on the Northern Lines. It was also represented that platforms varied in distance from rail at the top from 2 feet to 2 feet 6⅝ inches, and the bottom from 1 foot 9¾ inches to 2 feet 6 inches. It was pointed out that if a class of engine which had been running in the south were used where these platforms now prevented them being used, the Department could save the cost of assistant engines, and then we gave orders that this matter should be pushed on rapidly. Many of our works were then getting more forward, and we gave our engineers directions to push on more rapidly than they had been pushing on with this work. There are engines that had been worked upon the lines half an inch wider than the Baldwin engines were ordered to be. By this arrangement these platforms were altered, and the engines were enabled to run.

319. Then it comes to this, that you say distinctly that the alterations to the platforms—more especially the surburban platforms—were not made in anticipation of, nor had anything to do with arrival of the Baldwin engines? The question had nothing to do with the Baldwin engines.

320. Then I understand that if you desire to run large engines such as you had in stock on certain of the lines you would have had to alter them? Yes. We were anxious since we were getting so many of these large engines that the directions we had given long before should be carried into effect as quickly as possible, so that there should be no doubt about these large engines passing safely.

321. *Professor Warren.*] You would have ordered these alterations to be made without reference to the Baldwin engines in order to bring things to gauge? Yes.

322. *Mr. Brown.*] The fact is these alterations were set about actively at or about the time the Baldwin engines arrived here, and I understood you had an engine or engines working here as large as the Baldwin engines? I will put in dimensions showing that the measurement of the engine referred to over the cylinders was 9 feet 3⅛ inches—this engine had been working here for years. [*Exhibit put in.*]

323. *Mr. Hoyle.*] Do you know at the time the alterations had to be made to the suburban paltforms that these platforms would be demolished. Did you know this at the time that the quadruplication had been decided upon, these platforms would have to be destroyed? If you will tell me the date I shall tell you whether we had settled where the new stations were to be.

324. Did you know when these alterations were being made to the platforms on the suburban lines that these platforms would have to be destroyed to make room for the quadruplication of the line? Well, that all depended upon the date.

325. Mr. Simpson has sworn that June, 1891, was about the date on which these platforms were altered, was the Chief Commissioner then aware that the quadruplication of the surburban line was about to take place? I do not know anything about June, 1891, I have given you in plain words the alterations authorised by the Commissioners with regard to these works.

326. You have said that it was in consequence of the engineers being so busy, and so much work being in hand that this particular work had not been begun sooner than it was. Is it a fact that when the work was begun you put gangs of men on night and day? The Railway Commissioners do not control the way in which the work is done, directions are given to the engineer to do certain work, and we trust to their ability and skill to carry it out. Some work they are told to carry out at their convenience, other works they are told to complete at once; for an example, the opening of the quadrupled lines to Summer Hill, the engineer was told that the work must be finished for the Easter traffic, and it was done. There are other works that the engineers are told they may carry out whenever it is a convenient time with the men.

327. *Mr. Hoyle.*] I want to find out, first of all, whether it was a fact that men were put on night and day for this work. Were any orders issued by the Commissioners. I understand that before any night work can be done the leave of the Commissioners must be obtained. I will ask whether the Commissioners gave any orders to expedite this work, which would necessitate putting on men night and day?

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I have already answered that sometimes we give directions to the engineer to push on more rapidly with his work. The Commissioners do not take cognisance of how the engineers carry on their work. They do not come to us and say "We want to work an hour or two overtime in order to do certain things."
328. Is it not a fact that before overtime can be worked the permission of the Commissioners must be had? It is not a fact. There are certain cases in which the Commissioners are consulted; for example, at the end of last year the engineering department had a great need of points and cross. It was represented they could not be made in the shops sufficiently early to meet the requirements unless a night shift was put on. It was a large question, and therefore the Commissioners were consulted; but to say that an officer would have to come to the Commissioners whenever he wanted a man at Darling Harbour to work an hour's overtime loading or unloading special lots of goods would be monstrous.
329. *President.*] Supposing that the alteration in these stations was effected by having night shifts, would it be necessary for the engineers to whom the Commissioners gave direction to carry out the work to ask for permission to put on these shifts? Not if he had direction from the Commissioners to carry out the work in a certain time. In that case we would leave it to his discretion.
330. *Mr. Hoyle.*] Were instructions issued in this case?
331. *President.*] Were there any special instructions given that this work was to be done in a certain time? We gave directions that the work was to be pushed on more rapidly—to be completed as soon as possible.
332. *Mr. Hoyle.*] As this work was allowed to stand so long without the Department taking it up, will the Chief Commissioner say whether orders were given to force on this work by night and day? The Commissioners were anxious to carry out these necessary works as speedily as possible, and we have only a further period of 3½ years before our Commissions expire, and we are anxious to complete the works we are anxious to see done.
333. *Mr. Brown.*] Are you correctly reported in saying that the whole expenditure in connection with the alterations represented £2,478, for slewing the lines, £112? The statement up to the 31st March is for altering stations and platforms £3,056 12s. 2d., slewing the lines, £112 15s. 11d., making a total of £3,169 7s. 1d.
334. That is the cost for the whole line; it represents altogether about £3,000? Yes.

Deodatus Hilin Neale, being sworn, said:—

Mr. D. H. Neale. 13 April, 1892.

335. I am a mechanical engineer by profession, and I am an officer in the Railway Department, entrusted with responsible work.
336. *Professor Warren.*] What is your actual position; what is your official name? I am not aware that I have an official title.
337. *Mr. Eddy.*] He is a mechanical engineer on the staff of the Railway Commissioners.
338. *Mr. Hoyle.*] Does he advise the Commissioners as to what class of locomotive rolling stock shall be brought into the service? I, with other officers, was asked to advise the Commissioners on one occasion.
339. *President.*] Only on one occasion? Only on one, I believe.
340. *Mr. Hoyle.*] The witness has stated that his position is to advise the Commissioners on the style of locomotive plant we should have in the Colony. Is it part of your business, Mr. Neale, to advise the Commissioners as to the particular kind of locomotive stock which shall be brought into the service.
341. *Mr. Eddy.*] He said he advised the Railway Commissioners on anything that they desired to have his advice about.
342. *Mr. Hoyle.*] Is Mr. Neale's position in the service that of engineer—that of consulting or advising engineer—to the Commissioners as to what sort of rolling stock should be imported into the Department? Whatever the Commissioners ask my advice about I give them the benefit of my experience and knowledge, whatever the subject may be.
343. *Mr. Hoyle.*] Then we are to understand that his position officially was that of consulting engineer?
344. *President.*] I understand that he is a mechanical engineer on the staff of the Commissioners, and that his work is to give advice when asked for it. (To Witness): Is your position there a sort of consulting engineer. Would the Commissioners say to you, "What do you think of such and such an engine; is it advisable to have it here." Do they ask your advice periodically, or occasionally only? My reports are made in writing.
345. Are you required to advise on every question of moment as to the importation of new engines—rolling-stock; will you be consulted in such a question? Not necessarily.
346. What service do they pay you for? For the work I do, which consists of reporting on a variety of subjects as an engineer.
347. *Mr. Brown.*] Were you called upon to report on these Baldwin engines? Yes.
348. *Mr. Hoyle.*] Did you advise the Commissioners to obtain these engines? I advised the Commissioners that I thought the importation of these engines of immediate necessity.
349. What reasons had you, and what weighed with you, that caused you to advise the Commissioners to take that course?
350. *President.*] What have his reasons to do with it, if the charge here is that the engines are defective and unsuitable to the permanent way of the railway, and I cannot see how this affects the question. I want to know how it is material.
351. *Mr. Hoyle.*] Will the witness state to the Commission what his previous experience has been in this particular class of engine;—has he any experience of the class of engine regularly imported? Yes; I had this experience that I had met and conversed with some of the most eminent locomotive engineers of America, who had told me that they were greatly pleased with the performance of this class of engine, and considered them a great improvement on anything they previously had built.
352. Have you had any personal experience? I have seen the engines at work, and have spoken with the people who are responsible for them—the chief officers in the railway world; and I had the performance and consumption sheets of these engines in comparison with those previously used.
353. When this order was sent to America, do I understand that Mr. Thow was not in the Colony? He was absent.
354. Had Mr. Thow ever been consulted about the Baldwin engines being imported? That is a fact not within my knowledge.
355. Mr. Thow having been absent, I will ask the witness was he acting for that gentleman; in fact, was he not acting as head of the locomotive department in his absence? No; I was not acting as head of the locomotive department.

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356. Do you know whether any plans or drawings were sent to America;—were any drawings and specifications sent to America with the order for these engines? Yes; five drawings were sent of small details.
357. Were these drawings made in the Colony the complete set? Specifications for the engines were sent from America and we asked that certain alterations should be made. Drawings of the details I have mentioned were made in the Colony.
358. What were these alterations? They were the subject of some correspondence. I may mention that the Baltimore and Ohio engines were taken as the model, and I produce here some figures regarding them. As to the alterations, we desired first of all a slightly less weight on the driving-wheels, copper fire boxes, and brass tubes, and screw-reversing gear; the other alterations were slight, and I need not particularise them.
359. Will you state why the lessening of the weight on the driving-wheels was recommended? Because it was previously laid down that 14½ tons was a perfectly safe load on our railways, and I did not wish to exceed it.
360. You had in consideration, I suppose, the fact of the 71-lb. rail? Yes; I had in consideration the rail used. I believe the weight of the rail was 71 lb.
361. When the reduction in the weight was made in the engine, was it made to meet the requirements of the 71 lb.—that is, that it would be safe to ride over a 71-lb. rail? I am not prepared to answer that. I am a mechanical engineer. It is for a civil engineer to state that, and that weight had been fixed at 14½ tons per axle. I was informed that engines had been running on these lines before with considerably over that weight, and I thought that if I limited it to that weight I would be quite within the bounds of safety.
362. Did the specification set forth that there were iron or steel axles in the bogie? The specification stated iron or steel.
363. Do you know that it has been an established rule in our service only to admit steel axles in our locomotives? I do not know.
364. Does the witness know, or does he think that an iron axle in a bogie of the size of these axles would be safe? Yes; I think it would be perfectly safe.
365. When the engines arrived did the witness know whether these axles were iron or steel? I did not examine them.
366. Was Mr. Thow here when these axles arrived? I cannot remember; but my impression is that Mr. Thow arrived after some of the engines were running, and others yet to be put together.
367. *Mr. Eddy.*] I think I would ask the witness to think over his answer, would it not be Mr. Thow's departure and not his return that he refers to.
368. *Mr. Hoyle.*] Does the witness state that there was no responsible officer in the Locomotive Department whilst Mr. Thow was absent? Certainly not. I have not said anything of the kind.
369. Who was the responsible person during Mr. Thow's absence. Who ought to have examined these axles and locomotives? The responsible officer was the manager of the works, under whose supervision these locomotives were erected.
370. Who was he? Mr. Howe.
371. When you recommended these engines to be brought here the Railway Commissioners accepted your recommendation?
372. *Mr. Eddy.*] I would ask that some degree of order should be imposed in these proceedings; Mr. Hoyle is suggesting to Mr. Neale things he never said; Mr. Neale never said that he of his own authority recommended these engines, he said that he in conjunction with others had recommended them, and now he is made to appear to say that he alone recommended them.
373. *President.*] We understand that, it did not strike me in the way you said—if he and others recommended, it is not inaccurate to say that he recommended.
374. *Mr. Eddy.*] It is trying to put on one person the responsibility which does not rest upon him; the responsibility rests upon the shoulders of the Railway Commissioners.
375. *President.*] Well, then, Mr. Neale, you in consultation with others, recommended the importation of the Baldwin engines? Yes; I am prepared to take my full share of any responsibility of the advice I gave.
376. Who were the other persons who advised in consultation with you? They were Mr. Howe, Mr. Loughrey, and Mr. Stanger.
377. *Mr. Hoyle.*] The officers controlling the locomotive department were these gentlemen, are we to understand this, was the locomotive department controlled by Mr. Neale, Mr. Howe, Mr. Loughrey, and Mr. Stanger during Mr. Thow's absence.
378. *President.*] The witness may say whether he was consulted about these locomotives, and why he was consulted, but this Commission has not got to determine who was acting in the locomotive department during Mr. Thow's absence, how does that help us?
379. *Mr. Hoyle.*] They were responsible for the safe working of the Department during the absence of the head of it.
380. *Mr. Eddy.*] The Railway Commissioners personally administered the locomotive department during the absence of Mr. Thow. We took a greater responsibility than usual, and we distributed the detail responsibility over four officers.
381. *Mr. Hoyle.*] Did you examine the Baldwin engines after their arrival in the Colony, after their construction and during their putting together? Yes.
382. Did you find any defects in any part of the engines? In none of them.
383. Was there any defect in the wheels, or did you hear of any defect in the wheels? There were no defects in the wheels.
384. Did you hear of any defects in the wheels? I heard some criticism which was extremely misplaced, and made by people who understood nothing about the wheels, they did not understand the way wheels were made, and they were mislead by taking a little over-lapping of iron for a flaw.
385. There were no flaws you consider? The wheels were much safer that the ordinary make, and the inventor of them had received a medal for inventing these wheels. I would always recommend the use of the Baldwin wheels instead of the English wrought-iron wheels where ever I went. The English depends upon welds, but the Baldwin does not depend upon welds.
386. Is it a new or old principle on which these wheels are made? It is a new adaptation of an old process, called "The Cold Spoke" process, used by Owen and Dyson of Rotherham, the inventor of the adaptation being Mr. Vauclain.
387–8. Were there ever any of these wheels made before? Yes; thousands made by the old process of which this is an adaptation, the vital part is made on the "Cold Spoke" process.

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389. Are you aware that one of the tender axles which was attached to a passenger train broke down? I cannot say that I am fully possessed of the facts of that case, but I am under the impression that the journal was twisted off—we do not call that a broken axle.
390. Was it before this accident or after it that any minute examination was made of this axle, or minute examination or tests made of the quality of the material;—were such examinations made before the engines began to run, or after? Tests were not made before the engines commenced to run. Not in this Colony.
391. Did you subject these axles to any minute examination before they commenced to run? Personally I did not do so.
392. Do you know if any of the other officers—who with yourself controlled the Department at the time—subjected these axles to any minute examination or test? I cannot answer that, it is not within my knowledge.
393. Do you say that you are not aware that one of these axles was broken?
394. *Mr. Brown.*] He does not call it a broken axle.
395. *Mr. Hoyle.*] Is the journal a part of the axle? Yes.
396. Did it come under your knowledge that any other twisted journals occurred, or axles were broken that you are aware of? Yes; but there is a distinction between journals twisted off on the inside and the outside. If inside, it is broken—if outside, it does not necessarily follow that it is a broken axle.
397. Is it dangerous for an axle or journal to be damaged as the one referred to in the evidence yesterday was damaged? I do not know what was the evidence yesterday.
398. If the engine or the train on which this axle is broken had been travelling at the rate of 30 miles an hour would it have been dangerous then for the journal to be twisted off? That is an instance which in a large number of cases might have a different result. Only about one per cent. of the axles that are broken cause any injury to life or limb or serious injury to the rolling-stock or permanent way.
399. Is it your opinion that if this particular train had been going at 30 miles an hour that when this journal twisted off no danger would have resulted to the life of anyone in the train? Well it is a question of what the danger would have been, it might be 1 in 1,000.
400. *Mr. Brown.*] Would you have liked to have been in the train? Well, I would not have liked to have been in it.
401. *Professor Warren.*] Suppose the train were going at the rate of 30 miles and the front bogie axle broke on the inside, would that be dangerous? The thing can only be arrived at from records. A great many axles break every year—and not many result in accident.
402. Would it have the effect of making the front drop down? Yes. It might fall and the others take the weight, or it might not.
403. Do you say that in the majority of cases when a front bogie axle breaks that nothing happens? Yes, that is my experience.
404. *Mr. Hoyle.*] Have you had any experience in your life as a mechanical engineer of accidents of this kind, do you know whether axles have broken in some places? I was chief draughtsman for four years on the Great Eastern Railway, where the rolling stock and traffic was 50 per cent. larger than here, and all the broken axles passed through my hands. I examined the fracture and had drawings of each axle made for the Board of Trade, and during the whole of that time not a single passenger was injured through a broken axle. I should say there were about 30 broken axles a year.
405. *Mr. Hoyle.*] Were they bogie axles? Some were leading engine axles, the breakage of which is more serious because then there is only one axle to uphold the front of the engine, whereas in a bogie engine there are two. I remember on one class of engine three leading axles broke. After I left the line several extra large axles broke and no serious injuries resulted.
406. What was the rate of speed the train was going at? They were large express engines with 7 ft. 6 in. driving-wheels which could travel at 55 miles an hour.
407. Do you know when this axle broke whether the wheel came off? I do not know.
408. From the opportunity you had of knowing do you believe the wheel would come off? That depended upon whether it is an inside or an outside journal.
409. In this particular case was it an inside or an outside journal? It was an inside one.
410. Do you know in this case whether the wheel did come off or not? I believe that when it broke the engine was almost at a state of rest.
411. I am referring to the case of the engine at the Sydney Station. It was coming in at a very slow rate of speed, and what I want to know is whether the wheel in that case came off? Well I did not see it, and I should prefer the question being asked from some one who did.
412. If the axle broke, and the wheel came off, what, in your opinion, would be the result if the train was travelling at 30 miles an hour? I think I have stated my general experience.
413. *President.*] I understand that there might be an accident or not, but in any case the percentage of accidents was very slight in these cases.
414. *Mr. Hoyle.*] After the axle broke did you make any tests of the iron, or do you know if any tests of the axles were made? Tests were made, but not by me.
415. Do you know if the iron turned out to be good or bad? It did not turn out to be what I should call good iron.
416. Is it any part of the duty of the engineer of the department to examine minutely the vital parts of an engine;—is it his duty to examine these things? If he did he would have nothing else to do.
417. If engines are brought from abroad, before any of them are run is it any part of the duty of the gentleman at the head of the department to say whether all the specifications have been carried out or not, and if everything is perfectly safe? Do you mean is it the personal duty?
418. *President.*] What I understand is this, are these engines required to be examined by some capable officer to see whether they are in a fit state to run on the lines, whether their axles are good, and so on? Certainly it is the custom to examine engines, and not only before they run, but every day after they have done running.
419. *Mr. Hoyle.*] Was such an examination made of these engines? I said I could not state positively from my own personal knowledge.
420. *Mr. Brown.*] He says he has made no personal examination, and does not know who did.

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421. *Mr. Hoyle.*] Are you aware that after these defects had been discovered orders were given by the Railway Commissioners to make these engines safe, that new steel-axles should be put in the place of the iron ones? I am aware of the substitution.
422. Have steel axles been put in all the engines? I believe they have, but I cannot speak absolutely; I have every reason to believe so, but I am not the officer who changed them.
423. Do you know whether it is the intention of the locomotive department to put new steel axles where it has not already been done?
424. *Mr. Brown.*] How can he tell you that?
425. *Mr. Hoyle.*] Do you know that new axles either have been put in, or have to be put in, that in fact they are ordered?
426. *Mr. Brown.*] I suppose he can tell you that, as a matter of fact, some have been put in, and he presumes others will be put in.
427. *Mr. Neale.*] Mr. Howe would know. It is under his directions these axles have been changed. I would prefer that you ask that gentleman.
428. *Mr. Hoyle.*] Are you aware that the trailing wheels have been bored out, and larger steel axles put in than the original iron ones? In the trailing-wheels certainly not.
429. But in any of the bogie-axles, have they been replaced by larger axles of steel? Yes.
430. Were the bogie-wheels bored out to admit of a larger journal? Yes.
431. Has a face been turned on the wheels since then, and iron rings put on the boss to strengthen them? Yes; two iron rings have been put on.
432. Have you ever known a similar thing to be done? Yes; the Great Eastern Railway. About 1861 steel was a new material, and a great deal was expected from it. In some of Robt. Sinclair's engines with 7-feet driving wheels 16 by 24 cylinders, the original 5½ inch axles were found too small, and larger axles 6¾ inches diameter were substituted and put in the same wheels.
433. I understand the driving and trailing and coupling wheel axles of the engines were originally steel? No; I believe they are iron.
434. I am asking you about the bogie;—do you know where, in any case, an iron axle has been taken out, and the hole in the wheel made larger, and steel axle then put in its place? Yes; hundreds and thousands of cases.
435. Do you know whether wrought-iron rings have ever been shrunk on to the bosses of the wheels to strengthen them? In thousands of cases. There is no danger of the ring coming off if they have been shrunk on properly. Is not every tire on the railway shrunk on? and if it is safe to shrink on a tire which has a side blow against the rails, is it not safe to shrink on a ring?
436. Is there any liability of the rings put on to the bosses of the wheels to strengthen them coming off? I do not think that, humanly speaking, there is any possibility—there is certainly no possibility of one of the rings coming off because it is between the wheel and the box, and I think it a very remote chance of the outer one coming off.
437. Is the ring put on the boss fastened the same way as the tire? A great number of tires are not fastened except by being shrunk on.
438. The tires you refer to, are not they also fastened with a set screw? Yes; they are fastened with some fastenings.
439. Is the ring put on the boss of the wheel also fastened with a set screw to make it secure? No; I believe not.
440. Now, if these rings came off is it the opinion of the witness that the bosses of the wheels would be unsafe? No.
441. Then, why were the rings put on if it is not unsafe to take them off? I will explain. You want a wheel that is durable as well as safe. A wrought-iron driving-wheel, for example, is composed of a number of pieces welded together. In time, with the vibration of constant working of the engine, some of these welds will give way, but it does not follow that an accident will consequently happen, because the giving way of the wrought-iron welds in these cases is gradual; but you have this inconvenience, that when you find it is giving way you have to take the wheel off and replace it with another. It will go on gradually becoming worse and worse. In consequence, these rings are put on to prevent the occurrence of any crack. Removing the wheel, if the crack once starts, is only a question of time, and in order to prevent that the ring is put on. If one of these rings dropped off the engine-driver would notice it, and the wheel would be marked for taking off.
442. Do you consider that it is the custom to shrink on rings instead of having your bosses sufficiently large? I do not say it is the custom, but it has been done, and so far as I know with perfect immunity from accident.
443. Were the bosses in these wheels larger or smaller than those of the wheels you have seen done in England? I cannot say that without reference to the wheels themselves.
444. Do you consider that the bosses of the wheels with the old small iron axle were anything too large? I consider that they were amply large.
445. But if the ring came off and the boss of the wheel burst before the driver noticed it, would there not be a serious result? These things do not happen suddenly; it is not so much a question of safety as durability.
446. If you consider iron safe, but steel more safe, why was it considered necessary to put in steel axles instead of the original iron ones? On this point there are a great many opinions; as doctors differ, so do engineers. Some engineers consider steel axles best; others, that an iron axle made of scrap is best; others still, that an axle made of muck-bars are the best. Muck-bars are bars welded together as they leave the rolls. I may hold one opinion, and someone else another, and the practice of English railways differs in this respect.
447. You have already stated that the iron axles which came with these engines were sufficiently strong, and he has given no reason why additionally strong steel axles should be put in their place. Was it to increase the weight on the bogie? Not exactly; it would not increase the weight as much as a man riding on front of the engine. I did not advise it; I was only an on-looker, but I believe it was done because it was thought the journals would run cooler. They would give more bearing service, and run cooler.
448. Was there sufficient lubrication of the journals and the boxes? In a letter written to the Baldwin Company, we asked for extra lubrication on account of the heat of the climate, dust and so on, our line

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line being very dusty. And I believe they tried to comply with our requirements and provide for sufficient lubrication. That letter was written on the advice of myself, Mr. Stanger, Mr. Loughery, and Mr. Howe.

449. Do you say that there was the necessary provision made for lubrication in these engines when they arrived? Yes.

450. Now since you say you have seen that the proper request for lubrication was made, can you say why these particular journals ran hot? It is very difficult to say why these journals ran hot—as in other things you may take great pains and still things will not happen as you expect.

451. Do you, as an engineer, think that if a journal such as the one that broke ran hot, it was the result of a defect in the design of the bogie or the axle or the part of the axle which ran hot and twisted off? It all depends upon the circumstances, the best axle in the world will twist off if something goes wrong in the supply of oil.

452. The witness has already stated that he saw that the proper provision was made for lubricating the axle. Now we find that by reason of extra heating one of the axles came off. Having satisfied himself previously that there was sufficient provision for lubrication, I now ask him whether there was or was not a defect in the design, and that the journal twisted off in consequence of the overheating? Well, I cannot understand so long and complicated a question, which involves statements that I cannot admit.

453. *President.*] Did the journal twist off because of overheating? Yes.

454. *Professor Warren.*] Did you consider the bearing-service provided by the Baldwin Company sufficient for these axles? Yes.

455. And the pressure on the bearing-surface is not excessive? No, it is not.

456. Then how do you account for the axles running hot if the lubrication is sufficient? Sometimes it is a very difficult thing to account for a journal running hot. I remember one particular part of an engine seized twice when driven by the same driver. He was a good man and an experienced driver, and we could not find the reason of it. A little bit of grit or waste may run in between the bearings and the journal, and make them get hot.

457. Did you draft the specification for the engine? No; it was forwarded to us by the Baldwin Company, and I, in conjunction with three other officers, suggested certain alterations. We advised the Railway Commissioners that it was a good engine, but that in order to answer the requirements of our railways, certain modifications would be necessary.

458. What alterations were suggested? There was a draw-hook. A suggestion as to the form of the cylinder-flanges was made, also the contour of the tyre, so that we should get the proper shape. Then there was a suggestion as to how they should make the big end. We prefer the bolt and block big end to the strap big end, which is used in America.

459. I understand that the specification that was sent by you to the Company was a modification of the specification sent by the Baldwin Company to the Commissioners? Yes.

460. Was anything said in that specification about the quality of material? A great deal was said about the quality of the boiler and fire-box material, and the tubes, and the tests to which they would be subjected was also stated.

461. Was that not the case with regard to all the material? No; I do not think that anything was said about the tests for the axles. It appears that it is not usual to specify tests for locomotive axles.

462. Do you mean to say that it is not usual to specify tests for locomotive axles for engines ordered in England? Well, it is done sometimes, and often is not done. I have never done it in any specification that I have drawn up myself.

463. But do you not require the very best material in an axle—the finest material that can be produced? Yes; you require very good material, but for that you rely upon the reputation of the firm from whom you order the engine.

464. That is to say, you do not specify any tests? No; it has during the last few years been more customary to do it, but it is not always done, and was very seldom done ten years ago.

465. Do you know that all makers of axle specify that their steel shall stand certain elongation and reductions of area? Yes; but when it comes to first-rate locomotive axles it is customary to rely more upon the purity of the material used and not to specify the tests of strength. Where that is done it is usually in the case of cheaper axles. The makers then say "We are giving you a cheap axle, and in order to satisfy you that it is equal to your requirements we say that they will stand such and such a test," but where you go to a first-class firm such as Vickers & Company they simply say "We supply the best axle," and it is not usual in that case to specify a test.

466. Do you mean to say that Vickers & Company do not say that their axles shall stand certain tests? Well, they have during the last few years, but I do not think that you will find that practice has existed long.

467. Did you say that it had existed for ten years? No, not so long; and I think you will find that it is done now because they are making a large number of axles by a cheaper method. I never heard of any specifications for tensile strength and elongation in the case of scrap axles.

468. Not for Yorkshire scrap axles? No.

469. You trust to the honor of the firms supplying the axles in fact? Yes; the scrap is carefully selected, and carefully worked, and the reputation of the firm is supposed to be a sufficient guarantee of its quality.

470. And in writing a specification then you would not think it necessary to supply any tests? No; but I should take this precaution, that I should only ask for tenders from certain first-rate firms.

471. *President.*] The Baldwin firm is a first-rate firm, is it not?

472. *Mr. Eddy.*] I would ask whether it is necessary to ask Mr. Neale as to what he would do under certain circumstances in which he was never called upon to act?

473. *President.*] The Baldwin engine firm that you ordered these engines from is a first-rate firm, is it not? Yes; a very good firm—a firm of very high reputation indeed.

474. *Mr. Hoyle.*] I wish to ask the witness whether, when he recommended certain specifications, he made any recommendation as to the quality of material that should go into the axle of the bogie and tender wheel? No.

475. I understand from the answer you gave Professor Warren that you trust to the honor of the firm to supply first-class materials? Yes; that is the custom.

476.]

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476. Are you aware a discussion arose in the Department as far back as 1886 on this question of axles? Of iron axles?
477. Regarding the quality of steel that should be put into the axles of our rolling stock? Yes; but I was not talking about that.
478. What I want to point out is this, that our Railway Department has always jealously guarded the interests of the travelling public, and in that respect I believe that the present Commissioners are no exception to the rule, and in doing that, when in 1886 they required some locomotives, the then Locomotive Engineer, Mr. Scott, insisted that the axles should be of a certain quality.
479. *President.*] Do you know what Mr. Hoyle is asking? I do not. I had not then arrived in the country.
480. *President* (to Mr. Hoyle). How can you get that from this gentleman;—you can probably get it from somebody else;—if it took place before he came to the country, how can he know anything about it?
481. *Mr. Eddy.*] I suggest that it has no bearing upon this question. A contract was entered into by the Department some years ago for a supply of axles and tyres of a certain kind of steel for a number of years. The fact that that is demonstrated to you does not tell you that the Railway Commissioners concur in it, or otherwise, and it is therefore quite apart from this question.
482. *President.*] Yes; I do not see that it has anything to do with it.
483. *Mr. Hoyle.*] The witness has already admitted that the journal surface was sufficient, and he has no reason to believe that any of the surfaces were not up to the requirements;—is it a fact that there were only small oil-cups fitted to the bearings for the purpose of lubricating them when the engines came here? Which bearings do you refer to?
484. The bearings of the bogie wheels? They are lubricated from beneath, not by oil-cups.
485. Well, were they supplied with oil-cups when they came here? I should not exactly call them oil-cups. They were supplied in the way in which it is customary to supply American locomotives.
486. Then do you think that sufficient provision was made for lubrication? Yes.
487. You said just now in your evidence that in revising, or rather in altering the specifications submitted to you from America, you provided for certain modifications in the draw-hooks;—were the draw-hooks that you provided for in your specification on the engine when they came here? Some clerical error had been made in the drawing rooms of the Baldwin Company, and the engines were not in that respect to our requirements. The Baldwin Company recognised that, and agreed that the alterations should be made at their expense.
488. You say that stronger hooks were made for these engines after they arrived? Yes.
489. Do you know whether any of the draw-gear on the engines has broken since they commenced to run here? I believe that one or two of the hooks originally sent out broke.
490. Were any of the draw-hooks that were originally supplied with any of these engines used on the lines of this Colony? Yes, I believe they were used for a short time.
491. You said here just now that the specification provided that the engines were to have a different hook—a stronger hook;—I ask now whether you made any report to the Commissioners to the effect that these hooks were not in accordance with the specifications.
492. *Mr. Eddy.*] This witness has said several times that he had nothing whatever to do with these matters, and that somebody else ought to be asked these questions.
493. *President.*] Yes, I know that is so. There is no desire on the part of the Commission to limit the inquiry at all so far as we are permitted by our Commission to inquire into the question, but supposing they did use these draw-hooks, if no accident had happened I do not see what bearing the evidence has upon the case.
494. *Mr. Hoyle.*] Yes, but you will remember that one of my charges was that gross negligence has been shown, and that the Commissioners admitted that charge.
495. *President.*] No, I do not know that.
496. *Mr. Brown.*] Which set of Commissioners do you mean? Neither set has admitted that so far.
497. *President.*] The first charge that you made was "That in consequence of the extra width of Baldwin passenger engines or their great length the platforms on various parts of our lines have had to be altered." The second charge to the effect that the Baldwin passenger engines were not required and should not have been imported, and that the money spent upon them was, therefore, an unnecessary expenditure of public funds, was disallowed. The third charge, which now stands as the second charge, is as follows:—"That the safety of the draw-gear will be in danger if the Baldwin passenger engine or the Baldwin consolidation goods engines draw the loads that it is stated by the railway authorities they are intended to draw.
498. *Mr Brown.*] Is not that the one to which you referred when speaking just now of the draw-gear?
499. *Mr. Hoyle.*] Yes, but in the fifth charge it is said that the Baldwin passenger engines and the Baldwin consolidation goods engines are faulty in design, and that certain parts of the axles of the bogies and tenders are dangerous, and gross neglect was shown by allowing the engines to run before the parts in question were removed. That might not refer to the particular question before you; but what I wanted to prove is that neglect has been shown.
500. *President.*] Yes, but we are not now trying an action in which there has been an accident to a passenger, and the question is whether the Commissioners should allow a particular engine to run with particular draw-gear. That might show some neglect on the part of the Commissioners, but that is not the question. We are simply inquiring into the question as to whether the Baldwin engines are defective or not.
501. *Mr Eddy.*] Certain defects were found in the engines, and active steps were taken to put them to rights.
502. *President* (to Mr. Hoyle.)] You cannot go into the question of whether there has been any neglect on the part of the Railway Commissioners or anybody else. All that we can allow you to call evidence upon—and I am not binding myself to allow that yet—is whether these engines, when imported, were defective and not up to the standard and specifications required by the Commissioners, and that it is quite a different thing from the question as to whether there was any neglect on the part of the Commissioners.
503. *Mr Hoyle.*] One of my charges set forth that if these engines haul the load that the railway authorities say that they are intended to haul, the safety of the draw-gear is endangered. What I want to find out is this:—We heard yesterday that this draw-gear had been removed to give place to a stronger gear. Now the witness in reply to a question of mine says that all the draw-gear was not removed—that admittedly

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admittedly defective draw-gear was allowed to be used, and that he believes that two of these defective hooks broke.

504. *President.*] Supposing that is so, the evidence is that that has been remedied, and it has, therefore, nothing to do with this particular point.

505. *Mr. Hoyle.*] But what I want to show is that those engines were so powerful that they broke the draw-gear. Does Mr. Neale know whether this draw-gear was attached to a passenger or a goods train?

506. *Mr. Neale.*] I do not.

507. *Mr. Hoyle.*] Will the witness state that if this hook had broken——

508. *Mr. Eddy.*] All these things are matters of inference. Can Mr. Hoyle state that any single draw-gear in the twelve Baldwin engines that he is talking about ever broke when used in drawing trains.

509. *President.*] Yes. I must say that with every desire to allow Mr. Hoyle to inquire into every point that we are allowed by our Commission to inquire into, we cannot take into consideration the question of whether the Railway Commissioners were negligent in allowing this, that, or the other. If the Baldwin engines were defective it was not their fault as far as we can find out at present.

510. *Mr. Hoyle.*] I do not want to show that it was the result of neglect. I want to show that these engines do break the draw-gear, and I want to ask the witness as an engineer what would be the consequence if one of these draw-hooks broke on a goods train?

511. But did any of the draw-hooks break?

512. *Mr. Hoyle.*] In the charge to which I have referred I state that if the loads that these engines are intended to haul are put on they do endanger the draw-gear.

513. *President.*] Do you mean that they endanger the present draw-gear?

514. *Mr. Hoyle.*] I refer to any draw-gear used in the service. We have had it admitted that two hooks have broken.

515. *Mr. Brown.*] What you want to say is that this draw-gear is unfitted for the work of the railways?

516. *Mr. Hoyle.*] No; I believe that the Commissioners have increased the strength of their draw-gear.

517. *Mr. Brown.*] Then does that satisfy you?

518. *Mr. Hoyle.*] Yes; but my charge is this—that if the Baldwin engines haul the load that it is stated by the officers of the Department that they are intended to carry, that is to say, that if one of these engines is to do the work of two ordinary engines, the draw-gear is thereby endangered.

519. *Professor Warren.*] Which draw-gear?

520. *Mr. Hoyle.*] The draw-gear between the engine and any part of the frame.

521. *Mr. Eddy.*] That is all supposition. The Commission has been appointed to try a direct charge that these engines are unsuitable to our railways. As far as hypothetical cases are concerned, it might be said if a train ran off the rails on the Blue Mountains a large number of people might be killed; that would be just as much to the purpose. As a matter of fact, these charges were made in Parliament before a single Baldwin engine ran upon the railways of New South Wales, and all the facts in support of them placed before you now have been recently discovered, a great many of them during the last week or two; a great many of them, too, are hypothetical.

522. *Mr. Hoyle.*] I think those charges were admitted yesterday.

523. *Professor Warren* (to Mr. Neale).] Is the draw-gear equal in strength to the maximum pull that will come upon it when the engine is taking its full load? The draw-gear on the engine?

524. Yes? Yes; I consider that it was quite equal to what it ought to be.

525. Have you gone into it carefully;—have you made any calculations upon the subject?

526. *Mr. Eddy.*] Mr. Thow will be prepared to give you evidence upon this point.

527. *President* (to Mr. Neale).] You have not gone into this? No; I have not gone into it very much.

528. *To Mr. Hoyle.*] You say that these engines were imported to draw very heavy loads, and you say, that having brought out these engines capable of drawing such loads, the Railway Commissioners have thereby been endangering the draw-gear?

529. *Mr. Hoyle.*] That is my contention.

530. *Mr. Eddy.*] Then I should like you to ask him to prove it.

531. *Mr. Brown.*] He is going to call one of your witnesses to do that.

532. *Mr. Hoyle* (to witness).] Were two engines known as compound engines imported with the other engines? Yes.

533. Have these compound engines been at work? Yes.

534. Do they travel at anything like a decent speed? Yes.

535. Did you visit Penrith at any time relative to these engines? Yes.

536. Would you tell the Commission why you went to Penrith? To ride on the compound.

537. Was any complaint then made to you about these engines being slow? No.

538. I might ask a personal question here. Of course, Mr. Neale is one of the gentlemen who recommended the Commissioners to import these engines. In a letter written by you to the Commissioners on the 27th March, 1890, you recommended to the Commissioners the offer of a certain English firm to supply locomotives to the Colony, and in that recommendation you said further what should be the standard train. You say: "I give the following figures for the desirable standard trains on gradients of 1-40:—

PASSENGER TRAINS.		GOODS TRAINS.	
2 Sleepers	50 tons	25 Wagons at 8 tons (loaded) ...	200 tons
1 Car 1st (lavatory)	23 ,,	1 B. Van (bogie)	16 ,,
1 Car Compo. (lavatory)	23 ,,	Engine and Tender	80 ,,
1 2nd	23 ,,		
1 B.V. (lavatory)	21 ,,	Total	296 ,,
6 Vehicles (loaded) weighing ...	140 ,,		
Engine and Tender	80 ,,		
Total	220 ,,		

The difference in weight, 76 tons, would be offset by the higher speed required with the passenger train." Can you tell us what the weight of the Baldwin passenger and locomotive consolidation engine is? I am not prepared to admit that Mr. Hoyle has quoted my figures correctly. I should like that letter placed before the President.

539. *Mr. Hoyle.*] I place before you, Mr. President, a Return laid by the Minister for Railways upon the Table of the House and printed by the authority of Parliament.

540.

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540. *Mr. Eddy.*] And I would wish to call your attention to the fact that whatever these figures are they have no bearing upon this inquiry. It is not the weight of the average train that is given in them.
541. *Mr. Hoyle.*] I contend that it has a bearing on the point. Mr. Neale recommended here an engine at 80 tons. I want to know why, having done that, he has since recommended a heavier engine to be brought to the country. Here he recommends that the engine and tender should be 80 tons, and I want to know why he has since recommended that a heavier tender should be imported?
542. *Mr. Eddy.*] I would point out that this has no bearing upon the question at all. You might as well say that every officer who reports to the Commissioners is by his report to tie the Commissioners in their actions. When an officer is called upon for a report he reports to the best of his ability, and the Commissioners decide the matter in a way they think best, giving due attention to all the facts of the case. Mr. Neale never intended to tie the Commissioners to this weight of train, but simply wished to state what weight an engine of that particular kind should carry.
543. *Mr. Hoyle.*] I want to point out that in this instance Mr. Neale recommended this weight of train to the Commissioners, and that subsequently engines intended to draw a much heavier train were brought to the country.
544. *Mr. Brown.*] Can that report of Mr. Neale's bind the Commissioners in any way?
545. *President.*] I do not see exactly what particular bearing the point you are trying to establish has upon the question. Of course it is to be presumed that every question is put to the witness by me, but as a matter of convenience to you and to myself, I have asked you to put the questions directly, instead of filtering them through me, but now you are cross-examining this witness, and you want to contrast something that he has said before with what he is saying now. Do you want to discredit him, because that is what it looks like, and you call him as your own witness.
546. *Mr. Hoyle.*] He has reported that an engine should be at a certain weight, and now we have an engine of an extra weight brought to the country.
547. *President.*] I want to point out that this gentleman has been called by the Commission, but called at your request, and now you want to cross-examine him. I do not see what effect what you have put in would have upon the question. The paper says: "We do, however, undoubtedly badly want more powerful engines for the heavy parts of the line, and as showing that one class of engine would do for both goods and passenger traffic, I give the following figures for the desirable standard trains on gradients of 1 in 40." And then it is that the engine and tender of 80 tons come in.
548. *Mr. Hoyle.*] Well, I take it that when Mr. Neale made that report he had in view the strain which would be placed upon the draw-gear.
549. *Mr. Eddy.*] No such construction was ever put upon his figures.
550. *Professor Warren.*] It appears to me that all you prove is that the Baldwin engines weigh more than 80 tons.
551. *Mr. Hoyle.*] Quite so, and the fact that the Baldwin engines will endanger the safety of the train.
552. *President.*] You maintain that Mr. Neale supplied the figures furnished in the Parliamentary return as the desirable weight of a train?
553. *Mr. Hoyle.*] Quite so.
554. *President.*] Do you want to make out then that your own witness is wrong in what he has stated to-day?
555. *Mr. Hoyle.*] What I want to make out is this, that whilst Mr. Neale, as an expert, recommended a train of a certain weight to be a safe train, engines have been imported for the purpose of drawing a heavier train, and that if the train goes beyond the weight recommended by Mr. Neale it is not safe for the draw-gear.
556. *Mr. Neale.*] Might I make an explanation?
557. *President.*] Certainly; in one moment. I will allow the question to be asked (to Mr. Hoyle): You want to ask the witness whether he made this report to the Chief Commissioner? (Witness): Yes, I did.
558. *President* (to witness.)] Now you want to explain something? I should like to say that the addition of 100 tons to the weight of the engine, would make no difference to the draw-gear in the train, because the weight of the train strains the draw-gear by its weight, and the weight of the engine has nothing to do with the strain on the draw-gear of the train at all, and therefore the substitution of a 90-ton for an 80-ton engine would make no difference to the draw-gear of the train, and I should further like to say that in these figures I contemplated a Mogul engine, in which the leading end of the engine is supported by one axle and two wheels; but we have had engines of the ten-wheeler type, in which the leading end is supported by two axles and four wheels, which gives greater security, but at the same time some increase in weight.
559. *President.*] This report will be admitted. [*Exhibit.*]
560. *Professor Warren.*] You mean, Mr. Neale, of course, that if one engine could pull 50 trucks, and another engine could pull 100 trucks, that pulling 100 will entail a greater strain upon the draw gear than the one pulling the 50 trucks? Yes; but the addition to the weight of the engine would not strain the draw-gear any more.
561. *Mr. Hoyle.*] Will the additional weight of the engine have any effect upon the permanent-way when going at a high rate of speed?
562. *Professor Warren.*] You had better not ask Mr. Neale that question. You will be able to get it from subsequent witnesses.
563. *Mr. Hoyle.*] I would like to ask the witness whether, in increasing the haulage power of the engine, we should or should not increase the strength of the draw-gear? Not necessarily.
564. That is provided that the draw-gear was strong enough previously. Can you tell the Commission what was the load hauled by our strongest engines—say the strongest engine we had before these Baldwins came here—what was the load hauled by such an engine on a goods train? What was the number of trucks? On what gradient?
565. On the mountain grade—say, on the Lapstone grade—a grade of about 1 in 40? Which do you mean?
566. Take the Mogul engine that is now, I understand, running the Northern express—what would be the load of trucks that that engine could haul up the grade at the Lapstone Zig-Zag? That engine is not used to haul trucks.
567. Is the Mogul the strongest engine employed on the railway before the arrival of the Baldwin engines? What do you mean by the strongest engine?
568. The one that can haul the greatest load? No.
569. What could the strongest engine on the lines, before the arrival of the Baldwin engine, haul? Fourteen waggons.

570.

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570. Will you swear that that was the maximum load? Yes.
571. Will these Baldwin engines haul double that load? No.
572. What is the maximum load that the Baldwin engines can haul unassisted? I find the greatest difficulty in answering these questions, from the vague manner in which they are put.
573. *President.*] That is out of your line too, is it not? No, it is exactly in my line. But a question of this kind all depends upon the gradients and the curves.
574. *Mr. Eddy.*] Might I suggest that, instead of having this officer to answer questions of this kind, it would be more valuable to you to have the Locomotive Superintendent, or the Traffic Superintendent, who come in daily contact with these engines, to answer them.
575. *President.*] If you can tell Mr. Hoyle that there is an officer who can give him the information he desires, he might be satisfied; but perhaps he will not be satisfied, and in that case I can only allow him to proceed.
576. *Mr. Hoyle.*] I am dealing with a gentleman in a high position.
577. *Mr. Eddy.*] It is no use asking that a clergyman should tell you how to drive a locomotive. There are several officers in the Department, and some can give you more valuable evidence upon certain points than others. All our officers are at your disposal.
578. *President.*] I see all that, but I do not like to decline to put a question to this gentleman if he can answer it, because it might be that Mr. Hoyle will call some gentleman who will disagree with him if he does answer it; but as I understand it, he complains that the question is put in too bald a manner.
579. *Mr. Eddy.*] And in addition to that it is not a question of pulling. The practical way is to put an engine behind and an engine in front when necessary to do away with the danger of the hauling-gear breaking. It is the actual daily work of the engines that should be taken into account.
580. *Mr. Brown.*] What you want to get at is the practical work done by these Baldwin engines. You should compare them with the best class of engines here. Why don't you ask witness the question generally?
581. *Mr. Hoyle* (to witness).] Were you ever locomotive engineer in any locomotive works in the world? I was acting and assistant locomotive engineer on the western section of the Cape Government railways. I was first assistant superintendent and then acting superintendent.
582. *President.*] But Mr. Hoyle, supposing you were conducting this case in a Court, and you were calling this witness as a party to your case, and I do not think I can give you a position involving more latitude than that of a party conducting a case in a court of law, do you suppose that after putting a witness in the box you would be allowed to ask him questions with the apparent object of discrediting all that he had previously said?
583. *Mr. Hoyle.*] I should be sorry to hurt the feelings of any gentleman present, or indeed of any man, but Mr. Eddy has tried to show that the witness should not be called upon to answer these questions, and I want to show that he has been placed in positions in various parts of the world that fit him to answer these questions.
584. *President.*] Oh, I beg your pardon, I did not understand your question. I apologise. It was entirely my fault; but from your manner I misunderstood your object.
585. *Mr. Eddy.*] I beg to differ from Mr. Hoyle's statements.
586. *President.*] I must accept Mr. Hoyle's explanation.
587. *Mr. Eddy.*] But he has made a statement in regard to my wishing to discredit Mr. Neale, whereas we have the greatest possible regard for Mr. Neale's ability.
588. *President.*] Do not suppose that that was intended. From what I have seen of Mr. Neale I am sure that he is far too intelligent a witness to imagine anything of the kind.
589. *Mr. Hoyle.*] I must ask Mr. Neale whether he thinks it would be safe to haul a train of double the ordinary size by one of these Baldwin engines. If the strongest engine on the line previous to the arrival of the Baldwin engines could haul fourteen trucks up 1 in 33, do you think that it would be safe for the draw-gear for the Baldwin engine to pull a load of twenty-eight trucks up such an incline without the assistance of an engine behind.
590. *Mr. Eddy.*] I must object to all this. I have pointed out before that it is necessary for those engaged in the practical working of the traffic to give evidence on these points, but as a matter of fact goods traffic up 1 in 33 is always assisted by an engine in the rear whether double the amount of ordinary weight is put on a train or not.
591. *Mr. Hoyle.*] A statement appeared in the *Sydney Morning Herald* to the effect that these engines would do double the amount of work of any other engine now in the service. My contention is that if that statement is true, then by putting double the amount of strain on these engines the draw-gear would be endangered.
592. *Mr. Brown.*] Supposing, on the other hand, that these engines draw one truck more than any other engine in the service, how does that affect your case?
593. *Mr. Hoyle.*] I think it helps my case. If statements have been made time after time in the public Press that double the load is going to be put on trains that are being hauled by these engines, it is important to know whether they are true, because if they are true, I maintain that the draw-gear is endangered.
594. *Mr Brown.*] Our business is to inquire whether these engines are suitable for the New South Wales railways, and if we find that they will do better work than any other engines, that will satisfy me.
595. *Mr. Hoyle.*] I base my statements upon the authority of paragraphs in the newspapers, to the effect that they would do double the amount of work done by other engines, and I maintain that they have not done anything of the kind.
596. *Mr Eddy.*] Mr. Hoyle says that he bases his charge upon something that he has seen in the newspapers to the effect that the engines will do twice as much, or are doing twice as much, as any other engine in the service. I would point out that the charges made by him, as a result of which this Commission was appointed, were made on the 20th August, and at that time not one single engine of the consolidation type had arrived in the colonies. I do not, therefore, quite see how the statement in the Press, to the effect that the engines were doing twice as much work as any other engines, could have appeared.
597. *President.*] Not at that time, certainly, but you must look at the date of the Commission. It is dated the 15th March, and is to inquire into the allegations made, that the recently imported Baldwin locomotives are defective and unsuitable to the permanent way of the railways of the Colony, and are not

rendering

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rendering the service which was expected of them. As I understand it, under that Commission, any allegations made up to the date that the Commission was issued, becomes the subject of inquiry. I am not responsible for the drawing up of the Commission, and most heartily wish that I had never seen it.

598. *Mr. Eddy.*] The Commission says, "not rendering the services expected of them." Well, we have placed before you all the papers relative to the ordering of the engines, and we are prepared presently to bring evidence before you as to what they are now doing.

599. *Mr. Brown.*] Mr. Hoyle relies apparently upon some newspaper reports.

600. *President.*] What is the specific question?

601. *Mr Hoyle.*] That if twenty-eight loaded trucks were attached to one of these Baldwin engines, without an engine pushing up behind, does the witness think that the draw-gear would take the train safely up 1 in 33.

602. *Mr. Eddy.*] I object to that question being put, because in actual practice such a method of haulage does not exist. An engine is invariably put behind to assist a goods train up such a grade.

603. *President.*] The Commission allow the question to be put.

604. *Witness to Mr. Hoyle.*] Would you repeat your question?

605. *Mr. Hoyle.*] You have already stated that fourteen trucks represent the ordinary load that was carried before the Baldwin engines came to the Colony, what, in your opinion, would be the effect upon the draw-gear if double that load was attached to one of the Baldwin engines up an incline of 1 in 30? Well, the answer to that question is very simple. The train could not start.

606. *Professor Warren.*] You mean that the engine could not pull twenty-eight trucks up 1 in 30? Quite so.

607. How many could it pull up 1 in 30? Twenty, with one bogie brake-van.

608. Without the assistance of an engine behind? Yes; but I should like to point out that that has very little practical bearing upon the question, because it is not the ordinary way of working.

609. *President.*] That may be, but I want every opportunity to be given for throwing light upon the matter.

610. *Mr. Hoyle* (to witness).] Have you examined any of these engines lately?

611. *Mr. Eddy.*] I would really object to this waste of time. Mr. Neale, as I have said before, is attached to our office for special purposes. He is not engaged in the outdoor practical working of the railway, and it is a sheer waste of time to ask these questions of him when they could be put to a practical man.

612. *President.*] Well, if Mr. Neale says, "I don't know anything more about it, it is not in my department," I suppose there will be an end of it, and Mr. Hoyle would not ask any more questions, but it is not for me to stop the examination as long as Mr. Hoyle thinks he can obtain evidence of value.

613. *Mr. Hoyle.*] I made the charges, and surely I should be allowed to prove them.

614. *President.*] I am deciding in your favour, and any further argument is unnecessary; besides I wish it to be understood that after I have given my decision all arguments upon the point must cease.

615. *Mr. Hoyle.*] Does the witness know that the slide-bar or the cross-head is worn on some of these engines, and that has necessitated the putting in of a brass-liner? I would like Mr. Hoyle to specify which he means; the slide-bar is one thing, and the cross-head is another.

616. Well, I want to know whether there have been any brass-liners put in to any of the engines to make up for friction since the engines have been running? Not to my personal knowledge.

617. If such wearing did take place after the engines have been running so short a time, would you consider that a defect in the design of the engines? No, not considering the mileage they have run.

618. Can the witness say from his experience, considering that the engines came here somewhere about the middle of August last year, that it was according to the usual custom to put brass-liners on after they had been running such a short time? Yes, if there were brass rubbing-pieces in the cross-heads.

619. Does the witness know whether the axle-box has worn into the boss of the wheel on any occasion? Yes, some of them have slightly.

620. Will the witness explain to the Commission what is the cause of that? The numerous curves on the line on which they run.

621. Does witness know whether any other engines in the service have worn in the same way? I am not prepared to answer that question absolutely, I have not measured the wear on other engines.

622. *Mr. Brown.*] You told us in the early part of your examination that the specification was furnished by the Baldwin Company? Yes.

623. And that it was amended in some form or other the details of which you stated in your evidence? Yes.

624. Can you furnish the Commission with the specification the Baldwin Company supplied you with, and your amendment of that specification? The Commissioners have the specification, and I can furnish you with a copy of our report.

625. *Mr. Eddy.*] We will try to get them for you.

626. *Professor Warren.*] Is not the specification you refer to in the *Railway Gazette* of 7th November?

627. *Mr. Eddy.*] Would it not be much better to have the specification from which the engine was actually built?

628. *Mr. Brown.*] That is what I am referring to;—I am referring to a specification which was sent out by the Baldwin Company, and which was amended in your office. I want the amended specification and the original specification as well.

629. *Mr. Eddy.*] I am not sure that I can give you the original specification, but I can give you the specification from which the engines were built.

630. *Mr. Brown.*] Yes; but I think the Commission ought to have before them the specifications that were sent by the Baldwin Company to the Commissioners for Railways.

631. *Professor Warren.*] Would Mr. Eddy allow you to supply the Commission with a detailed description of all failures such as broken axles, defective draw-gear, parts of running-gear, &c., and the cost of the renewals in detail. Also, the nature and cost of all repairs which have been necessary in the Baldwin engines since their arrival, together with the mileage of each engine which has undergone such repairs, also the weight on the wheels and wheel base of both the Baldwin and the new English engines?

Mr. Eddy.] We will supply you with as much of the information as we possess, though I doubt whether we can give you the cost of the renewals in detail.

THURSDAY,

THURSDAY, 14 *APRIL*, 1892.

[*The Commission met at 2 o'clock in the Board Room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

632. *Mr. Eddy.*] Before the Commission enters upon the day's proceedings I would like to say a few words in order that the Railway Commissioners' action in the inquiry now proceeding may not be misunderstood, as the Railway Commissioners are unable, in accordance with the President's ruling, to be represented by counsel at this inquiry, and so have an opportunity of dealing with the cross-examination of witnesses in the usual way, I wish to make the following statement, and I wish it to be understood that I do not question your decision, sir, in the direction in which it has been given, for we consider that on the whole, the course adopted is a wise one. Still, the proceedings are being drawn out a great deal by the admission in evidence of a lot of extraneous matter. Much outside matter is being imported into this inquiry, and in order to save time, we, the Railway Commissioners, propose not to cross-examine any of the witnesses that Mr. Hoyle may call before him, unless it be that some very unfair statement should be made. In such a case we may perhaps have to request the President to put a question to the witness, but in the ordinary course we do not intend to ask any of Mr. Hoyle's witnesses any question. But subsequently we propose to place before the Commission all the facts that may be necessary to enable them to come to a satisfactory conclusion. Mr. Eddy, A.I.C.E. 14 April, 1892.

Dendatus Hilin Neale, Esq., further examined:—

633. *Mr. Hoyle.*] I would like to ask Mr. Neale whether he corrected the specifications of the Baldwin Engine Company? Yes. Mr. D. H. Neale. 14 April, 1892.

634. When doing so, did you provide for the thickness of the tube plate in the smoke-box? I would like to refer to the specifications before giving an answer to that question.

635. Before proceeding any further, I would like to ask you, Mr. President, if it is customary, at an inquiry such as this, for persons to be present at the Board Room who will later on have to be examined as witnesses. Yesterday afternoon I noticed that a number of persons were present who must have heard all the evidence then given before the Commission. I wish to know, sir, is this the usual course adopted or not?

636. *President.*] This inquiry, Mr. Hoyle, is not being conducted in the same way as the proceedings in a Court of law would be carried out. If it had been, it is quite possible that the latitude which has been allowed in the way you have mentioned would not have been permitted. With regard to the witnesses in this inquiry I cannot myself see that there would be any gain effected by sending them out, because, as you will have observed, all this evidence, or a great portion of it, is published in the daily Press, and if the witnesses choose they can, to-morrow morning, read the evidence given to-day. Under these circumstances, I do not see what is to be gained by their leaving the room. In fact, I doubt if I have any absolute power to order them out. The powers under the Act referring to Commissions are very vague in their terms. In Courts of law, witnesses are ordered out of Court, because in cases involving a great conflict of evidence, it is thought advisable that they should not remain in Court, and if a Judge thinks it necessary he can even direct that the proceedings shall not be published, but here at the proceedings of this Commission, I do not know if any order we may make would be effectual, for I do not know if we have any power to make such an order, neither can I see the practical good of it, even if we had the power, whilst at the same time, I doubt our power. I think it is rather a question of taste for the witnesses themselves to determine whether they should remain or not, and it may perhaps be a matter of observation for you to make, that certain of the witnesses have heard the evidence, if you think they are witnesses of that kind, which would be influenced one iota by what they heard. It is a matter for you to call attention to by-and-bye; but I do not think I have the power, even if I thought it desirable to order them to leave the room.

637. *Mr. Eddy.*] I propose to withdraw, sir, because I am simply in a position of witness.

638. *President.*] I did not understand that your remarks, Mr. Hoyle, applied to Mr. Eddy, I thought they were directed to the engineers and others of the Department present.

639. *Mr. Hoyle.*] Certainly I did not intend them to apply to Mr. Eddy; I look upon him as being here in almost a similar position to myself. I have made certain charges, and I am here to prove my case, and I understand that Mr. Eddy, to endeavour to prove me wrong.

640. *Professor Warren.*] It seems to me very undesirable that any of the witnesses should withdraw. I cannot see that anything will be gained by it.

641. *Mr. Eddy.*] I was surprised by being put in the position of a witness yesterday; and therefore as the presence of witnesses have been objected to, I thought it would be better for me to withdraw. I am not here from any mere desire to be present. The absence of the Commissioners and officers in the Railway Department is very detrimental to its management, and the business of the country will suffer in consequence.

642. *President.*] Mr. Hoyle says that he did not intend his remarks to apply to you, but to the witnesses who are here, and some of whom it seems heard the evidence given yesterday. You have really charge of a case for the Railway Commissioners; but I do not understand Mr. Hoyle making any suggestion that you or any of the other Commissioners should withdraw.

643. *Mr. Hoyle.*] Now Mr. Neale, you stated yesterday that you amended the specifications submitted by the Baldwin Company, did you provide in your revised specifications for the thickness of the tube-plates in the smoke-box? No, because it varies very little; it is almost invariable.

644. What is the thickness of the plate in these smoke-boxes, do you know? No; I cannot absolutely say; I should imagine it would be three-quarters of an inch to seven-eights of an inch.

645. Can you not tell me if the thickness of the smoke-box is different from that of the smoke-boxes in any of the engines running on the lines previous to the arrival of the Baldwin engines? Not positively.

646. What load do you consider the Baldwin engines ought to carry without the assistance of another engine, going up an incline of 1 in 33, taking into consideration the safety of the draw-gear? That depends

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depends upon circumstances, and on the position of the gradient. On one gradient of 1 in 33 I would have no objection to put five more waggons than on another grade of 1 in 33. Draw-gear does not break under a direct strain; within my experience I do not know that I have ever heard of draw-gear breaking whilst a train is going steadily up an incline however steep, or however heavy the train. Draw-gear breaks from jerks, more frequently in going down than in going up a hill. It is the sudden pull or jerk that breaks it. It is a question of how many jerks it would be subjected to. You may go over a piece of line with a great number of indentations; passing over these the draw-gear would be jerked, and perhaps broken. Then again you have to consider whether a breakage of draw-gear will lead to any dangerous consequences under a particular set of circumstances. It may do so, of course. For example the train may break away and rush down an incline into another train standing at a junction; or, in another case, it might break away and be brought up by another gradient without doing any mischief. So that the whole question of danger depends upon circumstances, and I must decline to lay down any general rules whatever.

647. *Professor Warren.*] You mean, Mr. Neale, that when a train comes to a place where there is a sag in the line that may be a likely place for the draw-gear to break on account of the sudden strain put upon it? Yes; there would be some strain on it.

648. Once the engine is on the grade the strain is uniform? Yes, in the way I have explained. Extra heavy brake-vans are used so that it is very improbable that any serious consequences would ensue in the event of the draw-gear breaking, even under the worst conditions.

649. *Mr. Hoyle.*] I will now put a very definite question to you, Mr. Neale. Will you state to the Commission what is the load that these engines can take up the Lapstone grade, that is the first incline between Penrith and the bottom points. What is the load of loaded trucks that these engines can pull up that grade? They can take up twenty unassisted.

650. *President.*] That is the 1 in 30 grade? Yes.

651. *Mr. Hoyle.*] I would direct the attention of the Commission to the fact that in the paper I put in in evidence yesterday it would be observed that Mr. Neale stated in making up his standard train that a standard engine, weighing 80 tons, could haul twenty-five loaded trucks. Now, in taking up this train of twenty loaded trucks you referred to just now, would you want the assistance of an engine behind; would it be necessary to have an engine to shove behind in order to assist one of the Baldwin engines pulling those twenty loaded trucks up the Lapstone? It would not be required—that is, from a purely engineering point of view, but in practical working another engine would be desirable.

652. *President.*] I take it that you mean for more abundant caution? Yes, that is what I mean.

653. *Mr. Hoyle.*] Do you say that any jerks take place on an incline? No, what I say is that they take place on changes of grade.

654. Suppose one of these engines was taking a load up one of the Lapstone grades, and steam went down and had to be got up again, and by reason of additional steam being put on would not that cause a jerk? That would depend upon how the engine was handled.

655. Do not jerks occur on these inclines? They occur on changes of grade.

656. Now Mr. Neale, I have put a specific grade to you, do not jerks take place on this specific grade? No; I am not aware that jerks do take place on this particular grade. Of course it might be possible to produce the jerk by a singular combination of circumstances, generally speaking the jerks do not take place.

657. *Professor Warren.*] You mean that if the steam ran down on ascending a grade, and was then put on suddenly it would cause a jerk? Yes; but as a matter of fact the man would stop his engine slowly, keeping his train stretched, and then start steadily again.

658. *Mr. Hoyle.*] Do you know when the order was sent to America for the Baldwin engines, whether any letter was sent with it? Certainly the order was contained in the letter.

659. Who sent the letter? It was sent by the Secretary to the Railway Commissioners.

660. *Mr. Eddy.*] I would like sir, to point out the misleading way in which these questions are put by Mr. Hoyle. Mr. Neale has stated before you that twenty waggons can be drawn up a grade of 1 in 30 by a consolidation engine. He never referred to a grade of 1 in 40, and it is to a grade of 1 in 40 that the paper referred to by Mr. Hoyle has reference.

661. *President.*] It does not mislead us in the least.

662. *Mr. Hoyle.*] I would like to know, Mr. Neale, whether when you were called upon to advise upon the importation of these locomotives, there was any meeting between you and any other officers of the Department relative to this matter? Yes; certainly there was.

663. Was it in the form of a conference? Yes.

664. Where was it held? In my office.

665. And who were present? The officers present were Mr. Howe, Mr. Stanger, Mr. Loughrey, and myself.

666. Were any of the Railway Commissioners present? No; not in my office.

667. At any conference? ——

668. *President.*] Were the Railway Commissioners present at any conference between the gentlemen you have named and the Railway Commissioners, relative to the importation of these engines? Certainly they were.

669. *Mr. Hoyle.*] Can you tell us whether at that conference there was any objection raised to the importation of these engines?

670. *President.*] Would you be so good as to show the commission, Mr. Hoyle, how these facts affect the inquiry before us. Supposing at that conference there were all kinds of different opinions expressed, the fact still remains that the Baldwin engines were ordered, and what we have to inquire is, as I have frequently stated already, were they were defective and unsuitable to the permanent-way of the Colony, and not capable of doing the work they were expected to do. Supposing there were all kinds of divergences of opinions at the conference, how would that affect the matter?

671. *Mr. Hoyle.*] I think I remember that when a similar statement was made Mr. Eddy said no such conference was held.

672. *Mr. Eddy.*] No such statement was made by me.

673. *President.*] Supposing Mr. Eddy had said that there was no such conference, and suppose he had been forgetful of the fact, how does all that affect the matter we have under inquiry?

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674. *Mr. Hoyle.*] Because if there was an officer who opposed the importation of the Baldwin engines I would like to have him called to state why and upon what grounds he objected to these engines being imported.
675. *President.*] Surely if they are defective that is enough in your case, and if they are not it cannot make any difference because someone at some time thought that they probably would be defective.
676. *Mr. Neale.*] I must object, sir, to assumptions being made about things I never said at all. I have never stated that there was any difference of opinion, and yet Mr. Hoyle speaks as though I had said so.
677. *President.*] I think I have said that at all events we do not assume it.
678. *Mr. Neale.*] As a matter of fact we were perfectly unanimous when we met at my office, and we all signed that report.
679. *Mr. Hoyle.*] Can you tell us, Mr. Neale, whether any trial was made of these engines last Sunday? Yes; between Wallerawang and Mount Victoria.
680. Can you tell us whether any decision has been arrived at to reduce the boiler pressure on these engines? Not that I am aware of.
681. *Mr. Hoyle.*] I do not think I have any further questions to ask the witness.
682. *Mr. Brown.*] You handed in some specifications yesterday—were they the specifications of the engines you have now? Yes; as they were constructed for us.
683. Have you been able to find the other specifications—I mean those which were examined before the engines were ordered?—
684. *Mr. Eddy.*] I have handed in to-day—that is, the specifications before Mr. Neale had them altered—the amended specifications were put in yesterday, and the papers dealing with the deviations from the original specifications were handed in on the first day the Commission met.
685. *Mr. Hoyle.*] Did I understand the witness to say yesterday that after the engines arrived in the Colony he did not examine them to see that all the alterations which had been ordered were carried out? I examined one of the engines, but it is not my duty to examine each particular engine, but as a matter of fact I did, as I say, examine one of the class.
686. *Mr. Brown.*] He said that it was no part of his duty to do that particular work—that there were special persons appointed for that purpose.
687. *Professor Warren.*] Could you tell me the maximum weight on the driving wheels of these engines? I have not seen the engines weighed myself, nor have I conducted the weighing, so that I would prefer not to speak positively about the matter.
688. *Mr. Hoyle.*] (There being some delay in the attendance of the next witness) I have already suggested that it would, perhaps, have been better to have postponed this meeting, as, on account of the holiday and the increased pressure of work in the Department it will be difficult to secure the attendance of witnesses.
689. *Mr. Eddy.*] I have had to postpone six committees for this meeting of the Commission, and there is a great deal of work of the railways being put aside and delayed, in consequence of this inquiry. A lot of men are being put off work and a number of workmen are being discharged, such as carpenters and painters, in consequence of our work being delayed. The Commissioners should be on their tour to-day.
690. *Mr. Hoyle.*] Well, will the Commissioners consent to adjourn for a time?
691. *Mr. Eddy.*] No; not for a moment. This charge has been hanging too long over the Commissioners.

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William Theodore Foxlee, M. Inst. C.E., Engineer-in-Chief of the Existing Lines of this Colony, being sworn, said:—

692. *Mr. Eddy.*] Will you kindly ask the witness if he is a member of the Institution of Civil Engineers, and how long he has been connected with that body.
693. *President.*] Are you a Member of the Institution of Civil Engineers? How long have you been connected with that body? About twenty years, that is to say, I have been a member for eight years; but I have been associated with the institution for about eighteen or twenty years as a Student and Associate and Member.
694. How long have you been in the Railway Service of the Colony? Since the end of February, 1890.
695. And before that what experience had you in England? I was connected with the Great Eastern Railway Company for about four years, and with the London and North-western Company for about twelve or thirteen years, and before that I was with the London and South-western Railway Company. I began work in 1866, so that I have had from twenty-five to twenty-six years experience up to the present time; that is to say, about twenty-four years experience before I came here.
696. Will you tell us what was your last position on the English railways? I was Resident Engineer for the Essex Lines of the the Great Eastern Company.
697. *Mr. Hoyle.*] Will you kindly tell us when the Baldwin engines arrived in the Colony—do you remember their arrival here? I do.
698. Were any orders issued by you or your predecessor Mr. Angus, relative to the alteration of the platforms on the line? Orders were issued. The question of the alterations to the platforms and structures on the lines was, however, under consideration before I arrived in the Colony.
699. When was the order absolutely issued from your office? I am not quite certain as to that, but I am certain that it was issued before the Baldwin engines arrived in this Colony.
700. Were the alterations to the platforms actually commenced before the engines arrived in the Colony? Yes.
701. Can you tell us how long before? No, I cannot say exactly how long before.
702. Can you give the Commission any information as to how long a time elapsed between the commencement of the alterations and the arrival of the first engine? I believe the alterations to the platforms were actually put in hand during the latter part of May or the beginning of June last year.
703. Was that when the work was commenced. I do not mean when you issued the orders to the divisional engineers to have it done, but I want to know when this work itself was commenced? I cannot give you the exact date when the work was commenced, but I believe it was about the end of May or the beginning of June of last year.
704. Do you remember that there was a retaining-wall on the eastern side of the Eveleigh station before the work of quadruplication was begun? That wall, I believe, was removed to make room for the quadruplication? Yes.

705.

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705-6. And the lines were made, and a new tunnel erected—I mean the skew arch? Yes.
707. Was a wall erected so as to form the eastern platform wall—I mean at the eastern side of the Eveleigh station? Yes; there was a wall there.
708. Was it pulled down, and re-erected a little further back? You are now referring, I presume, to the side of the new platform next the additional roads?
709. What I want to know is, was a wall erected to form the eastern wall of that platform? Yes; there is a wall there to-day.
710. But after the retaining-wall was pulled down was another wall erected? Are you referring to the retaining-wall?
711. No; the platform wall? Yes; there was a wall erected there, and the circumstances were these—there was a slight discrepancy on the side of the widened lines where the wall was built, and a portion of it was pulled down.
712. The whole length of the platform? Oh, no.
713. How much of it was pulled down? I cannot say, but I know a slight alteration was made.
714. Was it erected exactly the same distance from the railway as formerly? I believe it was; but I think, Mr. Hoyle, you are mixing up two things. We altered the grade under the skew arch, and the alteration of that grade necessitated a slight alteration to the platform wall. I think that is what you have in your mind.
715. When that alteration was made, Mr. Foxlee, do you say that the wall was pulled down, or was the road only lifted, the earthwork taken down, and the road dropped? I believe an alteration took place in the wall. To the best of my belief, a portion of it was sloped at the top, instead of being carried level.
716. You do not know whether it was erected the same distance from the rails as before? To the best of my belief it was.
717. Have you plans of the distance the rails next to the station were from the platform—plans which will show the distance between the rails and the platform before the platform was altered? ——
718. *Mr. Brown.*] What are you seeking to obtain by this cross-examination, Mr. Hoyle?
719. *Mr. Hoyle.*] I want to show that a wall was erected before the quadruplication in widening the line, and subsequently, when the quadruplication was carried out, that wall had to be demolished. *To witness:*—Have you any information you can give me relative to these distances. Do you know the distance between the rails and the platform? I think I have some information here which may meet what you want. Eveleigh platform, original width from the centre of the road, 4 feet 10½ inches instead of 5 feet.
720. That is to say the platform was 1½ inches nearer the inner rail than it ought to have been? Yes, it would appear so if this information which refers to the distance between the old platform wall and the old line is correct.
721. Were you aware that these alterations took place to the suburban platforms at a time when it was known that quadruplication was going to be carried out? Yes.
722. Will you tell the Commission why it was that a number of the platforms had to be altered when afterwards they had to be destroyed?——
723. *President.*] What has this to do with the matter, Mr. Hoyle;—what do you wish to show by these facts?
724. *Mr. Hoyle.*] I wish to show that these alterations had to be made to meet the convenience of these engines. *To witness:*—Were they not made in view of these engines? They were made to give the necessary clearance to certain types of existing rolling stock, and also in view of the advent of a large number of Baldwin engines which were being constructed of a similar width. It was, in fact, thought that these platforms should be brought to gauge, so that there should not be any difficulty in working the rolling stock referred to, and also the Baldwin engines.
725. Then the Baldwin engines had something to do with the alterations? No. It was thought that in view of their coming here these station platforms which were out of gauge should be put to gauge.
726. You had the Baldwin engines in view then? Oh, certainly we had them in view.
727. *Mr. Eddy.*] Since so much has been said about the platforms and their cost I think it would be well if the Commission would ask the witness how much the cost really was.
728. *Mr. Brown.*] We had it in evidence.
729. *Mr. Eddy.*] That applies to alterations to the whole of the railways, but so much has been said about alterations first being made and afterwards demolished on account of the quadruplication that it would be well to have the cost given in these instances.
730. *President.*] What platforms were altered, Mr. Foxlee, which were subsequently removed?
731. *Mr. Foxlee.*] There were Newtown, Ashfield, and also a slight alteration at Macdonaldtown.
732. *Mr. Hoyle.*] And Granville.
733. *Mr. Foxlee.*] That has not been removed, although it has been altered.
734. *Mr. Eddy.*] Granville has not been removed. Can you give the Commission the cost of alterations made to platforms that have since been removed?
735. *Mr. Foxlee.*] At Macdonaldtown the cost was about £7; at Newtown, about £10; and at Ashfield, about £20.
736. *Professor Warren.*] That makes £37 in all—that is the cost of the alterations to the platforms which have been removed? Yes.
737. *President.*] I understand that what Mr. Hoyle wants to show is, what useful purpose was served by altering the platforms at a time when it was known they would subsequently be demolished. Then, I understand from you that there are only three stations at which this was the case? Yes.
738. *Mr. Hoyle.*] I have asked the witness if they had the Baldwin engines in view when these alterations were made; the witness said yes.
739. *Mr. Foxlee.*] We undoubtedly knew they were coming.
740. *President.*] What I understand Mr. Foxlee to mean is that looking at some of the engines here, and knowing that other engines of similar gauge were coming, they—the Commissioners—bearing both these things in mind, made the alterations to the platforms so that the traffic might not be obstructed.
741. *Mr. Foxlee.*] Might I explain this point a little further; the Chief Commissioner has pointed out that the Commissioners found on taking office that a large number of the structures on the railways were out of gauge. Early in 1889 directions were given that the whole question of gauge should be taken in hand,

hand, as the Commissioners felt themselves very much hampered in working the traffic since certain stock was restricted to certain portions of the line, and so it was determined to take the whole question in hand and ascertain what it would cost to bring the whole of the structures to the correct gauge.

742. *President.*] That is to say, the gauge originally laid down? Yes.

743. *Mr. Foxlee.*] Early in 1889, men were sent out to measure all structures, bridges, retaining-walls, lamp and signal-posts, and other works, as many as 8,000 or 10,000 measurements being taken over our 2,200 miles of road. That, of course, took a considerable time, and it was not till March, 1891, that we got the information, and that information when put in this form showed at once to the Commissioners that what they had learned was true, viz., that many platforms and other structures were grievously out of gauge. For example, the platform at one station was at the top 3 feet ½-inch from the inner edge of the rail to the outer edge of the platform; at another station it was 2 feet 5½ inches; in another, 3 feet ½-inch, and so on; the standard distance being 2 feet 9 inches; there was in fact no kind of uniformity.

744. *Mr. Brown.*] Is it not necessary under the Board of Trade in England, that there should be some sort of uniformity observed in the various railway lines with regard to these matters? Yes; under the Board of Trade there is a standard distance of 2 feet 4 inches from the side of the widest vehicles above the top of the doors to the nearest standing work above platform level.

745. And you desire to conform in this Colony to that rule? Yes, as far as the existing structures will permit. What the Commissioners desire is to establish a rule here similar to the rule imposed by the Board of Trade in England, as far as practicable.

746. *President.*] This rule was only the result of what was found to be necessary for regulating the railways in England? Yes. Before a railway is opened in England it is submitted to a very rigid inspection by the Board of Trade Officials—the bridges are examined with great care; the heaviest engines are taken over the lines and bridges, each being tested by one of the Board of Trade officials; the workmanship is carefully examined, as well as the whole of the structures. The clearance of bridges and other structures is ascertained by taking the widest rolling stock over the line, opening the doors, and taking them past the piers and retaining walls, and thoroughly testing the clearance. The inspection before lines are allowed to be opened being most rigid.

747. *President.*] Is there any similar authority to the Board of Trade in this Colony? Yes; the Commissioners have instituted a similar system here.

748. Therefore, the inspection made by the Board of Trade in England is made here by the Commissioners themselves.

749. *Mr. Eddy.*] I will explain. The Commissioners put themselves in the position of the Board of Trade—and we lay down regulations for our own officers. That is what the Board of Trade do at home.

750. *President.*] They take upon themselves the responsibility of seeing that the rules of the Board of Trade in England are made applicable here.

751. *Mr. Foxlee.*] Yes; and that refers to the structures also in England. Before the Board there will allow a line to be opened for traffic, it requires that the rules laid down with regard to stresses on bridges and other structures have been complied with.

752. *Professor Warren.*] Otherwise the line would not be passed? Quite so.

753. And your evidence goes to show that these lines in their then condition would never have been passed? Undoubtedly—never in the world. The measurements we commenced in 1889 were only completed in March of last year; the whole had to be tabulated—so that there was not much time lost, since as already stated, we started the alterations at the end of May or beginning of June.

754. *Mr. Hoyle.*] Is it a fact that men were employed on nightwork, and also on Sunday to make these alterations? It may or may not be—all I know is, that I gave no such instructions.

755. Is it a fact that they were kept at work as I have described? I do not know.

756. *President.*] Supposing that they were at work night and day—why should not this course have been taken—surely the quicker the work was done the better, if it were necessary. I do not see the utility of your question.

757. *Mr Hoyle.*] It seems that there was no danger in passing the station—the platforms were simply out of uniformity, but they did not strike the carriages.

758. *Mr. Eddy.*] I have before referred to the case of the carriage out of which a slice had to be taken in order to make it run past the platforms.

759. *Mr. Brown.*] You wish, I suppose Mr. Hoyle, to show that the Baldwin engines were responsible for these works being taken in hand?

760. *Mr. Hoyle.*] Yes, and that men were kept at work night and day upon the alterations. (To witness): Do you know that men worked night and day on these works and on Sundays also? They may have done, you will remember that this work had been under consideration for a long time, as far back as '89.

761. *Mr. Eddy.*] You will remember, sir, that I gave evidence that a large number of platforms were altered to the extent of several inches in 1879, on the Western line.

762. *Mr. Hoyle.*] As no danger existed to the rolling stock, and the traffic could be carried out by ordinary day work, will the witness say why men were kept at work day and night and on Sundays?

763. *Mr. Eddy.*] I would like to point out that the witness is being made to say things that he did not say, he simply said that he did not know that they had being kept at work in the manner described, and now Mr. Hoyle is assuming that the witness admitted that they were kept working at night and on Sundays. He is also assuming that the witness said that there was no danger to the rolling stock.

764. *Mr. Hoyle.*] I said that it had been stated that the men were kept working as I have said.

765. *Mr. Brown.*] Mr. Eddy, pray do not so far as you can help interrupt the examination.

766. *President.*] I suppose that really the reason why Mr. Eddy has interrupted is lest these statements might go forth to the public, otherwise it would not have mattered; such statements will not have the slightest effect upon me. I shall endeavour to find out for myself what the facts are, but I understood Mr. Eddy referred to the question lest it should go forth to the public, and he therefore desired to put the matter in a way which would not cause undue alarm.

767. *Mr Hoyle.*] Do you know that at any time after the arrival of the Baldwin engines that one of these engines was taken down the South Coast line, and it was run past the platforms on that line as a trial? I believe there was an engine taken down the South Coast line—it may have been as a trial.

768. Were there any alterations made to the road after that? I am under the impression that one or two of the platforms were altered that were slightly out of gauge.

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769. Was it in consequence of the closeness with which these engines ran to the platforms, were these alterations made immediately after the trial? I believe one of the engines was taken down the line in order to ascertain if there was a proper clearance of the platforms. I believe alterations were made to the platforms at some of the stations which were not to gauge. No alteration would have been necessary if they had been in conformity with the standard gauge.

770. *President.*] When were the railway platforms built, were they done during the consulship of the present Commissioners? No.

771. *Mr. Hoyle.*] Were these platforms built by the Construction Department? Yes; a portion of them were built by the Construction Department.

772. Do you say this work passed through the hands of the Construction Department? Yes; a portion of it.

773. You only discovered that they were out of gauge when this engine passed through? I did not say that.

774. Were any measurements made as to the gauge of these particular platforms that the engine passed? I believe so. Measurements were taken, and amongst them occur the following: Kiama 2 ft. 7¾ in., Shell Harbour 2 ft. 8 in., Dapto 2 ft. 7½ in., Bulli 2 ft. 5¼ in., Helensborough 2 ft. 8 in.

775. *Mr. Hoyle.*] Will you tell me the date on which these measurements were taken? They were taken before the Baldwin engines came here, they were completed by March, 1891.

776. Then why did you send an engine down—did you have any doubts about the matter? Not the slightest doubt; we sent the engine down because it was the easiest practicable way of finding out if the necessary clearance existed.

777. Before this engine went down to try the platform, were the alterations made before the new engine was put on the line? I am not prepared to say that they were; I am not quite sure about that; they may or may not have been.

778. When the engines were standing at the platforms were any measurements taken. I want the distance of the cylinder from the platform? I cannot tell you; I did not take the measurements myself.

779. Now, if an engine in passing at a slow rate of speed and clearing the platform would it also clear it when travelling at a high rate of speed? I do not know—it might.

780. Would not the oscilation make a difference?

781. *President.*] Is there more oscilation when the train is going fast than when it is going slow? Yes.

782. *Mr. Hoyle.*] You never tried the experiment in the case of these engines? No, but as practical men, when making lines of railway we know that a train rushing past at a high rate of speed will probably oscilate, and therefore we make an allowance to meet this.

783. *Mr. Hoyle.*] You had these platforms altered so that I understand no danger would occur? Yes; they were altered.

784. Was it on account of the oscillation, Mr. Foxlee? No, but because they were originally built to the wrong gauge.

785. Did you ever hear whether any of the cabs to these engines came into contact with any of the stations on the line? I know that some of the cabs of the new engines are not wider than some of the carriages on the lines.

786. Did any strike the platforms between Sydney and Kiama or Sydney and Newcastle? I occasionally have reports of verandahs having been struck, on account of their not having been built to the proper gauge, but I really cannot say whether it was due to the engines being at fault or not; I should not think so, because we have stock as wide over all as the cabs of any of the Baldwin engines.

787. *Professor Warren.*] You might put in the dimensions of the engines that were wider than the Baldwin engines.

788. *Mr. Hoyle.*] Of the cylinders also. You might give their dimensions? The 304 class of engine is the same width as the Baldwin engines were ordered over their cylinders.

789. *Professor Warren.*] Mr. Hoyle has stated that he would like to see dimensions of the cylinders in order that he might see how high they were; I think it would be as well to put in those dimensions.

790. *Mr. Foxlee.*] I will have that done.

791. *Mr. Brown.*] How many of that class 304 have you? I do not know.

792. *Professor Warren.*] With regard to the weight of the wheels, particularly the weight of the driving-wheel, what should be the minimum weight on the rail, do you know, as a matter of fact, the weight on the driving-wheels of the Baldwin locomotives.

793. *Mr. Hoyle.*] Will you have the total weights of both the passenger and consolidation engine put in?

794. *Professor Warren.*] 14 tons 7 cwt., that appears to be the weight on the trailing wheel of the passenger engine under the cab.

795. *Mr. Hoyle.*] What is the weight on the driving wheel?

796. *Professor Warren.*] There is one 15 tons 6 cwt. I see, and there is another 15 tons 9 cwt. in the consolidation engine.

797. *Mr. Hoyle.*] Have you the weights on both sides, Professor? Yes.

798. Do they tally? Yes.

799. *Mr. Brown.*] The total weight including steam and coal capacity you mean? Yes.

800. *Professor Warren.*] I see that the weight on the front wheel of the consolidation engine is 5 tons 16 cwt.; on the first of the driving wheels, 13 tons 17 cwt.; on the second of the driving wheels, 13 tons 14 cwt.; on the third of the driving wheel, 15 tons 9 cwt., and on the trailing wheel, 16 tons 15 cwt.

801. *Mr. Brown.*] These diagrams (*produced*) are by Mr. Thow, had you not better call him.

802. *Professor Warren.*] Assuming the weights to be as quoted, do you consider a 71-lb. rail to be heavy enough with the spacing we have in our permanent way? Yes, for safety, but we prefer an 80-lb. rail because it is more economical; you get nearly double the wear out of an 80-lb. rail that you do out of a 71-lb. rail.

803. *Mr Brown.*] Then the life of the one rail is double that of the other? Yes, and it only costs about £111 more per mile for our road, laid with the heavier rail; and then we have also to take into consideration the saving in maintenance, as we get a stiffer road, and it follows, of course, where you have a better road there is less wear and tear on both rail and rolling stock.

804. *Professor Warren.*] Do you know the maximum weight on the driving-wheels of the engines that are in use here? There are some heavier in the colonies than the Baldwin engines; 16 tons 7 cwt. is the heaviest here.

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805. *Mr. Hoyle.*] Are those on the suburban tank engines? Yes. On the London and North Western Railway the weight of rail used to be 70 lb., then we increased it to 84 lb., and just as I was leaving England they were rolling 90-lb. rails, and now they are putting down some 100-lb. rails; the tendency all the world over is towards the adoption of a heavier rail. Not by compulsion of the state, but because companies find it more economical to do so. This is the case on the continent of Europe and also in America, not because it is safer, but because it is cheaper; and the whole tendency is in that direction. In Belgium, 105-lb. rails are used; in Germany the weight of rails has increased from 60 to 70 lb., and up to 80 lb.; and in France from 60 to 86 lb. The use of heavier rails saves in maintenance, more wear is got out of them, and a saving is effected in repairs to rolling stock. Universal experience shows that the heavier rails are more economical. With increased speed and increased weight of stock it is found cheaper to get heavier rails.

806. *Mr. Hoyle.*] Is there not some rule observed by engineers as to what is a safe weight in an engine to carry on a certain rail? If there is one thing more than another that is decided by experience only it is the details of permanent way. You might, for instance, calculate to an ounce the breaking weight of a rail resting upon supports at any given distance apart, but as in practice the supports (*i.e.* the sleepers) yield under the weight of passing trains, the calculation would be of no practical value.

807. *Professor Warren.*] It is a fact that the rail-head wears, and that you put more metal into it than is actually necessary for strength? Yes.

808. The actual carrying weight has nothing to do with it? Nothing at all.

809. *Mr. Hoyle.*] Has not the weight of the engine anything to do with the size of the rail? I do not say that. I say we do not reduce our rail to such dimensions that they are only safe to carry the rolling stock placed upon them. We know by experience what the weight of the rails should be in proportion to the weight of the rolling stock they have to carry.

810. Do you consider it would be safe to run a Baldwin consolidated engine at a high rate of speed over the Wagga Wagga viaduct? What do you call a high rate of speed?

811. Say 40 miles an hour? No; certainly it would not be.

812. Then it would not be safe to put the Baldwin engine at a rate of 40 miles an hour over the Wagga Wagga viaduct? Certainly not, nor any other engine; it would be a most mad thing to do.

813. Then at what rate of speed would you permit it to pass over that viaduct? All trains pass over the viaduct at a speed of 10 miles an hour, excepting where repairs are going on, when it is reduced to 4 miles an hour.

814. Have there ever been trains at a higher rate pass over it? Oh, yes; when it was built thirteen or fourteen years ago it was in a different condition.

815. *President.*] I know something about that viaduct. It is a place where considerable caution is required.

816. *Mr. Foxlee.*] Since this viaduct was constructed the weight of stock has considerably increased, and consequently does not give the same margin of safety as we should provide if we were building a new viaduct. The Wagga Wagga viaduct is one of the early structures.

817. *President.*] The rate you now go over is, I presume, a safe one to the public? Yes; perfectly safe.

818. *Mr. Hoyle.*] Would it be safe for these engines to pass over the bridge at a high rate of speed at Penrith—say 35 or 40 miles, or (say) even 20 miles an hour? Yes; I should think so.

819. Would it be safe for an engine weighing a hundred tons to pass over those viaducts? I think it would be perfectly safe to take one of the Baldwin engines over the Penrith viaduct at 20 miles an hour; but we have lowered the speed, inasmuch as we do not think it desirable to strain the girders unduly. It is one of the oldest bridges in the Colony. There is not the same margin of strength there as would be allowed in building a new one, and so we reduce the speed. By that we do not say that it is unsafe.

820. *Mr. Brown.*] But I understand you to say that the Baldwin engines are perfectly safe for the railways of New South Wales? Yes; I think so.

821. *Mr. Hoyle.*] Do you say that the Baldwin engines running on a 71-lb. rail, and at a high rate of speed a perfectly safe? I do.

822. By running at a high rate of speed would the extra employment of men be required? As a matter of fact we have not increased the strength of our gangs.

823. But you have not been running the Baldwin engines long? Well, as a matter of fact, wherever they are running we have not increased our gangs.

824. Have you found it necessary to effect any repairs of a more than ordinary character? No; the effect of these engines on our roads is much less injurious than that of two engines coupled together, which was the method adopted for working the traffic before the introduction of these engines. I have had a very careful watch kept as to the effect of these engines on the road, and the unanimous report has been that they have a much less injurious effect upon the permanent way, and that there is much less wear and tear than with two engines coupled together.

825. *President.*] Are the rails in one part of the line the same distance from each other as in another part of the line? No.

826. They are not uniform in that? There is no uniformity at all.

827. I cannot understand why all these platforms were originally of a different gauge;—are the different points on each side of the line uniform? No; there is no uniformity about them.

828. Here is a platform on one side—take Burwood for example—being the station that I know the best—here is the up line, there is the down line;—these two platforms are a certain distance from each other? They are.

829. Does not that distance obtain all the way through suburban stations? No; it varies in every station, and in the majority of cases the distance of each rail varies from the platform.

830. Ought they not to be the same distance from the platforms? Yes.

831. But, as I understand you, the platforms as well as the rails vary? Yes.

832. Where it is only a few inches even, it could not be through bad plate-laying or anything of that kind—by bad plate-laying I mean when the rails have been replaced in the course of repair? No; it is impossible.

833. The structures were badly built at first? Yes; every man seems to have gone upon his own bent.

834. *Professor Warren.*] There is no uniformity? No uniformity at all.

835. *President.*] Was that not a most serious thing? Yes; a most serious thing.

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836. Somebody, I suppose, understood railway management when this was done; I cannot understand a thing like that;—it strikes me as being a serious matter? Part of the work was carried out by the Construction Department, and generally that work was to gauge, though I have mentioned a few instances in which it was not. Then on the other lines, a number of structures were carried out by the Existing Lines officers.

837. I want to know this;—was the difference in gauge confined only to the line between Sydney and Parramatta, because that was the first portion of the New South Wales railways to be constructed, and I could have understood it on that account? No; the want of uniformity exists throughout the lines. I was going to explain that I am informed that certain parts of the work were carried out by the Existing Lines Branch, and others by divisional and other engineers connected with the Existing Lines Branch, and that it was structures put up by this Branch that were generally at fault.

838. *Mr. Brown.*] The immunity from accident that has prevailed in the past would probably have prevailed all along, so that as I understand it the alterations have been carried out according to your evidence merely as a matter of uniformity as far as the Department is concerned.

839. *Mr. Hoyle.*] I took the South Coast line as an example, because it is one of the last lines constructed, and the platforms there were built by the Construction Department. I would like to ask Mr. Foxlee what is the extent of the double line on the Illawarra railway? The double line extends as far as Waterfall.

840. Beyond that there is a single track? Yes.

841. Do you know whether any of these platforms were chipped or cut in any way beyond Waterfall, or whether the line was set back inasmuch as it was a single line? Speaking generally, and without accurate data respecting each particular platform, you may take it from me that if it was possible to slew the road, that would be done, but if there was anything to prevent the road being slewed, we should naturally cut the platform.

842. As it was only a single line, what would prevent you slewing it in every instance? Take Otford, for instance—although I am not sure that any alteration was effected there—you have a curve of 10 chains radius between the station and the tunnel, and it would have been impossible to slew the line in that instance. You have a 10-chain curve already, and if you slewed it over you would cripple your curve.

843. Is that an isolated case? No; but if you will give me any case in which we have chipped a platform instead of slewing the road, and I can tell you why it was done.

844. But was not the platform built in accordance with the orders of the Construction Department? I believe so.

845. If that was so, have you any reason to believe that the rails had not really moved in towards the station? As I have already stated, I am not quite sure whether any alteration was made at Otford at all, but speaking generally, it is quite possible that where the rails were found too near a platform, they had become slewed from their original position, and in that case we should give them the necessary clearance by slewing them back.

846. And all that was done after the Baldwin engines, to which reference has been made, went down the line? That I am not prepared to say.

847. Can you give us the date upon which the engine went down the South Coast line, and also the date upon which the platforms were altered? I will find that out for you.

William Thow, Chief Mechanical Engineer, called in and sworn:—

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848. *President.*] How long have you held your present position? Nearly three years.

849. What had you been before that? I was twelve and a half years in a similar position in South Australia, and before coming to South Australia I was with Sir John Fowler for five and a half years, connected with his office in Westminster. Previous to that I was at Crewe, in the London and North-Western Railway works, and in one or two contract shops—Dübs', of Glasgow, and the Worcester Engine Works, as draughtsman.

850. So altogether how many years' experience have you had? Thirty-two years.

851. Are you a member of the Institute of Civil Engineers? Yes, and a member of the Institute of Mechanical Engineers also.

852. *Mr. Hoyle.*] I would like to ask Mr Thow this question: You were not in the Colony, were you, when the order was sent to America for Baldwin engines? No.

853. You had gone to England, I understand, in connection with some business for the Department? Yes.

854. Was that business connected with the Baldwin engines? No.

855. Did you visit the Baldwin works in America, on your way back to Sydney? Yes.

856. Did you see the engines that have been brought into the service from the Baldwin Works, when they were under construction? No, I only saw some of the material. No parts of the engines were put together. Some of the materials were delivered, and they were beginning to put them together. For instance, they had none of the boilers put together, though they had some of the boiler plates ready for being put together.

857. Were you consulted as to the importation of these engines? I could not be consulted; I was not in the Colony at the time.

858. But was the importation of these particular engines suggested to you before you left the Colony? No.

859. You never heard anything about their importation at all? Not until I was in England.

860. What instructions did you receive in England in regard to them? To look up the Baldwin people when I passed through America, and to see how they were getting on, and to advise them with regard to our particular features.

861. Was that communication sent to you in the form of a letter or a cablegram? I think I had both.

862. *President.*] What was the purport of the cablegram? Simply to call at the works and see how they were getting on with the order, and there were also some particulars sent to me of the order by letter, I remember that distinctly.

863. *Mr. Hoyle.*] Will you state what those particulars were? I cannot; I have not looked into the matter since; however I can ascertain that for you later on.

864. Was this the first intimation you had with regard to the Baldwin engines? Yes.

865. Had you been consulted in regard to this particular engine before you left for England—would you have advised the Department to bring them here? That would have depended upon circumstances entirely.

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866. But would you, as Locomotive Engineer, have consented to an order similar to this? I say that would depend entirely upon circumstances. The circumstances are these. If we required the engines at once, and the Baldwin people were the only people who could deliver them in time, then I should say we must go to the Baldwin people for them.
867. Do you then consider these engines were not required? When?
868. At the time you were in England? Certainly not.
869. *President.*] When did you leave New South Wales to go to England? I think it was on the 10th August, 1890.
870. At that time the Baldwin engines were not ordered? They were certainly not ordered.
871. When did you hear in England that they had been ordered? I think at about the middle of October or the end of October, I think that would be about the time I got the first intimation.
872. *Mr. Hoyle.*] When did you get that cablegram—was the intimation you have referred to sent by by that? No, I do not know that I got that by cable; there were certain messages sent to me, but I thing they arrived either when I was in America, or just about the time I was leaving England for America.
873. *Mr. Eddy.*] You have ruled, Sir, previously that you would not admit evidence in regard to the necessity of these engines, and as this question is dealing purely with the necessity of these engines I presume you will not admit it.
874. *President.*] I take it that these questions are coming to the point of whether the engines are suitable to the permanent way. I take it that is what Mr. Hoyle is coming to.
875. *Mr. Eddy.*] He has been asked whether he would have ordered them—that is a question for the Railway Commissioners and not for Mr. Thow.
876. *President.*] You are quite right there, Mr. Eddy.
877. *Mr. Hoyle.*] Since you have returned to the Colony have you examined these engines? Yes.
878. Will you state to the Commission your opinions upon them? In what respect?
879. First let me ask you whether these engines were the cause of any correspondence between yourself and the Railway Commissioners upon your return? I do not think so.
880. Have you had any correspondence with them? Oh, I have reported to them the results obtained from the engines.
881. But did you make any comments to the Commissioners as to the suitability or unsuitability of the engines?
882. *President.*] If you can prove by this witness that he himself thinks them unsuitable, and get him to give his reasons for doing so, that will be of much more use than anything he may have said to the Commissioners. Questions regarding anything he has said to the Commissioners would be put solely for the purpose of cross-examining him if he were a hostile witness and had said something at variance with the statements he had made to the Commissioners.
883. *Mr. Hoyle.*] Did you examine the engines? Yes, I saw them being erected.
884. Did you examine their parts? Yes, I examined all their parts.
885. Do you know what the specifications for these engines contained? I think I have seen the specifications.
886. When you were examining these engines, had you the specifications before you to see that all the details were carried out? I think I had.
887. And were the specifications carried out? I believe they were.
888. Did you find any defects in the engines? In what respect?
889. In any respect? When they had been at work we found that the axles gave trouble.
890. Were the axles examined by you before they ran? Yes.
891. Did you consider these engines suitable for the work they had to do? Certainly; they are suitable for hauling heavy loads.
892. What is your opinion about the wheels of these engines—in any engine you design would you have put similar wheels? All my practice has been English practice. These are American engines.
893. Would you put such a kind of wheel as this on an engine? I would not specify American wheels for English engines. All my practice has been amongst English engines.
894. Have you any objection to state why you would not specify American wheels? Merely because I would be putting different parts of different engines altogether, which would be very unusual. I should certainly try as far as I could to make a uniform machine.
895. But would you put a wheel on an engine you had designed as light as these wheels are? In what respect, are they light?
896. The spokes and the bosses of the wheels are light? I would make stronger spokes.
897. You do not think that these spokes are strong enough? I said I would put stronger spokes in a wheel that I was designing.
898. *President.*] That is to say if you were building an engine for yourself, but take this engine? If Mr. Hoyle wants to know if I have seen any breakages in the wheels of the Baldwin engines, I say at once that I have not.
899. But are you in a position to say the wheels are defective in any way, are the wheels too light for the rest of the engine? I have not seen any defects in the wheels in the form of breakages. The wheels, I admit at once, are manufactured very roughly, they are very rough pieces of forged work, but that they are defective and not strong enough for the work they have to do, I am not prepared to say.
900. You mean to say that they are not so well finished as the wheels on English locomotives generally are? They are not so well finished as wheels that come out of an English workshop.
901. *Professor Warren.*] It has been said that these wheels have been made by an adaptation of an old process, that was stated in evidence yesterday;—do you consider that process suitable for the manufacture of wheels? The process is somewhat similar to a process worked for a long time at Rotherham for carriage and waggon wheels. It is a stamp process. The spokes are made of rolled-iron, and they put the hub of the wheels on to the spokes in two pieces, and place the whole thing in a furnace, taking it out at a welding heat and pressing it together by hydraulic presses, or with large steam-hammers.
902. Have you any objection to the process? I think it is a very good process for the production of this particular wheel.
903. *Mr. Hoyle.*] But do you consider the wheel heavy enough in the spokes to carry the weight it has to carry in these engines? If it were not heavy enough we should have seen signs of its giving way, and, as a matter of fact we have not detected anything amiss with the wheels.

904.

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904. You have not detected any defects in them? We have not detected any defects in this particular wheel.
905. Did you see an axle that broke on a train as it was coming into Sydney Railway Station? Yes; within a few minutes of its breaking.
906. Were any tests made? Yes.
907. Can you give any reason why the axle broke? Yes; my opinion is that it broke because it was of very bad material.
908. Was it through over-heating? I do not think so. The heating that it did receive would no doubt increase the weakness of the axle. It would no doubt cause it to give way a little sooner than it would have done had it been quite cold.
909. Was the axle twisted in any way? No, it was a clean break. In extension of that answer, I may say that there is no doubt that the axle had made a clean break, but that the two surfaces had for a few seconds rubbed together, which might have produced an appearance of twisting. There was no doubt an appearance of twisting, but that would be due, I think, to the fact of the parts rubbing together.
910. Were there any other axles broken? Yes; three bogie axles and two tender axles broke.
911. In Sydney, or whilst the trains were in motion? A tender axle broke in Newcastle. One of the bogie axles broke in Sydney, one at Yass, and one at Junee.
912. And when you previously examined these axles, had you any reason to believe that they were unsafe? No, none whatever.
913. Can you, as an engineer, tell us why, in your opinion, it was necessary to put into the bogies larger axles than the original iron axles—that is, when they were replaced by steel axles? Because it has always been my practice to use larger axles.
914. And you bored out the boss of the wheel? Yes.
915. To admit of larger axles? Yes.
916. That weakened the boss, I suppose? It would make it slightly weaker.
917. And when that was done a face was put on the wheel, and a wrought-iron ring round the boss? Yes. I have a tracing here which will explain matters. (*Tracing exhibited.*)
918. Do you consider that to be a safe practice? A very safe practice. Let me explain. This is the hub of the wheel. The hole, previous to the boss being bored out, was 5 inches in diameter. We bored it to 6 inches in diameter to admit the new axle; then we turned the outside edges of the boss, and shrank on a pair of rings to hold the wheel together in the event of its giving way.
919. *Professor Warren.*] To compensate for the material that you cut away in boring out for the larger diameter? Yes, but especially to hold the wheel in the event of its giving way. This being a cast-iron boss it would fracture without giving any warning, or at all events with very little warning, but by having the rings shrunk on in this way, if a fracture did take place it would hold together. This wheel is not like a coupled wheel; it is simply a roller, and has nothing to do but to roll along the line and carry the weight which may be transmitted from the axle.
920. *Mr. Hoyle.*] Do you know upon which train the axle broke, was it on the Northern express? Yes, on the Newcastle train quite close to the Sydney platform.
921. The train was going at a low rate of speed? Very low.
922. What would have been the result if the train had been travelling at the rate of 30 miles an hour? It is very difficult to say.
923. Do you mean to say that it would have turned the engine over? It is a very difficult thing to speculate upon. It is a very nasty accident to happen, and I should not like to see it happen again anywhere.
924. Since the engines have been running, do you know whether the repairs to them have been very great? They have been rather heavy, not particularly so.
925. Do you think the repairs that have been done to these engines are greater than they ought to have been considering the mileage run? They are greater than the repairs to some of the engines that we have, but not greater than the repairs to others.
926. But are they greater than they ought to have been to a new engine running at the rate these engines have been running? It all depends upon the type of engine.
927. *Professor Warren.*] Your experience is mostly in reference to English engines. Suppose we compare engines of the English and American types, in a majority of them would you have required to expend as much money upon repairs in a similar length of time provided of course that the English engines were a similar size, and had been running the same mileage? No, I do not think that we should.
928. There would be a considerable difference you think? No, there might not be a very considerable difference, but I do not think that under similar circumstances English engines would have come into the shop so often as these have.
929. It is rather early in the day to talk about repairs, is it not? Yes; that is what I say. It will take years before we can compare the costs of these engines with the cost of English engines. Engines are not worn out in a very short time, and it is not an uncommon thing for all engines to come into the shop more or less when first they begin to run; they have to shake down to their work, and there are several little details that must be attended to in order to bring them to their proper bearings.
930. Do you consider that the bearing service is sufficient in the axle-box? In the driving or coupled axle-boxes certainly it is ample.
931. You are speaking now of the engines? Yes. In the coupled axles the bearing surfaces are excellent. I would have preferred more in the bogie if I had designed the engines.
932. Was that the reason why you increased the diameter of the axle? Yes.
933. Not to give greater strength to the axle, but to give more bearing area? Yes; because they were running hot.
934. You consider that the chief cause of heating was the want of bearing space? No; I consider that it was the dirt that was in the axle. The axle had not been fairly worked; the dirt had not been sufficiently squeezed out when the metal was in a malleable state, and the consequence was that it was continually oozing out when the axle was at work, and irritating the brass bearings. If they had been made of excellent material I think they might have been running to-day.
935. Yorkshire scrap? Yes; Yorkshire scrap or any other clean material.
936. Do you think the lubrication was sufficient? Yes; I do not think it was for want of oil that these axles gave trouble.

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937. Have you made any experiments in that direction? Yes; we tried several methods of improving the axles before they were changed. We put on additional oil boxes in the hope that in that way we could remedy the defect.
938. You tried to improve the axles? Yes; we tried several plans of getting the axles to run cool before they broke, and it was a mystery to me why they did not run cool; I could not understand it until we pulled the material apart in the testing machine and then the secret was revealed.
939. *President.*] And that was the very bad stuff that had been put into the axles? Yes; it was inferior material, there is no doubt about that.
940. Very inferior material to put into such an important part of a locomotive? I think so.
941. *Mr. Brown.*] Could any reasonable supervision or care have prevented this accident? No; the only means of knowing what was in the axle was to pull it to pieces in the testing machine or to break it by the drop test.
942. And that is not a usual thing to do, is it? Oh dear, no; it would destroy the axles.
943. *Professor Warren.*] You do not mean that if the axles had been properly made, whether of iron or steel, you would be liable to have a bad accident. You would not expect a Yorkshire scrap or steel axle to turn out badly? We do not find that to be the case.
944. Axle material should be the finest and best that can be produced? Yes; it certainly should.
945. *Mr. Brown.*] No inspection or supervision on the part of yourself or anybody else in the Railway Department could have prevented this accident to the axle? No; it would have been impossible to tell that the axles were bad until they had been pulled or broken to pieces.
946. *Professor Warren.*] You do not mean to say that if you had been at the Baldwin works and seen these engines manufactured that you could not have told that they were not up to the mark. You say that there was a good deal of dirt in the material which shows that there was insufficient welding? No doubt in the process of manufacture a person might have seen that the axles were not getting fair treatment, but when they arrived here they were perfectly bright. They looked all right. My attention was drawn to various parts of the engines, but not to a single axle. Not a single axle raised doubt in the minds of any of my officers or in my own mind, and it was only when the axles were running hot that we adopted means such as increased lubrication to keep them cool. It was only by putting the axles in the testing machine and under the drop test that we found that they had been made of bad material.
947. You stated that you were with Sir John Fowler in England, and he is the Inspecting Engineer for the New South Wales Government. I take it that Sir John Fowler thoroughly inspects all engines, bridges, and other materials that are afterwards sent to this colony? I presume he does in the case of matters which are put into his hands.
948. You have lately imported some engines from English manufacturers? Yes.
949. Were they tested by Sir John Fowler and his staff? Yes, his office had the inspection in their hands.
950. The materials of the axles and other parts of the engines were tested I presume? Yes.
951. It was specified that they should be? Yes.
952. And the engines were tested in steam afterwards? Yes.
953. There is a specifiation here which I would like to read to you because it is certainly to me peculiar "Axles of hammered iron or steel." "To be made a true cylinder and carefully fitted," that is all. Is that a sufficient specification to obtain a suitable axle. There are no tests specified? You will not find I think in any Baldwin specifications anything else than that. That is my experience.
954. Do you believe in trusting to the honor of the manufacturer to produce the best axles from the best class of material? I should certainly have expected from the Baldwin people very much better axles than came out with these engines.
955. But that is not my question. I was asking whether you trusted to the honor of the manufacturers to produce axles from the best material rather than specify that they should undergo tensile tests, ductility tests, and drop tests? Well, I tell you that my practice has been all English practice, and in English practice we do subject axles to those tests, and specify them too; but I believe that if we were to go to America to-morrow or send such a specification as commonly used for English engines the Baldwin Company would not submit to it. They furnish their own specifications and it is very rarely that American Railway Companies issue such specifications as English builders accept. They are only beginning to do so now. I had a conversation with Mr. Ely, Chief of the Locomotive Department of the Pennsylvania Railway, and he showed me parts of his specifications which, for America, were unusually stringent and told me that although that was his practice it was an unusual one.
956. Is it not your general practice to specify full and complete tests? Yes it is.
957. You have never written a specification for locomotives in which you have not specified the materials? No, or given them afterwards, because it is the English practice to specify them, and English makers expect it.
958. Was there any inspection of the American engines similar to that which would have been the case in regard to an engine manufactured in England? Not that I am aware of.
959. *Mr. Eddy.*] Was not Mr. Thow authorised to appoint such an inspector when he was in America if he thought it desirable, and did he not decide, and cable the Commissioners that it was not the practice in America to do it, and that it would cause difficulty? Yes; I did. I had instructions from the Commissioners when I was in America to consider the question of appointing an inspector, and when I went to the Baldwin firm I inquired into their conditions for this contract, and with the information that I obtained I then consulted with our agents in New York to ascertain what the practice was with regard to the building of locomotives there, because I knew that they had had some experience in that particular work, and they told me that it was very unusual to have any inspector over the engines when built by a firm like the Baldwin Company. I had to consider what I had to put before an inspector to guide him in the matter. As I daresay you know, it was left with the Baldwin people to supply engines in accordance with their best practice. I could not give a specification or a set of drawings to the inspector. I could not tell him, "There are your instructions, which you must carry out." All these things were considered by myself and the agents, and the conclusion that was come to was this: That under the contract the onus rested with the Baldwin people to supply these engines of the best character possible, and if an inspector, without sufficient guidance, was to interfere, the onus would be removed from them to a considerable extent.

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960. You mean to say that, responsibility being removed from the Baldwin Engine Company, you would have been left with no guarantee beyond an unsatisfactory inspection? Well, I mean that the company would not have felt that the onus rested on them so much if we had appointed an inspector at that time.
961. You mean that, if you had appointed an inspector, the Baldwin Company would have felt that it was the look-out of the New South Wales Commissioners, and that it was no question of honor as to them? That would have been the tendency, no doubt, and the agents instanced a case known to me of rolling-stock supplied by American builders. They reminded me that they had Mr. So-and-so as the inspector, and said, "We know that he took the money he charged without doing any more than going to the works occasionally, and saying 'How do you do?' and leaving the matter with the makers. He exercised no real control."
962. *Mr. Brown.*] We understand from Mr. Eddy that the Baldwin Company accepted the full responsibility in regard to these defects? They have in regard to the axles, and with regard to other things besides.
963. So in that way they justified your argument that if left to their honor they would take the responsibility for the work being done properly, and it was better not to appoint an inspector, who would have had insufficient data to work by? Yes.
964. *President.*] You mean to say that the Baldwin Company are strong enough to say, "You must trust us to produce the best work," and, being strong enough to say that, in this instance they put in bad axles? I do not suppose that they did it intentionally. They may not have made the axles.
965. *Mr. Eddy.*] We find that they obtained the axles from the manufacturer who had been in the habit of supplying axles to them, and who had never failed them before. The Baldwin Company build 1,000 engines a year. More than twice as many as any English firm.
966. *Professor Warren.*] You have replaced the iron axles with steel axles?
967. *Witness.*] Yes.
968. What steel have you used? There were twenty-four replaced, and six of them are of steel manufactured by Vickers & Co., of Sheffield, and the rest are of steel sent out by the Baldwin Company. The reason we used the Vickers steel is this:—We wanted the engines, and we obtained six axles from Victoria—made of Vickers steel. We put those in the first engines which failed, and in the meantime the Baldwin people had shipped 24 steel axles so that we obtained the full complement from the Baldwin firm without any charge.
969. What kind of steel did they send out? "Otis" steel, that is a very well-known American firm; a firm as well known as Vickers in England, or Krupp in Germany.
970. How do you know that the steel axles are all right? We do not find that they give us any trouble.
971. *President.*] They do not heat as the others did, I suppose? No; they are running very well without giving us any trouble.
972. There is a point that I think the Commission ought to get at with regard to coal consumption;—I know it is a difficult matter, and we might have to give it up, but could you suggest any way in which the coal consumption could be got at in the Baldwin engines, and compared with the performances in English engines? We can give the records of the coal consumed.
973. *Mr. Eddy.*] Is it really necessary that a question like that should be gone into. What has that to do with the permanent-way of New South Wales and the engines not doing their work. We are ready to give any information that we can to the Commission, but there is such a loss to the country through the Commissioners being kept here day after day that I should like the evidence to be kept as far as possible within the four corners of the inquiry.
974. *Professor Warren.*] But suppose that it should turn out that the American engines are unduly extravagant—would not that be a defect?
975. *Mr. Eddy.*] This is the first time that I have heard the question of coal consumption raised. There is no charge of that nature before us. A defect is a defect in the machine, the coal consumption has no bearing upon it.
976. *Professor Warren.*] I do not take that view at all. If the engines were badly constructed, and had insufficient heating surface, and there is a great deal more friction in the movement of various parts than ought to be the case, then they certainly would consume very much more coal. Then the manner of design and construction would also affect the coal consumption. The amount of coal consumed is a very difficult matter to get at, I know, but I should like to get at it if possible.
977. *President.*] Professor Warren is really the expert Commissioner upon this Commission. You, Mr. Eddy, think that a question of coal consumption is not material, he thinks it is, and surely you cannot think that I am going to say that something that Professor Warren—who is here to advise myself and my colleague—thinks material is not material. I cannot enter into the matter at all.
978. *Professor Warren.*] I think the matter is distinctly between the four corners of the inquiry, whatever the Commissioner may think, and I only wish to get the facts of the case.
979. *Witness.*] I think we can supply you with information.
980. Have you made any tests of the engines, have you put an indicator on? No.
981. Have you made any tests as to the evaporation of the water? No.
982. You have made tests with regard to American engines in South Australia, I believe? Yes.
983. Did those engines in South Australia consume more coal than the English engines that you have running there? Yes, they did.
984. Was the evaporation per pound of fuel greater or less in the American engines than in the English engines? It was less in South Australia at the time we made the tests.
985. And you have never made any tests of that character here? No, we have not.
986. There has been a great deal said about these engines;—do you not think it would be very desirable to ascertain the evaporation, the coal consumption, and the power developed? Well, it might be interesting as a scientific question, but for the practical work of railways, with which we have a great deal to do just now, I do not think it material.
987. Why did you indicate the engines in South Australia, merely as a scientific test? Yes, and for a special purpose; but not merely to inform myself of the coal consumption of those engines. It was really for the special purpose of an inquiry, rather than for railway purposes.
988. Then you did not consider it necessary to determine the evaporative efficiency in South Australia, excepting as a matter of curiosity? The evaporative power of the engines was ascertained, but it was not

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not done in the way in which you would probably consider it necessary to do it as a scientific experiment. We did it roughly by ascertaining the quantity of water evaporated by a known quantity of coal consumed over a long period, and we referred the result to the basis of 100 tons hauled 1 mile.

988½. Have you noticed anywhere any side play in the Baldwin engines. Have the axle-boxes cut into the wheels? No; the axle-boxes have themselves been cut into by the wheels in one or two instances.

989. Would you ask the witness whether the consumption of coal in a locomotive has any bearing upon the load hauled, and whether, without taking that into consideration, it is possible to compare the coal burnt by one locomotive with the coal consumption of another locomotive? It is the coal consumed in relation to load hauled that is the test. The question is the amount of coal burnt per 100 tons hauled per mile.

990. *Professor Warren.*] I spoke just now of indicator diagrams;—would not that be a test of the power developed? Yes; you would then get the actual horse-power.

991. I suppose you could give us some information about it? Yes, we could; but it would be rather unsatisfactory from your point of view, because not only has the load a great deal to do with the consumption; but supposing two engines are taking different loads, you can only make comparisons if they move at the same speed. That is to say, you could compare the consumption per 100 tons per mile if the speeds were the same; but if you have engines running at different speeds over the same road and with different loads, it is a very difficult thing to equate. It must be referred to horse-power. If you wanted to make a scientific test of the coal consumed it would take a long time, and you would have to devote a very large amount of labour to it. For rough purposes we could give you a good deal of information.

992. That is all I want. I do not want anything in the nature of a steam-engine test? Yes; but if you were to draw any conclusion from the information we are now able to supply, I am afraid it may be questioned. We can get some data, but it will take a long time and a great deal of work to produce an exact comparison.

993. *Mr. Eddy.*] Is it not a fact that the Commissioners have for some time been trying to get information of that kind for their own guidance, but that with the large amount of other work of a more important character in the Department we have not been able to do so yet? Yes, that is the case.

994. *Mr. Hoyle.*] Is it not a fact that you are raising the tender of some of these engines to create additional water capacity? We have altered one as an experiment.

995. Have you examined any of these engines lately? Yes.

996. Have you found in any of them any undue wear of the cross-head slides? I do not know whether you should call it undue wear—there is an apparent wear.

997. Have you not had to put brass liners in? Yes, or to bring the slide-bars together, which comes to exactly the same thing.

998. But have you any engines in which you have put brass liners in such a short time as these engines have been running? Yes, I am sure we have; but you must remember this,—these are very powerful engines, and you cannot get power without destruction—that is impossible; and if you want to compare a very powerful engine with an engine that is only half or 50 per cent. as powerful, then you must expect to find a difference in the wear and tear of the engines. You cannot possibly avoid that.

999. Is there anything wrong with the reversing gear of these engines? Yes; it has given trouble in some respects.

1000. Is it your intention to alter the reversing gear of those engines, or to renew it? It is our intention to strengthen it.

1001. Will that be done at the cost of the Baldwin Company? I think so. We have done something of the kind already and it has been paid for by them.

1002. Is it your intention to do that in regard to all the engines? I believe we shall do it in regard to all the engines.

1003. Has there been much trouble or work in connection with the tubes of the engines? No, not much. We had a little trouble at first, but I think that was chiefly due to want of attention on the part of drivers, because we have had no trouble lately.

1004. Have you put, or is it the intention of the Department to put, new steel axles into all the tenders of these engines as well as into the bogies? We have put a number of steel axles into the tenders, and, as they require it, we shall put steel axles into the others.

1005. You intend to put them in all? We do ultimately.

1006. And will the whole cost of it be charged to the Baldwin Company? Certainly, so far as the passenger engines are concerned.

1007. And how about the Consolidation engines—have you not had to do the same with regard to them? In some instances we have, and up to the present we have charged the cost to the Baldwin people.

1008. Is this charge being deducted from any money of the Baldwin people that is held by the Department? Yes, we still hold money of theirs.

1009. *Mr. Brown.*] That is hardly fair. The witness tells us that the expense is being defrayed by the Baldwin Company, and that is sufficient without going into the question of the way in which the money is being paid.

1010. *Mr. Hoyle.*] Do you know whether any of these engines were lifted when they went to Newcastle? Yes, some of them were lifted because their axles ran hot.

1011. Were they lifted often? I do not know that they were lifted often. We very frequently lift engines or tenders for that reason.

1012. Did it come to your knowledge that there was any play between the bosses of the wheels on both sides of the engines running north? There always is some play, even when engines are sent out new.

1013. Was there any play between the swing of the bearings? I do not understand the question.

1014. Were many of these draw-bars broken? I only know of two, but we have changed the draw-bars, and charged the cost against the Baldwin Company.

1015. All the draw-bars were taken off? Yes; and we put new ones on.

1016. New ones, of additional strength, I presume? Yes.

1017. And have any of these new and stronger ones broken? I have not heard of any of them breaking.

1018. Are these reports supposed to be made to you as Chief Mechanical Engineer? Yes; I generally know of anything that is peculiar in that way.

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1019. Do you know whether there is a fitter and his mate told off at Bathurst to look after these engine particularly? It is quite likely that there is. We split up our fitters in different ways. Men used to one class of engine are generally employed upon that class, because we get our work done better in that way.
1020. Have you heard if any of the foundation rings were defective? I heard of one that was leaking and I expect leakages sometimes in boilers in such things as fire-hole rings or foundation rings, no matter where they come from.
1021. How many men are on these engines? Three men are on the American engines.
1022. *Mr. Eddy.*] Has it not been a practice always in the Colony to put three men on American engines—there are a large number of American engines at work? Oh, yes; ever since the American engines of similar design have been working in the Colony three men have been employed upon them. The Consolidation engines, before the arrival of the Baldwin engines, had three men upon them.
1023. Are the American engines of the 304 class driven by three men? That is not Consolidation engines at all. There are not three men employed upon them.
1024. Are there three men employed on the Mogul engines? No; that is a different type of engine.
1025. Are three men employed on the 232 (? 294) class? No; that is a smaller engine, and smaller engines do not require three men. But when we have large engines it takes one man more to keep up the fire. Two men are employed in looking after the fire, and one in driving the engine, and if you have an engine giving off the power of two small engines, you must expect to have two firemen to keep the fire going.
1026. *Mr. Eddy*, to Mr. Hoyle.] We will take the second fireman off to-morrow, if you like.
1027. *Mr. Hoyle.*] Oh, that is the business of the Railway Commissioners. They will not be dictated to by me as to how they will work the railways. *To witness:*—Are the fire-boxes as large as the fire-boxes in ordinary engines? Much larger.
1028. And does it not follow that there would be a larger draught and a greater consumption of coal? Certainly.
1029. Do you think that the power in this fire-box is too large? Certainly not. It is a well-proportioned box. I consider that no fault can be found with the grate area.
1030. In examining these fire-boxes, did you notice any test-mark? I do not remember that there was any.
1031. Is it customary to put a test-brand on the fire-box—I mean a maker's test-brand? I never saw one.
1032. But is it customary in your Department to put brands on the boilers? Yes; we do it for our own information, but I never saw it on boilers tested by the makers. They are never marked in that way.
1033. Is it a fact that the goods Consolidation engines are running the passenger trains? Yes.
1034. How far do they take it? From Penrith to Katoomba.
1035. How is it that they do not take it further than Katoomba? They are not required.
1036. Why are they not required? Because the line is of a less mountainous character. It is only because the engines are capable of taking a load up the very steep parts of the incline between Penrith and Katoomba by themselves that they are employed there.
1037. What is the general load that the traffic justifies as far at Katoomba? The Consolidation engines carry a load of about 145 or 150 tons behind them. I should say 145 tons.
1038. And what engine then takes the train on to Bathurst? Sometimes one and sometimes another of the old class.
1039. Do any of the Baldwin passenger engines ever take the train on to Bathurst? Sometimes.
1040. Can you tell me why the Baldwin passenger engines are not employed in taking the train from Penrith to Katoomba? Because we found the other more suitable, being more powerful.
1041. I understand that they were brought here to run the heavy traffic? Yes; and they are doing it now.
1042. Then can you tell me why they do not run the heavy trains up the Zig Zag and on to Katoomba? I should think that it was a very peculiar restriction if we had to employ Baldwin passenger engines on all heavy loads. We employ them on work for which they are best suited.
1043. Could the Baldwin passenger engines take the trains up the steep gradients as well as the Baldwin Consolidation engines? You ask me a question very like this, "Can a donkey draw as much as a draught horse?" Certainly not; the Baldwin engines were intended for certain work, and for that work they are used.
1044. What were they intended for? To run on other parts of the railway system and on those parts of the railway system they are now employed.
1045. Were they not intended to run the passenger traffic of the express trains? I have never seen anything to justify that limitation.
1046. *Mr. Hoyle.*] I shall put in a paper to show that they were.
1047. *President.*] What paper? The *Sydney Morning Herald.*
1048. *Mr. Eddy.*] What does it matter what is in a newspaper regarding these engines?
1049. *President.*] If the Railway Commissioners had said that they had brought such engines here for a certain purpose, and you could prove that they were not being used for that purpose it would be to the point; but how can it matter what appears in a daily newspaper in regard to them? All sorts of things are found in newspapers.
1050. *Mr. Hoyle.*] I intend to put in the *Sydney Morning Herald*, and to call the reporter to say where he got his information from.
1051. *President.*] Of course the *Sydney Morning Herald* is a very good paper indeed. We all know that; but if you get a reporter or anybody else to say that any one of the Commissioners said that the Baldwin engines were brought here to do certain work, and you are also able to prove that it was subsequently found they could not do the work, then that would be valuable evidence. But the mere fact that you get these statements from a newspaper has nothing to do with the case. Where you get your facts from is a matter of detail, and concerns no one but yourself. If you get them from the newspaper then you naturally look for the person who supplied that information to the newspaper, and the evidence of that person alone shall have any bearing upon the case.
1052. *Mr. Hoyle*, to witness.] Well do you know what these Baldwin passenger engines were brought here for? To run both passenger and goods trains; passenger trains in one direction and goods trains in the other, if required.

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1053. I am speaking of the American passenger engines? Yes; and I am referring to the English as well as the American passenger engines. They were to be powerful enough to be useful for both goods and passenger work.
1054. Were they put on the northern and southern express trains, and if so, have they been taken off? They were; and taken off when their axles began to break.
1055. Have they been put on the express trains since the axles were replaced? No; we have now other engines equally powerful that are doing that work.
1056. Were those particular engines in the country when the Baldwin passenger engines had to be taken off this particular service? They were not.
1057. Then were there engines in the service powerful enough to haul these particular express trains? No; only when we put two of them together.
1058. After the Baldwin passenger engines were taken off the northern express, what engines were put on to do that work, that is before the last engines you referred to came to the Colony? Sometimes one class sometimes another—sometimes 304 class, sometimes 255 class. That train is a very light train, comparatively speaking, and almost any of our express engines in the service before the introduction of the Baldwin or English express engine could manage that train, as far as from here to Newcastle is concerned, and on some of the other sections. When the train was unusually heavy two engines had to be employed.
1059. Do you know of any cases in which two engines have to be employed when the 304 class engines were doing the work?
1060. *President.*] Is this to show that it was unnecessary to get the Baldwin engines.
1061. *Mr Hoyle.*] It is to show that the Baldwin engines are unsuitable for the work.
1062. *President.*] Well why do you not ask him straight out, he is a gentleman upon whose integrity you will not cast any slur.
1063. *Mr. Hoyle.*] Certainly not.
1064. *President.*] Then why not ask him whether these Baldwin engines were disused from the express, because other engines were more suitable?
1065. *Mr. Hoyle.*] I understand that Mr. Thow has already said that they were withdrawn on account of the axles breaking.
1066. *President.*] And since the new axles were put in, have you got sufficient to go on that line? Yes.
1067. Why have the Baldwin engines not been put on again? They were put on some of the sections.
1068. *Professor Warren.*] What is the maximum speed at which you consider the Baldwin passenger engines should run? We have frequently run them up to 50 miles an hour.
1069. You consider them safe at that? We have proved it, by running them at 50 miles an hour.
1070. But you broke axles? We have run them at that speed since.
1071. And the Consolidation engines? They are meant for slow traffic. What I think Mr. Hoyle wanted to show was that another engine classed as the 304 class, was as useful as the American Baldwin engines.
1072. *Mr. Hoyle.*] Do you know whether these Baldwin passenger engines slip very much on our grades? No; I do not think they do slip very much.
1073. Have you any instances of slipping ever been reported to you? Only once, in Otford tunnel, and that was in very bad weather when any engine would slip.
1074. Was it an extra heavy train? No.
1075. You have heard of no slipping since? Oh, no; I am sure that the engines are well proportioned and would not slip more than they should do.
1076. Was that a wet day? It was one of those moist days when engines are likely to slip in tunnels. That was the only occasion that I remember upon which one of those engines have seriously slipped, but all engines will slip when the rails are damp, and it is quite a proper thing for an engine to do. I never think that there is anything wrong in an engine slipping a little, unless it is slipping too much.
1077. *Professor Warren.*] You do not consider that the cylinder power is too great in comparison to the adhesion? No; the parts are well proportioned.
1078. *President.*] You say that when the engines came into the country they were defective as far as the axles were concerned? Yes.
1079. Are they now defective? Do you mean the axles?
1080. I mean the whole locomotive? I do not think so at all.
1081. Are they unsuitable to the permanent-way of the Colony? Not to my knowledge.
1082. Are they not rendering that service which was expected of them? I think they are.
1083. And you do not think that the amount of repairs necessary in consequence of the manner in which the engines were constructed will be abnormally large? They will be higher than the repairs to English engines would be, but that will be the case with regard to all American engines. The maintenance of American engines is always higher, and that is the only distinction that I could draw between the two classes as far as efficiency goes.
1084. You evidently prefer English engines? Oh, certainly I do.
1085. *Mr. Hoyle.*] Is any of that bad material, or the same class of material that broke when the train was running into Sydney, in any of the axles in engines running now? Certainly not in the bogie axles.
1086. But in the tenders? It may be in the tenders, but the strains on the tender axles are not so great, and we have not found that they are giving the same trouble that the bogie axles did. The reason that we are removing the tender axles is a different one altogether.
1087. *President.*] Let me understand, what you found out was that the defective axles grew so very hot? Yes.
1088. And you found that the reason for that was that foreign material was enclosed which ought not to have been in the iron? Yes; that was what I thought.
1089. You have not found the same amount of heating with the tender axles? No.
1090. *Professor Warren.*] Nor in the driving axles? No; they are unusually large.
1091. And of iron? Yes.
1092. No driving axle has broken? No.
1093. And until it does, you will not know what material is in it? No; I should not think it would be a proper thing to pull those axles to pieces for the purpose of finding that out.
1094. *Mr. Hoyle.*] Who is the responsible locomotive officer in the Newcastle shops—who was there when the new Baldwin engines came in? Mr. Pilford.

WEDNESDAY, 20 APRIL, 1892.

[*The Commission met at 2 o'clock, in the Board Room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

W. M. Fehon, Esq. 20 April, 1892.

1095. *Mr. Brown.*] Mr. Fehon, you are one of the Railway Commissioners present I believe, you may remember that at the commencement of this inquiry I asked through the President that the whole of the correspondence in the possession of the Railway Commissioners in connection with the Baldwin engines should be produced in order that we might have an opportunity of perusing copies of it, and I presume that this correspondence has been supplied to us; but all that I have in my possession are copies of correspondence dating from 1st September, 1890, to 29th December, of the same year. This, I understand, is the correspondence which has been supplied by the Department. Now, what I wanted was the whole of the correspondence in the possession of the Railway Commissioners in connection with these engines, including the correspondence between those gentlemen and Messrs. Towns and the Baldwin Company, &c., both to and fro.

1096. *Mr. Fehon.*] The correspondence includes letters passing between the Railway Commissioners and Messrs. Towns & Co. with respect to the purchase.

1097. *Mr. Brown.*] But there must be some further correspondence in connection with the purchase of the Baldwin engines, and the business with respect to it. All the correspondence I have is between September and December of 1890.

1098. *Mr. Fehon.*] There is one letter we have received within the past ten days.

1099. *Mr. Brown.*] I wish you to give me the whole of the correspondence up to the last letter, including that between Towns & Co. and the Commissioners, the Baldwin Company and the Commissioners, and any others in connection with these engines.

Henry Bryant Howe being sworn, said: I am General Works Manager in the Railway workshops at Eveleigh.

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1100. *President.*] How long have you been in the Service? I have been about twenty-eight years in the service of the New South Wales Railway.

1101. *Mr. Hoyle.*] We understand that you, in connection with others, recommended the importation of the Baldwin engines? I did.

1102. Had you anything to do with the drawing up of the amended specifications in connection with these engines. Were you consulted about the amended specifications submitted to the Baldwin Company? I was present at one meeting with regard to drawing up the specifications having reference to these engines.

1103. Do you know exactly all the alterations that were made in the original specifications? I could not say.

1104. When the engines arrived in the Colony were you supplied with a copy of those amended specifications? I was not.

1105. Did you minutely examine all the parts of the engines when they were being put together—did you consider it any part of your duty to see that these amended specifications had been carried out so far as materials were concerned? Well, it is a peculiar way to put the question, but I was not supplied with a copy of the specifications referred to neither did I consider it necessary.

1106. And therefore you could not, in erecting these engines, ascertain whether they had been made in conformity with these specifications?

1107. *President.*] In other words did you compare the engine and the specifications? I did not compare the work with the specification.

1108. *Mr. Hoyle.*] Then do we understand that your work as Works Manager was simply to put a machine together when it had been ordered by the Department, after the engine was ordered, and when it arrived you had to see that it was put properly together? That was my duty, I had to erect the engines.

1109. Did you receive no instructions when the engines came back to minutely examine the parts of the engines. Had you no instructions from the Commissioners or any other officers to make a minute examination of the different parts of the engines? I had not.

1110. Did you examine them closely? I did.

1111. Did you find any defect in them? Not any material defects.

1112. But in any of the parts? You talk about parts—I do not know what parts you refer to.

1113. Did you make any examination of the axles, such an examination as any man would make if he were going to properly erect them; did you examine the journals, boxes, see if they were properly fitted, and the boxes properly placed to the engine? Anyone who understood his business would know that would be the proper course to take.

1114. Were you satisfied that all the materials were good? Perfectly satisfied.

1115. Did you examine the wheels, and did you find any defects in them? No, none whatever, there were however some imaginary defects.

1116. Would you consider it a defect to be able to put any part of a knife into any part of the rim of the wheel? It depended upon what part it would be so far as the rim is concerned.

1117. Yes, the outer rim, the outer part of the rim immediately near the tire? What part?

1118. Between the spokes and the tire—suppose that any part of that portion of the rim, near the spokes were so open that I could put a knife into the hole, would not that be a defect in the wheel? I suppose it would not be as it ought to be if such were the case.

1119. But would it not be a defect. If you specify anything then you expect to get it sound, and have every thing of the best quality? Yes; of the best quality.

1120. Then if I could put a knife into any part of the rim, would not that be a defect? The question is to much qualified, if the rim were broken through, that is to say, if there were cracks through it, that would be a defect, but it would not be dangerous to the working of the engine, the tire would keep that together, and as to cracks in the wheels I should say that there are perhaps hundreds in the same way.

1121.

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1121. Have those engines been very costly since they came here through having many repairs made to them? I could not say that they have been any more costly than other engines, I have not made any comparison that would lead me to believe that they were any more costly since they have been here than other engines.
1122. *Professor Warren.*] Do other engines require their axles to be renewed to the same extent as these have required renewing? They have been more costly in that respect, but the makers have borne that cost.
1123. Have they not cut into the axles? The bosses of the wheels have cut into the face of the axle-boxes.
1124. Have you done anything to repair that? Yes, I have, by taking the wheels out of the engine and recessing the flanges of axle-boxes, and fitting brass liners.
1125. Do you consider that the future maintenance of these engines will be excessive, that is to say, more than ordinary engines, more, say, than English made engines? I think rather that the maintenance will be more.
1126. *President.*] Putting aside these axles, which we know now were bad, or some at all events of them, putting these aside, I say, is the expense of keeping the engines in repair, &c., greater than that of keeping ordinary new engines in repair? Of course, having to lift the engines on account of the bosses cutting into the axle-boxes has been an additional expense, these are cast-iron axle-boxes, the English engines have wrought-iron axle-boxes case-hardened.
1127. Would these engines then be much more expensive, from a point of maintenance? I cannot say much more expensive, for such things do happen to other engines as well. I could show you other engines which have had the wheel boss recessed and liners put in, it is not infrequent.
1128. But compared with the general run of new engines? Well, I am not prepared to say, perhaps the engines have been dealt with somewhat sooner than English engines, but still the same thing takes place with regard to English engines sometimes, but not to such an extent perhaps. That, perhaps, is accounted for by making the one with cast-iron axle-boxes and the other with wrought-iron axle-boxes case-hardened.
1129. *Mr. Hoyle.*] Have you had to take the wheels off any of these engines and put them in a lathe, either the bogies, tenders, or engines themselves? Yes.
1130. Will you explain why this was done? I cannot give the number of the engine. It was on account of the driver of the engine allowing it to skid, and this wore a flat face on the wheel, and because the wheels could not revolve, being locked by the brake.
1131. *President.*] Putting it out of the circle is what it comes to? Yes.
1132. *Mr. Hoyle.*] Was it caused through a failure of the brake-gear, or the carelessness of the driver? I am not in a position to speak with any certainty, and cannot say any more than that the face was worn down. It was done, to the best of my belief, from the fault of the driver.
1133. *Mr. Brown.*] Is that the only case of an engine being turned up, and the wheels put in the lathe? That is so, so far as our shops are concerned.
1134. *Mr. Hoyle.*] You know that the bogie axles or some of them have broken—one broke coming into the Sydney yard? Yes.
1135. And you know that new axles have been put into them? Yes.
1136. Can you tell the Commission whether any of the inferior iron removed on account of the breakage from some of the axles is still in any of the axles of the tenders? Inferior iron?
1137. Well, Mr. Thow described it in his evidence as iron of the most inferior description;—is any of the iron that came here originally in the axles still allowed to remain in the axles of any of these engines? Some of the original axles are still in the tenders, and from the latest reports in examination are running all right. They have not been heated.
1138. The examination in this case would be the same as that before? Yes; an examination from outward appearance.
1139. When new bogie axles were put in, were any of the bogie-frames renewed? One had to be very extensively repaired through the breaking of the axle. The breaking of the axle had twisted the bogie frame. There were no new bogie-frames made.
1140. Have there been any other extensive repairs made to any of the bogie-frames? I am not quite clear, but I think there has been one or two others, but that would be the whole extent.
1141. Can you explain what the accident was that necessitated the repairing of the bogie-frame? I cannot say, but I think it was through one of the axles of the bogie breaking. In the Bathurst district they had a frame injured.
1142. Is it customary for the bogie-frames to have to undergo repair so soon after the engines have been received? If they undergo injuries through an accident—yes. I could show you one now that requires repairs on account of a collision.
1143. Do you know whether there has been any trouble with any of the piston-heads? One has come under my notice; I put new piston rings into it.
1144. For how long was that engine running? I do not know.
1145. You know how long these engines have been here? Yes, they passed through my hands, and then went under the control of the out-door superintendent.
1146. What is the thickness of the tube-plate in the smoke-box—have you ever measured it? Well, I am not quite clear, but I think it is five-eighths.
1147. What is the customary thickness for boilers of that kind carrying this pressure? For an English engine boiler it would be $\frac{7}{16}$, but that is an answer that wants qualifying. The American system is to use much lighter plates in their boilers than it is customary to use in English boilers. There are thousands of American engines working with much lighter tube-plates. It is not because they are made of steel, for many of them are iron. They carry a pressure of 135 lb. to the square inch, but the general system in America is to use lighter material in their boilers, especially in the tube boilers than it is customary for English manufacturers to use.
1148. Do you know why these passenger engines were brought here;—was it to run the express service? I do not know.
1149. It would not come into your Department, a matter of that kind? No.
1150. Can you tell us whether stronger draw-hooks have been made since the engines came here? Yes.
1151. Have there been many failures of these hooks? Which do you allude to, the stronger ones or the former ones?

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1152. Those put on instead of those which were taken off;—have many of these broken? None that I know of.
1153. Would they give you notice if there had been any of these broken? Notice would be given either to me or to the District Foreman. Of course, they would apply to me for any hooks.
1154. How many sets of hooks have you made? I have made sixty-four—two to each engine, one for for the tender end, and one to the leading end; these where charged to the Baldwin Company.
1155. Have any since been made? Not that I am aware of.
1156. Can you tell the Commission whether you had any trouble with the reversing-gear;—would that come under your Department? So far as the shops are concerned, there has been some little trouble with it; we have had to make some slight modifications.
1157. What was the matter with the reversing-gear supplied to these engines;—what was the defect in that gear? The defect was the fulcrum-point in the centre of the lever being light at the screw end, and that has been replaced by a pin through the bracket.
1158. Has that been done to all? Yes; not that they failed, but the one or two that did fail were taken as a criterion, and the rest were altered as a protection.
1159. If the reversing gear failed, was not that likely to cause trouble; suppose an engine had to pull up at a station, and could not do so through some defect in the reversing gear, might not that cause some trouble? It might cause trouble to an engine-driver who had not got his wits about him.
1160. Do you know anything about a Baldwin engine engaged in the morning of last Anniversay Day having an accident? I do not know.
1161. That would not be in your department? No; I do not know of it.
1162. *Professor Warren.*] We have asked for a list of repairs and breakages to these engines from the Railway Commissioners, and if I had that list with me now it might save us some time, but the Commission has not received it, and I am afraid we shall have to call Mr. Howe again.
1163. *Mr. Eckon.*] The list is not yet ready, I understand.
1164. *President.*] This reversing gear, Mr. Howe, is not a very material thing—a material part of the engine? Yes; it is a material part of the engine, on account of the handling of the engine, being used when it is desired to reverse the running of the engine; as, for example, when running tender first. It is merely a long screw attached to a rod leading from the reversing shaft, and is used to reverse the engine to send it backwards or forwards as may be desired.
1165. That, gear, I understand you to say, had given some trouble? It has caused no accident or trouble to any train, but a weakness has been shown in this gear, in the bolt or stud that goes through the reversing lever, that has been found to be light at the point. It has evidently been used by the American people made in this way, and they must apparently have found that in their case it gave no trouble, since they were working similar engines with similar gear to this in that country; and I presume that had there been any serious trouble with this gear in America they would have altered it.
1166. You have altered that gear here? Yes; in the shops.
1167. Was that a very expensive job? Oh, no; only an alteration entailing an expenditure of a few shillings.
1168. It is merely a question, then, of thicker material? No; a stronger fulcrum pin for the lever to work upon.
1169. Was that all? Yes.
1170. Was there no other trouble but that of the fulcrum pin? No.
1171. How many engines did this occur in? There were two of these points broken, and it was thought advisable, in order to prevent any trouble arising from others, that we should take the bolt out of all of them and put stronger pins in and rivet them.
1172. That is a small matter? Yes.
1173. And supposing they used lighter material and lighter fulcrum pins in America, would the sort of thing you have described naturally take place? Yes, it would, I think; it would happen in America, too, I think, if they ran the engines as hard there as we do here.
1174. Do you know if they ran any of these engines in America—I mean the engines which you have now got on the lines? Yes; I believe they did run one a fortnight before it came here.
1175. Had it the same amount of work to do there that it has to do here? No; the gradients, I believe were not the same, so the Baldwin Engine Company representative, Mr. Rhodes told me, but I do not know otherwise.
1176. Some of our curves are very severe, I hear? Yes; the 1 in 30 is very severe.
1177. Do you know any gradients where these engines had been running in America as severe as ours? No; I do not know.
1178. Well, would that account for the reversing gear being sufficient in America, and lasting there, and not being sufficient or lasting here? There is very heavy pulling, and a very heavy strain on this point, and it might give way under the work done on our lines, such might be the case.
1179. Is there anything to show that the American people know of the sort of service that was expected of these engines here, that they were to pull loads on these steep gradients?
1180. *Mr. Brown.*] Yes, that is all in the correspondence.
1181. *Mr. Hoyle.*] Are you not now making a new set of reversing gear as an experiment to these engines? I have made a set, not entirely new, but with some alterations.
1182. If that new gear were carried out, what would it cost to equip each engine with it? I do not know, but the information can easily be obtained.
1183. What would be the approximate cost, if this new or altered gear were put on the engines? Do you mean each set; if we were to supply the whole of the engines, the cost per engine would be cheaper than if we made one or two singly; I should say the cost would be £15 to £20 approximately each, if we did the lot, and a man would take two or three days making each set, if they were turned out separately; but it would be cheaper if we were making a number.
1184. *Professor Warren.*] A good deal has been said about the broken axle, did any of the axles break in these engines when they were travelling at a good speed? Not that I am aware of; one broke at Sydney when the train was going at the rate of 2 or 3 miles an hour coming into the station, and in another case it was found that the axle-boxes were hot; this was at Yass or Junee.
1185. *Professor Warren.*] Where they all going at a slow speed? Yes; there was no actual danger at the time they were travelling.

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1186. You consider that fortunate? I do.
1187. Supposing the train had been going at 30 miles an hour, and the front bogie axle broke, what do you think would have been the effect?
1188. *Mr. Fehon.*] I would like to call your attention to the fact, Mr. President, that Mr. Howe is a purely mechanical man, and knows nothing about the running of the trains and its effect upon the axles.
1189. *Professor Warren.*] I know Mr. Howe's position, and I am confident of his ability to answer the question I have put to him.
1190. *Witness.*] It depends upon circumstances. Sometimes a simple accident produces very serious results. Had the axle broken on the inside of the journal it might have remained there and not have come out; and even if it had come out and allowed the bogie to drag in front, the other pair of wheels would have kept the engine up, and there would have been no serious accident that I can see.
1191. Do you consider that it might have been a very serious thing to occur whilst the train was running at its ordinary pace? Yes; so far as the carriage axles are concerned it would be serious.
1192. But not so with an engine axle? No; a passenger axle may break and no alarm be given to the driver, unless a passenger happen to see it and try to communicate with him; but when the driver is on the foot-plate and an axle of his engine breaks he knows it instantly. I have known of engine axles breaking and drivers stopping their engines within a few feet.
1193. Supposing an engine was coming down a grade of 1 in 30, would not the breaking of one of its axles be a dangerous thing, and might it not cause a loss of life and property? Yes; of course such things have caused accidents, but you must know that the percentage of broken axles is very small, especially in the colonies, compared with the number of broken axles on the English railways.
1194. *Mr. Brown.*] But I suppose the distance run here is also comparatively small?
1195. *Professor Warren.*] But the percentage on the Baldwin engines, is not that very large? Well, that must not be considered in the statement I have made, at least so far as the bogie axles are concerned.
1196. *Mr. Brown.*] You say you were present when these specifications were amended, do you know what engine you had before you at the time you were considering this matter? It was not an engine in the Colony, it was a Baldwin passenger engine, similar to one now running in America, that is the one we had before us; there were modifications made in that engine, as for example to the diameter of the wheels.
1197. *President.*] Why were these modifications made? To suit the work upon our railway lines; the engine from which these specifications were originally taken had I think a 6-foot six wheel, or at all events a 6-foot wheel, and we reduced the diameter of the wheel to 5 feet.
1198. Were you satisfied with amended specification of the engine, that the amended specification would give the satisfactory result as the engine before you? I was quite satisfied that the engine when amended according to the specification would give the same satisfactory results.
1199. *Mr. Brown.*] As good results you say as the one before you? Quite.
1200. Were the alterations material? They were chiefly in revising the diameter of the wheels, and specifying for copper fire-boxes and brass tubes.
1201. Have you heard from the manufacturers themselves that they were dissatisfied with your specification as amended? I have not heard. I do not know anything about the correspondence.
1202. Would you be surprised to hear that they were dissatisfied? Yes; I do not know why they were dissatisfied.
1203. But if they themselves expressed an opinion that the engines would not under the amended specification give satisfaction to the Government, would not that surprise you;—I will read you an extract from a letter addressed from the Baldwin Locomotive Works, Burnham, Berry, Williams & Co., Philadelphia, 10th October, 1890, and addressed to Messrs. R. Towns & Company, in which it is said, "The proposed reduction of weight per axle will we fear, cause disappointment in the performance of the engine. We judge the same work is expected of them as that stated in the *Railroad Gazette*, as being performed by the Baltimore and Ohio engines, it should be fully understood that their efficiency will be correspondingly reduced." Are you quite prepared to learn that the manufacturers have made that statement? Well, from an engineering point of view they were reducing the weight on the wheels, and they may have wished to have supplied a heavier engine.
1204. Could you have used an engine of the character you then had before you without making these amendments? No.
1205. And if the locomotive manufacturers told you that they considered your road sufficiently satisfactory, and that you should have an engine exactly like the one before you, would you be surprised to hear it; would you be surprised to hear that they said that the engine you had before you was sufficient for the roads in this Colony; well, I shall read you another extract from this letter,—"As we understand that the permanent ways of the New South Wales railways are of a much more substantial character than the Baltimore and Ohio railroads, we see no reason why the engines built for the latter could not be adopted entire; we should be gratified if on further consideration this is decided upon." Now, from this you will see that the manufacturers have sent you the specifications for a Baltimore and Ohio railway engine, and that they consider that that class of engine would have given satisfaction in this Colony, and protesting against the sort of modified engine you proposed, can you give any explanation with regard to this matter? No; I cannot.
1206. *President.*] Is this with regard to the weight of rail only,—you know our rails and viaducts; would not one of the Baldwin engines placed before you as a model at the time referred to have suited those viaducts and bridges? I am not clear as to the weight of these engines, the correspondence is new to me, and it takes me somewhat at a disadvantage, I have never read it.
1207. *Mr. Brown.* Did you say Dr. Williams, of the Baldwin Engine Company; would be able to give them every information with regard to this Colony? Yes.
1208. And if they are writing from his information they know something about the matter? Yes.
1209. In fact, they are perfectly seized of the matter? As to bridges, I am not quite sure.
1210. But they wrote that with some reasonable intelligence, having some knowledge of the matter? Yes; since he has been here on two occasions to my own knowledge.
1211. *Professor Warren.*] I assume that the following information will be supplied to us; and, in now asking for it, I do so thinking that considerable time will be saved; if the engineer were here himself, it is very unlikely he could give the information I require without a reference to data and calculations, and, therefore, I ask it to be furnished to us in the form of a return as follows:—A tabulated statement of the bridges built since the Railway Commissioners took office, giving the following particulars:—1. Position of bridge.

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bridge. 2. Number of spans, and length of each. 3. Whether a deck or through-bridge. 4. Materials used in superstructure and piers. 5. Spacing of cross-girders and longitudinals, where they exist. 6. Actual intensity of working stresses in the main and cross-girders when loaded with Baldwin engines. 7. Live loads for which the bridges were designed, per foot run. 8. Whether any tests have been made, if so the maximum deflection obtained, and the weights on the wheels of engines, and tenders used in testing. 9. What methods have been adopted, or are proposed, for the strengthening of Penrith bridge. The bridges over the Wollondilly River, and the bridges over the Solitary Creek, in order that they may not be over-stressed with the Baldwin engines. These are very important questions, and will require some consideration.

1213. *Mr. Fehon.*] Many of the bridges you speak of were constructed by the old Construction Department, and the Railway Commissioners took them over. The only ones the Commissioners have created are those in connection with the duplication and quadruplication of the lines lately. The other information will have to be furnished by the Construction Department.

1214. *Professor Warren.*] The reason I ask particularly for the bridges constructed since the Commission came into office, is because the Royal Commission on railway bridges goes into the matter of the railways built by Mr. Whitton, very extensively; that is why I carefully avoided any reference to them. I only ask for the bridges that have been built since the present Commission took office. Question 9 is based upon what is actually known of the Penrith, Wollondilly, and Solitary Creek bridges. In addition to that, Mr. Thow gave, in evidence last week, certain statements with reference to the appointment of an Inspector, to the effect that certain correspondence had passed between the Commissioners and Mr. Thow, whilst that gentleman was in America, and I would like the Commissioners to furnish us with a copy of that letter.

1215. *President.*] Can you say now, Mr. Howe, in looking at these axles, what was the cause of their breaking—did you find out the cause when they did break? "What," you ask, "is the cause of their breaking"? Well, through running hot, and, of course, through being made of bad material.

1216. Would a bad material make them run hot? It would tend to make them run hot.

1217. On account of foreign matter contained in the bad material? Yes, on account of the slag or dirt, if they were showing any seams that would work out. The bad material tends, of course, to make them hot; but even the best of axles will run hot.

1218. Even if there is proper provision made for oiling them? Yes, even then.

1219. *Professor Warren.*] And with sufficient bearing surface? Yes, at times an axle will start to run hot, and cause a deal of trouble, and afterwards cool down and run alright.

1220. *President.*] Why is that so? There is hardly any accounting for it at times.

1221. But perhaps that would be because the oil would not be kept well over it? That would not interfere, you may pour as much oil as you like on it, and that would not prevent it running hot. The presence of any foreign matter would cut the axle and would cause it to become hot.

1222. And would not allow the oil to get properly on to it perhaps? Oh that would not matter; it would get heated to such an extent that perhaps the oil would be set on fire and flame up. I have seen a flame of 2 or 3 feet high bursting out from an axle box that had become heated.

1223. *Professor Warren.*] How do you account for the axles turning out so badly when the specifications had been made out? I cannot say why, the axles I believe are not made by the firm, that is the Baldwin Company, but by an outside firm, and the makers of the engine have themselves admitted they have been taken in through this bad material.

1224. Do you know the English system? Yes.

1225. If locomotives were ordered from England, would it not be stated that the axles should be submitted to the tensile ductility, and probably the drop test? Yes.

1226. Would this have happened if a similar system had been adopted with regard to the Baldwin Company? In all probability they did not adopt that system. No American system that I know of use any such tests; in fact, as a rule, there are very few inspectors on the job.

1227. Would the absence of these tests induce bad axles? Certainly they would tend to.

1228. There would be no means of telling if they were good or bad? Not until they commenced to show the signs themselves. It is not usual to take a pair of wheels off axles and destroy it in order to ascertain if it is bad. If we found flaws in it, of course, we would take it out.

1229. But if some of the axles had been tested that would have given an idea of the quality of the material contained in them? Yes.

1230. *President.*] In England, you say, they apply these tests? Yes. In America they do not.

1231. Then what guarantee have you got that these engines are sound? Well, you must depend upon the names and reputations of the manufacturers. The Baldwin Company bears an excellent name for engines.

1232. But if they get their axles from other people then they have to rely upon the honesty of other people? Yes; or take the responsibility.

1233. Well, I do not know about the responsibility. If you have a whole train of people killed, it is just such a case as where a man lives on his reputation. It is very unpleasant if any blot be cast upon it, but what remedy is there for the unfortunate people who suffer? The firm, in justice to themselves, should, in ordering these axles, have specified a test to be given to them.

1234. *Professor Warren.*] Much more so should a proper specification have been written out here. If it is necessary for the Baldwin Company to secure good material to stand the tests, surely the same system should be adopted by us with regard to the American engines we purchase.

1235. *Mr. Hoyle.*] I submit that human life should be regarded of more account than the honor and reputation of a firm of locomotive manufacturers.

1236. *President.*] Yes, I think so, you need not argue that before me.

1237. *Mr. Brown.*] There are some matters referred to in the correspondence of which I have copies. There is a cablegram from the Commissioners to the Baldwin Engine Company saying "Reduce weight to 32,500 lb. per axle, by reducing grate area, allowance expected for reduced weight; screw hand-brake on tender and drivers, Westinghouse air on drivers and tender; width over all 9 ft. 3 in. in offer, includes an engineer, must supervise erection and trial." In reply to that cablegram the Baldwin Engine Company confirmed the first part, and goes on to say, "An engineer must supervise erection trial." What will they mean by that? Does it mean that the Company expected you to supervise, or that they would do so?

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1238. *Mr. Fehon.*] They sent a man out from their works to supervise the erection of the engine here.
1239. *Mr. Brown.*] Then that is what is meant? Yes.
1240. I suppose that man did come and put them to a trial? Yes; I believe it was the same man who supervised the erection of the Baldwin engines here some years ago. I believe this gentleman was the same as the one I referred to.
1241. *Mr. Fehon.*] His name was Mr. Rhodes, and he will be in Sydney next week, when he will be called to give evidence before you.
1242. *President.*] In a letter which Mr. Fehon has just given me, received from the Baldwin Company, and dated 15th February of the present year, it is stated:—"In contracting for these locomotives the Commissioners desired to obtain engines adapted to unusually heavy service. In order to secure the utmost efficiency, and to obtain the best results of American experience, they left many of the details of the specification to our judgment. The material for the driving, truck, and tender axles was left optional, and as, in our opinion, the most satisfactory results are usually obtained from axles carefully forged from selected scrap-iron. We ordered such axles from the manufacturer whose product we had been largely using with good results, and whose reputation for excellent work is generally recognised. No test was prescribed by us, as it is well known that no test of scrap-axles is conclusive. We relied upon their showing clean, uniform, well worked material when turned up in the lathe. Steel axles, or axles forged from muck-bars, can be tested under a drop with reasonable probability of the uniformity of the axles not tested, but the fact that a hammered scrap-axle withstands such test is no guarantee that others of similar manufacture and appearance will stand. Not only have we been buying axles in this way for many years, but so far as we know, it is the general practice in buying hammered scrap-axles, both by railroads and manufacturers. These axle-forgings did turn up clean, smooth and free from flaws, and we supposed them to be as good as the many hundreds which we had received from the same maker without one instance of failure coming to our knowledge. We go into the matter at this length to assure you that there was no conscious lack of diligence exercised by us to supply materials of the best quality, which your Government was entitled to receive from us. We have already replaced the twenty-four engine truck axles with others of steel. We offer to reimburse the Government the cost of replacing the forty-eight tender axles. We also offer to pay the reasonable cost of the labour involved in effecting the replacement. We are of the opinion that the original dimensions of the truck and tender axles and journal bearings are ample for the fast speed for which the locomotives are suitable, provided the quality of the material is good, and the bearings are well lubricated. These dimensions are here considered the best for such engines, and have been widely adopted for similar service with good results. We should have much hesitation in increasing the diameter of the bearings with such small wheels, owing to the higher rotative friction. It should be borne in mind that the smaller truck wheels necessary in engines of this type require closer attention to the lubrication than the larger wheels usual in English locomotives. If, however, larger bearings are adopted, we urge the desirability of making them 5½ inches rather than 6 inches in diameter. In view of the above, we think the cost of new boxes, whether of iron or solid gun-metal, should not be charged to us, as we are certain that the replacing of the axles will prove a sufficient remedy. We remark that the driving axles were not made by the same party as the truck and tender axles. We therefore trust they will, upon investigation, prove satisfactory. There appears to have been a clerical error in transmitting to our shopmen the dimensions of draw-hooks shown by your drawings. We authorise you to debit our account the cost of replacing them with stronger hooks. With these modifications we trust the engines will speedily show the special adaptation, which we believe they possess, to the difficult service for which they were ordered. That similar engines are doing such work on our American railways is shown by the recent tests of our 10-wheel locomotives on the Baltimore and Ohio railroad. Under separate cover we mail you three copies of the report of these tests. We trust these tests will in a measure justify the wisdom of the Commissioners in the purchase of these locomotives, and that after the defective axles are replaced, the performance of the locomotives will be such as to merit their entire approval." Does the statement that there was no conscious lack of diligence exercised by the company to supply materials of the best quality arise from there being no means of testing the scrap-iron axles, though of course you could test it by the weight test I suppose? Yes, the drop test.
1243. But is it right to say that you cannot tell whether the material is good or bad if you have similar scrap-iron to that contained in the axles, could not the tests be applied to that, and would not that be a guide to the quality of the material? Two axles might be forged, one might be as good as another, or on the other hand might not be, that very much depends upon the qualifications of the men who worked them, an axle might appear to be good and sound outside, but perhaps would not be properly worked together or united, but would be reedy in the centre.
1244. Not properly welded together? Yes, quite so. It would perhaps have every appearance of being sound, and yet on going a little way into it it would be found to be reedy.
1245. Is there no way of testing axles but by breaking them;—could you not get weight enough to drop on them to ascertain if they were sound without necessarily breaking them? If once you apply any test it is not safe to use them afterwards. For example, the man who is turning the axle comes to a bad place where the iron is reedy; he would then throw that axle aside, and it would not be used. The usual way of testing these axles is this: So many axles are required, and order is given, say for 200, and we test, say 1 per cent., and if that percentage successfully withstands the drop test without tearing the material to pieces you take that as a test af the whole number.
1246. I am not quite clear as to the nature of these tests? I will explain. The tensile test is to reduce the material to a square inch and then tear it asunder; then there is the reduction into sectional areas, and the ductility test.
1247. Showing how long the material will draw out before it breaks? Yes.
1248. Then, according to this letter, supposing you did test one or two axles, still if they are made of scrap-iron that would be no proof of the soundness of the rest? It is not a proof, but it would be taken as such. The man working at each axle would probably make them all in the same way, so that most likely if the percentage were sound the rest would be found to be so.
1249. You are supposing that so much of the work should be subjected to a test, as well as trying portion of the iron from which the axles have been made? It is this way. A man forges a number of articles from the same heap of material, and you take one of these articles out of the number he has forged, and apply it to a test, and if the material in it should be successful under the test, then you would conclude that the remainder of the article was equally sound and good.

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1250. But you cannot tell if they are sound from an external examination? No.
1251. *Mr. Brown.*] Is there not some place where these tests are regularly made—Kirkcaldy, I believe, is the name? Yes; they are always made there.
1252. *Professor Warren.*] Yes; there is a special man for making these tests in England—Kirkcaldy.
1253. *Mr. Brown.*] Yes, I know; I had some tested there myself.
1254. *Professor Warren.*] You could not have done better.
1255. *President.*] You found some of these axles broken, you say;—some of these have been ill-made, I understand, but as to the others, do they continue to remain in the engines? I do not see why they should be removed; nothing has happened to them since.
1256. Such, for example, as heating;—is that what put you on the guard? No; an axle might run hot, and in consequence of doing so it would have to be examined before it could be allowed to run again. It must be examined and refitted, and in going through that operation, if it were found that the journal were not fit to run again, the axle would have to be removed; but you might examine the axles, and to all outward appearances they will appear to be all right. I should not think of removing these axles at present.
1257. *Mr. Fehon.*] I think there is some misapprehension in this matter. I would like you, sir, to ask the witness if all the bogie axles have been removed.
1258. *President.*] Have all the bogie axles been removed? Yes, every one of them; I am referring to the tender axles now.
1259. *Professor Warren.*] Were not any tender axles broken? Yes; I think two were, one of them was twisted off in the journal at Newcastle, I think, but that is not an uncommon occurrence.
1260. *President.*] It does not show that the axles were inherently bad? No.
1261. Then I understand all the bogie axles have been removed? Yes.
1262. Now it seems that the bogie axles have been proved to be bad, and you have done something to other portions of the engine; now looking at these things, would you say that these engines are defective, and not doing their work? No, sir.
1263. Are they fit for the permanent-way of the Colony; fit and suitable to do the work they are doing every day, and the class of work they were ordered for? Yes; and I am not sure that they are not doing more than they were ordered to do, the goods engines especially.
1264. You say then that they are doing the work that was expected of them, and the passenger engines are they doing the service they were expected to perform, and for which they were ordered? Yes.
1265. *Professor Warren.*] Would you say, Mr. Howe, that the engines are suitable for the permanent-way of the Colony, provided that the bridges are strong enough to carry them; that is a separate matter? Yes.
1266. *President.*] You mean the permanent-way? Yes.
1267. They would not cause the rails to be crunched down—I do not know the technical term, that is what is meant? No.
1268. In permanent-way you do not include anything about the permanent bridges or viaducts? No; I do not enter upon that question.
1269. *Mr. Brown* (to Mr. Fehon.)] I see that a letter you have put in is part of the correspondence of the Baldwin Engine Company? Yes.
1270. If you had carried out my suggestion it would have been more convenient for us; I asked for the whole of the correspondence, and this letter, among others, would have been included, but instead of that you have supplied me with three months' correspondence instead of fifteen months; you have not done what I asked you to do? I do not know anything about it. The Secretary informs me that what you desired to have was the correspondence with regard to the ordering of the engines.
1270½. No; what I wanted was the whole of the correspondence in connection with these engines; will you let me have the rest of the correspondence? Yes.
1271. *Mr. Hoyle* (to witness).] You say that the passenger engines are doing the work for which they were brought here? Yes.
1272. Then why did you put a goods Consolidation engine to take a train from Penrith to Katoomba? I do not know. The only information I can give is that instead of taking an assistant engine the work is now done by this one engine, and thereby a second engine is saved.
1273. If these engines were brought here to do this work why have you given them a second engine? I do not allude to the passenger engine. Undoubtedly there are times when the train would be too heavy even for a Consolidation engine to take.
1274. *President.*] You mean with an exceedingly heavy load? Well, sir, it is not in my department, and I might be giving you answers to your questions which might not be strictly true.
1275. *Mr. Hoyle.*] Are you positively sure that these axles were hammered iron; are you positively sure that they are not only bar-iron? I do not believe they are bar-iron. I believe them to be hammered scrap-iron.
1276. When the journals were turned on the axle was the piece or shoulder against which the wheel goes as large as the ordinary shoulder put into a English engine? English engines do not have shoulders, the end which comes into the wheel is larger than the journal of an English engine.
1277. Then how do you fasten them? They are put on by the hydraulic press, no wheels for rolling stock are now put on to a shoulder, this is one of the most effective ways of putting them on, there may be a mark for a man to press his wheel up to.
1278. Is there a swell there? There may be; I cannot say.
1279. There is a viaduct at Lewisham, and an axle broke on the train there, I believe? Yes; on a vehicle.
1280. Where the trucks and break-van attached to that train thrown down the embankment in consequence of that breakage? There were one or two carriages thrown down, I believe.
1281. And the broken axle was alleged to be the cause? Yes; but that was one of the axles to which you have just now alluded as having shoulders.
1282. When you were putting these engines together you were aware of course that the bogie wheel being half as large as the driving-wheel? Yes; one-half of the diameter.
1283. It would, of course, travel twice the speed of the other, that is to say, for every one revolution of the larger wheel there would be two revolutions of the smaller wheel? Yes.
1284. Did you observe whether there were oil-boxes or oil-caps attached to the engines for lubricating purposes? There were oil-boxes; a system adopted with regard to all American engines, the top of the

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boxes open and are filled with cotton-wool, and the wool on the top of the box forms a receptacle for the oil, and from it, the oil filter to the journal, this is a recognised American way of lubricating axles.
1285. *President.*] Is there no cover? No cover.
1286. *Mr. Hoyle.*] Is the same oil provision now on the engines as was there when they first arrived in the Colony? No. They have a different system of oiling now; we have adopted the English system of oiling—out-side boxes.
1287. Are there any supplementary feeders to the boxes;—you have supplementary feeders for the leading and trailing wheels, have you not? You mean the oil-boxes supplying the journals with oil?
1288. Yes;—on the side of the boiler are there any such supplementary feeding-boxes for these engines? Yes; there are.
1289. Were there any on the engines when they first came here? No, not on the bogies.
1290. *Professor Warren.*] I am sorry that we should have to ask you again to give us the information I have already referred to; I think you know the details?
1291. *Mr. Fehon.*] The information you require will take some time to prepare; we must have time to prepare it in.
1292. *Mr. Brown.*] I think the information ought to be given to us by the Department.
1293. *Professor Warren.*] What I want is a list of all the breakages, the costs of renewals and repairs, you have made, and, as far as possible, the whole cost of the Baldwin engines since they have been here. If it would take a very long time to get the complete cost, we should have to be satisfied with a list of the breakages and renewals. I have prepared a list of what we require as follows:—
1294. *Mr. Fehon.*] You do not want the repairs minutely specified I suppose, they must be taken approximately, otherwise it would take quite a fortnight to search through the time-books, &c., one item might cost 2s. another 10s., and so on.
1295. *Professor Warren.*] I could estimate them approximately, but the repairs themselves are important;—what you allude to I understand are the workshop repairs? Yes; you do not want the running repairs, such as letting up a pair of brasses and small things like that.
1296. *Mr. Hoyle* (to witness).] You say that one of the axles of the tenders broke? Yes.
1297. Was the iron in that axle tested? Yes; it was.
1298. What kind of iron was it, bad or good? It was not the best of iron that I have seen, but I do not say it is as bad as the iron in the bogie axles was.
1299. But it is not really good iron? No; it is not really good iron.
1300. *Professor Warren.*] Do you think the material in the bogie axles good enough to be used anywhere in any engine? No, sir.
1301. Would you use it yourself if you were making axles? No; if I had applied the usual tensile test I would not have put the material into the axles.
1302. *President.*] Then again about the axle of the tender, you say that was not good iron? It was not the best iron.
1303. Was it iron such as should have been used for such a purpose? As far as I am concerned I do not know, if I were building the engines I would not use such material, but still at the same time there is nothing dangerous about these tender axles, they could not be any material danger to the tender.
1304. *Professor Warren.*] A broken axle in a tender would not mean the same thing from a point of danger as in a passenger carriage? Oh, no it would not be the same as if it were a passenger carriage.
1305. Axle material should be the finest and best material that can be produced, should it not? Yes.
1306. *President.*] Even for a tender? Yes, for everything.
1307. Did they use different iron for tender axles than for other parts of the engine? Yes, generally speaking their material in America is of the very best quality for other work, for boilers and other parts of the engine in which there is wrought iron it is especially good.
1308. Between the axles and the bogie and the tender do they make any difference? They might have been made by different processes, or different men may have made them.
1309. To make such a difference between the two classes of axles for the sake of economy would be cutting it very fine, eh? Yes, it would be cutting it fine.

1310. *Mr. Hoyle.*] Before you call the next witness I would ask you if you would order the Baldwin passenger engines Nos. 456 and 457 to be placed for the inspection of the Commission either at Sydney or at Penrith. I would like to have them placed for the personal inspection of the Commission and especially for the inspection of Professor Warren.
1311. *President.* (to Mr. Fehon).] Is it troublesome to bring them to Sydney because we can go to Penrith if it suits you better or we can see them in Sydney.
1312. *Mr Fehon.*] We can bring them to Sydney just as easily.
1313. *Mr. Hoyle.*] I would like you to go to Penrith so that on your way you can see about these platforms being in gauge you would be able to ascertain the different measurements between the step of the carriage and each platform.
1314. *President.*] As they are altered now Mr. Hoyle? Yes.
1315. *President.*] What have we got to do with them? As I understand the scope of our inquiry, as I understand it is whether the Baldwin are defective and unsuitable to our permanent way seeing that these platforms had to be altered and chipped away just about the time the Baldwin engines were to arrive, do you therefore contend that the engines were unsuitable to the permanent way. Supposing these platforms had been altered and that new platforms had been built by the Railway Commissioners, and supposing for the sake of argument were of wrong gauge, what have we to do with that?
1316. *Mr. Hoyle.*] It has been sworn by more than one witness that these platforms were altered in order that the line shall be put in gauge, and I want to show that they are not in gauge now. They differ the one from the other.
1317. *President.*] But supposing there is now no danger of any of these verandahs scraping on the sides of the carriages, what then? Does not gauge mean that these platforms are exactly the same distance from each other, and out of gauge that there is a slight variation between them. In other words, do you say that they must be such a distance apart; and that if there is a little distance then they are out of gauge?

1318. *Mr. Hoyle.*] It has been sworn that alterations were made in order to put these platforms in gauge.
1319. *President.*] They say that the Baldwin engines had nothing whatever to do with it but that this action was taken simply to bring the platforms to gauge.
1320. *Mr. Hoyle.*] What I desire you to see and to measure on your trip to Penrith is that these platforms do not gauge alike.
1321. *Mr. Brown.*] And the Railway Commissioners have said that their object was to secure a uniformity of gauge, according to the Board of Trade Regulations. Do you want to show that they have not brought them into uniformity?
1322. *Mr. Hoyle.*] Yes.
1323. *Mr. Brown.*] I see what he wants. It is a question of the credibility of the witnesses.
1324. *President.*] I quite understand that. Have new platforms been built altogether?
1325. *Mr. Hoyle.*] Yes, there have been certain platforms built in connection with the quadruplication of the Southern line. And I want to show that since they have been altered, it has been sworn here that the alterations to the platforms were made in order to bring them up to the standard gauge, and that the Baldwin engines had nothing to do with it. I want you to see now that these platforms are not all alike, and it may have some influence with you when you come to review the whole of the evidence.
1326. *President.*] Suppose it was necessary to have a certain width between the platforms and the inside of the rail, and supposing that they have not got them to that exact dimension, will you inform us how does that affect the question?
1327. *Mr. Hoyle.*] I want you to measure the distance between the platform and the carriages.
1328. *Mr. Brown.*] It is a question of the credibility of the witnesses.
1329. *President.*] Quite so.
1330. *Professor Warren.*] Have any of these platforms been altered?
1331. *Mr. Hoyle.*] Yes, some of them have. I think you ought to insist upon having the information with regard to all the platforms that have been altered, and the distance they were before the alterations, also the distance they now are, and what is the proper gauge to which they ought to have been brought.
1332. *Professor Warren.*] The information was asked for.
1333. *President.*] Can some gentleman of the Department give us this information. It would appear to me to be a very rough way of measuring the distance.
1334. *Mr. Hoyle.*] I will put in writing to-morrow exactly what I want.
1335. *President.*] Of course we will go to Penrith as you wish it Mr. Hoyle. But do you want us to go to Penrith if the Railway Commissioners give us the informations that you ask for.
1336. *Mr. Hoyle.*] Yes.
1337. *Professor Warren.*] I propose to make at test of the Baldwin passenger and it is this:—The Baldwin passenger engine to be attached to a train consisting of fully loaded trucks and one brake-van, having a gross load exclusive of engine and tender of 144 tons, and to run this train from Sydney to Goulburn. During the trial, indicator diagrams will be taken at frequent intervals, and the quantity of coal and water consumed during the entire journey would be correctly ascertained. The speed attained would be ascertained by observations with ordinary and stop watches, at the various mile posts throughout the journey. In climbing the long incline between Picton and Mittagong (1 in 30 or 176 feet per mile) a further test of the full capacity of the engine to haul heavy loads would be furnished, and the speed attained, taken in conjunction with the load hauled, would give data for calculating the maximum horse-power developed. The facts and figures properly tabulated would materially aid the Commission in their inquiry and would be of great value to the Department. But facts and figures are necessarily incomplete in this case without some standard of comparison, as the recorded performance of any of our engines on this road would furnish no useful data for comparison with engines of such a powerful type as that of the Baldwin engines. It is necessary to compare the performance of the Baldwin engines in such a test with an engine built by some other makers for the same class of service, and being at the same time of similar size and capacity. Such a comparison could be made by selecting one of the newly imported passenger engines, built by Messrs. Beyer & Peacock, of Manchester, as they are almost precisely similar in size, weight, and in other respects, to the Baldwin engines. I propose to subject both engines to the same test, with the same load on the same road, so that the conditions would be precisely similar, and the results obtained strictly comparable. We shall take indicated diagrams and we shall have the speed at which the engine is going, and the coal and water consumptions so that we have by this means an accurate test of coal, and water, and horse-power. The reason for going to Goulburn is this, that in taking a five hours trip we have the actual weight of coal, and the water we are therefore able to balance up equally. It would be necessary to have at least a five hours trip to make a satisfactory test. I will take charge of this test and carry it out, and get all the points that I want. (To Mr. Fehon): Will there be any difficulty in having one of the passenger engines? It is a simple matter.
1338. *President.*] What day will be most convenient? Mr. Fehon we should have to get one of the engines from the North-eastern line.
1339. *Professor Warren.*] There are three Baldwin engines. The passenger engine, the Consolidation engine, and the Compound engine. We are taking the Baldwin passenger engine; could we not arrange to have tests of the others?
1340. *Mr. Fehon.*] Mr. Stangar says that 144 tons would be rather an extreme load for the 1 in 30 up the Picton road.
1341. *Professor Warren.*] I picked that out in order to make it do its utmost.
1342. *Mr. Fehon.*] About 132 tons Mr. Stangar thinks would be a fair load to put on up the 1 in 30 gradient.
1343. *Professor Warren.*] They were ordered to do that, that is why I have stated it.
1344. *Mr. Brown.*] It was expected that they would do it, they were not guaranteed to do it.
1345. *Professor Warren.*] It does not matter, we could easily get the speed, it will only go a little faster, that is all.
1346. *Mr. Hoyle.*] I think the comparison ought to be made with the most powerful engines before these came, there are some that since have come out, Beyer and Peacock's engines, I would prefer that the test should be made with the most powerful engine before the Baldwin came out, I will suggest the Mogul engine

1347. *Professor Warren.*] I would rather have them try the very ones you object to, as they are engines which are brought out to do practically the same work.
1348. *President.*] It is much better for you, I think; it is harder to try them against recently imported engines than one which was here when the Baldwin came.
1349. *Mr. Hoyle.*] Well, Mr. President, I would like to be understood that I have only taken up the position I do as a man in a public position. It has been asserted that these engines have been brought here to do the work of two engines before them, therefore, I do not think that 144 tons is excessive, I think you will find that the weight recommended by Mr. Neale as the standard weight should be adopted, he recommends a train of 296 tons goods and 220 tons passenger, including the engine, which will weigh about 80 tons.
1350. *Mr. Brown.*] They did not ask that the Baldwin engines should draw that weight, they said the required load would be 120 tons without the engine or tender.
1351. *Mr. Fehon.*] These grades are heavy and there are sharp curves.
1352. *Mr. Hoyle.*] I wish it to be borne in mind that these engines were brought here that one of them could do the work of two before.
1353. *Mr. Brown.*] The Railway Commissioners, when they imported these engines, spoke of a train of 120 tons; at present, therefore, we must be guided by what is before us in this correspondence.
1354. *Mr. Fehon.*] The engine does do the work of two engines, but it is not expected that she should draw the load of two engines.
1355. *Professor Warren.*] Would you kindly enable a test to be carried out between the Beyer and Peacock engine and one of the Baldwin engines. I know you intended to make this test because Mr. Eddy in his speech at the Railway Institute, said that the Department intended to test the Baldwin engines against the Beyer and Peacock. Now the Beyer and Peacock engines are almost the same as the Baldwin engines—there is about 2 tons difference; the weights on the driving wheel are almost precisely the same.
1356. *Mr. Fehon.*] We have no objection, but we can furnish returns showing what each class of engine has done up to its highest point, on each gradient. We can furnish that easily.
1357. *Professor Warren.*] It was stated that it could be given in a rough way, but the witness said in his evidence that at similar trials in South Australia he had taken indicated diagrams, but he had not taken indicated diagrams in this Colony. We should have several tests, and that would show that we are doing our work properly.
1358. *Mr. Fehon.*] We have only made ordinary every-day tests, and we have not taken these through necessity or for scientific purposes, but for commercial reasons, so that we may know what we may put safely behind an engine, so as to take it safely to its destination.
1359. *Mr. Brown.*] Would not that do you, Professor?
1360. *Professor Warren.*] The work will be heavy while it lasts, but it will fall upon me—these tests will be valuable, and they will be accurate.
1361. *President.*] Are they practicable?
1362. *Professor Warren.*] Oh, yes; I will answer for that.
1363. *President* (to Mr. Fehon).] Can they be carried out without disturbing the traffic?
1364. *Mr. Fehon.*] Yes; what about the Mogul engine?
1365. *Mr. Brown.*] I think a comparison should be made between the engines which we had in the Government service before the Baldwin engines came here.
1366. *Mr. Hoyle.*] The Mogul engines were brought out to do the express service, and they did it until the last engine from Beyer and Peacock arrived. Now, I should like a comparison to be made between the Mogul engines, if they are able to do this service, and the Baldwin engines, which, as a matter of fact, had to be taken off.
1367. *President.*] How many of these Mogul engines were here?
1368. *Mr. Fehon.*] Eight or ten.
1369. Were there enough for the service? Yes.
1370. *President.*] That will be a third day required.
1371. *Mr. Fehon.*] We will arrange for any day you like that will be convenient.
1372. *Professor Warren.*] The only thing necessary will be to fit up indicator-gear on the engines.
1373. *Mr. Fehon.*] We would like to know the extent of the tests you desire to make.
1374. *Professor Warren.*] Mr. Brown suggests the Mogul engine.
1375. *Mr. Brown.*] I think it would be well to make a test with the engines that were in the Government service and which were the best in their service at the time when the Baldwin engines were ordered.
1376. *Mr. Hoyle.*] I especially ask that the test may be made in regard to the Dubs' Mogul engine. It is an American engine, built by Dubs.
1377. *President.*] Professor Warren will look after that. What I want to get at is when it is we are going to make the tests. Owing to Mr. Brown's scruples, we cannot go on Sunday. Indeed, I think it quite right if we do not interfere with the traffic on other days that we should not go on Sunday, but that only leaves Saturday on which I can go.
1378. *Professor Warren.*] And that is a bad day for the traffic.
1379. *Mr. Brown.*] Can you make it Monday or Tuesday?
1380. *President.*] If you could make it next Monday it would suit me.
1381. *Mr. Robert Smith.*] Is it necessary for all the Commissioners to be present at the proposed test;—would it not be sufficient if Professor Warren was to go alone?
1382. *President.*] Well, so far as any practical knowledge that I may bring to bear upon the matter is concerned, it is quite unnecessary for me to go, and apart from that I have no particular desire to go; but to allow Professor Warren to go by himself seems like deserting a mate.
1383. *Mr. Hoyle.*] With all respect, Mr. President, I submit that the gentleman who put the last question to the Commission had no right of audience. Might I remind you that, being the legal adviser of the Commissioners, that gentleman comes under the rule that you laid down precluding the appearance of legal representatives before you.
1384. *President.*] It was merely as a matter of convenience to the Commissioners themselves, Mr. Hoyle, that Mr. Smith made the suggestion. It had no reference to any legal standing, and was merely a suggestion that might have come from any person in the room. In regard to this matter I will do anything that Professor Warren thinks best. If he thinks it better that he should go alone, then I shall not go; if he thinks it desirable for me to go, then I shall go.

1385. *Mr. Hoyle.*] Are we to understand that the Mogul engine will be included in the test?
1386. *President.*] Yes, we will understand that Dubs' Mogul engine is to be put in the test.
1387. *Professor Warren.*] As a third test.
1388. *Mr. Fehon.*] Would you wish these engines all to run to Goulburn?
1389. *Professor Warren.*] If we are to have an equal test of these engines, we shall have to run them on the same train.
1390. *Mr. Fehon.*] Would it not be enough to run them to Mittagong?
1391. *Professor Warren* (to Mr. Hoyle).] Do you want the coal and water consumption in each case? Yes; decidedly I think it is most important.
1392. *Professor Warren* (to Mr. Fehon).] Well, that must be done; we shall have to run the engines as far as Goulburn.
1393. *Mr. Fehon.*] Would Mittagong do as well? There is a turn-table there, and you would have the advantage of running up the 1 in 30 bank.
1394. *Professor Warren.*] I would very much like to make the test a short one, if possible.
1395. *Mr. Brown.*] You could run to Mittagong and back if you liked. Would not that be far enough?
1396. *Mr. Hoyle.*] Would it not be better to go to Goulburn?
1397. *Professor Warren.*] I would very much like to make the test right through without any interruption, and then we could balance up results afterwards.
1398. *Professor Warren* (to Mr. Howe).] How long will it take you to fit up indicator-gear on the engines? I think there is already one of the American passenger engines fitted with an indicator.
1399. *Professor Warren.*] We may take that one first, and make the necessary tests, and then you could take the cock from it and put it on to the others.
1400. *Mr. Brown* (to Mr. Howe).] Could you have that engine ready by Tuesday? Yes; that could be done, although you could hardly use the same gear the next day. It would be better to make a break between the trials.
1401. *Professor Warren.*] I would very much rather not have the trials on successive days, because I should like to balance up the results as we go along.
1402. *Mr. Howe.*] Then may I make a suggestion that the work should be put in hand at once, and that the Commission should be advised as soon as it is ready. It is work that should not be done hurriedly.
1403. *President.*] Quite so; I am most anxious that nothing should be done with undue haste.

Mr. Harry H. Park called in and was sworn:—

Mr. H. H. Park. 20 April, 1892.

1404. *President.*] What are you, Mr. Park? A mechanical engineer.
1405. In the Railway service of this Colony? Yes; I am locomotive inspector at Penrith at present.
1406. How long have you been in the service? About three years and six or seven months this time.
1407. Had you experience in that kind of work before you came here? Yes, sir.
1408. Where? Here, in Tasmania, and in England.
1409. How long in England? In England I was engaged at the locomotive shops on the Great Western Railway, at Swindon. I was then for some time at Paddington in connection with the same company, and for some time after that I was on the London and Brighton Railway.
1410. Tell me how many years' experience you had in England? I should think about three in England.
1411. And how long in Tasmania? About eighteen months, and three years and six months here. I was three years in this Service, and then I left to take something else, but joined the Service again, and the last time I have been connected with it for about three and a half years.
1412. Oh; then you were in the Service before? Yes; I was in the Service before. I have been connected with these railways about six and a half years altogether.
1413. *Professor Warren.*] Then you have had about ten years experience? Yes.
1414. *Mr. Hoyle.*] You are locomotive inspector at Penrith, I understand? Yes.
1415. Is it your duty as locomotive inspector at Penrith to report to head-quarters—that is to say, to the locomotive engineer, through the proper channel, with respect to all failures of, and accidents either to, engines or parts of engines? Yes.
1416. And do you follow out that practice? I do.
1417. Can you tell us how long the Baldwin passenger and Consolidation engines have been doing the work between Penrith and Bathurst? Are you talking of passenger and goods engines?
1418. Yes; I am talking of passenger and Consolidation and goods engines? Well, the passenger engines have not been stationed there very long, we have three stationed there, but one is in Sydney. We are only running three round trips a week with the passenger engines.
1419. What do you mean by a "round trip"? From Penrith to Bathurst, returning the next day. In addition to this Nos. 5 and 10, to Mount Victoria are run by the new passenger engine.
1420. And do you run the Consolidation goods engines from Penrith also? Yes.
1421. Can you tell the Commission whether these engines have been in any way troublesome as to repairs necessary, since they have been under your control at Penrith? Yes, they have.
1422. Have they cost more than, or been in the shop oftener for repairs than other engines you know of taking into consideration the length of time they have been running? Well, I must answer that question in this way; they are new engines, and I have not had any new engines excepting these to deal with since I have been there. I cannot, therefore, draw a comparison such as Mr. Hoyle asks with very great exactness. It is a comparison between the new machine and one in which the weak points have already been strengthened.
1423. *Mr. Brown.*] But can you not answer that question from your previous experience as an engineer? Yes.
1424. *Mr. Hoyle.*] What has been that experience? Well, the engines have contained a number of small details, not sufficiently strong to do the work which they ought to have been put to.
1425. *Mr. Hoyle.*] And do you take it that the passenger engines are not sufficiently strong to do the work they ought to have been put to? No. The points that have given way have had scarcely anything to do with the drawing of the train at any rate. The particular things that have given way have been connected with the draw-gear—those engines have caused more delay in that respect that any other engines that I know of.
1426. Do you consider the brake-gear defective now? Yes.

1427.

Mr. H. H. Park. 20 April, 1892.

1427. In what way were the rods connecting the brakes weak? They were badly forged, and I think were not sufficiently strong enough had they been properly forged.
1428. *President.*] Have there been many failures of these rods? Yes.
1429. Do you know how many? Well, it would only be guess work.
1430. What do you think taking it at a rough guess—half a dozen? More than that, about a dozen times, as many as that I think.
1431. You say you report these matters? Yes.
1432. The reports are in existence I suppose? Yes.
1433. Your reports? Yes.
1434. They could be produced? Yes; I think so.
1435. *Mr. Hoyle.*] I will ask that they be produced.
1436. *President* (to Mr. Fehon).] Would these reports be in existence? Yes; I think they would form a part of the return that you have asked for with regard to repairs to engines.
1437. *Professor Warren.*] Mr. Howe would supply one part and Mr. Park would supply the other, I suppose.
1438. *Mr. Fehon.*] They would come from all parts of the Colony and be sent in to Mr. Thow.
1439. *Mr. Hoyle.*] From your experience of these engines at Penrith, do you know whether many draw-hooks have been broken? There has not been a broken draw-hoook since they have been in the district.
1440. But have there been any broken draw-hooks on the engines? Yes; on No. 500 at Clarence Station.
1441. Did an engine come into the Penrith yard with the right first trailing-wheel loose? Yes.
1442. Had the wheel moved on the axle? Yes.
1443. How much? I should say about three seconds.
1444. Is it dangerous for a wheel to work like that;—is it not very dangerous? Not in its present condition.
1445. But would it it be a dangerous thing for a wheel to work loose—such an important wheel as a trailing-wheel, I mean? It would be if it got loose to any extent.
1446. What is the number of that engine? No. 456.
1447. Has it been sent to Sydney for repairs? Yes.
1448. In what manner was this engine employed? On a train from Penrith to Mount Victoria.
1449. Was it a passenger engine? Yes.
1450. Are you aware, or does it come within your knowledge, that two engines run with one train;—have you anything to do with that in supplying the engines? Yes.
1451. Can you tell the Commission whether these Baldwin engines (passengers) have had to have a pilot to assist them up the Lapstone bank? Yes; I think they have had.
1452. They have had a pilot engine to assist them up the bank? Yes.
1453. Has there been an extra load on them? Yes.
1454. Is it a fact that the consolidation engine is taking the mail train, that is, the passenger train, from Penrith to Katoomba? Yes.
1455. Why do you use the consolidation engine? To prevent the necessity of using two.
1456. Then, do you say that the passenger Baldwin engine cannot perform the work without the assistance of another engine? You must let me explain that a little. The passenger engines are not used by the mail this side of Katoomba, but they are used by the passenger train leaving here at 10 o'clock from Penrith to Bathurst; that is how they are run at present.
1457. Do I understand that an engine takes the train from Sydney, and another engine picks up the same train (the mail train) at Penrith, and takes it to Katoomba, and another engine picking it up there and taking it on to Bathurst. In other words, that three engines are used between Sydney and Bathurst? Yes; that is so.
1458. Was that customary? Not until we used these big engines.
1459. As a matter of fact, you are now using three engines to do what was originally done by one? Yes.
1460. *President.*] What do you mean by saying what was originally done by one? One engine was only used on the trip, but we are using three now, because we are dividing the district between Sydney and Bathurst into two.
1461. Was there always an additional engine used for drawing the train up the hill? No; not always. It all depended upon the load.
1462. *Mr. Hoyle.*] Did the passenger engines ever run the train—I refer to the Baldwin engines? For a short time they did.
1463. But did ever the Baldwin engines take the mail train from Penrith to Bathurst or Katoomba? Yes.
1464. When they were doing that did they require the assistance of a second engine? Oftentimes.
1465. What do you say? Sometimes.
1466. *President.*] He said "oftentimes" at first, but now he has corrected himself, and says "sometimes?"
1467. *Mr. Hoyle* (to witness).] You say that the Baldwin passenger engines, in doing that work, would require the assistance of a second engine? Yes.
1468. That was according to the amount of traffic on the road, I suppose? Yes; it depended on the load it had to draw.
1469. When you were using the pilot engine under these circumstances, did the pilot engine first go to Emu and hook on to the train there? Yes; since the Baldwin engines came here.
1470. My question is this, that you have had to use the Baldwin engine to assist the passenger engine up the gradient as a pilot engine, being hooked on at Penrith or Emu? Why, because of the viaduct. We could not couple the two engines at Penrith, so as to be such a weight on the viaduct between Penrith and Emu.
1471. Was any accident reported to you that a brake-down of one of the Baldwin engines on Friday last somewhere on the mountains? I am not aware of it, I cannot call it to mind.
1472. But if you heard of such an accident happening? Wait a moment.
1473. *Professor Warren.*] Last Friday, was it?
1474. *Mr. Howe.*] Yes, last Friday on the mountains. *Witness:* Yes.
1475. *Mr. Hoyle.*] You did hear of it then? Yes.

Mr. H. H. Park. 20 April, 1892.

1476. What was the cause of the accident? The poles came out of the eccentric strap and rod.
1477. And did the strap break? Yes, the eccentric strap broke.
1478. Where would it be reported—to Bathurst or Penrith? To both places.
1479. And the report sent will reach you? I cannot remember seeing the report, and I know that the matter has been reported and the breakage repaired.
1480. And what was the result of that accident, was the train stuck up till it had to get another engine? I do not think so.
1481. But when the eccentric strap broke, could the same engine pull the train home;—had they not to telegraph for another engine? I do not think so, but I cannot call it to mind.
1482. Would an engine be telegraphed for to your district or Mount Victoria if another engine was sent for? To the nearest station.
1483. What would the nearest station be? Hartley Vale, I suppose. No, Eskbank.
1484. Then the officer-in-charge at Eskbank would know all about it? Yes.
1485. Do you know what load the Baldwin consolidation engine hauls from Penrith to Katoomba? Yes.
1486. Then what is a load? Twenty-two trucks, including brake-van. I am now speaking of ordinary loaded trucks.
1487. How many loaded trucks would such an engine haul? Twenty or twenty-one, if there is only one small brake-van on the train.
1488. Do they have the assistance of an engine behind to shove up the hill when they have these twenty loaded trucks?
1489. *Professor Warren.*] What is the weight of one of the loaded trucks of which you speak? They would average about 10 tons.
1490. No more? Not more than the average load, taking one with another.
1491. Therefore, the whole train would weigh about 200 tons, and that would mean 200 on a grade of 1 in 30? Yes.
1492. Have they in both cases? Very little in the consolidation engines.
1493. How do you account for that? That is a question that I am scarcely prepared to answer.
1494. But in consequence of these axle-boxes having worn into the boss of the wheel, considering the short time the engines have been running, would you say that it was a defect in the design? I scarcely understand what you are trying to arrive at Mr. Hoyle.
1495. You say that the axle-boxes are wearing into the boss of the wheel, would that be caused by reason of a fault in the design of the engine? No; I think not.
1496. Would it be the result of bad workmanship? It might be to a certain extent attributable to the design of the engines for certain classes of work. If the boss were larger it would, evidently, not wear so quickly.
1497. Is it, do you think, caused through the boss being somewhat small? Yes; to some extent, I believe it is.
1498. To some extent? Yes.
1499. With your experience of locomotive work, do you consider that these engines are what they ought to be in workmanship and material? No, I do not.
1500. Have you known whether any of the turn-tables have broken whilst one of the consolidation or passenger engines has been upon it? Yes.
1501. One did break? Yes.
1502. Where was that? It was at Penrith.
1503. Do you think it was in consequence of the great weight of this engine that the turn-table broke? Yes, I do.
1504. Have you had anything to do since you have been there with the pistons? Yes.
1505. Have you found that the piston-head has worn very much? In one class.
1506. Which class is that? The compounds.
1507. And what would be the result of a piston-head wearing in that way, what would you have to do to put it right? We should have to put a new one in.
1508. You could not repair it without putting a new one in? No.
1509. Then, from your experience as an engineer, do you think that these piston-heads ought to wear so much in so short a time? With that design I am not surprised at it.
1510. Then, do you consider that the piston-heads in this case are very heavy, do you consider that wear was owing to the weight of the head? Yes, and to other things as well.
1511. Have you examined very minutely the wheels of any of these engines? Yes.
1512. Have you discovered any defects in them? I have seen what was an apparent defect.
1513. What is that? Well what appears to be flaw.
1514. Do you know if the spokes of any of these wheels are cracked? That is what I am alluding to.
1515. I they are cracked is not that a very serious thing? I do not think that they are unsafe.
1516. But is it not a serious defect for the spoke of a wheel to be cracked? Well, not necessarily. It is a defect I acknowledge.
1517. Then, if a wheel will run when it is cracked, do you not think it it is a very grave defect, if not a very serious one? Yes.
1518. I will put it in this way—supposing any of these spokes are cracked, is there not danger of the defective wheel collapsing? No, I do not think so; at any rate, not at present.
1519. On how many wheels are spokes cracked? No. 457 is one. Just at present I cannot call to mind any other particular case, but that one I do remember, because I have been watching it for some time to see whether the defect went any further.
1520. But what I want to know is whether you are really satisfied they are really cracked in the spokes, or whether you merely think they are? Well, it is either a defect in the forging, or it is a crack; I am not sufficiently conversant with the mode of manufacture to say which.
1521. We understand from Mr. Thow, and also from Mr. Neale, that these wheels are made by a new process, or really by a new adaption of a new process.
1522. Are there any other wheels in the service made by that process? Not that I am aware of.
1523. Do you consider that these wheels are sufficiently heavy and sufficiently strong for the work they have to do? I will qualify it in this way by saying that I do not think they are as good as English wheels.
1524. And if you were designing an engine, you would not put these wheels on it, would you? No, I should not.

1525.

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1525. *Mr. Brown.*] Are they good enough for the work they have to do? They are for the present.
1526. *Mr. Hoyle.*] You say they are for the present, but do you think that in time these wheels might become wanting repair and unsafe? Yes, I think they might.
1527. Is that not unsafe? No.
1528. But you think it is necessary to keep close watch over them? Yes, I keep a close watch over them myself.
1529. Can you tell us whether there is any test mark in the fire-box of any of the Baldwin engines? What do you mean by a test mark?
1530. Is there any mark showing that these boilers have been tested at any time;—any mark in the fire-box, I mean? Not that I am aware of. There is a mark on the front plate.
1531. That I am aware of;—that is only the mark to show where the plate is manufactured, is it not;—it is not for the purpose of showing when the boiler was tested? No; it is a patent mark.
1532. But in testing boilers is it not customary to brand the date upon which the test was made on the fire-box? It is not a custom with all makers.
1533. But it is a custom in our service, is it not? Yes.
1534. Have you had any trouble with the tubes of these engines since they have been under your control? Not much more than with any others. We have had some trouble.
1535. Is it not a fact that you keep a fitter and his mate at Penrith specially to look after these engines? Yes, it is.
1536. It is a fact? Yes.
1537. Is it the case with regard to any other engines? I should like to explain what I mean. These are a special engine, and we think it better to entrust the duty of looking after them to a particular man, because we find that a man who gets accustomed to them, or indeed to any particular class of engines, can do twice as much work as a man who is not accustomed to them. Mind, he is not employed only upon these engines, but if there is anything marked up against a Baldwin engine it is his special duty to go and attend to it.
1538. *President.*] That is to say he understands Baldwin engines? Yes.
1539. Is it because he knows the weak points of the engines, or because he knows Baldwin engines better than any other man. Do you keep him employed upon the Baldwin engines I mean, because there are so many weak points in them, that he has already attended to, that he is especially familiar with their weak points, or because he has a better knowledge of the Baldwin engines generally than any other man? We find that when there is any special class of work to be done, it is better to keep one man employed upon it, as he knows where to put his hand upon the details of the work, and he knows where the weak points are.
1540. *Mr. Brown.*] Exactly; that is the very point we want to get at. The President asked you whether this man is especially conversant with the Baldwin engines, and whether it was for that reason that you employed him, and not merely because there are so many weak points in the Baldwin engines that it is necessary to have a special man to look after them? No; it is because he knows more about the Baldwin engines than the others, and I can get more work out of him.
1541. But not because he knows the weak points particularly? We employed him when the Baldwin engines first arrived, and he has so to speak grown up with them, consequently we get a good deal more work out of him than we should out of a man who was not so well acquainted with them.
1542. But you do not keep him for doctoring up these engines, because they have got weak points in order to keep them running. You do not employ him especially upon this work because the engines are a bad job, and have certain defects which this man is acquainted with? No.
1543. *President.*] You do not mean that he is a kind of nurse for these engines? No, he does other work as well, and other men do work upon the Baldwin engines if he has too much to do.
1544. This is a very important point, let us be particularly clear about it. I want to know exactly what you mean; is it because there are such a lot of weak points in these Baldwin engines, that you have to keep a man who understands their weak points; or do you keep a man who understands any particular kind of work, whether it be work in connection with Baldwin engine or an English engine, for that particular work, because you can get more work out of him—in other words, because he is a sort of specialist? That is so.
1545. *Mr. Hoyle.*] Have you reported these defects, as you think they are in the wheels, to head-quarters? No, because they have not gone so far that I consider them dangerous.
1546. *Mr. Brown.*] Have they not gone so far as to warrant you making report upon them? No.
1547. *Mr. Hoyle.*] Do you know whether, since these engines have been under your control, there has been any failure in the reversing gear? Yes.
1548. Will you explain what has been the nature of that failure? The first that I can call to mind was an engine stationed at Bathurst. In that case the pin that carries one of the minor wheels came out, and the bracket worked loose in the train.
1549. And what was the result? Well, they managed to get it into Penrith; I cannot call to mind whether there was any delay; I think that there was, but it had to be repaired before it came out again.
1550. Was any accident on the mountains reported to you as having occurred on Saturday last? Yes.
1551. What was the nature of that accident? A truck and tender jumped the road.
1552. Has there been any inquiry in regard to it. Have you had anything to do in regard to it? Yes, I was examined yesterday.
1553. And what was alleged to be the cause of the accident? I did not hear any evidence. I gave evidence, but did not hear the evidence given by anybody else.
1554. Have you any idea what caused the truck and the tender of the engine to leave the train? I cannot offer my opinion. All that I can tell you with regard to it is this, that I saw the road at the point on which the accident occurred, and I also examined the wheels of the tender, and with this result: that I found that both rail and road and tender-wheels were in good order so far as I could see. I had not time to examine it very much, as a passenger train was being delayed all the while.
1555. Did any report reach you of an accident that happened on the second Zig Zag? No, I had nothing to do with it.
1556. But as a matter of fact, a train did leave the road there, did it not? I believe so.
1557. Have you discovered with regard to the wheels of the tender wheels that any of them are loose? Yes.
1558. Do you know that one of the tender axles is loose in one of these engines? Yes.

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1559. *Mr. Fehon.*] If you will allow, I will suggest that Mr. Hoyle is travelling a little outside the scope of this inquiry. He is asking questions about engines that have nothing whatever to do with the Baldwin Company's engines.
1560. *President.*] I understood that he was referring to a tender attached to one of the Baldwin engines?
1561. *Mr. Fehon.*] No, he was not.
1562. *Mr. Hoyle.*] The last instance that I referred to had no reference to a Baldwin engine, but my reason in asking the question was that I wanted to know whether there was anything the matter with the road?
1563. *President.*] Then ask the question simply whether there was anything the matter with the road?
1564. *Mr. Hoyle* (to witness).] You say that you have discovered one of the axles loose in the tender of the Baldwin engine? Yes.
1565. Have you reported it? Yes.
1566. What number is it? It is No. 499.
1567. How many wheels are there loose? Two wheels loose on No. 499.
1568. Has that engine been sent to Sydney for repairs? No, I repaired it myself. I got new wheels from Sydney.
1569. And you had to put new wheels on these axles? No, I put new axles and wheels on.
1570. You put new axles as well as new wheels? Yes.
1571. Let me ask you a question in regard to this axle that has worked loose on the trailing-wheel; that has worked loose, will a new axle have to be put in to replace it? I should think so.
1572. You will have to put in a new axle, you say? Yes, I shall, so far as I can judge from appearances at present. I think it will have to be a new axle.
1573. For what reason? Because it is too small for the hole in the wheel.
1574. Would it have been dangerous to run this any further than it had gone when it was discovered to be loose? I do not think it would have been dangerous, but, on the other hand, I never have sent it out knowing it was loose.
1575. And you say that engine was repaired at Penrith? That tender.
1576. By putting new wheels and axles on? Yes.
1577. Have you had much experience of the Compound engines? Well, they have been run more or less every day.
1578. Are they giving general satisfaction? In what respect?
1579. *President.*] I do not think that general satisfaction has anything to do with it. You should make your questions more specific.
1580. *Mr. Hoyle.*] Are there any defects about the Compound engines? Well, the brake-gear is the same as on the Consolidation. That gave way, but I do not know of anything else in particular.
1581. Is there anything wrong with the speed of these engines—are they very slow or very fast? They are slow.
1582. *President.*] Those are the Compound that you are speaking of? Yes; Nos. 500 and 502.
1583. *Mr. Brown.*] Are they, in your opinion, doing good or bad work for the railway service? I cannot say that I think they are doing good work.
1584. *Professor Warren.*] Will you supply us with drawings of the Compound similar to those you have supplied us with of the passenger and Consolidation engines?
1585. *Mr. Fehon.*] I do not think we have the drawing of the Compound engine.
1586. *Professor Warren.*] I do not mean the drawings—I mean the diagrams, similar to what we have here.
1587. *Mr. Fehon.*] Oh, yes; we can furnish you with them.
1588. *Mr. Hoyle* (to witness).] Did Mr. Neale visit Penrith, as far as you know, for the purpose of examining these engines, or of making any inquiry at all with regard to them upon one occasion? Yes.
1589. Will you tell the Commissioners what inquiries he was making, or what there was defective about these engines that he inquired into? They were not doing sufficient work. That is, not doing sufficient work, considering what they were expected to do.
1590. You believe that Mr. Neale went up to Penrith to inquire into the allegation that these engines were not doing sufficient work? Yes.
1591. Did Mr. Neale state that to you? No; I do not think he did. In fact, I believe I was away when he came there.
1592. As a matter of fact then, are these engines not doing the work that they ought to be doing? They are not doing the work they were expected to do. Mind, I am only saying that from hearsay evidence.
1593. *President.*] You ought not to do that; we do not want hearsay evidence from you; these questions have reference to what you yourself actually know; do you yourself say that these engines are not doing the work they were expected to do;—you do know what work they were expected to do, I suppose? Only from hearsay.
1594. What work were they expected to do, did you hear? The same work as the Consolidation engines.
1595. What work did they not do?
1596. *Professor Warren.*] Will they pull the same loads that the Consolidation engines? No.
1597. *Mr. Fehon.*] I may mention that the two Compound engines are what are called experimental engines. The Compound engines are a new departure in America, but we thought it was desirable as we were ordering American engines to order two Compound engines, in order that we might see what they could do. They were therefore not ordered to do any given amount of work.
1598. *Mr. Hoyle* (to witness).] Do you think that those Baldwin passenger engines would be perfectly safe going round a sharp curve at a high rate of speed—going round a 10-chain curve for example? It all depends upon what you call a high rate of speed.
1599. Well, perhaps you will tell us what is the average speed that the Baldwin passenger engines could make to keep time according to the time-table, say between Katoomba and Bathurst. Is it 30 miles an hour? Yes, I think so. If you will give me a minute to consider. Well, I think they would be safe to run over that portion of the line at 40 miles an hour.
1600. Do you consider that it would be safe for these engines to take a 10-chain curve at 40 miles an hour, taking into consideration the height of the boiler above the wheels? Yes; I judge it from the way they have acted when I have ridden upon them.

1601.

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1571. *Professor Warren.*] But have you ridden upon an engine running at the rate of 40 miles an hour round a 10-chain curve? No, sir, we do not do it.
1572. *Mr. Hoyle.*] Was any order issued to your knowledge relative to the speed of the Consolidated engines? Yes.
1573. What was that order? The order was to the effect that the engines were not to exceed a rate of 18 miles an hour.
1574. That they were not to exceed 18 miles an hour? Yes.
1575. Can you say why that order was issued? No; there was no reason given to me. I simply got the circular.
1576. *Mr. Brown.*] As a matter of fact is it because the Consolidation engines are cart-horses, and are not supposed to do the work of race-horses? I should think that had something to do with it.
1577. *Mr. Hoyle.*] No, that is not the point at all Mr. Brown.
1578. *Professor Warren* (to witness).] Have you received any similar instructions in regard to other goods engines? No.
1579. Then the instructions with regard to not exceeding 18 miles an hour were issued simply with regard to these particular engines? Yes.
1580. *Mr. Brown.*] But, as a matter of fact is it not because one is a cart-horse and the other is a race-horse?
1581. *Mr. Hoyle.*] There may be something in that, but these Baldwin Consolidation engines are very much heavier than the passenger engines, and to run them fast would be to injure the permanent way.
1582. *Mr. Brown.*] Yes, but that is because they are cart-horses.
1583. *Mr. Hoyle.*] Yes, but what I am coming to is this—if they are only supposed to go 18 miles an hour, then in attaching them to the mail trains they are using a cart-horse for the purpose of running a sulky. Why do they not use their race-horses for that purpose.
1584. *Mr. Fehon.*] Eighteen miles an hour has always been the time-table rate for any engines travelling up the mountain gradients, it matters not whether it is a big engine or a little one, or whether it is a train drawn by two engines or by one engine; 18 miles an hour is the time-table rate of speed, and has been all along.
1585. *Mr. Hoyle* (to witness).] Do you know whether, at any time, any of the trains going to Sydney have had to drop a portion of load so that that portion might be put on to the train that is drawn by these Baldwin engines? Do you mean working between Penrith and Sydney?
1586. Between Katoomba and Sydney;—I will put it this way—do you know of any train down from Sydney to the west having dropped any portion of her load in order that it might be put on to the train attached to the Baldwin engine to be drawn to Penrith? No, I am not aware of it.
1587. *President* (to Mr. Hoyle).] After what the President has said with regard to the applicability of the instructions that trains are not to run faster than 18 miles an hour over the mountains to all trains, do you particularly want the printed instructions the witness admits having received with regard to the Baldwin Consolidated engines?
1588. *Mr. Hoyle.*] Undoubtedly, Mr. President, because I have not studied the time-table—(to witness)—and you do not know whether any other truck load has had to be given the Baldwin engines to carry? No, I am not aware of it.
1589. *President* (to Mr. Fehon).] Are there any questions that you would like to put, through the Commission, to the witness?
1590. *Mr. Fehon.*] There is one question that I would like to put to Mr. Park, not in the way of cross-examination, but more in the way of correction;—Mr. Park stated that it was a custom for two engines to take the load from Penrith to Katoomba;—does Mr. Park know that two engines take the train from Katoomba to the west? The push-up engine does.
1591. Does not the push-up engine return to Penrith? No; that is, it depends on how much load there is on.
1592. If there was a push-up engine, would she not return to Eskbank.
1593. *President.*] Supposing an engine start from Penrith and assist the train to get up to Katoomba, does that second engine go further west than Katoomba, or does it come back to Penrith? It is according to the load that is on the train, and also according whether the engine is going to Eskbank or Wallerawang.
1594. Exactly; then it amounts to this;—does the second engine proceed with the train west of Katoomba for the purpose of assisting with the hauling of the train, or as a mere matter of convenience, dependent upon whether it is going to Eskbank or Wallerawang? Both; sometimes when a train consists of a double load the engine will proceed with it west to Katoomba for the purpose of assisting by pushing the train, and sometimes it will go further west merely for the sake of returning to its destination.
1595. *President* (to Mr. Fehon).] Does that answer satisfy you?
1596. *Mr. Fehon.*] There may be exceptional cases of that kind.
1597. *President* (to witness).] Do you say that these Baldwin engines are now defective? Most of these small points have been rectified.
1598. Are they merely small points, such as might occur in connection with any new kind of engines? Yes, sir.
1599. And are all things that you have mended things that might occur in any new and, to a certain extent, experimental engines? Yes.
1600. I believe the Baldwin engines are new, so far as our railways are concerned, are they not? Yes; we have engines from the same firm that have been working here for years.
1601. Yes; but I am referring to what are better know to the public as Baldwin engines;—they are new here, are they not? Yes.
1602. Have there been more repairs done to them than would have been effected in the case of newly-imported English engines? I think there have been.
1603. You think that the English engines would have been more perfectly finished? Yes. There would have been better work and better material in them.
1604. Are the English engines much more expense than these? You can scarcely say.
1605. Having made all these repairs, do you say whether the engines are now defective or not? In the minor parts that have been already repaired?

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1606. Now you have mended those minor parts, you say, and substituted things where they were wanted;—are these new engines now defective;—on the 15th of March last were they defective? I cannot say that they were.
1607. Do you think that they were unsuitable for the permanent way of the Colony? That is a question that I am not prepared to answer. It is a question for a civil engineer, not a mechanical engineer.
1608. Do you say that the Baldwin engines—I am not referring to the compound engines, they were a mere experiment;—but do you say that these Baldwin engines are not doing the work that was expected of them? No; I do not say that.
1609. Do you think that they are doing the work that is expected of them? Yes.
1610. *Professor Warren.*] You were speaking just now as to the load these engines would take up inclines, and you stated that they would take up twenty loaded trucks;—were you speaking of Consolidation or of passenger engines? Of Consolidation engines.
1611. Do you know how many the passenger engine will haul;—I take it that they have been used for hauling trucks? I cannot say from memory.
1612. My only object in asking the question was to see whether a test with 144 tons was too much.
1613. *Mr. Fehon.*] 144 tons was on a grade of 1 in 40.
1614. *Professor Warren.*] No, I think not. The grade referred to was undoubtedly 1 in 30.
1615. *Mr. Hoyle* (to witness).] The President asked you just now whether these engines were not more costly to repair than new engines usually are. I wish to ask you whether you know of any case in which new engines have had to have their bogie axles and some of their tender axles renewed so soon after running? I cannot say that I have.
1616. Is it customary, is it usual, or is it not an extraordinary thing for such repairs to be necessary to engines so soon after they have begun to run? It is unusual with English engines.
1617. But during your experience in the service do you know of any other American engines in which the axles have had to be renewed so soon after their arrival? I cannot say from my own personal knowledge.
1618. But from your personal knowledge do you know of any such repairs having been made to them? No.
1619. But do you consider that a loose axle is not a defect? I have not said there was a loose axle.
1620. You have just sworn it? Yes; but I mean in running condition.
1621. But that axle was loose since the 13th of March, was it not? Yes.
1622. That was a defect? ——
1623. *President.*] I would like to understand about that loose axle; is it a kind of thing that might happen at some time by an accident to any engine, or is it a very special or unusual thing to happen? I think it was put on a little too loose in the first instance. Axles are put on under certain pressure, and I think this one was put on at a low pressure. I do not think that the pressure was ever required for this one.
1624. You do not think that great pressure was ever used? No; because it was not needed. It would probably go on at a lower pressure.
1625. Might that happen in connection with any other engine; I mean an English engine? Yes.
1626. Have you known it to happen? Yes.
1627. Then taking everything you can against the engine, is there anything to show it to be outrageously bad because of that axle being loose? No.
1628. It might happen to any engine, I suppose;—if an axle had been put on at not a very high pressure is it a thing that might occur to it? Yes. For instance, if a wheel was put on at a pressure of 30 tons it would not be as safe as if it had been put on at a pressure of 80 tons.
1629. *Mr. Brown.*] If you had the ordering of these engines, would you order these same engines from the Baldwin Company? I would not care to say that.
1630. *President.*] Some people, I believe, like English, and some American engines better; which do you like? For good workmanship I like an English engine, but for good hauling power, I like an American engine.
1631. By good workmanship you do not mean mere finish? No; I mean good material and design.
1632. But for doing the work you like the American engine? Yes.
1633. Will not the English engines do the work as well? I do not think they do. I do not think they haul as much in comparison to their size.
1634. *Professor Warren.*] Not the newly imported English engines? I have had no experience of them.
1635. You could not compare one of those Baldwin engines with such an engine as we had before the new English engines arrived? No.
1636. *President.*] No, but take engines for heavy hauling power, do you think the American engines are better than the English? I do.
1637. *Professor Warren.*] If they have the same weights on the driving-wheel, the same cylinder power, and the same heating surface? I do.
1638. *Mr. Hoyle.*] Can you tell us the difference in the load between the new Consolidation Baldwin engines, and the old Consolidation engines? Yes.
1639. *Professor Warren.*] It was something like 75 tons.
1640. *Mr. Hoyle.*] What is the difference in the load? I think it is about six trucks.
1641. *Professor Warren.*] That is 54 tons.
1642. *Mr. Fehon.*] Yes, that is the average weight.
1643. *Mr. Hoyle.*] You do not consider that it would be unsafe for the draw-gear if the Consolidation engines are engaged in drawing twenty loaded trucks weighing altogether about 200 tons? Not with the proviso that there is plenty of brake power.
1644. But is there not plenty of brake power on the trains? As far as I know there is; I am not responsible for that.
1645. If this very heavy load was taken up the 1 in 33 or the 1 in 40, would it require vigilance on the part of the men with the train? Most decidedly, if there were only six trucks.
1646. *Mr. Fehon* (to the President).] I have spoken to my colleagues on the question of the trial-trip, and they seem to think it would be expensive, and that it would to some extent disarrange the working of the traffic if they carried out as has been suggested by the Commission. They have therefore asked me to put it to you whether you consider it is absolutely necessary that three separate trials should be made.

So

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So far as the Baldwin engines are concerned we should be happy to give any trials that might be needed, it being the object of the inquiry to deal exhaustively with them; but to give tests with other engines it seems to us it scarcely comes within the scope of the inquiry. We could, and would give you returns with regard to the power of the other engines, their coal consumption, and so on, but to make actual tests such as Professor Warren proposes would be an expensive matter.

1647. *President.*] If you have the data that Professor Warren wants he would not want the tests that is quite plain.

1648. *Professor Warren.*] They have not got the data.

1649. *Mr. Fehon.*] We can give you the data upon which we are working the railways—the data which is after all the best practical test. Scientific test would give a slightly different result, but the result would be so slightly different that it would amount to a mere nothing. We can give you the load which it is safe for an engine to carry, and that is the beginning and end of the question involved in the trial. At the same time let me say, that if you wish to make any examination with regard to the Baldwin engines, we will give you every facility at our disposal to make it.

1650. *President.*] Mr. Brown and I must be guided entirely by what Professor Warren thinks in this matter. I should never think of exercising my independent judgment.

1651. *Professor Warren.*] Mr. Thow said that he could only give this information in a very rough way; indeed, and that is why I am asking for it now. As far as the expense of the test is concerned, I shall supply the indicator, and shall make the tests myself. It is merely a question of supplying us with an engine and trucks. My object in asking for the third test is to compare the Mogul engine with engines intended for the same class of work. We are not really testing the Baldwin engine against the English engine, and if the English engine beats the Baldwin engine, that would not influence us to any extent.

1652. *Mr. Fehon.*] Of course, we leave to the President the question of whether the test of other engines than the Baldwin engine comes within the scope of the Commission.

1653. *President.*] What we have to inquire into is whether these engines are defective, or in any way unsuitable to the permanent-way of the Colony as a railway, or whether they are performing the work for which they were ordered. Personally, I do not see exactly how this test would bear upon the question, but Professor Warren says that it does bear upon it. He says that if he could compare these different engines it will help him in his decision as to whether the Baldwin engines really are defective in any way, or unsuitable to the permanent-way of the railways. I only want you to understand that in the first place Professor Warren is associated with us for the purpose of helping us in this matter, for I know nothing about engineering, and though Mr. Brown knows a little he certainly does not know as much as Professor Warren, and not so much about railway engineering as he personally might know about other kinds of engineering. As I say, at present I do not see where the materiality of the tests in regard to the other engines than the Baldwin engines comes in. I can well understand the necessity for a test of the Baldwin engines; but Professor Warren points out to me that if he finds that there is a tremendous difference in the consumption of fuel in the Baldwin, that is to say, if they consume a great deal more fuel than the other engines that would be a defect in the engine.

1654. *Professor Warren.*] If it is a very large difference, but we shall get the speed up the Picton incline and get the horse-power in each case.

1655. *Mr. Brown.*] Personally I endorse every word that the President has said, but Professor Warren is here as a professional engineer, and if he wishes these steps we cannot stand in the way of them.

1656. *Professor Warren.*] If the Commissioners make a decided objection, then I do not think I shall press the point; but I cannot understand why they should object to have these tests made, because as Mr. Eddy said himself he intended to make them, but for so far had not been able to do so.

1657. *President.*] The only question is whether convenient.

1658. *Professor Warren.*] Well, it would be more convenient to the Commissioners if we made the test ourselves.

1659. *Mr. Brown.*] They say that they can give you all the information necessary for practical purposes, and you say they cannot.

1660. *Professor Warren.*] I am quite sure they cannot, because I asked Mr. Thow. If you make a test of any new thing you always make a mental comparison with what something else does, and that is precisely what I want to do in this instance.

1661. *Mr. Brown.*] You have heard the wish of the Commission about it, and you can now confer with your colleagues.

1662. *Mr. Fehon.*] I would only ask the President whether it comes within the scope of the Commission?

1663. *President.*] Professor Warren thinks that it will enable him to arrive at a conclusion, and that alone is sufficient for us, and would be if even we differed much more than we do from him. We are not now writing a report in which if we each held different opinions we should hesitate about signing it, but here is a test that he says will help him to arrive at the decision, and I do not see how we can resist it in any way, or how, because I, in my ignorance, cannot see why Professor Warren wants these results, can oppose him.

1664. *Mr. Brown.*] We have really gone further than we ought to have gone in publicly admitting that there was a want of unanimity on this point. The best thing you can do, Mr. Fehon, is to confer with your colleagues.

1665. *Mr. Fehon.*] I will withdraw the question, and confer with them.

1666. *Professor Warren.*] And if the Commissioners still object, although I say again that I think the tests are most desirable, we shall have to be content without them. I shall have asked for them, and have been refused; at all events, I have done my duty.

William Wilson, being sworn, said:—

Mr. W. Wilson. 2 April, 1892.

1667. I am locomotive inspector in the Railway Service of this Colony.

1668. *President.*] How long have you been in the service of the Railway Department of this Colony? I have been in the Colony between seven and eight years, engaged in the Railway Department.

1669. What were you before that? I have had twenty-eight years' railway experience—that is to say, twenty years before I came here, and eight years since.

1670.

Mr. W. Wilson. 20 April, 1892.

1670. In the same class of work? Yes; I am a fitter by trade, and I have gone right on.
1671. *Mr. Hoyle.*] Have you had much experience with regard to these engines, since you have been in Bathurst? Yes, nearly all the time I have been in Bathurst—that is during the last five or six months.
1672. Have you found these engines to be very expensive to repair? Well, yes, they have been a little expensive in repairs, the same as all new engines, I suppose.
1673. Have they not been more expensive than ordinary new engines—English engines, for example? Well, seeing that the axles have had to be changed on a number of them, I suppose they have been more expensive.
1674. Have there been any break-downs in these engines in your district? They have not broken down very often.
1675. But have there been any break-downs? Yes.
1676. Will you explain to the Commission what the nature of these break-downs was? It was through the reversing gear.
1677. And has the engine actually broken down, and been unable to go on the journey? No, we have always been able to go on with the journey.
1678. There was an accident upon Friday last on the Mountains;—was it reported to you? No.
1679. Have you any knowledge of that accident? I do not know anything about it.
1680. Have you, since these engines have been running, stripped one of the Consolidation engines at Bathurst of a number of its parts, in order to enable another engine to run? Yes, I did so.
1681. Why? On account of the parts being broken, and in order to keep the traffic going.
1682. You had to strip one engine in order to keep the other running upon the line? Yes.
1683. What were these broken parts? There was a broken rocker arm.
1684. *President.*] What is a rocker arm? It gives motion to the slide-valve; it is a rod with arms on each side to give motion to the slide-valve. It moves backwards and forwards.
1685. *Mr. Hoyle.*] Was not there more than one part of the engine broken? No.
1686. Was there no part of the piston broken; was the rocker arm the only part that had to be taken from the engine—the only part that had to be dealt with? Yes. If by putting one engine in the dock we could make another right for the road we thought it would be better to do so—better than having both laid up.
1687. Have you ever examined these engines minutely? Yes.
1688. Have you found any defects in the wheels? Yes, apparently.
1689. Have you found any holes in any part of the wheels? No, I have not.
1690. Have you examined No. 456 engine minutely;—it is a passenger engine? No, that is not in my district.
1691. Have you ever examined engine No. 457? No, that also is not in my district.
1692. Are you sure of that? Yes, it is in the Nyngan, Dubbo and Bathurst District, she runs from Dubbo, and sometimes gets to Bathurst.
1693. It is engine No. 457 that I am referring to, Mr. Park says, with regard to this engine that he has examined her minutely, and there are flaws in her wheels, she runs to Penrith sometimes? No, I do not know the engine that I know of, she is not stationed at Bathurst.
1694. You have stated that you found no defects except those in the wheels of these engines, you would necessarily examine them when they came into your sheds? Yes.
1695. *Mr. Brown.*] Not only these particular engines, but any other engine that came to your shed.
1696. *Mr. Hoyle.*] Could you tell us the numbers of the engines in which there were apparent defects? Nos. 446 and 447.
1697. What were these apparent defects? They seemed as if they were cracked in the spokes of the wheels.
1698. Was this a passenger or Consolidation engine? A passenger engine.
1699. I presume you have not subjected them to any other test than closely looking at them? No.
1700. Have you ever sounded them with a hammer, do they appear to be cracked? I should not think there was anything wrong with them from the sound of the wheels, I am sure that if that test alone were relied upon they would seem to be alright; I am sure on these grounds that they are alright.
1701. Did any of the axles in any of the engines work loose? Not lately.
1702. But have any of them at any time? Yes.
1703. What numbers were they? I do not remember, but I think No. 493 was one.
1704. In what respect did that work loose? The wheel worked loose in the bogie axle.
1705. Is that since the alterations have been made, or was it before? Before.
1706. Have any of the wheels worked loose on the tenders? There have been but not lately.
1707. They were, I presume, the old axles that were originally in the wheels, they were not any of those which had been renewed? Yes, I think so.
1708. You have had some of the axles which have been loose, did you make the defects good, or were they sent to Sydney to be made good? They were sent to Sydney.
1709. Have you found any defects whilst you have had to do with these engines with regard to the brake-gear? No, but it has been broken considerably.
1710. What were the defects there? I think it was the rough handling of the brake attached to the engine.
1711. Do you think the brake-gear rods are strong enough for the amount of pressure that must be put on these engines in order to control them? They are proving that now.
1712. What were the breakages caused through? I think they were owing to the excessive use of the Westinghouse brake, and the drivers use the brake too roughly.
1713. Can you give us the names of some of the drivers who drove these engines? Yes; they were Fullerton, Evans, Hordern, and Moses—do you want any more?
1714. They will be enough;—did these men drive the engines regularly? Yes.
1715. And you think the failures of the brake-gear have been caused through the rough usage the drivers have given these engines? I do.
1716. *Professor Warren.*] Do you know the name of the driver who was in the Westinghouse brake trials recently? No, I do not.
1717. Do you know a Mr. Fisher? Yes; I think it was Mr. Fisher.
1718. *Mr. Hoyle.*] Do you know whether any of the draw-gear was broken on these engines? I have had one to mend, it was a tender draw-hook.

1719.

1719. Was it one of the new draw-hooks? Yes; it was a long and strong hook. Mr. W. Wilson.
1720. Can you tell us how it was broken? It was broken through the bend of the hook.
1721. But where was it broken, what place? When the engine was hauling a train. 20 April, 1892.
1722. Was it a passenger or a goods train? It was a passenger train.
1723. *Mr. Brown.*] Did the train break away in consequence? No.
1724. Were they running on a level or not? I do not remember, but I think it was on a slight incline.
1725. And the train was, I suppose, stopped by the guard? Yes; the guard's brake is qualified to hold the train.
1726. Have there been any other breakages connected with other parts of the engine? No, I do not think so; I do not know of anything else except the reversing gear, and I spoke about that.
1727. *Mr. Hoyle.*] Do you keep a fitter and his mate at Bathurst especially to look after these engines? No; we do not. But the fitter and his mate are employed there looking after all passenger engines, or rather I should say a fitter, he has always been employed there in order to look after the passenger train engines.
1728. Do these engines draw a larger load in the passenger traffic than the old engines used to do; do they draw a greater load ordinarily? Yes.
1729. Why if that—is it on account of the increase in the traffic; has the traffic increased so much that these engines are required to draw a heavier load? We require fewer engines to do the work now, and there are bigger loads.
1730. When the passenger trains were running, before the Baldwin engines arrived, were two of these engines employed to do the work of one now? Yes.
1731. Were they doing it regularly? Not regularly.
1732. Have any of these passenger engines required the assistance of the second engine? Never that I know of.
1733. What kind of engine had you before? The Dubbs' engine.
1734. And have you used the second engine to assist that? No; I cannot remember it.
1735. You ought to remember that. Do you think you have ever used a second engine when one of these was doing the work? I cannot swear.
1736. Do you think you have? I think it was very probable that we have.
1737. You have, of course, some Consolidation engines at Bathurst? Yes.
1738. Have you any difficulty with these engines at all with regard to the turn-table? Well, they are harder to turn round according to the weight.
1739. But have you ever had any breakages there—I mean with one of these engines? No.
1740. How many men does it take to turn them round? It depends upon the state of the turn-table.
1741. *Mr. Brown.*] That was rather fine, Mr. Hoyle; I think you might give it generally, without going into details of this kind.
1742. *Mr. Hoyle.*] Then you do not know of any other breakages than those you have mentioned? ——
1743. *Mr. Fehon.*] The witness has stated that a wheel got loose on the bogie. I would like to know whether it was on an engine bogie or a carriage bogie? It was a tender bogie.
1744. Was it before or since the new axles were made? Before.
1745. *Mr. Brown.*] I think we should sit on Friday.
1746. *Mr. Hoyle.*] It would be of great inconvenience to me to do so. I am an auctioneer, and sell on every Friday. I have to pay a man to take charge of my business while I am absent at this Commission.
1747. *President.*] Well then, Mr. Hoyle, we shall not sit on Friday.

THURSDAY, 21 *APRIL*, 1892.

[*The Commission met at 2 o'clock, in the Board Room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

1748. *Mr. Fehon.*] Mr. President, the witness, Mr. Wilson, who gave evidence before the Commission yesterday, is present in the room, and he would like to be called again, as he wishes to make some slight correction with regard to the evidence he gave when last before you.
1749. *President.*] If Mr. Wilson wishes to correct some statement he gave in evidence yesterday, we shall permit him to be called again.

William Wilson, recalled, said:—

1750. I wish to correct a statement I made yesterday with regard to a wheel being loose on the axle. I said that it was an axle of one of the bogies; I should have said it was an axle on the tender, and not the bogie. Mr. W. Wilson. 21 April, 1892.
1751. *President.*] I understand it is the custom in these proceedings, to let the witnesses have a copy of the evidence, and I should think that that would be the better course, to let each witness have a copy of the printed evidence, so that he may have an opportunity of reading over his evidence, and if he wishes to make any corrections as to what he has stated, then I think he should come here and make them on oath. All the witnesses, if they wish it, will be furnished by the Secretary with copies of the evidence they have given, and then they may add anything they want to add to it.
1752. *President* (to Mr. Hoyle).] Do you want to ask this witness anything further? No.

William Pilford, being sworn, saith:—

1753. I am Shed Inspector in charge of the Newcastle District, and I have been sixteen and a half years in the Railway Service of the Colony. Mr. W. Pilford. 21 April, 1892.
1754. *Mr. Hoyle.*] Were you in charge of the Newcastle shops since the Baldwin passenger engines or Consolidation goods engines have been running in that district? Yes; the passenger engines.
1755. Were you in charge of the Newcastle shops when these engines went there first; can you tell us whether at any time whilst these engines were there any of the wheels were taken off any part of the engine and put in the lathe, either the bogie tender or engine wheels? The bogie only. The bogie axle and tender axle were taken from under the engine and put in the lathe.
1756. Why did you put it in the lathe? To clean up the journal.

1757.

Mr. W. Pilford. 21 April, 1892.

1757. When you had any of these wheels in the lathe, did you find one wheel larger than the other? There was a slight difference of not more than one-eighth—if my memory serves me it was about a bare eighth. You find differences in any ordinary engine. If my memory serves me it was about that.
1758. Did you true the tyres up in the lathe? No; the tyres were never trued up.
1759. Will you swear that the tyres were not trued up? I shall.
1760. Were any of the axles broken? None belonging to the Newcastle district.
1761. I mean of the Baldwin engines;—did any of them come under your inspection? Not under my inspection. There was one axle broken, but it was in the Sydney District.
1762. Was an engine brought into the Newcastle district with a broken axle? No.
1763. Where did this axle break then? At Redfern tunnel, I believe.
1764. Was there no other axle broken with the journal twisting during the time these engines were running in your district? There was one tender axle which came into the Newcastle district with the journal twisted off.
1765. Why was that? It was through the neglect of the engineman in charge
1766. Who was the engineman in charge? I think it was Vincent.
1767. What was it caused through? Running hot, at least I should take it to be so at first.
1768. Was it customary for other axles to twist off,—I mean the axles of other kinds of engines;—do you know of any others with the journals twisted off in that way? No; I have no recollection.
1769. Was the rocking-shaft of any of these engines taken off? Not to the best of my belief, so far as I can recollect there was no rocking-shaft taken off.
1770. *Mr. Brown.*] Could such a thing be done without your knowledge? It might, if I were absent.
1771. *Mr. Hoyle.*] Then who would be present during your absence? The shed foreman, Mr. Richardson
1772. Under whose notice would this come, under that of the man on the day-shift? Yes.
1773. Did you find anything wrong at any time with the link motion? No.
1774. Would that also come under the notice of Mr. Richardson if you were away for any length of time? I would only be away a day or two on duty in my district, or attending the head office on duty. It would only be a day or a day and a half at the outside.
1775. Was the tender axle sent to Sydney when it was broken? Yes; it was sent for inspection.
1776. Then it might be placed for the inspection of Professor Warren, if he wished to inspect it? I do not know where it is now; it was sent to Sydney.
1777. And it was a tender axle you say? Yes.
1778. Do you know, whilst these engines were running in your district, whether they were ever lifted, and at what place. How often were they lifted on any particular journey at any point in your district? They ran from Sydney to Newcastle and return, and the same from Newcastle to Sydney and return
1779. Were there none running from Newcastle to Wallangarra? None for running the train.
1780. Why did they go there then; did they go over the line without a train; was it a trial trip? I cannot say.
1781. Was it to try the platforms? That I cannot swear positively to.
1782. Did you go with the engine? No.
1783. Who went with it; was there any officers besides the driver and fireman? I think there were Mr. Halligan and Mr. Robinson, of the Locomotive Department. Mr. Halligan is the Divisional Engineer of the Northern District.
1784. Do you remember an engine being fitted in the Newcastle shop with a gauge on its side to try the platform?
1785. *Mr. Fehon.*] I object to that question being asked Mr. President, it refers to other engines than the Baldwin engines, and this inquiry is limited entirely to the Baldwin engines. I ask if Mr. Hoyle can be permitted to carry on such an official inquiry as he is at present endeavouring to do, he has not brought forward a single fact since I have been here, but has only been fishing for information to build his case upon, I contend that he should be confined entirely to the question of the Baldwin engines.
1786. *Mr. Hoyle.*] I contend that I am well within my rights, I asked if an engine was fitted up with a gauge on its side to try the platforms along the line, I mean an ordinary engine. The gauge was intended to ascertain the distance between the platform in anticipation of the arrival of the Baldwin engines, I want to know if such an engine were fitted up with a gauge for the purpose I have referred to? Not in my time, I had no idea of any engine being fitted up in the Northern District for that purpose
1787. Were there many repairs made to these engines in the shops? A fair number of repairs.
1788. More than to any ordinary new engines? In some cases, but not in all cases.
1789. Did you find any trouble with regard to the reversing gear? The Fulcrum pin had been injured.
1790. *President.*] Could that be easily discovered? Yes.
1791. And easily remedied? Yes; it is only putting in a stronger pin, that is all.
1792. *Mr. Hoyle.*] Are there any engines in your district now? None since December.
1793. Why were they taken off? I do not know.
1794. Were any of the axles taken off at any time and trued up, and the axle-boxes repaired? Not to that extent. The only repairs were the one tender axle and the bogie axle, to be screwed up by the journal to spare filing.
1795. Did you bore out the axle-box as well? No.
1796. Did you find the axle-boxes in any of them wear into the wheel? In one they did, but it was very slight.
1797. Were you there long enough to observe this? Yes; I have been sufficiently long in my district to observe that. It was very slight, no more than would be on other engines.
1798. Do you say that on other engines the boxes of the wheels wear into the axle? Yes, in other engines they do just the same.
1799. *President.*] You say that in other engines the axle-box wears into the boss of the wheel just as in the case of the Baldwin engines? Yes.
1800. Then is there nothing exceptional in that? No.
1801. Then do you notice it in all of them—all classes of engines? Yes.
1802. In English engines for example? Yes; in all classes of engines you will find that they will more or less wear.
1803. Looking at these engines which are new and are just coming into use, and taking into consideration that

Mr. W. Pilford. 21 April, 1892.

that they are powerful engines, did you find that more repairs to them were required than say to a powerful English engine? We have not had the experience of English engines of the same power or near the same power to enable us to make a comparison.
1804. Are these the most powerful engines that have been used in this Colony? To the best of my knowledge they are.
1805. Well, at the time they were used, were they the most powerful engines that had ever been at work here? Yes, I believe so.
1806. So you cannot compare the repairs necessary for them with those required for a similar class of English engine? No, sir.
1807. Can you tell us whether for new engines you consider that the repairs made were excessive? Well, there is always something to be done with new engines, the amount of repairs was fairly heavy.
1808. Was it in your opinion excessive, taking into consideration the size of the engines? No, I do not think so.
1809. *Professor Warren.*] You only speak of your own district? Yes, that is all.
1810. *President.*] Speaking of one wheel being smaller than another is that unusual? Well, I have not come across many instances, but it might easily have happened, it would be the fault of the wheel-turner.
1811. But I thought you said that it happened on other engines? Oh, yes; but not to the extent the tyres are concerned; I thought Mr. Hoyle referred to the axles.
1812. *Mr. Hoyle.*] Have you ever found the tire of one wheel larger than another in other engines, with the same axle for both wheels? Yes, slightly.
1813. Would such a thing have the effect of causing the wheels to run slightly on the skew? Very slightly. What I noticed was that they showed about a 32nd. a side; so taking the roads they have to run over it would make very little difference.
1814. Have you tried any of the others to see if they are the same? No, I have not, I have made no further examinations.
1815. *Professor Warren.*] You have said that the estimated difference of an eighth of an inch was due to the turner? I said a bare eighth.
1816. Well, would not that be rather unusual, even supposing it to be a sixteenth of an inch—would it not be unusual for a turner to make that mistake? Yes; but there have been mistakes of that kind made.
1817. You can feel the ten thousandth part of an inch, although you may not be able to express it; you would know whether it was under or over, and so one-sixteenth would be a big error? Yes; but it has been noticed so in other wheels turned out; the turner's gauge may not be accurate.
1818. *President.*] The difference is in the tyre? No; what we call the thread.
1819. *Mr. Brown.*] So far as these engines came under your observation, did they do their work satisfactorily? Yes; while under my observation.
1820. What work were they doing? Well, we were running Nos. 20 and 55 passenger trains between Sydney and Newcastle.
1821. And did they work satisfactorily while they were doing that—did you look on them as serviceable and suitable for the permanent way of New South Wales? Yes.
1822. How long were they employed in your district? From the middle of August to the latter part of December.
1823. And during that time did they give satisfaction? Yes; the engines I had to do with did so.
1824. Did they work well? Yes.
1825. And yet you cannot say why they were taken off the service despite the fact that they were doing their work well for about five months. They were taken off and you are not able to give any reason why? No; I cannot give any specific reason.
1826. *Mr. Hoyle.*] Can you give us the name of the turner who turned these wheels up? I could not give you the name just at this moment, but I could easily get it for you.
1827. Have you found any failures in the brake-gear? There were no failures in the brake-gear during the time they were under my charge.
1928. Was there only one axle broken whilst these engines were under your charge? The one tender axle only, I think.
1829. And this train that the axle broke in was from Sydney. It was in the Northern express service, I understand? Yes; I believe so.
1830. Do you remember that at the time the engines were running in your district whether any of the draw-hooks broke? Not during the time that they were under my charge.

Isaac Gregory, being sworn, said:—

Mr. I. Gregory. 21 April, 1892.

1831. I am shed foreman at Penrith, and I have been in the railway service of New South Wales since 1877.
1832. *Mr. Hoyle.*] Have you been a driver, Mr. Gregory? Yes; I have.
1833. And you have had considerable experience in the service as a driver? Yes; I have had.
1834. Did you accompany a train that went from Sydney to the west in order to try the platforms, I mean the gauge of the platforms? Yes.
1835. Was there a gauge fitted to the engine of that train, made up to the width that would correspond with the width of the cylinder of the Baldwin engines? Yes.
1836. *President.*] Was that engine fitted up with a gauge to show the width of the Baldwin engine cylinder—was it fitted for that purpose? Yes; I think it was.
1837. I understand you do not really know what it was fitted for, but that you think it was fitted for this purpose? Yes.
1838. *Mr. Hoyle.*] Was that gauge put there to represent the width of the cylinders of the Baldwin engines? It might be the width that the cylinders of the Baldwin engines would be, but I am not certain, it was placed on the engine before I arrived in Sydney.
1839. How far did you go with that engine? I went from Sydney to Bourke.
1840. Did this gauge, fitted to the engine scrape some of the platforms as you passed? Yes; I think it did scrape some of them.

Mr. J. Gregory. 21 April, 1892.

1841. Then you were not told what that gauge was for? No; I was not told what it was for.
1842. Did it correspond with the width of the Baldwin engine? Yes; I think it did.
1843. You say it scraped some of the platforms? Yes, one or two; I am not quite sure how many.
1844. *President.*] Where? I am not quite sure of the stations, although I took the measurement at the time, there were Sydney and Granville; at Granville it just touched in one place, whilst the engine was oscillating in going through the platform.
1845. *Mr. Hoyle.*] Did you measure all the platforms as you passed? Yes.
1846. And did you report to the officers of your Department the result of that trial trip? Yes.
1847. Is that report containing your measurements still in existence? I do not know, but I suppose so.
1848. I would like that report to be put in.
1849. *Mr. Fehon.*] If the reports are in existence, they will be put in.
1850. *Mr. Hoyle.*] I think the Commission should insist upon them being produced? The witness says he made a report, and sent it to the Department.
1851. *President.*] Mr. Fehon says if reports of these measurements are in existence they will be put in. I think that should be sufficient, Mr. Hoyle.
1852. *Mr. Hoyle* (to witness).] You made a trial of the platforms on both sides of the line, I suppose? Yes.
1853. In any place where the engine struck would it be possible for the Baldwin engine to pass going at anything like a high rate of speed without touching the platform? They might strike by oscillation.
1854. But where this engine scraped they would pass? Yes, I suppose so.
1855. Therefore the platforms would have to be chipped away to allow the engines to pass, is not that so? Yes, to permit them to pass freely, perhaps.
1856. *President.*] Do I understand that the engine could not get by, or was it oscillation? A certain amount of oscillation would cause the engines to touch.
1857. *Mr. Hoyle.*] Did you notice any other places where the gauge touched besides the platforms examined? No.
1858. Or places where it was rather close but did not quite touch? Yes; I noticed some places where it was rather close.
1859. And all these cases are in your report? Yes.
1860. Have you anything to do with ordering the engines out to do work? Yes, to supply the demands of the traffic.
1861. Since the Baldwin passenger engines have been out have they been ever run with the mail at night; I mean, since you have been there, did they ever require a tail engine or push-up-behind engine? No, except in very bad weather, or with an exceptionally heavy load.
1862. What is the usual passenger train? There are usually sixteen and a-half carriages to a passenger engine.
1863. Does she take it up without any other assistance? Yes, except, as I have said, in very bad weather.
1864. *President.*] Will you explain—I do not quite understand what these sixteen and a-half carriages represent? I will explain, sir; the old count was up to 10 tons for one carriage.
1865. *Mr. Fehon.*] It is in this way, sir; it varies according to the class of carriage; it is all based upon the old four-wheeled carriage; a large carriage represents one and a-half carriages, a still larger carriage represents what is known as two carriages, and so on; so that sixteen and a-half carriages may mean practically four large carriages.
1866. *Professor Warren.*] What does that mean in weight?
1867. *Mr. Fehon.*] There are 10 tons to each carriage, so that counting each carriage up to 10 tons, a carriage representing 20 tons would represent under our system two carriages, although as a matter of fact it would only be one carriage.
1868. *Mr. Brown.*] Then the total weight for a passenger train would be 165 tons?
1869. *Mr. Fehon.*] Yes.
1870. *Mr. Hoyle (to witness).*] You say you only had a pilot engine when the load exceeded that amount, or in bad weather? Yes.
1871. Do these engines ever slip? I never heard of them slipping.
1872. Did you ever hear a report from any of the drivers that there was an engine behind time for an hour through slipping; about, I think it was, the 4th April the occasion I refer to? I do not know.
1873. *President.*] Do you mean the 4th April this year?
1874. *Mr Hoyle.*] Yes, about that date. [*To witness.*] Do you know if any of the other trains have had to drop their load in order that the Baldwin engine might bring it on? Yes; I think it was on the 14th the train had to drop its load and give it up to the Baldwin engine.
1875. You also remember that? Yes.
1876. And then had to run in light? Yes.
1877. It ran in without a load? Yes; the first engine gave the load up as it was not able to take it on, and the Baldwin engine came along with the second train and the carriages were taken off the first engine and put on the second one, this was from Lawson to Katoomba.
1878. *Professor Warren.*] You pass over a heavy grade there? Yes.
1879. So that this engine took about 185 tons over a heavy grade? Yes.
1880. *Mr. Hoyle.*] Do you know of any case where any portion of a load has been dropped when the other engine was able to pull it? No.
1881. Does the Baldwin engine run from Penrith to Katoomba going back light.—the Consolidation engine, say? Yes; the Consolidation does come back light from Katoomba, after taking a mail up.
1882. *Professor Warren.*] You are speaking of the recently imported engine I presume? Yes; the 8-wheeled couple—as we call them.
1883. *Mr. Hoyle.*] Why does not the Consolidation engine, instead of coming back without any load to Penrith, take a load on to Bathurst? Well, it is not adapted for taking trains on.
1884. Why; on account of the speed? Well, it may give the speed, but it is not built for that grade, it is not intended for such purposes.
1885. Would it have an effect upon the permanent way if the Consolidation engine ran the return trip between Katoomba and Bathurst, to time? Well, it might be done.
1886. *Mr. Fehon.*] Will you allow me to explain sir. These engines are intended for running the mountain traffic; they are not intended for running at a high rate of speed. It would knock the road about if they were run at a high rate of speed; they are not intended for that purpose, and they are not being used for it.

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1887. *President.*] Our Commission says that we are to inquire whether these engines are unsuitable to the permanent way of our railways; therefore, I think Mr. Hoyle has a right to put these questions, if he wishes to do so; but you can explain afterwards that these engines were not intended for such service, and would not be put to it.
1888. *Mr. Fehon.*] I thought a wrong impression would get abroad, and, therefore, I wish to explain that these engines were intended for a heavy grade and not for anything else, not for running at a high rate of speed.
1889. *Mr. Hoyle* (to witness).] Do the passenger Baldwin engines take the mail on to Katoomba? Yes.
1890. Have you had much experience of these engines? Not on the engines.
1891. But about the repairs? No, I have not much to do with repairs, only to see that they are completed in a proper time, so that the engine may go out at a proper time.
1892. Do you know of any draw-hooks breaking? They may have broken, but not in my presence.
1893. Do you know anything about draw-hooks or coupling-chains breaking on trucks drawn by these engines? I do not know from my own knowledge, but I think there have been several broken.
1894. Has it been the links or the hooks that have broken? The hooks, I think.
1895. Who would know all about that? I suppose the foreman-fitter would know.
1896. Is it part of the guard's duty to report these things? Yes, he reports them to his superior officer (the District Superintendent, Mr. Duff).
1897. Since these trains have been running, what load do they put on; what number of loaded trucks is put on either the Consolidation goods engine or the passenger engine when she has to haul a goods train? A passenger engine takes twenty trucks and a large brake, and if that weight of trucks is exceeded there is second engine to push up.
1898. And you put that on for safety? It is always done up the mountains. It is very seldom they run a single train up the mountains now.
1899. Is it ever done with less than twenty or with twenty? Not that I know of. The train is held with the assistance of a heavy brake behind.
1900. What is the weight of these trains, supposing you had twenty loaded trucks? Well, there are about 10 tons in each truck when loaded, and the brake van would be about 19 tons.
1901. *President.*] That is about 219 tons in all.
1902. *Professor Warren.*] Do you mean to say that the Baldwin Consolidation engine can pull 219 tons? Well, she takes 22 trucks up the grade.
1903. *Mr. Hoyle.*] And do you think that in taking up that enormous load the draw-gear is not in any way endangered? Well; not at present, I think.
1904. Suppose I take this pencil and pull it to-day, I may strain it a little, and if I pull it to-morrow there is a likelihood of a greater strain, and the time may come when, with the maximum strain, it might break altogether; would not this be the case with the draw-gear, would it not be sufficient to break it in time?
1905. *Professor Warren.*] I do not think you ought to ask this question. It is a very difficult one; you mean, will the maximum pull on the train stretch the hooks beyond their elastic limits, I think that would be better ascertained in the testing machine.
1906. *Mr. Fehon.*] Perhaps the most practical way would be to ask him if he knows of any accident that has happened to the draw-gear; but, as to his opinion, it was a question what it was worth; it might be worth a great deal or it might be worth very little.
1907. *Mr. Hoyle.*] I was never a guard on the railway line, and so far as breaking away is concerned I can only go by my knowledge gained through the reports that are found in the press; I only know that trucks did break away through the gear breaking at Bathurst where loss of life happened through this cause.
1908. *President.*] You mean to show, I suppose, that presuming there is a constant strain every day upon this gear it will so weaken it, that one day it will break, and a smash will follow. Well, I think, with Professor Warren that this is a question which will be better decided in the testing machines; and again, you have to ask yourself is this a person from whom you should ask such a question. His opinion may be worth a great deal on the one hand, as pointed out, or on the other hand it may be worth very little.
1909. *Mr. Brown.*] Perhaps it is the inevitable end of all draw-gear.
1910. *Mr. Fehon.*] I cannot allow statements like the one Mr. Hoyle has made to go forth without informing you that when the Commissioners took office they found the draw-gear was inadequate to the strain put on it, and since we have been in office we have altered the whole of the draw-gear of the goods traffic, and the light draw-gear on the whole stock has been brought up to the standard of the heaviest draw-gear in the world. In order to provide against any probability of the trucks breaking away, all our rolling stock was fitted with the heaviest draw-gear that could be found in any part of the world.
1911. *Mr. Hoyle.*] I am quite aware of that, and I know that even the heaviest draw-gear has been broken, and that with a load not so heavy as has been put on these engines.
1912. *President.*] But in this case was the load unduly heavy; because, if so, an accident might happen at any time, even though the Commissioners got the heaviest draw-gear in the world.
1913. *Mr. Fehon.*] I have a return of all the broken draw-gear or hooks, and I know the cause of their breaking, and I have the names of the men who were driving the engines at the time. Some of these breakages may be the result of bad welding or a flaw, but the greater number of them arise from the jerk received at starting or pulling up the steep grades. At starting, the engine may go away with a jerk, and the draw-gear may snap. We have provided against this to the utmost in our power, and we can do no more. Such accidents may happen under the best regulations with bad drivers.
1914. *Professor Warren* (to witness).] I understand you to say that the heaviest load the Consolidation engine can take up the Mountains was 220 tons;—is that the utmost load they can take? I did not say that was the utmost. For a short distance they might do more.
1915. Would you put more than that on the engine? Yes, I might; but I think that is a fair load.
1916. Well; supposing the maximum to be 220 tons, it is an easy thing to decide whether the draw-gear might easily be broken or would be sufficient for the load.
1917. *Mr. Fehon*] Mr. Thow, the Chief Mechanical Engineer, will be called by the Railway Commissioners to give all this evidence.

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1918. *Professor Warren.*] Yes; but since the matter has arisen I am bound to satisfy myself that it will take that load. It means simply that you ought to supply the drawings of the draw-gear for the engines and the trucks—the one as between the engine and the train, and the other the ordinary draw-gear between the trucks. Will you try and have that put in.
1919. *Mr. Fehon.*] I submit that, as the draw-gear between the trucks, that would be going into a general inquiry with regard to the rolling stock of the railways.
1920. *Professor Warren.*] It has been decided, I understand, that we must take some notice of the trucks.
1921. *Mr. Fehon.*] I admit that a mistake was originally made with regard to the draw-gear, but heavier hooks have since been substituted at the expense of the Baldwin Company. That deals entirely with the question of the draw-gear supplied by the Baldwin Engine Company. As to what may be behind those engines—as, for example, the draw-gear between the trucks—that, I submit, has nothing to do with this inquiry. It might be the coupling of other engines nearly up to the capacity of these; so that, in fact, if this question were admitted it would resolve itself into an inquiry into the condition of the rolling stock generally of the Colonies.
1922. *Professor Warren.*] Well, will you supply drawings of the strong draw-gear you used on the Baldwin engines.
1923. *Mr. Brown* (to witness).] Does the strong gear with the load you now put to the engine give satisfaction? Yes.
1924. Do you know of any cases of its giving way? No.
1925. You know that other draw-gear was substituted for that originally used? Yes.
1926. *President.*] You have never known this new draw-gear to give way? No.
1927. *Mr. Hoyle.*] You say you have heard of some links breaking attached to some of the trucks? Yes; I have seen all kinds break, strong and standard, but it has been chiefly in starting the train where the brakes have been put down, about Katoomba principally, and thereabouts. Putting down the brake suddenly throws a strain on the hooks.
1928. Did you ever at any other time accompany the officers in other trials to test the width on the other stations? No.
1929. It was only on the Western Line? Yes.

Henry Robinson being sworn, saith:—

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1930. I am connected with Mr. Stangar's staff, Department of the Locomotive Superintendent.
1931. *President.*] How long have you been in the railway service? About nine years altogether.
1932. What is your exact position, how would you define it? I am with Mr. Stangar's staff, and inquire into little matters in connection with the running of the trains.
1933. *Professor Warren.*] You are assistant to Mr. Stangar then I understand? No; I am connected with his staff, that is to say, I am on his staff.
1934. *Mr. Fehon.*] Mr. Robinson was a cadet in the Department, coming to us from school, and when his time was up, he took a trip through Europe and America, and since coming out he has been placed in Mr. Stangar's office to make inquiry into matters coming under his notice that necessitate inquiry.
1935. *President.*] Was he sent Home from the Department?
1936. *Mr. Fehon.*] No. He was one of those who went Home at his own expense, prior to the cadets being sent by the Commissioners.
1937. *President.*] Did you make any inquiries into the working of railways when you were at Home? I went Home to make inquiries, and to try and pick up as much information as I could. I visited several establishments at Home.
1938. And I suppose you picked up some experience? Yes; some little experience.
1939. *Mr. Hoyle.*] Did you make any tests or trials of coal stages, or the platforms in connection with the Baldwin engines? I cannot say that I personally made any tests, but I was present when one of the engines was being run over the Northern Line.
1940. Where was that? The Northern Main Line.
1941. Was there any gauge on that engine that would make up for the width of the cylinders of the Baldwin engines? No.
1942. You had no gauge at all? There was no gauge at all.
1943. On what engine were you? I was on one of the Baldwin engines.
1944. Where did you go to? We went as far as Wallangarra, near the Queensland Border.
1945. Did you find that anywhere that any of the cylinders scraped, or went very close to the platforms? No; not in one instance.
1946. Was there plenty of room for these engines to pass going at a high rate of speed? Well, quite sufficient room to allow the engine to pass and to allow for oscillation.
1947. You went the whole length of the Northern Line, did you not? Yes. Wallangarra is the extreme point in our Colony. But I am speaking principally now of the distance from Strathfield to Wallangarra.
1948. That is practically the whole distance? Yes, we have a branch line from Werris Creek.
1949. Oh, I do not refer to that, your trip was on the Main Northern Line, was it not? Yes.
1950. Did the cab of the engine, during any part of your trip, come into contact with the verandahs of any of the platforms? No, I cannot say that it fouled any of them.
1951. Were any alterations made to any of the platforms in consequence of its coming into contact with them? I cannot say.
1952. *Mr. Brown.*] Were you watching throughout, and are you speaking of your own knowledge when you say it did not touch any of these verandahs or platforms? I say it did not foul any of them.
1953. Did it not hit any of them? No.
1954. Did it not knock any portion away? No, not that I am aware of. I am speaking of the Northern Line.
1955. Had any of the Baldwin engines gone over these lines previously? Not that I am aware of.
1956. Then that was the first one? Yes.
1957. Did you know subsequently of any of the Baldwin engines striking any of the platforms? No.
1958. Did you know of any of the Baldwin engines striking any of the verandahs between here and Newcastle? No, I did not.

1959.

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1959. *President* (to Mr. Hoyle).] Would you contend that because these engines did touch the verandahs or platforms they would, therefore, be unsuitable for the permanent way of the colonies or defective? No; but I would say that it showed gross negligence on the part of the officers in not seeing that these details were attended to in the specifications they sent to America for these engines.
1960. But suppose that an engine was a good one, and it was built up a little too high, so that a verandah would be injured, would you in that case say that the engine was defective or unsuitable to the to the permanent way, just because the Commissioners might have to remove a portion of a platform or two? No; but I think it would show great want of care on the part of the officers, and one of my charges is that there was neglect on the part of the officers.
1961. You contend that before they allow the engine to go they should have seen that it cleared all the platforms? Yes; that before the specifications were drawn up this should have been seen to, so that we should not have had to alter any of our platforms to allow these engines to pass.
1962. *Mr. Hoyle* (to witness).] Did you make any reports in connection with the coal stages? No; I made no report whatever.
1963. Was there not any investigation made relative to the coal stages in connection with these engines? Not that I am aware of.
1964. Were any alterations made at any of these stages to meet the convenience of these engines? I cannot say whether there was any alteration made or not, but I daresay the line was altered a few inches perhaps.
1965. Had that anything to do with the width of the cylinders of the Baldwin engines? I do not know why it was altered at all.
1966. Do you know if the coal stage at Eveleigh was altered in connection with these engines or not? I do not.
1967. Were any alterations made to the coal stages in connection with these engines? There was a deviation made in the line, but whether in connection with the American engines I do not know.
1968. Was it made before or after they came? I cannot speak except from memory, but I believe it was made before the engines came or about the time they came.
1969. Did I understand you to say that you only went on the Northern Lines on these trials, did you go on the South Coast Line or on the Western Line making a similar trial there? Yes, I went on to the Southern Line.
1970. Did you go to Picton on the Southern Line with an engine? Yes.
1971. Could you go past Picton platform before the rails were shifted, I mean the line was altered? No.
1972. You could not? No.
1973. You could not pass Picton platform with the Baldwin engine until the rails were slewed or the platform altered? Oh, we got past the station certainly, but the lines were afterwards altered I believe.
1974. But the cylinder touched? No, it went very close.
1975. Could the engine have passed with safety running at the rate of say 30 miles an hour? I daresay if all the brasses were in good condition, in that event we might have got through safely.
1976. *Mr. Brown.*] Would you like to be on an engine going at the rate of 30 miles an hour, and to have it pass so close to the platform as you say this pass. Would you have liked to have driven an engine through at that rate? Yes; I dare say I could have driven the engine.
1977. Do you think it would have derailed the engine? No; perhaps it might have scraped the buffer beam, that is all.
1978. Did you find you got very close to other platforms on the Southern Line? It is some time since I went on the trip, so that I cannot remember quite clearly.
1979. Did you make any report on your trip? Yes.
1980. Did it contain the measurements of all the distances? I do not remember if all the distances were given, because in the majority of cases the engines cleared very well.
1981. But in the cases where the engines did not pass the stations very well, where, in fact, they went too close, did you report on the distances? Yes.
1982. Was that report made by you? I do not know if my figures were sent in; figures may have been sent in by the engineer.
1983. You made a report, at any rate; you made these measurements? Yes.
1984. Did you make a press copy of your own report, or keep a copy of any kind; is it in existence? Yes; but I do not know if I could lay my hand upon it or not.
1985. Is it not in the books of the Department? I cannot say.
1986. Did you not take a copy of it in your own private book, or one of the books of the Department? I cannot say. I copy so many letters that it is impossible for me to remember each particular one.
1987. You mean in your own Department? Yes.
1988. *Mr. Hoyle.*] I ask that that report be put in.
1989. *Mr. Brown.*] He says he cannot remember if he has got it or not.
1990. *President.*] Have you got it, Mr. Fehon?
1991. *Mr. Fehon.*] It may be in existence—we shall try to find it.
1992. *Mr. Brown.*] Let him look through his books, and if he can find it, let him produce it.
1993. *President.*] Yes, if he can find a press copy let him produce it.
1994. *Mr. Hoyle.*] At what speed were you going when you passed the Picton platform? We generally slow up when going past platforms.
1995. About what speed were you going? Well, that all depends upon what speed you come up at, whether the signals are against you or not, if you have a clear line, and so on.
1996. But for the purpose of making this test, and ascertaining these measurements, at what speed were you going along? I could not say.
1997. At Picton, were you going at a pace of about 4 miles an hour? Yes.
1998. Did you get very close to the Guildford platform? No; I think we had sufficient space at the Guildford platform.
1999. Did you get very close to Merrylands platform? I cannot remember the individual platforms as we went along.
2000. Do you say you cannot remember the various platforms you passed, and where you found the engines very close? Picton is the only one I can remember.

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2001. Did you go on the South Coast line? No.
2002. The Northern and the Southern lines were the only ones you went on? Yes; and the Western line also.
2003. What did you find on the Western, was it on a Baldwin engine that you went? Yes.
2004. Did you come into close contact with any of the platforms on that line? No; we got through with a sufficient amount of clearance.
2005. Was the clearance in all cases sufficient to allow the engine to go through at the speed a passenger engine would have to run at? I cannot say that, I do not know.
2006. *Mr. Brown.*] We have it already in evidence that about £2,000 to £3,000 was spent. The Commissioners are best qualified to judge whether it was wisely spent or not.
2007. *Mr. Hoyle.*] I am only asking this witness now whether these engines went so close to the platform as to touch, or whether they were able to pass them safely. I am not asking these questions for any purpose of delaying.
2008. *Mr. Brown.*] Upwards of £3,000 were spent, and the bulk of that sum was expended shortly after the Baldwin engines arrived, and the Commission will have to determine whether it was spent in connection with the Baldwin engines themselves, or whether it was spent in order to secure uniformity of gauge as the Railway Commissioners allege.
2009. *Mr. Hoyle.*] All I am trying to do is to put anything before the Commission that I can put on this particular point, in order to show that there was some neglect on the part of the officers in this matter.
2010.] *President.*] Supposing the engine had run close, does that show that these engines are defective and unsuitable for the permanent-way of the Colony, and that they are not performing the services that are expected of them. Do you want to make out that it was negligence to run so close to the platform. If a platform were in existence which would be so close to the engine when it passes that might be evidence of negligence, if some accident happened in consequence of it, but how does that bear on the question we are trying? We are not trying whether the Department generally is guilty of negligence, but whether the negligence they have shown is in importing engines to the Colony which are defective and unsuitable to the permanent-way of the Colony, and not doing the work that is expected from them.
2011. *Mr. Brown.*] Do you wish to show that some official had been guilty of some negligence in this matter?
2012. *Mr. Hoyle.*] I make no charges against the Railway Commissioners; but I say that someone was guilty of neglect in not ascertaining these facts with regard to the platforms before the engines were ordered, and adapting the specifications to them. With regard to the extent of this inquiry, as laid down in the Commission, I certainly am not aware that anyone ever alleged that these engines were not performing what was expected from them, I never said so.
2013. *President.*] The words of the Commission are as follows [*Commission Read*]. These are the three things we have to inquire into, and how does the evidence you are now bringing out bear upon them.
2014. *Mr. Hoyle.*] But it bears upon the alteration of the platforms. When Mr. Eddy came here at the first meeting of the Commission you asked for someone to come forward and make direct charges. I came forward, and I have made these charges. The Royal instrument may say something perhaps, and include in that some things that have never been alleged against the engines, yet surely my charges will have to form some considerable portion of what you will have to decide in determining this question.
2015. *President.*] You cannot come and make charges outside this Commission, but you are allowed to state in support of one of the charges that a great many of the platforms were altered because the Baldwin engines had been imported. It might be that this would show that these engines were unsuitable to the permanent-way of the Colony. A vast expense having been incurred to alter the platforms on account of the importation of these engines might go to show that they were unsuitable to the permanent-way. In other words looking at what our platforms were, if they were to be regarded as permanent-platforms and a vast expense had been gone to in altering them, if they had had to knock them down or remove them in order to fit these engines that would be some evidence that the engines should never have been brought here, that is looking at the difference between the width required for them and the measurement of our platforms and stations along the line. But unless you are prepared to show that it was some vast expense that reasonable people would not go to, I do not see how that will help your case. Were a few bricks taken, some coping-stones removed, parts of verandahs cut down, that a much more serviceable engine could be used on our lines, would that show that these engines were unsuitable to the permanent-way?
2016. *Mr. Hoyle.*] The platforms are part of the permanent-way.
2017. *President.*] Only relatively so; that is to say, platforms built in some very substantial and solid way—so substantial, in fact, that it would be an outrage to interfere with them unless with very good reason—might be regarded as part of the permanent-way; that is to say, if they were built at an enormous expense and very substantially, and yet had to be pulled down or partially destroyed in order to let these engines pass, that might be evidence that the engines were not suitable for our permanent-way. All these things must be relative. But, on the other hand, if by chipping away a little brickwork you will enable an engine to be brought here that will be able to do a great deal more work than any engine did before, then you must look upon the matter as a question of the relative benefits or otherwise that follow.
2018. *Mr. Fehon.*] In America the permanent-way is complete without a platform.
2019. *Professor Warren.*] I must ask for some information as to the platforms, the alteration of the gauge, width of platforms, &c.;—can I have it?
2020. *Mr. Fehon.*] It is being prepared.
2021. *Professor Warren.*] It seems to me that when we get that information all Mr. Hoyle's questions with regard to these platforms will be answered.
2022. *Mr. Brown.*] I think that what Mr. Hoyle desires to show is, that since we knew that this large sum of money had been spent, it was for the Commission to determine whether it was spent in connection with the Baldwin Engine Company, and whether, under all circumstances, it was a justifiable expenditure in connection with the Railway Department. Knowing the value these engines were likely to prove, still was it worth while to interfere with the platforms, thus causing additional expense in connection with these engines.
2023. *President* (to Mr. Hoyle.) So far as I am concerned, I wish to give you every latitude, but I cannot

see

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see how these questions bear upon the matter. It may be said the cab of the engine touches the verandahs, but how does this show these engines are unfit for the permanent-way.

2024. *Mr. Brown.*] Should you not show, Mr. Hoyle, that these plans or specifications should have gone to some particular part of the Department, and should have had the sanction of the officers there before they were sent forward when the engine was decided upon, should you not have shown the plans of the engine and submitted them to the Head of the permanent-way, saying: Now these are the engines we propose to send for—are they suitable to the permanent-way?

2025. *Mr. Fehon.*] The gauge was sent to the Baldwin people and they knew what was required, but the verandahs and platforms were not always to gauge; but that was not the fault of the Baldwin Company. Mr. Hoyle is trying to question this witness on the trial-trip to test whether these engines were right or not; surely the Commissioners would have done very wrong if they had started the trains without making such a trial trip.

2026. *President.*] If you had been satisfied that the platforms were in gauge you would do it.

2027. *Mr. Fehon.*] Yes.

2028. *Mr. Brown.*] Would you not ordinarily have transmitted these plans and specifications to the various Heads of the Departments whose works they may concern? I am not saying, you will understand, that you were not quite right in sending up the engine along the line; but could you not have ascertained before the specifications for these engines were sent whether they were suitable for the permanent-way or not, by submitting that question to the proper officer?

2029. *Mr. Fehon.*] All that will come out in our evidence. These engines were a necessity at the time. We had other engines ordered in England at the time, but the manufacturers could not supply us with them in time for the last wool season, and therefore, as a matter of fact, we had to fall back upon the manufacturers from whom we could get the engines sufficiently speedily to meet our circumstances. That was the reason why we ordered them. We knew in ordering the Baldwin engines what they were. It was like asking for a Waltham watch—we had not to inquire what the mainspring was made of, and so on. The Baldwin people are people of very great repute, and if you order ten or a dozen engines it is nothing to them. They have a very large extensive business, and they would not sacrifice their good name in order to supply us with defective engines. All this will come out in the evidence we shall give.

2030. *Mr. Brown.*] You will understand we do not wish to limit you, Mr. Hoyle, in any way; but you have heard the matters the Commission requires us to inquire into.

2031. *Mr. Hoyle.*] I can see now there is something in the Royal Instrument which is outside any charge that anyone has ever made against these engines. It has been put in without any necessity, and it covers the Railway Commissioners clean up.

2032. *President.*] If there is no necessity for it then it only makes the inquiry larger. What, I repeat, we have to inquire into is whether these engines are defective or are unsuitable to the permanent-way of the Colony, or have not done the work that was expected from them.

2033. *Mr. Hoyle.*] I say that charge was never made.

2034. *President.*] Therefore we are only required, you think, to inquire whether they are unsuitable to to the permanent-way or defective? I really do not see how it affects this matter, simply because in passing this engine may have touched some of the platforms, unless you can show that these stations were made of granite or some solid material, and were, in short, of such a substantial nature that they could be regarded as part of the permanent-way.

2035. *Mr. Brown.*] You cannot complain of any want of range in this Commission, Mr. Hoyle.

2036. *Mr. Hoyle.*] I have had the fullest fair play so far as this Commission is concerned. It seems that an order has been sent to America for these engines without the slightest regard having been taken in regard to the risk to human life or the property that might be behind them.

2037. *President.*] You ought, as a public man, to remember that the press and public are admitted here, and you yourself know that if these statements go forth to the public, without the Commissioners on their side coming forward, it may cause the public to be frightened, and convey a wrong impression. I should feel sorry that we had allowed any one to be present if these charges are to be made. You must not make charges that will frighten people until at least you have heard all the evidence. We do not care about the Railway Commissioners any more than we care about anyone else in this inquiry; but if we think our report should be favourable to the Baldwin engines we shall give it in that direction; or if we find that the Baldwin engines are defective, we shall bring in a report accordingly.

2038. *Mr. Hoyle.*] I have no further questions to ask the witness if he has not been down the South Coast Line.

Charles Baggs, being sworn, said:—

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2039. I am Sub-Inspecter of the Locomotive Department, and am stationed at Eskbank.

2040. *President.*] How long have you been in the service of the Department? About 23 years.

2041. *Mr. Hoyle.*] Did you have much experience with these Baldwin engines at Eskbank? Well, they passed through there; there are none stationed at Eskbank.

2042. Do you remember whether on Friday last there was an accident to one of these engines on the Mountains? I do not remember any accident to them.

2043. Did any of them break down excentric strap? Yes, I believe so, but it was not at Eskbank.

2044. Was any telegram sent to you about the matter? No telegram was sent to me to "Send another engine on."

2045. *Mr. Brown.*] He does not know personally that this accident happened.

2046. *Mr. Hoyle.*] A witness stated yesterday that an excentric strap had broken in one of these engines, and I was told that an engine was telegraphed for.

2047. *Mr. Hoyle.*] Was there any stoppage of the traffic between Eskbank and Penrith? Yes, through an engine getting disabled.

2048. Do you know what happened to that engine? Not personally; there was nothing sent to me about it.

2049. How then do you know it was disabled? Only by hearsay.

2050. *President.*] I suppose a telegram was sent along the line? No telegram was sent to me.

2051. *Mr. Hoyle.*] Do you know whether at any time the brake-gear failed in any of these engines, about Lithgow or Eskbank; have any trains been detained on that account? No trains have been delayed by breaking

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breaking of brake-gear at Eskbank; engines have come into the station with defective brake-gear, and we have repaired them. They only bring the train as far as Eskbank, and the accident would be repaired by the time the train was starting again. There was a lever broke one day belonging to the tender; that, I think, was about the greatest defect that has occurred to the brake-gear.

2052. You say you do not know of any train being delayed at Eskbank by the failure of the brake-gear or reversing-gear? There has been a delay on account of the reversing-gear; the train was delayed until we got another engine.

2053. You had to take one engine off and put another on? Yes, there was a delay of about 37 minutes to a mail train.

2054. When was that? On the 1st April, I think.

2055. Do you know the number of the engine? On the 1st April, it was 450.

2056. Do you know of any other failure in any part of these engines which came under your personal knowledge? No.

2057. Did none of the axles ever go wrong at Eskbank? Yes; we have had the tender bearings hot, that is all.

2058. Have you had them running hot lately? No, not lately.

2059. How long ago? About two months ago.

2060. Not since? No.

2061. Have you had any trouble with the bogie wheels? No.

2062. No trouble at all? None.

2063. Or with any of the other wheels. Have you detected anything wrong about the other wheels at all? No.

2064. Have you examined these wheels and found any defects in them? No.

2065. And what appeared to be blow holes in the cast iron? No.

2066. What you ordinarily know as blow holes in the cast-iron, have you not found any defects of that kind in them? No.

2067. Have you examined them minutely? Not very minutely, because the engines have not been stationed at Eskbank.

2068. *Mr. Brown.*] Are these engines giving satisfaction in the work they are doing, so far as they have come under your observation? I think they are.

2069. *President.*] Who is the next witness?

2070. *Mr. Hoyle.*] I do not think I can call any. I wanted to call the Engineer-in-Chief, but Professor Warren wants some documents from him, so, in the absence of these papers, I would rather not call him.

2071. *Mr. Brown.*] You can examine him so far, but if you do not want to call him now, of course we are satisfied, Mr. Hoyle.

2072. *Mr. Hoyle.*] Well, I will go on if he can be found.

Mr. Henry Deane, being sworn, said:—

Mr. H. Deane. 21 April, 1892.

2073. I am Engineer-in-Chief for Railway Construction.

2074. *President.*] How many years experience have you had in regard to the railways of this Colony? My experience dates from the year 1867; since then I have had railway experience off and on; I have had over 12 years of it in this Colony alone.

2075. And before that where were you? In London and in Hungary chiefly.

2076. *Mr Hoyle.*] Did your Department prepare the plans for the construction of the South Coast Railway, Mr. Deane? Yes.

2077. That line, I presume, was carried out under the supervision of your officers? Yes.

2078. Were the platforms and stations on that line made to the standard gauge of the Department? I believe so.

2079. But I presume that the gentlemen in charge of it would have direct instructions, and that your plans would show that these stations ought to be erected to gauge? Yes.

2080. Do you know if any of these platforms, upon the completion of the line, were out of gauge? I am not aware of it.

2081. Had your Inspectors to pass this work before the contractors were paid? Yes.

2082. Would it be part of his duty to examine these platforms, to see that the work had been carried out according to plans? Certainly.

2083. And did your officers report to you that everything was all right—that the platforms and stations were according to plans? They did not report to me because I was not Engineer-in-Chief at that time. Mr. Whitton was Engineer-in-Chief.

2084. But they reported to Mr. Whitton, you say: Are the reports in your office now? Not on that subject specially that I know of.

2085. Were any reports made when the work was taken over by the Inspectors? Before the works were taken over an inspection was made by the Engineer-in-Chief.

2086. Just so, and that was Mr. Whitton? Yes.

2087. Have you any reason to believe that these platforms on the Illawarra line were not to gauge—that they were not made according to the plans? I have no information on the subject. They were presumably to gauge.

2088. The whole of the platforms on the line? All that were constructed by the Railway Construction Branch.

2089. Just so. But you had nothing to do with the plans in connection with the duplication work on the Southern Line from Granville to Campbelltown? No.

2090. Had you anything to do with the construction of the duplication from Parramatta to Penrith? No.

2091. Your Department had nothing to do with that? No.

2092. But you had to do, of course, with the South Coast and North Coast lines? Yes. You mean by the North Coast Line the connecting line between Sydney and Newcastle?

2093. Yes. Can you tell me whether the structures on that line are the structures that were erected when the line was made. That is the permanent structures I mean, I am not referring to wooden platforms that may have been erected since, but I mean the permanent station buildings, were they constructed when you made the line? Some of them were.

2094. Such as Ryde, for instance? Ryde and Eastwood, and Hornsby were erected then. Carlingford is a new station.

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2095. Have you any reason to believe they were not to gauge? No.
2096. I am asking you these questions, because it has been said that certain alterations were made to the platforms because they were not to gauge? Well, they were never reported to me as being out of gauge.
2097. Never reported to you as being out of gauge at all. Do you think that if they had been out of gauge—of course it is an important thing where an engine has to pass a platform that no part of the engine should come in contact with the structure—do you therefore think that if the platforms had been out of gauge, it would have been reported to you? If it had been found out before the line was handed over, it would have been reported as a matter of course.
2098. But have you ever heard until recently that the rails and platforms were out of gauge? Well, I always believed that the work constructed by the officers of my branch is very carefully carried out.
2099. That such work has been carried out according to plans? Yes, I always believed so.
2100. *Professor Warren.*] Was Mr. Firth the engineer of the Southern line? Yes.
2101. Mr. Firth has had a large experience, of course? Yes.
2102. You think it unlikely that a man of Mr. Firth's experience would make a mistake in a simple measurement such as that involved in the width of two platforms, or the width of the rails between two platforms? Well, as you mentioned Mr. Firth, I will tell you what did occur. He was living at Arncliffe, and I noticed that the platform there had been chipped away, so I asked him to measure them, and he measured them and found that they were exactly according to plans, but the explanation that I had afterwards was that the road was out of gauge, and that it had been found easier to chip the platforms than to alter the road. The road, however, to the best of my belief—Mr. Firth can say whether it was the case or not—was placed originally to gauge, but afterwards the rails may have been shifted by the permanent way men. Under those circumstances, rather than shift the road, which would have been a heavy and troublesome matter, they chipped a little off the platforms.
2103. *Mr. Hoyle.*] We will take an instance in which a platform stands on a curve—Otford platform. If your department left that platform to gauge, the curve I presume would be a true curve? Yes.
2104. If the line moved in towards the platform, in order to bring that curve back to its former position, I presume the line should be shifted back again so that the curve would remain it its true radius? I do not think I quite understand.
2105. Take the Otford tunnel. The platform there is on a curve? Otford Station, you mean?
2106. Yes, the station stands on a curve—if the line moved in towards the station the true radius of the curve would be destroyed, I presume? Inappreciably.
2107. *President.*] Supposing the rails got moved in a little, that would destroy the trueness of the curve? It need not destroy it appreciably.
2108. Would it have been the right thing in regard to these stations to chip the platform or to put the rails in their proper position? Well, I should prefer to have the road in its proper position, but it is a question of cost to a large extent.
2109. What part of the inquiry does that tend to, even supposing the platform was chipped very wrongly?
2110. *Mr. Hoyle.*] Well, Mr. Foxlee stated that the Otford platform was out of gauge, and that by altering the rails they would destroy the curve.
2111. *President.*] Supposing that you even got these gentlemen to disagree upon what was the right thing to do what bearing has it upon the Baldwin engines—how can it show that they are unsuitable to the permanent way. One of two things has to occur either the road has to be shifted or the platform has to be chipped. How does either of these things show that the engines were unsuitable to the road, unless, as I put it before, the buildings were of such a kind as to be so absolutely mixed up with the permanent way, that you would have to look upon them as part of the permanent-way. That is to say that they were permanent valuable structures. How does this bear upon the matter—whether the rail is shifted or the platform is chipped?
2112. *Mr. Hoyle.*] Do you consider, Mr. Deane, that the permanent station structures are part of the permanent way? No, the permanent way properly speaking includes rails, fastenings, sleepers, and ballast.
2113. *Mr. Fehon.*] In reference to the question put by Mr. Hoyle just now it would appear that Mr. Foxlee is at variance with Mr. Deane, but if you will refer to question 845 you will find that Mr. Foxlee was asked, "Have you any reason to believe that the rails had not really moved in towards the station," his reply being "I am not quite sure whether any alteration was made at Otford at all, but speaking generally, it is quite possible that where the rails were found too near the platform they had slewed from their original position, and in that case we should give them the necessary clearance by slewing them back."
2114. *Mr. Brown.*] Would it not be just as well for you to let Mr. Hoyle finish and then for you to contradict him afterwards?
2115. *Mr. Fehon.*] Certainly.
2116. *Mr Hoyle* (to witness).] When you are constructing a line, do not you take into consideration the weight of the rolling stock that is going to run on it? You have to take into consideration the traffic that the line has to carry.
2117. Is there no rule which would guide you in that matter; for instance, are you guided in any way by the weight on the driving-wheels of engines? I think it is a matter for experience more than anything else. The heavier your permanent way is the more expensive it is, but the more durable it is. No one would think of running heavy locomotives over light rails. At the same time there is a certain amount of latitude allowable in the weight of the rails. I mean to say that you can run heavy locomotives like those recently imported by the Railway Commissioners over the existing rails, indeed, upon rails varying very considerably in weight.
2118. *Professor Warren.*] With perfect safety? With perfect safety.
2119. But not with economy? It would not be economical to run heavy rolling stock on very light rails, of course. If there is heavy traffic, the more material there is in the rails for wear, the greater the economy.
2120. *Mr. Hoyle.*] Do you think, Mr. Deane, that to run these engines of 92 tons weight at a high rate of speed over a 70-lb. iron rail is perfectly safe? I have not gone into that question.
2121. But do you think it is perfectly safe to run a 92-ton engine and tender upon them;—would it not have the effect of spreading the road or making it in some way unsafe? Oh, I should not think so.

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2122. We have 71-lb. rails now, have we not? Yes, but they are of steel.
2123. But we have a few 70-lb. iron rails, have we not? Yes; I think we have a few. I consider that the 71-lb. rails, screwed and spiked to the sleepers as they are, form a fairly steady road over which loads can be run at a high speed.
2124. And you do not think then that engines running at that speed with the driving-wheels weighted as those of the Baldwin engines are would tend to spread the road, or to make it in such a condition that extra expense would have to be incurred to keep them in good order? That is a matter that I have not considered very carefully.
2125. And you therefore are not at present prepared to give an opinion? I am not prepared to give an opinion.
2126. Have you any doubts about the matter at all? As to the suitability of the roads to carry these heavy loads?
2127. As to the suitability of the roads to carry these heavy loads at a high rate of speed? I believe it can be done with perfect safety.
2128. Also an engine of a greater weight—an engine weighing 97 tons—running, of couse, at a low rate of speed, at a rate of speed not exceeding 18 miles an hour, can that also be run with perfect safety on our roads? Yes; I can understand the economy of putting heavier rails in, and it is very likely that if the question of the weight of rails was considered over again, and it was known that the heavy engines would have to be used, perhaps a heavier rail would be employed. It is more economical to use a heavy rail, but at the same time a 71-lb. steel rail can be used with perfect safety.
2129. But would the running of the heavy engines over a 71-lb. rail necessitate extra vigilance in keeping the road in repair. I believe that at present three or four men are employed to look after 13 miles of road, and I want to know whether it would require an extra number of men to keep that distance in a perfectly safe state of repair, and consequently entail greater cost upon the Department, if these heavy engines were run upon 71-lb. rails? The more the work done by the roads the more vigilance and care it would necessitate.
2130. The load is about 15 tons on the driving wheel? Yes.
2131. And you think that with that load on the driving-wheel extra vigilance should be shown in looking after the permanent way? I dare say; but I suppose that whatever is necessary is done. You see I am not connected with the permanent way. I do not know that I can give you any valuable information upon the subject, but I think that the common-sense answer is,—the more work the road has to do the more in the way of maintenance it requires. At the same time the difference may be inappreciable.
2132. But they may not be running more trains now than they did before;—what I want to get at is whether the heavier trains would have the effect that I have described? To some extent no doubt they would, but I do not know that there would be very much difference due to the few tons extra weight.
2133. Well, would they knock the road about more, do you think;—would these heavy engines be liable to knock the road about more? That depends principally upon the build of engine, because light engines may knock the road about more than heavy ones. I am not prepared to give any opinion on the subject as to the effect of any particular engine in use, because I have not gone into the question at all. I have not the information at hand to enable me to give any opinion upon it.
2134. But if you were called upon to-morrow to construct a line upon which it was intended to use these heavy Baldwin engines, would you recommend the construction of a line of 70-lb. rails, either for the sake of economy or for the sake of safety? I should think it perfectly safe to do so if there were not a large amount of traffic on the line. If it were a suburban line I should certainly adopt a heavier rail, as the Railway Commissioners have done.
2135. Would that be for reasons of safety? More for reasons of economy.
2136. But would not want of stability guide you in that case?
2137. *President.*] Want of stability as regards danger is one thing, and the witness has already said that there would be no danger whatever; but want of stability with a view to economy is another thing, and taking that into consideration, he tells you that he would use a heavier rail. He therefore answers your question.
2138. *Professor Warren.*] You would be guided by the traffic, I suppose? Yes.
2139. I thought of asking you some questions with regard to the stability of the bridges, but at that time I hoped to have the report of the Bridges Commission before me. I wanted to ask you how you thought the bridges would come out when loaded with these heavy engines. I am speaking now mostly from memory, but take the Solitary Creek Bridge for example, it is a 60-feet span, and, according to the inquiry, the tensile stress in the flanges was about 5½ to 6 tons when loaded with the Consolidation engines, in fact, when loaded with 1½ tons per foot run. These engines are 97 tons, and the weight on the driving-wheels is 15 tons. Do not you think it will be necessary to increase the strength of the cross girders by some means or other, and also the main girders, or to take some means to render such bridges capable of taking these heavy loads without being unduly strained? I may say that with regard to the older structures I had a conference with Mr. Foxlee as to the best way of strengthening them, but I cannot tell you at present what conclusions were arrived at with regard to the different bridges. I know, however, that at the time we considered the desirability of strengthening a number of them. It was proposed to strengthen them indirectly by putting a beam on the top so as to distribute the weight in a better manner.
2140. That was suggested by the Bridges Commission; I believe I have a very vivid recollection of that? Yes; it is a very natural suggestion to make.
2141. And with regard to the main girders, if I remember rightly, it was suggested that a third girder might perhaps be put where the head room permitted in the middle of the road; at all events it really is proposed to strengthen the bridges which would be unduly stressed either by the Baldwin or the other engines? Yes; I believe that instructions have been given to Mr. Foxlee to prepare the necessary plans, and he told me only a short time ago that he was preparing them.
2142. If you take the wheel-base of the Consolidation engine, it amounts to 4 tons per foot run; the whole of that wheel-base could stand on a short-span bridge such as the timber viaducts;—do you not think that the timber viaducts and designs will have to be materially strengthened to carry these heavy loads? Yes; I have a new design for the timber viaducts that makes them very much stronger and better adapted to carry these heavy loads. Of course, with regard to older structures the factor of safety is reduced very much, and I do not know that anything can be done but to pull them down and build new ones.

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2143. It is the short span-bridges I am inquiring particularly about? Yes; I do not anticipate any danger on the long-span bridge, because the load is distributed.
2144. That is all I think of at present, though probably when we have certain returns before us we shall call you again? If there is anything which requires mature consideration I should be very glad to know beforehand, that I might form an opinion which would really be of value. To give an opinion at a short notice is not always very easy.
2145. *President.*] You have seen these Baldwin engines? Yes.
2146. You know the loads that they can carry? Yes.
2147. Do you know the different parts of the lines that the engines go over at present; for instance, we hear that they are running on the mountains, also on the Southern line?
2148. *Mr. Fehon.*] No; there are none on the Southern line, but there are on the Western.
2149. *President* (to Witness).] You know, at all events, the parts of the Western line that these engines travel over? Yes.
2150. Are there any bridges which it would be dangerous for them to travel over? Yes; there is the Solitary Creek bridge.
2151. Where is that? It is on the Western line, between Tarana and Eskbank.
2152. *Professor Warren.*] It goes to Bathurst, does it not?
2153. *Mr. Fehon.*] Yes.
2154. *President.*] Then I want you to tell me plainly now what you think. Do you consider it safe, considering the weight of the engines themselves, and the weight of the loaded carriages that they have to draw, for them to travel over that bridge in its present condition?
2155. *Professor Warren.*] It is a 60-feet span.
2156. *Witness.*] I do not remember what the stress would come out at. Of course, anything that is under the limit of elasticity is perfectly safe, but it shortens the life of the bridge every time a heavy load goes over it.
2157. *Mr. Brown.*] As a matter of fact, these engines do go over it, don't they? Yes.
2158. What I want to know is, whether there is any danger on that account? I do not consider that there is any immediate danger.
2159. *Professor Warren.*] But you would not like to subject a bridge of that kind to 7 tons tension? No, I would take prompt measures to strengthen the bridges.
2160. I do not say that the Solitary Creek bridge is not safe, you understand? Well, the stress would not be in proportion to the live load; it would be in proportion to the 70 tons plus the dead load, in the case of the lighter engines, as against 92 tons plus the dead load in the case of the heavier engines.
2161. As a matter of fact it is 97 tons, not 92, in the case of the Consolidation engines? The dead load would be about 12 cwt. to the foot.
2162. About that? Well, that is a little over half a ton.
2163. It is all in the report of the Bridge Commission, and I am sorry that I have not got it here. We will get it, however, and then we may like your opinion as to the stability of those bridges that are built by the Construction Branch, although you were not in charge at the time. We ought to have your opinion as to whether the various bridges will carry the load brought upon them by the Baldwin Consolidation engines without being strengthened? Very well.
2164. *President.*] With regard to the platforms, you say that Mr. Whitton gave instructions, I suppose, that they should all be built to a certain gauge? Yes.
2165. Would it have been part of his duties as Engineer-in-Chief to tell his officers what distance to put the platforms apart, and whereabouts to lay the rails? Yes, these dimensions will be seen in the drawings.
2166. Which would be either prepared by him, or done by his officers under his supervision? Yes.
2167. *Professor Warren.*] The drawings will show the position of the platforms, the position of the rails, and all particulars with regard to the buildings on the platforms? Yes.
2168. *President.*] Suppose they were really not built to gauge—suppose it was found that they varied 7 or 8 inches, how could you account for that; would it be through the shifting of the rails? Well, I cannot account for it at all. I do not know that I need account for it, because I understand that the work was done by the Existing Lines Branch, and not by Mr. Whitton's officers.
2169. But, however that may be, can you account for the variations? No, I cannot; I can understand that on certain portions of the older lines the gauge may be wrong as compared with the present gauge, because I think that before the year 1878 the gauge was narrower. The platforms were placed closer to each other where there was a pair; where there was a single platform, closer to the centre of the rail. The distance used to be 4 feet 9 inches from the centre of the road. From that date, or from some date about that time, it was made 5 feet.
2170. *Professor Warren.*] That is from the centre of the rail to the edge of the platform? Yes, previous to that time all rolling stock was generally made narrower. I believe it was then altered to suit a new type of engine, but since that time, so far as I am aware, everything that has been done by the Railway Construction Branch has been carried out to that gauge—that is, 5 feet from the centre of the rails.
2171. *Mr. Hoyle.*] And was that 5-feet gauge adopted on the Illawarra line? Yes, it was.
2172. Do you say that Mr. Firth was the officer who measured the platforms when this question came up? Yes; he was in charge of the construction of the Illawarra line—up to this side of the Coal Cliff tunnel.
2173. That is the last tunnel from here? Yes, the last of the long tunnels.
2174. And who was the officer beyond that? Mr. Alexander.
2175. *President.*] I think you wanted to ask a question, Mr. Fehon.
2176. *Mr. Fehon.*] I wanted to ask Mr. Deane whether, in his opinion, an engine of the weight of the Baldwin engine or two lighter engines put together to draw the same load would be more disastrous to the permanent-way? I dare say one good steady engine strong enough to carry its load would be less on the permanent-way than two lighter engines.
2177. With regard to the bridges, we shall be prepared to give you all the information you asked for in evidence. We have had reports of all the bridges and railway structures made since the arrival of the Baldwin engines.
2178. *President.*] Very well; that seems to be a very important matter, because if these engines were unsuitable to the bridges, then it would amount to the fact that they were unsuitable to the permanent-way.

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2179. *Mr. Fehon.*] Yes; the surface of a bridge might be considered permanent-way.
2180. *Professor Warren.*] I think so, certainly for the purpose of this enquiry.
2181. *Mr. Fehon.*] With regard to the proposed tests of engines, the Railway Commissioners seem to think that after the evidence we shall be able to place before you, you may consider that there is no necessity for any of these trials.
2182. *Professor Warren.*] For any trials?
2183. *Mr. Fehon.*] Yes, for any trials; we hope that we shall be able to give you such substantial information in regard to these engines and to the other engines—because every engine has its maximum load, and we can tell you what their performances are under these loads—that it will be unnecessary for you to make the experiments.
2184. *President.*] Perhaps Professor Warren will hear the evidence and then decide the matter.
2185. *Professor Warren.*] If we can get out of making the trials so much the better.

TUESDAY, 26 APRIL, 1892.

(*The Commission met at 2 o'clock in the Board Room, Colonial Secretary's Office.*)

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

Edwin Molloy Halligan, being sworn, saith:—

Mr. E. M. Halligan. 26 April, 1892.

2186. I am divisional engineer on the norther division of the railways. I have been seventeen years and three months in the railway service.
2187. *Mr. Hoyle.*] Since you have been divisional engineer in the northern district have any alterations or additions been made to the platform at Murrurundi and Farley? Yes.
2188. Can you tell us when these additions or alterations were made? I could not from memory tell the exact date.
2189. Were plans issued for the work from your division? No; not from my office, but from the head office.
2190. I presume such plans would be seen by the head engineer? Yes.
2191. *Mr. Brown.*] Try and fix some date if you can, he may give you the year or month.
2192. *Mr. Hoyle.*] When was it? About fourteen months ago, I should say.
2193. Have there been any addition since that? No; I think not.
2194. Have any additions been made to the structure or permanent-way since the Baldwin engines came here? No.
2195. Have you made any alteration to them since the Baldwin engines came to Newcastle. We made some alterations to the buildings, but not to the platforms.
2196. You are quite sure? Yes.
2197. Did you accompany other officers on a trial trip of the Baldwin engines to the north? Yes; I did. I was away about four days altogether.
2198. What was that trial for? To see if she would go over the lines and through the stations properly, and to give her a trial run was what I understood from the locomotive engineer.
2199. Was it necessary after this trial to do anything to the platforms to permit these engines to go by with safety? No; nothing was done since.
2200. Then you say positively that no alterations were made to the Murrurundi and Farley Platforms since the engines came here? Yes, I say so.
2201. *Mr. Brown.*] Were any alterations made prior to the engines arriving? Yes.
2202. How long before? They were altered six months before, and some up to date of arrival in Newcastle.
2203. Were many of them altered? A great number of the platforms.
2204. Nearly all of them? Yes; nearly all on the old line.
2205. When were these alterations begun? About fourteen months ago.
2206. January, 1891? Yes; I think that is the date about fourteen months ago.
2207. You know the Baldwin passenger and Consolidation engine;—I presume you know their weights? Yes.
2208. They are, I think, 92 and 97 tons respectively? Yes, I believe so; the one is 92 tons and the other somewhat heavier.
2209. Do you think, as an engineer, that the running of these engines at a high rate of speed, (say) 20 miles an hour, would in any way injure the road? No; certainly not.
2210. You do not think it would have an injurious effect upon the permanent-way, such as spreading or causing extra repairs, or requiring extra vigilance for watching the road? No; I am certain from my experience that it is not so.
2211. But you have had very little experience of these engines upon that road, because, as a matter of fact they have run for a very little time upon it;—have you had any experience of engines of a similar weight? Yes; the couple engines.
2212. The old Consolidation you mean? They did more damage to the road.
2213. Why? I do not know; but the effect is not so great now—not so great as formerly, but what the reason is I cannot say.
2214. *Professor Warren.*] They weigh 75 tons, I believe? Yes, I believe so.
2215. *Mr. Hoyle.*] Did they affect the road injuriously? Yes.
2216. But these engines are heavy, and yet you say that they had no injurious effect upon the roadway? Well, they did not give the same trouble to the men.
2217. How long were these engines running upon the Northern line? Well, they have been running on and off.
2218. Have you any running now—I mean the Baldwin passenger engines? Yes; I have seen them within the last fortnight myself. They have been running from Newcastle to Sydney occasionally.
2219. *Professor Warren.*] Was it the express train. I do not know. It was the Saturday afternoon train

2220.

2220. *Mr. Hoyle.*] Do they run regularly now? No.
2221. Well, how long were they running from Newcastle north? They have not been running from Newcastle north at all. I have not any information as to that at all. I am only giving information with regard to their running between Newcastle and Sydney.
2222. Do you consider that under the circumstances, considering that they have been running so short a time, you have had sufficient opportunity to form an opinion? Yes; I have formed my opinion as I have given it to you.
2223. Then it is your opinion that these engines have no injurious effect upon the road? No more than you would expect any ordinary engine to have. You must expect all engines to have some effect on the line.
2224. Would the running of these engines without any extra supervision would you not say put the road in state of disrepair and make it dangerous? Certainly not.
2225. *Professor Warren.*] You stated that the Consolidation engines which the Baldwin Engine Company supplied some time ago are 75 tons weight, and some of them, I understand you to say, would have a greater effect upon the road in causing spreading and in requiring repairs than the new passenger engines we are dealing with? Yes; that has been my report, sir.
2226. Do you not think that it is somewhat remarkable they are built by the same firm and have the same ratio; the only difference is that one is heavier than the other? The engines which ran the express trains prior to the Baldwin engines were coupled; we had two coupled together.
2227. Oh, then what you mean is that two engines coupled together had greater effect upon the roadway than one of the Baldwin engines? Yes.
2228. I understood at the time that you referred to one of these 75-ton engines, then what you do mean is that two of these engines coupled together produce a greater effect upon the roadway—far greater? Yes.
2229. *Mr. Hoyle.*] I understood you to mean that the old Consolidation engine, weighing about 75 tons, had a worse effect upon the permanent way than the engines now run? I meant the express train—the two engines coupled together, as to one of these engines and the Baldwin engine I could not have any means of comparison.
2230. You have had engines running express without the assistance of another engine? Yes, and some of them are running now. The English engines are running in the service now. The last engine which came here.
2231. Is it running occasional trips? Yes.
2232. *Professor Warren* (to Mr. Hoyle).] But you were making the comparison, as I understood it, between two engines coupled together and the Baldwin engine? Yes, that goes without saying.
2233. *Mr. Brown.*] You told us that nearly all the platforms had been altered in the north—why was that? In order to get uniformity of gauge, I understood. There was a conference of engineers in Mr. Goodchap's time—in 1888, before the line was opened to Hawkesbury. Before I took charge of the northern district the platforms were all different gauges, and he wanted uniformity in them.
2233½. When was this work absolutely commenced? About twelve months afterwards—about June.
2234. Were these platforms altered prior to the importation of the Baldwin engines? Yes.
2235. Do you know whether they were altered before you started on the trial trip of which you have spoken? Yes, I know that they were all altered.
2236. You did not see the engines touch anywhere? No.
2237. Did the cab of the engine touch any of the platforms? No, it did not touch anywhere, but it was very close at some places. It was close at Cockle Creek.
2238. Were any alterations made after this trial trip? Yes; spouting was lifted about 3 inches at East Maitland and Cockle Creek.
2239. So far as you know, did these engines give satisfaction? I do not know, sir. I could not express an opinion upon that.
2240. Could you express an opinion whether they were suitable for our permanent way? Yes, sir.
2241. You have no hesitation in giving a qualified opinion that they were suitable in every way? Yes.
2242. *Professor Warren.*] You say that certain platforms were altered upon the Newcastle and Sydney line. Well these lines have not been very long opened but the platforms were built originally in Mr. Whitton's time;—do you imply that Mr. Whitton's officers built them out of gauge? I do not imply that, but I found them slightly out of gauge. The road may have been built out of gauge, but I cannot say the reason why they were slightly out of gauge, as a matter of fact.
2243. Did you measure between the platforms? No, sir, I measured from rail to platform.
2244. Well, what was the greatest difference? I said that I measured from rail to platform, but I may add that in the case of a double line with big platforms we would measure over all.
2245. What you have said practically amounts to a charge that the Construction Branch constructed these lines out of gauge, and later on we shall have to ask some questions about that; but did you find any great difference between them? No, only in one place did we find any considerable difference. The difference might arise from pulling or setting out.
2246. Then you would not say the Construction Branch built the structures out of gauge? No, I would not say so. The difference was so trifling on the Sydney line, and the other lines are all old things, that from Newcastle from 30 to 35 years old—they were built any way, old wooden platforms. Some of these were 2 feet and 2 feet 6 inches from rail, and 3 feet to 3 feet six inches high.
2247. *Mr. Brown.*] Did you measure the Newcastle station? The Newcastle station is very shallow—being of a curve, the steps of the carriages might catch as the train came round quickly.
2248. *Professor Warren.*] What was the biggest alteration you made so far as you can remember? Taking it from the rail, I should think about 4 inches would be the greatest.
2249. *Mr. Brown.*] You remember the young fellow with you on the trial trip named Robertson? Yes, sir.
2250. Did he observe a small contact when you were passing by Maitland. He says in answer to the question, "Were you watching throughout, and are you speaking of your own knowledge when you say it did not touch any of these verandahs or platforms? I say it did not foul any of them. Did it not hit any of them? No. Did it not knock any portion away? No; not that I am aware of." Well, would that be incorrect so far as East Maitland was concerned? It would not be incorrect, sir, because I said we passed there very close—and we were going slowly; if we had passed there going fast we might have touched.

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2251. *President.*] And therefore it would be wise to take down those parts of the structure that touched or nearly touched? Yes.
2252. *Mr. Hoyle.*] Do you remember if an engine went out of Newcastle with a gauge fastened to the buffer stock? I do not remember it, but I understand that it was so.
2253. *Mr. Fehon.*] I have already objected to this question previously—the engine Mr. Hoyle is asking about is not a Baldwin engine.
2254. *Mr. Hoyle.*] What I want to point out is that this gauge was put on to show the size of the Baldwin engine cylinder so that the necessary alterations might be made before the Baldwin engines were sent out; I want to show that that was the object of having the gauge fastened to the buffer stock.
2255. *President.*] If that is so, and Mr. Hoyle wishes to show that this engine was made the same width as the Baldwin engine by putting a bar across it, in order, as he says, that these alterations might be made prior to the Baldwin engines being brought out here, would not that be evidence, Mr. Fehon?
2256. *Mr. Fehon.*] My object in making the objection was to limit the inquiry to the question of the Baldwin engines themselves.
2257. *President.*] Well, practically, are they not trying to make out that this engine was the same as the Baldwin in its effects.
2258. *Mr. Fehon.*] I do not want to object except to limit the inquiry.
2259. *Mr. Brown.*] I should have thought it would be a right thing to do to test these platforms before the arrival of the engines.
2260. *Mr. Hoyle.*] Will you tell us, then, why, having already put the platforms to gauge, why such an engine should be sent out to try the platforms and ascertain their gauge?
2261. *Witness.*] I have not any reason, the first engine I know anything of, so far as ascertaining the gauge of the line, was the Baldwin engine itself.
2262. Was there any doubt about the Baldwin engine being so wide that the cylinders would come into contact? I was satisfied that they could not.
2263. Was it to try the engines over the road as much as to test the gauge of the platforms that this trip was made? My instructions were to try the platform.
2264. Then there was a doubt on your mind? My instructions were such as I have said, and I carried them out. I put the lines back to a uniform gauge.
2265. If you had been consulted about sending this engine out with the gauge, you would not have recommended it? I did not think anything about it, and I did not know anything about it till it came back.
2266. *President.*] Would it not be a proper precaution to take to have a practical test made? Yes; it would be better, I think, sir.
2267. *Mr. Brown* (*placing document before witness*).] Look at these figures. Judging by those figures, how much do you think the Newcastle Station would be out of gauge? I should think 4½ inches.
2268. What does this "cant" mean? That is to allow for the curve.
2269. These are the figures supplied by the Railway Commissioners, showing the difference between the platforms and the uniform gauge. Now, as a scientific man, how much is the Newcastle line out? These are the old measurements.
2270. Bringing it into line again—bringing this platform to gauge—you would have to make some alterations, would you not? The Commissioners, I understand, wanted to bring all the lines into uniform gauge in accordance with the Board of Trade Regulations.
2271. Now, I ask you how much would be required to bring the Newcastle line to this uniform gauge? Four and a half inches, sir, I think, to make it to the 2 feet 8 inches—that is the uniform gauge. It formerly measured 2 feet 3½ inches. Now it would be 2 feet 8½ inches.
2272. What was the size of the coping-stone you removed from that station? About 9 inches wide, I think, sir.
2273. I do not understand this uniform gauge, why should it be necessary to take up a coping-stone of 9 inches in width in order to add 4½ inches to the gauge? We only moved it back, sir; we did not take it up. We put it back 4½ inches from the edge.
2274. I see, that leaves it now 4½ inches more than it was? Yes.
2275. *Mr. Hoyle.*] Is your gauge now from the edge of the platform to the top of the outer edge of the rail 4 feet 9 inches? No, it is 2 feet 8 inches; the whole line would be 5 feet.
2276. Do you know that the English standard gauge is 2 feet 2⅜ inches?
2277. *Mr. Brown.*] Where is that measured from?
2278. *Mr. Hoyle.*] From the top of the platform to the outer edge of the rail next to the platform. In England the gauge overall is 4 feet 9 inches, but taken from the coping-stone to the outer edge of the nearest rail is 2 feet 2⅜ inches.
2279. *Mr. Brown.*] Do not the Railway Commissioners measure the distance from the centre.
2280. *Mr. Hoyle.*] I suppose they do, and from the inner edge also.
2281. *Mr. Fehon.*] You might explain that prior to the Commissioners taking office you represented to the Engineer for Existing Lines that many of the platforms were out of gauge, and pointed out the desirability of bringing them into gauge.
2282. *Witness.*] Yes, I did do so.
2283. *President.*] He said, I understood, that this was done in the year 1888? Yes.
2284. *Mr. Brown.*] He was, I understand, the first to draw attention to it.
2285. *Witness.*] I wanted the whole of these alterations to be made at once, but the late Commissioner said no, that they should be done as the men were available for the purpose. It has been a stock job, and we have done it as opportunity enabled us.
2286. *President.*] You set about it in June, 1888? Yes, it was in June, 1888.
2287. *Mr. Fehon.*] The Commissioners took office in October, 1888.
2288. *Witness.*] My answer came from the late Commissioner, Mr. Goodchap.
2289. *President.*] When was it put earnestly in hand to make a regular job? I think about twelve months after that. As nearly May or June in 1889 as possible. It was then begun as regular business. We had been pottering at it up to that time.
2290. It was then you made a regular job of it in order to do the matter out of hand? Yes; and I think it was about 1891 before it was finished completely.

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2291. Was it towards the end of that time that the work was hurried on? Yes, it was finished off rather quickly.
2292. Why? I do not know.
2293. *Mr. Fehon.*] I admit that the work was hurried on in anticipation of these engines coming. It was hurried on at the last in consequence of the Baldwin engines being brought out.
2294. *Mr. Brown.*] In consequence you say of these engines?
2295. *Mr. Fehon.*] It was not begun on account of them, but it was hurried on on account of them.
2296. *President.*] Do you know whether any of the Baldwin engines are running on the Northern line beyond Newcastle? Not regularly. There have been a few trips made by them on that line.
2297. Have they run as far as Wallangarra? Yes, I have taken one right through there.
2298. *Mr. Hoyle.*] With a train? No. I do not know the traffic there on that part of the line. I do not know how far they go once they leave Newcastle.

Mr. John Love, being sworn, said:—

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2299. I am an Engineer, and served my time in that calling. I have been nearly fourteen years in the Railway Service of this Colony. Thirteen years and six months, I think, is about the exact time. I was leading fitter, but now I am advanced to S. S. Inspector, Junee.
2300. *Mr. Hoyle.*] Since you have been stationed at Junee have any of the Baldwin engines come under your notice;—have any of them run beyond Junee? Yes; between Junee and Goulburn.
2301. Since you have been there did a bogie axle break at the Junee Station? The right trailing bogie axle failed in the yard after it had left the down express.
2302. *Professor Warren.*] What speed was it going at? I do not think more than a mile an hour.
2303. I merely wish to know whether it was running fast or not at the time the axle broke? It was running, I think, at about the rate of a mile an hour.
2304. *Mr. Brown.*] Do you know the rate at which it was going before it came into the shed—the rate during the trip? I do not know.
2305. Cannot you give us some idea of what it was? It would run at the rate of over 30 miles in some places.
2306. It would be 20 or 30 miles, eh; I only want to know the average rate of speed that a train like that would run between these places? It would run from 30 to 35 miles an hour I should think.
2307. *President.*] How many days or weeks had it been running in this service? It was in the district, I think, not more than three weeks.
2308. *Mr. Hoyle.*] How long was it from the time you unhooked the engine from the train—which was an express, I understand? Yes.
2309. Was it full of passengers? I could not say.
2310. Was it full? I cannot say.
2311. How long a time elapsed between the engine leaving the express train until the axle broke? About ten minutes.
2312. Did it not break whilst it was going from the train to the sheds? I could not say. I was in bed at the time.
2313. What report reached you? I was called out of bed and was told that the engine had been derailed. I got up at once and went there, and discovered that one wheel was off—that is to say, the axle had parted.
2314. Is not there an incline coming into the Junee Station? Yes.
2315. And what speed was the train coming down that bank to the station at? Well, at about 30 miles an hour.
2316. Then you say that this wheel broke just after the engine had been taken off the main line?
2317. *President.*] He says he does not know exactly when it broke—is not that so? Yes; I could not say whether it twisted or broke, but it came off from the state of heat.
2318. *Mr. Hoyle.*] What was the consequence; was the train disabled? No; it was going on to Albury by that time.
2319. Well, I mean the engine; was it disabled when the axle broke? Yes, partly; but by a little work I was able to run it into the shed easily enough.
2320. Well, suppose the axle did break coming down the bank at 30 miles an hour, what would be the result? I cannot say. It might have been a considerable accident, but I do not think that human life would have been endangered.
2321. *Professor Warren.*] What was the position of the axle? It was the right trailing-wheel of the bogie, or truck of the engine.
2322. *Mr. Brown.*] And he says that he does not think that an engine coming down a bank at about 30 miles an hour would endanger life if its axle broke.
2323. *Professor Warren.*] That is a matter of opinion.
2324. *Mr. Brown.*] Yes; I would not have liked to have been on it at the time.
2325. *Witness.*] The brake would have stopped the train in the length of itself—the application of the air-brake would have brought the train up within a length or a length and a half of itself.
2326. *Mr. Hoyle.*] But if the engine had gone over, and carried the carriage with it, what about the brake-van? There was not much chance of that.
2327. *President.*] I think there was no need for that question, Mr. Hoyle. We have common-sense enough to see that if an engine went over a bank and drew the train with it what would happen.
2328. *Professor Warren.*] I really do not think, Mr. Hoyle, it is worth while asking questions as to what will happen.
2329. *Mr. Brown.*] The only thing is this, that if a train is going at the rate of 30 and 35 miles an hour, and can be pulled up within the distance it is said it can be without danger to any passengers, then it does not seem to matter what kind of axles these engines have.
2330. *Mr. Hoyle.*] No; they may be wooden axles for the matter of that.
2331. *Mr. Brown.*] Exactly.

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2332. *Mr. Hoyle* (to witness).] How did you find these engines;—in what condition were they? They were just like other engines, with little defects in their details, which required to be seen to in order to bring them into working order; but you find that in all engines.
2333. *Mr. Brown.*] You would not call a broken axle a little defect, would you? No; not at all.
2334. *Mr. Hoyle.*] How long have you been stationed at Junee? About two years, and I was at Goulburn before that, and Penrith and Bathurst before that.
2335. What experience have you had of other new engines, besides these, within the last six years in the Service? I have had the same experience as others in the same capacity.
2336. When did the last new engines come—the Scotch Yankees? I have had nothing to do with them. I had something to do with the Vulcans.
2337. Did you find with regard to them that there was as much trouble and cost in repairing as with regard to the Baldwin engines? Well, we had a lot of trouble with them, and have a lot of trouble still.
2338. How long is it since they came here, a considerable time? Yes.
2339. And you have had no experience with new engines since then? No.
2340. What was the matter with the Vulcan engines? The valve gear was defective in them.
2341. *Mr. Fehon.*] I must object again to inquiries being made about engines not concerned in this inquiry.
2342. *Mr. Brown.*] Do you not see how it arises—the witness says the repairs were not more than those required for other engines, and how can we compare these repairs unless we have some information with regard to the repairs made to other engines.
2343. *Mr. Fehon.*] We will submit the cost of repairs in any case with regard to the Baldwin engines or other. We shall give actual facts, and not mere opinions.
2344. *Professor Warren.*] I think the question is quite legitimate.
2345. *Mr. Fehon.*] The witness knows that a certain piece of mechanical work is to be done, but other people keep the cost of doing the work against the various engines, and these items of cost are gathered together, not only from Junee, but from all the running sheds on the road.
2346. *Professor Warren.*] The question in my opinion is a right one to ask, it is another matter whether the evidence may be of any importance after or not.
2347. *President.*] I think you may ask the question, Mr. Hoyle. You say, I understand that the Baldwin engines required certain repairs, and he says that all engines require some alterations in detail. I think now you have a right to ask whether he knows of other engines, and if so, what repairs they require.
2348. *Mr. Hoyle.*] What did you find in this instance were the defective parts? They were not long enough there for me to get at the bottom of all their little defects.
2349. How long were they there? About three weeks.
2350. Do you not think, looking the fact in the face, and seeing that the engines were there only for three weeks, that the repairs were excessive, I mean the repairs that had to be effected to the engines in that time? No; I do not think so.
2351. Of what engine are you speaking now? I am speaking of the passenger Baldwin engines.
2352. You do not think the repairs were excessive? No; I do not think so.
2353. Was there any bogie axle broken at Yass? I believe there was.
2354. Was this engine attached to the passenger train? I do not know.
2355. Is that in your district? No; it was in the Goulburn district. It was, I believe, a Junee engine, at least, so I heard.
2356. Was there any trouble in regard to any of the axles of the tenders? No; not the slightest.
2357. Did you examine the wheels in any of these engines? No.
2358. Did you find any apparent defects in them? Yes; I saw what appeared to be cracks, but on sounding them, they appeared to be quite right; I sounded them with a hammer.
2359. Do you know how these tires are fastened on? Yes; they are shrunk on.
2360. Now, do you consider that when that tire was turned down to its extreme point, when you came within half-an-inch of the set screw when the tire was worn down that much, that the wheel would be safe? There is no wheel safe, if it is turned down too much.
2361. Well, would not the English wheels with the tire turned down the tire in the same way be safe? They do not go down so much. I think they go about 1¾ inch in the thread.
2362. Do you think such a wheel would be perfectly safe? Yes, I do.
2363. *President.*] What do you mean by turned down? I mean turned down in the lathe.
2364. *Professor Warren.*] A smaller diameter.
2365. *Mr. Hoyle.*] Was there any order whilst these engines were running in your district that the speed should be reduced to 20 miles an hour? No.
2366. Do you know of any breakages in connection with the draw-gear whilst these engines were in your district? No, never.
2367. Did the reversing-gear give any trouble? Not the slightest.
2368. Or the brake-gear? The brake gear is good.
2369. Do you consider, as an engineer, that the brake-gear on these engines is strong enough as it is? On the passenger trains it is quite strong enough.
2370. *President.*] When the bogie axle broke did you look at it and examine it at all? Yes, I saw it.
2371. Did you seek to find out what was the cause of the accident? I could see the cause of it.
2372. What was it? Being over-heated.
2373. Did you keep the axle or did you send it on to Sydney? It was sent on to Sydney that very day.
2374. You did not experiment with it to see what sort of stuff it was made of or anything of that sort? No.
2375. *Professor Warren.*] He would not be allowed to do that.
2376. *President.*] How long have you been a fitter? I have been twenty-eight years in the trade.
2377. And you have seen many new engines? I have had a varied experience. There are always some little things to be done in a new engine, there is no such thing as a perfect engine, I have never seen one yet.
2378. You only found out its defects by practice and use? Yes.
2379. Do these Baldwin engines, so far as you can judge, show more of these defects than other engines? Well, they have more pieces about them than an English engine—in consequence they are more liable to shake to pieces, but whilst they are new I do not think they are very much trouble, not more than other engines to keep them right.

2380.

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2380. Looking at this as a new engine and remembering that there are always some little defects in these engines until you get them into proper running order, can you say that there were more little defects to remedy than in others? Well, no; I cannot say so.
2381. *Mr. Brown.*] Are you satisfied with the performances of these engines? Well, they work very satisfactorily; I have ridden on them and thought that they worked very satisfactorily.
2382. Do you consider them safe and suitable for the permanent way of the Colony? Yes, at a restricted speed.
2383. Do you think you could get better engines for the work they have been doing? Yes, I think I could get better engines.
2384. Which? Some of the Scotch, I think.
2385. Do you think they would do the work just as well as these? Yes.
2386. And not better? Yes, better sometimes.
2387. *President.*] Do you believe in English engines? They are more compact.
2388. *Mr. Brown.*] You are better used to Scotch and English engines perhaps? Yes; I have had a good deal of experience of American engines here, and I have no reason to be dissatisfied with them, they do their work well, and the repairs are not excessive.
2389. *President.*] But you like the Scotch engines better than the American, eh? Well I have built some of the Scotch myself.
2390. Do you like them better than the English? Well, I cannot say I like the English better than the Scotch.
2391. *Mr. Hoyle.*] Whilst the express service was running in your district two engines were required of any description, other than the American engines, to draw them? Yes. When the American were stopped they were pulled by two engines, the trains were so heavy; I had to use two engines to do the work of one American.
2392. Why were they taken off? I cannot say.
2393. *Mr. Brown.*] They gave you every satisfaction, you say, and they were doing the work of two engines.
2394. *President.*] He said that for the work they were doing one American engine could do the work of two others.
2395. *Mr. Brown.*] I understood you to say that when they took off the American engines from the express service they had to put on two ordinary engines to do the work of one American engine, and yet you cannot say why they were taken off? I think they were stopped from running pending the examination of the axles. I cannot say all the axles, the axles of the bogie wheels at all events.
2396. These engines have been replaced in your district, have they not? No.
2397. *Mr. Hoyle.*] Have you any experience of the Scotch-Yankee engines? Yes; I have seen them work and I have ridden on them.
2398. Do you consider the Baldwin engines as better than they are? I do not say that.
2399. Do you consider that the Baldwin engine is better than the Scotch-Yankee? I cannot tell that, I have not had the experience.
2400. *Professor Warren.*] I do not think that I would ask these questions, Mr. Hoyle, they do bear upon the inquiry in a sense, but they are so remote that I do not think that any answer you get would be of any great value.
2401. *Mr. Hoyle.*] Can you tell us how many of these engines were in your charge? Nos. 453 and 456. No. 452 is the one that broke down at Junee and No. 456 failed at Yass.
2402. *Mr. Fehon.*] It might perhaps save a little time to the Commission and all of us if it were borne in mind by Mr. Hoyle that the Commission admit that the bogie axles were defective, and have had to be supplied and have been supplied at the expense of the Baldwin Engine Co. This person has been brought here several hundred miles to tell the Commission what we already admit that these bogie axles were defective.
2403. *Mr. Brown.*] But he can tell us the circumstances under which the bogie axles were broken.
2404. *Mr. Fehon.*] We admit that the bogie axles were broken.
2405. *President.*] That is admitted, I understand. The bogie axles when they came here were bad, and have since been replaced.
2406. *Mr. Hoyle.*] I wish to show not only that one broke at Junee, but also that one broke at Yass. I think it is for you to ascertain whether there was any negligence or not in not taking these axles off immediately after the breakage.
2407. *President.*] Our duty you understand is to find out whether these engines were or are defective, whether they are suitable or unsuitable to the permanent way, and whether they are doing or are not doing the work they were expected to do; and I understand you to say with regard to the latter words of the Commission that they were not doing the work they were expected to do, that you were not prepared to bring any evidence on that point.
2408. *Mr. Hoyle.*] I said that I never said that they were not doing the work that they were expected to do, nor did I ever hear anyone else say so, and I pointed out that I was in fact making certain charges and my contention was that the Commission should try the charges I had made.
2409. *President.*] There is no charge that I know of under which what we seek to show now would be evidence. We cannot go on to inquire whether the railway people have been guilty of negligence in running something that they knew to be defective. There is nothing of that kind in any of the charges. It might perhaps be a very good thing if the whole question whether the department ever showed any neglect in its administration should be gone into, but our Commission is not so worded. We have only to determine whether they are defective or not suitable or not doing the work for which they were ordered.
2410. *Mr. Brown.*] Did I not understand that you proposed to give evidence as to certain allegations against the Commissioners, which you said had been made in the Press, that you intended to call some of the reporters in connection with this business—how then can you say that you have abandoned the charges contained in the Commission. Did you not allege that the Commissioners asserted that they were going to do certain work, and that you would prove from the reporters that these reports came from the Commissioners, and that these communications had not been borne out by facts?
2411. *Mr. Hoyle.*] I take up my position from what was in the public Press, and it was alleged in the Press, through the medium of inspired paragraphs, that these engines were going to do double the work of the old ones.
2412. *Mr. Brown.*] Well, is that not included in the last part of the paragraph? 2413.

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2413. *Mr. Hoyle.*] I say that, as a matter of fact, they were not intended to do double the work, and what I intend to call the reporters for is to show that they were brought here to run the express service, and that they were afterwards taken off, and also that if they have had double the work put upon them that the draw-gear would become unsafe. I say they were brought here for the express service, and were afterwards taken off that service.
2414. *Mr. Brown.*] Well, then, will you go on with the last part?
2415. *Mr. Hoyle.*] Yes, I will go on with it.
2416. *Professor Warren.*] We have put the tests aside, and we are now waiting for evidence as to what is really the power of these engines, and when we get that evidence from the Commissioners we shall decide whether these engines are doing the work they are expected to do or not.
2417. *Mr. Hoyle.*] Then I will withdraw my objections with regard to the last paragraph.
2418. *Mr. Fehon.*] As to the negligence in keeping the engines at work after these axles had broken, it might clear the way, if I stated now that three axles which were broken broke within eighteen hours of each other.
2419. *Mr. Hoyle.*] I ask why were they not immediately withdrawn from the passenger traffic.
2420. *Mr. Fehon.*] The passenger engines were immediately withdrawn, every one of the Baldwin engines was stopped from running a mixed or passenger or a mixed train from that time.
2421. *Mr. Hoyle.*] Were they stopped from running a goods train?
2422. *Mr. Fehon.*] Possibly not.
2423. *President.*] Supposing, Mr. Hoyle that you wanted to make a suggestion that these trains were run with neglect, has that anything to do with the matter we are inquiring into?
2424. *Mr. Hoyle.*] Yes; I think so.
2425. *Mr. Fehon.*] I thought it my duty to make the statement that I have.
2426. *President.*] I understand, Mr. Fehon, you wish to state the facts you have referred to on account of the Press being here, and that without your explanation an erroneous impression might be conveyed to the public.
2427. *Mr. Fehon.*] Yes.

John Fullerton, being sworn, said:—

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2428. I am an engine-driver at Bathurst, and I have been twelve years in the Railway Service of this Colony, up to the 20th of January last; I began as an engine-cleaner, then became a fireman, then a driver. I have been driving for twelve years, come the 1st of June next; I drive from Bathurst to Penrith, and I was driving until a month ago from Sydney to Bathurst, and from Bathurst to Sydney.
2429. *Mr. Hoyle.*] Did you drive one of the Baldwin engines? Yes.
2430. Could you tell us whether you had any trouble as a driver with those engines? No, I had no trouble with the running of the Baldwin engines.
2431. Have you had any failures in any of their parts? Yes. I had one failure, the eccentric-strap broke.
2432. When was that? On Good Friday last.
2433. Did that engine break down—was she disabled? Yes, on one side.
2434. Did you drive her further? Yes; I took her to Penrith with a passenger train with another engine attached.
2435. Another engine having to be sent for? Yes. It went from Mount Victoria to Hartley Vale.
2436. Was that in the Penrith district? No; I do not think so.
2437. Do you know whether the engine came from Eskbank or not? No; it came from Mount Victoria.
2438. Where did you break down? Hartley Vale.
2439. A telegram had to be sent on for assistance? Yes; I was sending my fireman by the trycicle, and I wanted them to be ready on the arrival of the man, so as the engine would travel with all possible speed.
2440. That is the ordinary precaution of the driver to take in this case? Oh, yes; we do that to expedite the work.
2441. Have you had any failures of the draw-gear? No.
2442. Any of the reversing-gear? Yes, one. The back pin of the reversing screw.
2443. Do you mean the fulcrum pin? No, that is in the middle. It was the back pin of the reversing-screw.
2444. Did you ever receive a notice of this kind:—

Notice to Drivers.

The number of broken draw-hooks is increasing considerably notwithstanding all that has been done in the way of strengthening the draw-gear. It is feared that drivers are depending to much upon the increased strength of the draw-gear, and are becoming less careful. The application of the steam-brake is a frequent cause of broken draw-gear. This brake is only for use in emergencies and should not be depended upon for ordinary purposes. It has been decided that all cases of broken draw-gear shall be printed in the minutes of the Traffic Conference, when all particulars, including the names of the men concerned, will come under the notice of the Commissioners.

2445. *Witness.*] Yes, I remember some such notice as that, Mr. Hoyle.
2446. *Mr. Brown.*] What are you seeking this information for?
2447. *Mr. Hoyle.*] It has been alleged that the failures in the draw-gear were owing to the carelessness of the drivers in applying the brake, that is why I am getting this notice in, it were issued before the Baldwin engines were imported.
2448. *Mr. Brown.*] All right.
2449. *Mr. Hoyle.*] Do you know whether any draw-hooks or many of them have broken in connection with these engines in your district? I do not know of any.
2450. Is it a fact that when this draw-gear breaks it does so through the carelessness of the drivers by jerking their engines or putting an undue strain upon the hooks? Well, if I were to break a draw-bar I should be able to tell you, but I have not, if I had broken this draw-bar I should be able to tell you whether it was broken through want of experience on my part or not, as a matter of fact I have only broken about two draw-hooks in twelve years, so that I do not think that I can be put down as anything but a very careful driver.
2451. *Mr. Hoyle.*] I am glad to hear that, because I have understood that you people are always breaking draw-hooks.
2452. *Mr. Brown.*] Some of them are pretty good at it. *Witness.* I can only speak for myself.

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2453. *Mr. Hoyle.*] Do you think there is much carelessness amongst drivers in this matter?
2454. *President.*] What does his opinion about other drivers matter? If you can get the other drivers themselves to prove that they have broken draw-gear, well and good; but his opinion is nothing on a point like that.
2455. *Mr. Hoyle.*] Can you tell us generally whether these men are careful or not? I cannot say anything but that they are a careful class of men, because before going to driving they are examined on their merits, as to whether they understand their business or not, and also examined as to the Westinghouse brake, and supplied with a pamphlet showing how they are to use them; very often firemen are promoted from the foot-plate of passenger-engines, and they have every chance of seeing how the brake works; these men before promotion are examined by the Locomotive Inspector, and as I have said, supplied with a copy of this pamphlet.
2456. You can assert positively that no brake-gear—I mean the rod attached to the brake—has been broken so far as you are concerned, by any carelessness in applying the brake? I am quite sure of that.
2457. *Mr. Fehon.*] It applies to every engine, not only to the Baldwin.
2458. *Witness.*] Of the two draw-hooks I have broken, one was about ten years ago, and the other about six years.
2459. *President.*] Did you drive a Baldwin engine? I have been driving Baldwin engines for about the past twelve years, sir.
2460. But I refer to the recently-imported Baldwin engines? Well, I have had one of the new ones from the 31st December, 1891.
2461. Up till now? Yes.
2462. Well, what do you say of them, as an engine-driver? Well, my opinion would be borne out by results of what I have done. They are good engines, capable of doing their work, capable of doing the work they have been imported to do, if not more. I have done more than I have been asked to do with them.
2463. Did you find the draw-gear defective? No; one of the strongest draw-gear of any engine in the country.
2464. Did you find anything wrong with the reversing-gear? Well, sir, one pin broke.
2465. Is that easily remedied by a larger pin being put in? Yes; I think it could be.
2466. Is it very serious? Well, it is serious, and it is not. It is a matter of delaying an engine a little while. I was only booked 4 minutes late by the guard on account of the breakage.
2467. *Mr. Brown.*] As a driver, did these engines give you any satisfaction? Oh, yes; the engine I have driven gave me every satisfaction; I have had only one warm bogie-box since I have had her; they do their work admirably.
2468. *Mr. Hoyle.*] What is the number of your engine? No. 454. I have run her up to 42 miles an hour.
2469. Have you run any of the other ones? Yes.
2470. Was it the same as the other—no failures? It was No. 448; that was the one I had a failure with; it was not my own engine.
2471. Did you find that they took greater loads than the ordinary engines? Oh, yes.
2472. When you were going down a bank with these engines did you find any rolling with them? There were one or two of them I have to do with which were just as steady as any of the Yankees, but the one I had myself rolled a little; I would always steady an engine if it commenced to roll; I would do so if only for the sake of economy. I have had other engines roll just as badly as these.
2473. *President.*] What do you mean by "the sake of economy?" Well, if I were careless and allowed the engine to roll, I would increase the friction of the boxes, and cause them to run hot, and that would mean more oil for lubrication. I always think it right to economise by going slowly round curves, besides having regard to the safety of the passengers and rolling stock. The engine I have rolls a little more than others, perhaps, but the two others I have run do not roll any more than others.
2474. What is that caused by? It might be mere elasticity in the springs that might cause them to roll a little more than the other ones might do.
2475. *Mr. Brown.*] You are satisfied those are the engines you have been on? Oh, yes.
2476. *Professor Warren.*] Do you know the loads you have had behind you? Yes, quite well.
2477. What is the biggest load you have taken up the 1 in 30, on the Penrith grade? Sixteen and a half carriages.
2478. What does that mean in weight? Multiply the carriages by 8 tons, that is the standard weight of each carriage.
2479. *Mr. Brown.*] That would be 132 tons? Yes.
2480. That is from Penrith, unassisted? Yes.
2481. *Professor Warren.*] When you started with your engine, did you take a run at the grade? Nothing more than with any other engine.
2482. When you settled down, at what rate of speed did you go? My running time to Katoomba, taking my stops out—is that what you want?
2483. I do not want it from Katoomba exactly, but as nearly as you can? About 18 miles an hour.
2484. That is to say, you went down a grade of 1 in 30, with a load of 132 tons, at a rate of 18 miles an hour? Yes; that is, taking all the stops out.
2485. *Mr. Fehon.*] With regard to the breaking of the eccentric-strap, that is only one of such breakages that would probably occur to any engine? Oh, yes; I have seen reversing-screws broken before—there is nothing unusual in that. There is nothing that might not happen to any engine.
2486. On your return journey—you have spoken of your trip to Penrith and Katoomba—what load would you bring on a return trip? Well, I have brought twenty-one trucks, and twenty on another occasion, from Wallerawang.
2487. And you were able to mount the grade unassisted? Yes, without any assistance.
2488. *President.*] Coming up the Lithgow grade? Yes.
2489. Was the train full of passengers? Yes; some were standing in the compartments. It was the heaviest-loaded train I have ever seen. On the day I had the Governor I had twenty-one carriages, and that was just as heavy.
2490. *Mr. Fehon.*] Do you remember the 14th of April, you were driver of the second division of passenger train above 31? Yes.
2491. The first division went away with another class of engine, an ordinary express engine, and she had how many carriages on? I suppose about nine, or nine and a half, but under ten, I know.

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2492. Did she get stuck? Yes, to Lawson she lost about fifty minutes, and then I relieved her. I suggested to the guard that he should go forward to the station-master, and he should take two of them off; they made about eighteen and a half carriages, and that left him one carriage and the brake-van. With this additional load I made up five minutes of the lost time. He had been running in front of me, and then as I have said I caught him up at Lawson, and took his two front carriages and attached them to my own carriages, thus making my own train eighteen and a half carriages all told, and I then took them up to Katoomba. The engine attached to the first division had not been able to get on with nine and a-half carriages, so, instead of allowing him to block me by delaying in front, I considered it my duty to the Department and as man to man to take the two and attach them to my own carriages.
2493. What class was that? It was No. 273 that got stuck, and it belonged to the express class, the four-wheel couple generally known as the express class of engine, although as far as that is concerned my own engine is express because I ran it at 42 miles an hour.
2494. *Professor Warren.*] But you are not allowed to run at that rate now? Oh, that was before the order, so I considered myself justified in doing it.
2495. *Mr. Hoyle.*] You say that this train left here and started for the Mountains with nine and a half carriages, and that she was in the first division and you had to run behind, and that she delayed you. you then got to some station and decided to take two carriages from her, and that left her one carriage and a brake-van, what became of the other carriages? When I was speaking of carriages I meant in the sense of vehicles, they equalise the vehicles, so many vehicles are equal to so many carriages.
2496. Was this train only equal to nine or nine and a half? Yes; I know it was under ten.
2497. Then that would be four vehicles, could she not haul that load? No, it seems not.
2498. Well, if she could not she ought to have been thrown on the scrap heap.
2499. *Professor Warren.*] You speak of the carriage being 8 tons, must you not add to that the weight of the passengers in order to get the total load, are the passengers included in the 8 tons?
2500. *Mr. Fehon.*] Yes, the 8 tons cover everything.
2501. *Mr. Hoyle.*] Was it not stated to be 10 tons the other day?
2502. *Mr. Fehon.*] Yes.
2503. *President.*] I suppose the other engine would have got the carriages to their destination right enough only you wanted to hurry them up? Yes; but it was blocking me, and I considered it my duty departmentally, and as one man to another to take these two carriages; I took the carriages and made up five minutes of the time to Katoomba.

Charles Hurathouse Stanger, being sworn, said:—

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2504. I am at present employed by the Railway Commissioners of New South Wales as out-door Locomotive Superintendent in charge of the Northern and Western Divisions of the Railway system. I began to serve my apprenticeship in 1869, on the Great Northern Railway Company in England. I have been just 10 years in the service of this Colony, I commenced as a fitter at Bathurst.
2505. *Mr. Hoyle.*] I understand you, Mr. Stanger, among others recommended these engines? Yes.
2506. Did you not before you recommended them know that an order had been sent to England for engines, and do you know how many engines were ordered? I knew there were a considerable number ordered, I knew it was over 50 anyway.
2507. Did you know when you consulted with others that it was the custom to draw special attention to, and to specify for, all the materials to be put in the engine? I know that when a locomotive superintendent of a railway is ordering his own engines he makes specifications, but under the circumstances in which we were asked to suggest engines there was not an opportunity of doing that—there was not time.
2508. Why was there this hurry? I am not one of the parties who had anything to do with it, but I know there was a syndicate in England who were going to build these engines for us within a certain time, and there was some hitch and we found that we were not likely to get them at all, and we did not know how we were going to get through the wool season.
2509. Had you anything to do with the specifications of these engines? Yes.
2510. When these engines were delivered in the Colony did you see whether this specification had been carried out or not? No, I did not.
2511. Did you make any minute examination or inspection of the engines? No, not before they commenced running.
2512. Was the first intimation you got of the defects derived from the break-down? No, the drivers were reporting them hot, and we could see that there was something wrong, there seemed to be some difficulty in getting them to run cool.
2513. Did you make any minute inspection into the matter? Yes, we consulted with our drivers and improved the lubrication, and gave the engines every chance.
2513½. Well, what was your opinion, as an engineer, as to what was making these engines run hot? I think the very rough and unsuitable stuff the axles were composed of.
2514. *President.*] You are now talking of the bogie axles? Yes.
2515. *Mr. Hoyle.*] You say it was rough, unsuitable stuff; when the engine was elevated to see what was the matter with it did you make a minute examination of the journals? I do not know that I myself saw any of these journals lifted after they had been running hot, but even if I had, I could not have told that. Even now I do not know that I am right as to what was the actual cause. I am only surmising it.
2516. Then why did you say it was the rough material? Because I have seen a piece of the iron tested, and I have seen the material of which it was made.
2517. But that would not necessarily make the axle run hot? My opinion is that the material of the axle had everything to do with its running hot, and that it would not be possible for these axles to run cool at high rate of speed.
2518. Notwithstanding the lubrication? Notwithstanding the lubrication.
2519. *Professor Warren.*] You mean that the dirt inside the axle—in the material of which it was made—worked out, and that is the reason why it worked hot? Yes; that was the cause. I know that the stuff may ooze out and destroy the effect of the lubrication.
2520. *President.*] And cut into the axle? Yes.

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2521. *Mr. Hoyle.*] I see by the correspondence that you cabled to America to the Company to make these engines lighter than the original Baltimore and Ohio? Yes; I know that that was done.
2522. Well, if you wanted a lighter engine, why did you specify copper fire-boxes, which would actually make the engines heavier than the original boxes would? Well, we locomotive people of English bringing up, have not very much faith in steel fire-boxes. We know the copper fire-boxes, and we can trust them, and preferred getting them, and we used our endeavours with the Commissioners to get them to pay the extra price that these boxes would entail.
2523. Did you know that you were making the fire-boxes heavier by putting in copper instead of steel? Yes.
2524. Was that order sent—that cablegram? Yes. For my own part I would gladly sacrifice the weight to get the copper boxes.
2525. You must have had some reason for reducing the weight on the driving-wheel? Yes. All locomotive engineers are anxious to keep down the weight on the driving-wheel on account of the permanent way, the greater weight meaning greater wear and tear. We did not sacrifice the utility of the engine by the loss of adhesion, but took care to see that it was maintained.
2526. Will you say that the real reason of the axles running hot was not because there was too much weight on the bogie? To the best of my belief, the cause of the bogies running hot was the material composing the iron of which the axles were made.
2527. Now, I would ask you whether, with the surface you have, and the axle the size it is, and the weight on the bogie, would not that cause it to run hot, taking your Journal surfaces into consideration, do you not think that it was the extra weight on the bogie that caused the axles to run hot? No; I do not.
2528. Does it come within your duty to know what happened to these engines outside your district? Yes, that is a chief part of my duty.
2529. Now when you had run these engines for a time, did you think that the wheel-base of the engine had anything to do with the axle and the boxes running hot? No, I did not. The wheel-base of the passenger engine is, I think, 12 feet 6 inches. I have not the drawings before me, but I think that is so.
2530. *Mr. Hoyle.*] I would like to be furnished with the drawings and the weights.
2531. Do you remember what brackets were broken in connection with the reversing-gear? No; I am not aware of anything that I would call a bracket.
2532. Were not the engines previous to the alterations to the fulcrum-pins fitted with a new brass bracket fixed on the boiler to carry the catch on the screw? I think they have all been fitted with a catch.
2533. The whole of them? Yes.
2534. At what cost? It hardly comes within my province to say what the cost would be, but I could give a guess.
2535. Then what do you think would be about the cost of each? I think these catches were brass, and would cost about 8s. or 10s. each.
2536. Would they cost £1 each? I say, I think they would cost about 8s. or 10s. each.
2537. *Professor Warren.*] Mr. Thow will supply all that information.
2538. *Mr. Hoyle.*] Is it a fact that you have fitted these engines with new brass-boxes? Yes.
2539. Does the Baldwin Company pay for them? I think they do.
2540. Does the correspondence show that they have been deducted?
2541. *Mr. Brown.*] They have made reductions about £1,200 in all in the Baldwin Company.
2542. *Mr. Hoyle.*] At Penrith an engine broke down with a loose coupled wheel. Is it a fact that you put a completely new set of wheels on that engine? I am not quite sure about it breaking down, but as a matter of fact a loose wheel was discovered and the engine was sent to Sydney, and we took the quickest way of putting her into service again, and we considered the quickest way to be putting a new set of wheels under her, so that we could repair the broken one at our leisure, it is necessary to do this if we want to get an engine back to work at once.
2543. Could you not have taken out the right and left trailing-wheels and put in other trailing-wheels in their stead? Yes, I could do that.
2544. Would it not be quicker? Yes; it would be much quicker.
2545. Then, why did you not do it? I would be very sorry to do it; it is necessary that the wheels should be all of the same diameter, and we could not take out one pair and put in a new pair without having different diameters in our set of wheels, one pair being new and the others worn even if the same size when new.
2546. Well, the result has been anyhow, that you have had to put in a completely new set of wheels? If you mean by that, that one wheel breaking has caused the loss of six wheels, it is not true. We have these six wheels on hand and can use them, and we did what I have said in order to save time.
2547. *President.*] And you will utilise the others? Yes. By putting them in another engine.
2548. *Mr. Brown.*] That is not an unusual thing to do? It is the proper thing to do, sir.
2549. *Mr. Hoyle.*] What about the other wheels;—you have the drivers and the leading-wheels left? And we have trailers also.
2550. But you will have to fix a new axle to them? Yes.
2551. What will be the result;—can you bush the wheel, or ought a new axle to be made? I think we should have to put a new axle in the wheels.
2552. And that expense would be borne by the Baldwin Company? Yes; it ought to be, certainly; but it is beyond my knowledge to state definitely whether it will be.
2553. *Mr. Fehon.*] We have £1,000 still in hand of the Baldwin Company's, and that will meet any little contingencies that may arise.
2554. Did you find any of the Baldwin Company's valve-brackets break? I do not know of any part that we generally know by that name.
2555. The rod that works the valve [*pointing out the part indicated on a photograph*]? I have not known any of the rods you have pointed out to break. The valve-buckle, that goes inside the steam-chest, has broken; we have had several breakages with them.
2556. Is that the usual thing in new engines? No; but it is a common thing among American engines.
2557. Have you mounted them with stronger buckles? Yes. In this case it seemed wise to strengthen them.
2558. The former ones, then, seemed too slight? I am not prepared to say that; this was a class of buckle that I believe does good service in America.

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2559. But not with the same grades as we have here? It is not a question of grade.
2560. *Professor Warren.*] There are some grades in America worse than those we have here, but not on the Baltimore and Ohio line.
2561. *Mr. Hoyle.*] What caused the axle-boxes to wear into the bosses of the wheel;—can you account for that? I think the material of which the boxes were made had something to do with it; a wrought-iron boss against a cast-iron box has not much chance. I think our road has something to do with it. In at least two classes of our English engine we have had similar trouble.
2562. Wearing as much in the same time? I cannot say about time, but they were very deeply.
2563. Have you seen the wheel wearing into any of the feed-cocks in the Consolidation engines? Yes; I have seen the leading wheel of the tenders, where it has been on the curve, cutting into the brass elbow of the feed-cock.
2564. Would not that necessitate the renewal of the feed-cock? I think we have dealt with this by putting in a piece which slews the cock out of the way.
2565. Have there been any of these engines here, either passenger or Consolidation, with unsound frames;—have you seen any with unsound frames? Yes; on one of them, a passenger engine. We took it to be unsound; we took it to be a bad weld.
2566. Would that be serious? Well, we would have to stop the engine, and would have to go to some expense; but it would not cost very much. I think we could adopt a cheap method with it, otherwise it might be expensive.
2567. I think you furnished five detail drawings to the Baldwin Company according to the correspondence;—was one of these drawings for the draw-hooks? I believe a drawing was supplied for the draw-hooks; but I had not anything personally to do with that.
2568. *Mr. Brown.*] The Baldwin Engine Company admit that they made a mistake with regard to the draw-hooks, and they were ready to bear the cost of replacing them.
2569. *Mr. Hoyle.*] It has already been stated that some of the wheels of the tender axles have been loose;—has that been the case in many of them? Yes; there have been a great number of them.
2570. What has been done in that case? They have been taken out, and better and larger axles put in.
2571. Did you send to Victoria for any axles? Not that I am aware of.
2572. Did you use any of your truck axles for the purpose? I really do not know. When we got a tender with a loose wheel up the country we sent it to Sydney, and the works people dealt with it.
2573. *Professor Warren.*] You, in conjunction with Mr. Neale and others, advised the Railway Commissioners with regard to the purchase of these engines? Yes.
2574. I take it that you fix the weights to be hauled, and the speeds to be run on the various inclines, as specified in a letter of the Secretary of the Railway Commissioners? Yes.
2575. Will the engines do that work? I think they are doing more than that. Of course I must guard against being misunderstood as to what the work for which they were intended was. What I took it to mean was that it was wished that what was then the customary load on the southern express, should be taken by one engine with assistance from Picton to Hilltop. I think that the weight of that train was 144 tons, and that, I think, led to its being inserted in a letter to the Baldwin Company, that the engines were to be capable of taking 144 tons over a grade of 1 in 40 at an average speed of 30 miles an hour for the whole journey.
2576. Well, I just wanted your opinion as an engineer. I wanted to know that you are satisfied that the engines have done the work required of them according to the specification. And I suppose that we shall be supplied with returns to show that they have actually done that work? Yes.
2577. *President.*] Here is a letter from the Secretary to the Railway Commissioners, dated 22nd September, 1890:—"Government Railways of New South Wales, Secretary's Office, Sydney, 22nd September, 1890. Gentlemen,—I am directed by the Railway Commissioners to inform you that they accept the offer of the Baldwin Locomotive Works to supply twelve 10-wheeled express engines and tenders similar to those recently supplied to the Baltimore and Ohio Railway, under a guarantee to haul a passenger train of seven cars up a grade of 116 feet per mile, and 17 miles long, at a speed of 25 miles per hour." That has not been modified in any way, has it? Not that I am aware of. The engines are doing equal to that, and more than that.
2578. That is all that I wanted to know. Are the engines doing that? Yes. When I answered Professor Warren's question just now I spoke of a grade of 1 in 40. I remember that they were wanted to do a grade of 1 in 45, but that, as a matter of fact, they are really doing a grade of 1 in 40.
2579. At all events, they are fulfilling what was required of them in this letter? Yes; and a good deal more.
2580. *Professor Warren.*] Of course I take it that we shall have that proved?
2581. *Mr. Fehon.*] Yes.
2582. *Professor Warren.*] It is a very important matter.
2583. *President.*] The letter from which I have quoted also says:—"It is proposed to haul with these engines trains weighing 152 gross tons (340,500 lb.) up long grades of 130 feet per mile. This would be the usual train, and we expect it to be hauled up this grade at about 22 miles per hour. Occasionally the train would have an additional car, making the load without engine and tender, 178 tons or 394,240 lb. These loads include a full complement of passengers, mail, and baggage. The cars are all on trucks or bogies. The regular load up the 176-foot grades would be 120 gross tons (269,000 lb.) without engine or tender. These grades are free from very sharp curves, and therefore in practice a greater proportionate load can be hauled than on the 130-foot grades. It is, therefore, expected that occasionally an extra car could be hauled, making the total weight of the train 144 gross tons (322,500 lb.) without engine or tender." What engine does that refer to? The ten-wheeled passenger engine.
2584. And it will do that? Yes.
2585. *Professor Warren.*] This letter gives the sharpest curves you have and the engines are supposed to do it without reference to curves or resistance. They can do the sharpest curves on our lines, because the letter describes our lines? Yes.
2586. Will they do more than that? It is expected of them that they will do that as an ordinary thing?
2587. In the letter it says that the load must be 178 tons, but I take it that that has only reference to test performances, and that 144 tons represents the usual loads that the engines will have to carry, as a matter of fact, will they carry 178 tons?

2588. *Mr. Fehon.*] Yes; we will produce the running sheets to prove it.
2589. These things have been called into question a great deal. Have you made any test as to what the engines will do with the loads on the 1 in 30 or 1 in 40, I do not care which you give me? Might I refer to the test?
2590. *President.*] Yes, certainly.
2591. *Professor Warren.*] You might hand in a copy, and I will consider it and ask questions upon it later on.
2592. *Mr. Fehon.*] The Commissioners are already pledged to do that.
2593. *Professor Warren.*] Yes, I know they are; and I wish I had the returns by me now.
2594. *Witness.*] This is a copy of mine. There is a copy with the report of the officers who made the test. This is not the one that the Commissioners intend to hand in.
2595. *The Secretary to the Railway Commissioners.*] We may put Mr. Stanger in the box again after a while?
2596. *Professor Warren.*] Well then, I will not press him now with regard to the returns.
2597. *Mr. Brown* (to witness).] You say you had no specifications before you at the time the engines were ordered—nothing to guide you but a copy of the *Railroad Gazette*? That is all.
2598. And I suppose that you are aware that the manufacturers said that they could not guarantee the speed of the engines after the alterations suggested by yourselves? I was not aware of that, but I was quite satisfied with what the engines did.
2599. *Mr. Brown* (to Mr. Fehon).] There is a stipulation to the effect that these engines are to run 1,000 miles before the money is handed over to the Baldwin Company. Where did that stipulation emanate from, and how did it originate?
2600. *Mr. Fehon.*] It was our proposal, but it was not adopted by the Company.
2601. *Mr. Brown.*] But here is the letter from the Company in which it is said "We have the honor to enclose invoice of the 10 per cent. due on the twelve locomotives."
2602. *The Secretary to the Railway Commissioners.*] We hold 10 per cent. retention money, and that we keep until the engines have run 1,000 miles.
2603. *Mr. Brown.*] Exactly, I wanted to know where that came from?
2604. *The Secretary to the Railway Commissioners.*] It is a usual arrangement, and in this instance we made it with the agent of the Baldwin Company here.
2605. *Mr. Brown.*] I see there is nothing in the correspondence to show just where the arrangement emanated from, and I thought that it might lead up to some question in regard to the first specification?
2606. *The Secretary to the Railway Commissioners.*] No; it is a customary arrangement.
2607. *Mr. Brown.*] And you do not pay for the engines until they have run 1,000 miles?
2608. *The Secretary to the Railway Commissioners.*] We do not pay the retention money till then.
2609. *Professor Warren.*] I suppose you have no more returns like those just referred to by Mr. Stanger?
2610. *The Secretary to the Railway Commissioners.*] The Chief Commissioner for Railways has a good deal of information that he is about to hand in.
2611. *Professor Warren.*] Well, if these returns do not represent the case it is no use going into them, I have worked out what the engines ought to do, and I can see that at least two or three are not doing it. They might all be doing less than they ought to be doing. What I want is for you to see that this is a very important matter, and that we shall have to decide with regard to the question, as to what the engines ought to do upon these returns.
2612. *Witness.*] You must remember that the reference in the returns from which I have been quoting is to coal waggons.
2613. *The Secretary to the Railway Commissioners.*] Yes, full particulars will be submitted to you.
2614. *Professor Warren.*] What is the power necessary to haul ordinary coal waggons as compared to carriages? I am not in a position to answer that question, but I think the 4-wheeled coal waggon stock must be more heavy to pull than bogie passenger stock.
2615. Do you not think that a carriage run at 22 miles an hour would offer much more resistance per unit of weight than a coal waggon? Of course it offers a great deal more resistance to the air, but I do not think that there would be so much friction.
2616. But air resistance is a very important matter? Yes; but in going up these gradients we travel very slowly.
2617. I suppose you know all about the experiments of D. K. Clarke, Searle, and Wellington? I know that the train resistance is gone into very thoroughly by Mr. Clarke and others.
2618. You do not know Wellington's work with regard to train resistance? I have just looked through it, but I do not know it in the sense you mean.
2619. *Mr. Fehon.*] I would like Mr. Stanger whilst he is giving his evidence to give the Commission some idea as to the difficulties we had before these engines arrived in carrying wool and stock on the western road, over which he is the locomotive superintendent? Well, we were working under great difficulties, indeed we had to keep the engines so constantly running that we could not do the necessary repairs, and as a consequence we had a great number of failures on the road. That blocked the traffic and made the difficulties even greater than they would otherwise have been. We were not able to wash out the engines, and instead of keeping, as we should have liked to have kept, one driver to each engine, men would come on duty and have to wait for an engine to come in before they could go out. On one occasion, and I think this was last year, men were waiting in the shed at Bathurst for the mail to arrive from Sydney, in order that they might take the engine to work a pick-up goods train from Bathurst to Orange. The mail driver reported to his foreman that the engine's boiler was so dirty that she could not go out again with the mail-train, but notwithstanding that they were obliged to run her first of all with the pick-up goods train and then with the mail train on the following day. Engine-men working on mail trains always consider themselves very hardly dealt with if their engine is taken from them at all; but when it had to be done with the engine, in such a bad state as this engine was, it shows the great difficulty we had in working the traffic and the necessity for new engines.
2620. You mean that previously your engine-power was short? Roughly speaking, the year before last we had barely half the engines we ought to have had, and the expenses in all directions were heaped up in consequence. In order to get the work done we had to keep men working overtime, and it was in consequence of that that the expenditure was so great. I remember one engine that had been standing in the shops for several weeks—I think the intention was to break it up—but our necessities were so great that it

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in or about October of 1890 that engine and two or three others were brought out and put into working the traffic—the less important traffic, of course—ballast and so on; but by doing that work they released other engines for the goods traffic.

2621. And at the time you ordered the Baldwin engines you had been disappointed in getting some English engines, I believe? Yes.

2622. *Mr. Hoyle.*] Is it not a fact that you have now more engines than you know what to do with? No we have not.

2623. *President.*] Have you now more engines than you have use for? Well, we are now in the very slackest season.

2624. Yes, but I do not mean at this moment. Have you got more engines in the Service than there is need for? No; I do not think that when all our engines are doing work we should have more than we desire.

2625. *Mr. Hoyle.*] What induced you to order two Compound engines for experimental purposes when you were so hard pushed that you did not know what to do for engines to work the ordinary traffic? Well, I do not see that because they were experimental engines we therefore lost the use of them. Although we did not understand these engines, and have not learned all about them, yet they are doing the same work as any other engines did before the Baldwin engines came out. They are doing as much work as our old Consolidation engines.

2626. *Professor Warren.*] The question is how much they cost? Well, the Commissioners wanted to see whether it would not be more economical to use them, and I think that if I were owning the railway I should feel myself justified in spending a few hundred pounds on a similar experiment.

2627. *Mr. Fehon.*] Mr. Stanger could tell you, as a locomotive superintendent, of the great delay in the carriage of live stock and wool that occurred in the western district before the advent of the Baldwin engine.

2628. *President.*] Well, I think he has already told us a good deal in that regard. You say that there were great delays, Mr. Stanger, before the arrival of the Baldwin engines? Oh, it was a matter of daily complaint from the traffic branch that they could not get engines to work their traffic. Shortly after we put the Consolidation engines on the line, indeed, before we were quite satisfied to load them up to their full power there was a great block of wool at Dubbo—at one time as many as 300 trucks loaded with wool standing at Dubbo, simply waiting for engine-power to bring them on. One Saturday night I arrived at Dubbo and found 150 trucks waiting there. In order to get them away we used three or four of these large Consolidation engines, loading them on that occasion up to their full power, that is to say, with twenty-six wagons and brake-vans. They moved as much wool as seven of the small engines would have taken, and it was from that date that we felt the great assistance that these large engines could be made to give in working the wool traffic of last year.

2629. Now about these repairs to the engines I am not talking about repairs to the bogie axles, I am not talking about the repairs to the draw-gear and reversing-gear—the draw-gear I believe was too light when the engines arrived—but leaving out of consideration the draw-gear and the bogie axles and taking account of the other parts that required repairing, have there been more defects in them than you would expect to find in new engines before they got thoroughly into their work? Not more than has been my experience with regard to other American engines. I am rather dubious about comparing them with English engines because we have found that there is not so much trouble with engines of English manufacture.

2630. But you have had American engines to deal with before coming in contact with the new Baldwin engine? Yes.

2631. Have you had as much trouble with them? Not if we are to set the bogie wheels aside.

2632. *Mr. Hoyle.*] Have you had as much trouble with the reversing-gear of the other American engines? No; I think not, though we had some trouble with the last lot.

2633. Had you more trouble with the last lot? No.

2634. Have you had the same trouble with the brake-gear of the other American engines? I think so. I think that the brake-gear of the first lot had to be remodelled entirely after we received them from the makers.

2635. Had you to make stronger valve buckles? I do not know that we had to make stronger valve buckles, but we had a great deal of trouble with the valves, and we had to substitute spiral springs for the springs supplied with the valves.

2636. Have you ever heard that they have cancelled trains at Penrith so that an extremely heavy load might be given to the Baldwin engines to take up the mountains? I have not heard that in the sense in which I think you mean to put it. Of course, I know that the traffic people like to reduce the number of trains where it is possible. They prefer to run one heavy train drawn by a Baldwin engine to running two light ones drawn by other engines.

2637. That is to say that goods were detained at Penrith in order to wait until a big load had been made up? I think not. I think it is the other way about—that loads have been taken from Penrith earlier than would otherwise have been the case, simply because the Baldwin engines were capable of taking them.

2638. But have not trains been delayed at Penrith in order that big loads might be given to the Baldwin engines? I do not know that they have, that is purely a traffic matter.

2639. Some trouble has been caused by the Compound engines. You say that they could only haul the load that the original Consolidation engine could haul? That is as far as we have got with them yet.

2640. How old are the original Consolidation engines? I do not know, they were here when I came, I think they came in 1879 or 1880.

2641. Well, having drawn this comparison between the Compound engines and the old Consolidation engines I should like to ask you whether you think that the Compound engines when they are twelve years old will be hauling the loads that the original Consolidation engines are hauling now? I am satisfied that they will be hauling 50 per cent. more.

2642. *Mr. Brown.*] Is that not merely a question of new tubes and cylinders? Not new tubes, but I think we have new cylinders for them.

2643. *Professor Warren.*] Is it your opinion that the Baldwin passenger engines will cost more to keep in repair than an ordinary English engine would cost? My experience is that American engines do cost more for repairs than English engines.

2644. And up to the present you think that the repairs to these particular engines, barring the axles have not been excessive? No, not particularly. I think they will compare favourably with other engines of the same type.

2645. But not with English engines? *No.*
2646. They are more costly to keep in repair than the English engines? *Yes.*
2647. *President.*] I suppose as a matter of fact that the English engines are better finished? *Yes, that is it. I fancy that the American people consider that it is cheaper in the long run to build less expensive engines, and then when they are used up to throw them away.*
2648. *Professor Warren.*] From this return you conclude that the engines are doing the work that was expected of them? *Yes.*
2649. How do you arrive at that. *I have just gone through three or four sets of your figures and I may tell you that I do not think they are doing the work that is expected of them. I may say that I know they are not if these returns are correct. I have not spent many minutes over them, but you say you have made a certain test, and upon that test you have drawn a conclusion. What I want to know is by what method you have arrived at that conclusion? We have arrived at the loads by weighing the waggons filled with coal and we took the speed by the stop watch between the quarter-mile posts.*
2650. You could not do better than that, but having done that how is it that you arrive at the conclusion that the engines are drawing 144 tons up 1 in 30 at a speed of 22 miles an hour? *I do not know that that was ever expected of them.*
2651. *Professor Warren.*] That is what was specified in the letter of the Secretary to the Railway Commissioners:—"It is proposed to haul with this engine trains weighing 152 gross tons (340,500 lb.) up long grades of 130 feet per mile. This would be the usual train, and we expect it to be hauled up this grade at about 22 miles per hour. Occasionally the train would have an additional car, making the load without engine and tender 178 tons or about 394,240 lb. These loads include a full complement of passengers, mail, and baggage. The cars are all on trucks or bogies. The regular load up the 176-foot grades would be 120 gross tons (269,000 lb.) without engine or tender. These grades are free from very sharp curves, and, therefore, in practice a greater proportionate load can be hauled than on the 130-foot grades. It is therefore expected that occasionally an extra car could be hauled, making the total weight of the train 144 gross tons (322,500 lb.) without engine or tender." Upon that I shall base my decision as to whether they are doing or are not doing the work expected of them. I will ask Mr. Stanger whether he has gone into this question and whether these tests show that the engines are doing their work which it was intended they would have to do when this letter was written?
2652. *Mr. Brown.*] But you must remember that at that time they asked the company to give them a guarantee that the engines would do certain work, and that the company refused to give them that guarantee, and that after that refusal the Railway Commissioners decided to take the engines.
2653. *Professor Warren.*] I do not think that that affects the question. The letter from which I have quoted clearly shows what the engines were required to perform.
2654. *Secretary to the Railway Commissioners.*] We ordered a certain class of engine to do a certain work.
2655. *Professor Warren.*] Exactly, and Mr. Stanger says that it will do the work, and indeed that it has been shown to do more than the work, and these returns are placed before me to prove that, and it is very unfortunate if they prove the contrary.
2656. *Mr. Stanger.*] I think it only fair that I should be allowed to state that I did not hand in these returns as a piece of evidence, I was only refreshing my memory with them, and handed them to Professor Warren because I concluded that he wished to see them. It should be remembered that these engines are not always wanted to pull trains of 144 tons up the Picton bank with a gradient of 1 in 30.
2657. *Mr. Brown.*] The Baldwin Company offered you an engine which they were prepared to guarantee, but you asked them for something else, and when they sent the engines to you, whilst they declined to guarantee them they said they would probably do more than what you asked them to guarantee them to do.
2658. *Professor Warren.*] The Baldwin Company say that these engines will haul a certain load, but they will not guarantee the speed. Supposing one engine hauls 200 tons at the rate of 5 miles an hour, and another engine hauls 200 tons at the rate of 10 miles an hour, it does double as much work as the other one.
2659. *Mr. Fehon.*] That point will be cleared up when we call our evidence.
2660. *Secretary to the Railway Commissioners.*] We have not commenced our case yet. These are all Mr. Hoyle's witnesses.
2661. *Professor Warren.*] I take it that Mr. Stanger says just what he knows in either case, whether he is speaking for the Commissioners or for Mr. Hoyle.
2662. *Mr. Fehon.*] We shall have to call him again, and will, in the meantime, obtain the necessary returns, and lay them before the Commission.
2663. *President.*] It does not matter by whom a witness is called, especially such a witness as Mr. Stanger. It does not matter whether he is called by the Railway Commissioners or not. The only circumstances under which it could matter would be in a Court where the question of the right to cross-examine, or something of that kind might crop up. Mr. Stanger will speak the truth whoever he is called by.
2664. *Mr. Hoyle.*] This is an order issued by the Chief Mechanical Engineer for the guidance of drivers and firemen. It says "Drivers and firemen who work the new Baldwin engines of both kinds are hereby instructed that on no account must they allow the level of water to get below half a gauge-glass on the levels, or when ascending grades, particularly on grades of 1 in 40 and 1 in 30—indeed on these engines they should have more than half a gauge-glass of water—and when descending grades of any kind they must take care that the water shall always be seen in the gauge-glass. Recent failures of the Consolidation boilers are attributed to shortness of water"? *We have had several cases of leaking tubes.*
2665. But is that caused by the gauge-glass not being in the proper place? *I have not made the necessary measurements. All I can say is that since the order was issued we have had no trouble.*
2666. Then under the circumstances of a driver not attending to his gauge-glass trouble did arise, and it was necessary to issue this order to drivers on that point? *As these engines were new to the men, and larger than anything they had handled before, it was thought necessary to issue these instructions in order to warn them to keep up the necessary amount of water. I do not think there is anything excessive in the quantity specified.*
2667. But you see the latter part of the order states that failures of the Consolidation boiler had occurred, and that they were attributable to shortness of water. You have a rule that on certain gradients a driver should have more than half a gauge-glass of water, and that when descending grades of any kind he must take care that the water can always be seen in his gauge-glass? *Under the circumstances under which these engines were being worked, it was found necessary to keep up the supply of water in the gauge-glass. It was a large machine, and as such required a plentiful supply of water.*

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2668. So that it appears that something must have gone wrong with the water in these boilers, or that it would have been unnecessary to issue special instructions about them? I do not know anything in that order that implied that the gauge-glass is not in its proper place. There is not more water specified in the order that you have read than it is necessary to carry in the best locomotive ever built.
2669. *Professor Warren* (to witness).] When you come into the box again I shall inquire further into the subject connected with those returns. I do not think it is fair to press the matter further now.

Mr. Thomas Rhodes Firth, being sworn, said:—

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2670. *President.*] What are you, Mr. Firth? Chief Assistant Engineer in the Railway Construction Branch.
2671. Where are you stationed? In Sydney.
2672. Are you a member of the Institute of Civil Engineers? Yes.
2673. How long have you been in the Railway Service of this Colony? Since 1860; in the service of the Government since 1863.
2674. Well I want to know how long you have been in the Railway Service? I have been in the Railway Service since 1860, and was connected with railway work for about seven years before I came here.
2675. *Mr. Hoyle.*] Had you charge of the South Coast Line when it was being constructed? As far as Clifton—from Eveleigh to Clifton.
2676. Did you see when the structures were being built along that line that they were to the standard gauge? Yes.
2677. And were they to the standard gauge? Yes, of course they were.
2678. You have no doubt whatever about that? Not the slightest.
2679. Do you know whether any alteration was made to the Arncliffe platform by the Commissioners? Yes, I do.
2680. Have you measured that platform? Yes.
2681. Was it to gauge before these alterations were made? Yes.
2682. Are you sure of that? Yes, I am sure of it.
2683. I want you to be very particular on that point. You are absolutely sure that it was to gauge? I have already said so.
2684. Was the platform at Otford to gauge? Yes, it was erected to gauge.
2685. Have you any gauge to guide you in the structures overhead in the projection of the verandahs, for example, so as to clear the cabs of passing engines? Yes; we had the platform to guide us as to that.
2686. But do you work to a gauge in that case;—is there not a particular distance at which the verandah stands from the line? Yes. We build them a certain distance from the edge of the platform and a certain height above it.
2687. Was the Wollongong station verandah built to that gauge? I know nothing about that. I was not on that part of the line.
2688. Who was in charge of that? Mr. Alexander, I think.
2689. *Mr. Brown.*] What is the gauge? I can give you the figures.
2690. *Mr. Hoyle.*] You will be able to furnish the figures to-morrow, I daresay? Yes, I can get them for the Commission; but it is impossible for me to carry all these details in my mind.
2691. When you are constructing a road have you not a standard to guide you as to the weight of the engines to be run on the rails? I suppose that was taken into consideration when the railway was first projected.
2692. Do you consider that an engine having 15 tons 9 cwt. on her driving-wheels would be a danger to the permanent way—we will say on the Northern Line, where you have an iron rail—a 70-lb. iron rail. Do you consider that an engine with a weight, such as I have described, on the driving-wheel would be in any way dangerous to the permanent way, with a rail of 70-lb. weight? No, I do not think it would be in any way dangerous with the sleepers placed where they are now.
2693. What is the distance of the sleepers? About 2 feet 4 inches; some of them a little closer. The joints are 1 foot 9 inches.
2694. Do you think that an engine and tender when loaded weighs 97 tons? I think the weight is 92 tons.
2695. Well, some of them weigh 92 tons, and some of them 97 tons. The Consolidation engines weigh 97 tons and the passenger engines 92 tons. We will take a passenger engine weighing 92 tons. Do you consider that it would be perfectly safe for such an engine to run over a 70 lb. iron rail at a high rate of speed? Well, I think so; and, as a matter of fact, they are doing it in America now with the same rails and the same kind of engines.
2696. Would not the manner in which the driving-wheels are loaded have something to do with the wear and tear of the road? Yes, certainly; and you may overload them so that it would be dangerous to run on such a rail, but I do not think there is any danger with the present loading. If I was going to employ engines of that weight on a railway I do not think that I should begin by laying such light rails, because I think it would be more economical to have heavier rails.
2697. Do you think, by the continual running of these engines, it would be necessary to employ extra supervision, or to have the road more closely watched than would be the case with lighter engines? Yes; the heavier the engine, and the more traffic on the road, the more supervision is necessary.
2698. Well, would not such an engine as this make it necessary in time for a heavier rail to be used? No; you might lay the same weight of rails again. It is a question of economy. Looking at it from an economical point of view, I think it would be better to renew the lines with a heavier kind of rails.
2699. Then it would not be anything like as economical to run these heavy loads on the present rails as it would on heavier rails? No; I think it would be more economical to put down a stronger road.
2700–1. *President.*] Mr. Firth says that if he were organising a railway, and knew that he was going to get these engines, he would put down heavier rails than they have now, and that he would do so purely as a matter of economy? Quite so.
2702. But if you thought that it was necessary, in order to carry on the traffic, to get heavier engines, you would get them, notwithstanding that you had rails as light as those at present in use? Yes.

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2703. *Mr. Hoyle.*] And you think that a 70-lb. road with these engines upon it is perfectly safe? Yes; perfectly safe.
2704. *Professor Warren.*] That is provided the bridges are strong enough to carry them? Yes; I was speaking about the road though.
2705. Here is a Consolidation engine. Its weight is about 58 tons on the driving-wheels. Would any of our timber viaducts carry that weight. You have had a large experience of timber viaducts, and you know what they would carry. You have eight beams of ironbark. Do you say that they would carry these engines? Yes; they would carry them safely.
2706. But what factor of safety would you have? About three, I think.
2707. And you consider a factor of safety of three safe enough for a timber viaduct? I said that it was safe.
2708. For how long? That would depend a great deal upon the speed, and so on.
2709. Take the Wagga Wagga viaduct? I think it is very probable that if I had these engines to start with I should re-design the bridges.
2710. But taking the Wagga Wagga viaduct, would you run over it with one of these engines at a rate of 10 miles an hour? Yes. I should think it safe to do so.
2711. *Mr. Fehon.*] As a matter of fact, it is not done. The speed is always slackened on that viaduct, and we have money voted to build a new one.
2712. *President* (to witness).] What rate do the engines go over the Wagga Wagga viaduct? I cannot say.
2713. *Professor Warren.*] I know that you have had a good deal of experience with regard to the Wagga Wagga viaduct? Yes; but when I am giving answers to these questions I would prefer to be accurate, and I have not had any time to think over the matter.
2714. Could you not tell us approximately? I would rather think over the matter.
2715. *Mr. Fehon.*] Had not Mr. Whitton two gauges? Yes; I believe the gauge was altered between 1878 and 1880. Mr. Whitton widened the gauge by 3 inches.
2716. *President.*] Had you the work of widening it? Yes, on the new line.
2717. To a new gauge of what? Five feet. There were platforms and station buildings on the lines at the time. I believe the rails were shifted to this new gauge.
2718. Then they did not disturb the building, but they made the difference by altering the rails? Yes. The first place that I was aware of the alteration, was at Wallerawang; I was up there and noticed that the rails had been thrown over 3 inches.
2719. What system were these Illawarra stations built upon? The latter gauge, of 5 feet from the centre of the rails.
2720. *Professor Warren.*] You have already stated that you built these platforms to gauge. There is no use in my asking you many questions about that. It has been stated that the platforms were not to gauge in your district? They are to gauge now.
2721. Of course you set out the ordinary tunnels and the curved tunnels? Yes.
2722. It is a very difficult thing to set out a tunnel compared to the measurement of the platforms and the rails alongside them? Yes.
2723. And you would hardly imagine that the man who could do the one would go wrong in the other? No; the Arncliffe platform was set out with a theodolite.
2724. Do you not think that the real reason is this—that the lines were wrongly measured? The rails are not in their proper line.
2725. *Mr. Hoyle.*] And could the rails have been put back to their proper place instead of the platforms being chipped? Well, it is a question as to what would cost the least money. No doubt the correct thing would have been to put the rails back.
2726. Is it not the duty of an Inspector of the Permanent Way to see that his road is kept to gauge? Yes; it his duty, but like many other duties it is not always strictly carried out.
2727. We have gangs of men whose duty it is to keep the roads in proper order, and the duty of the inspector is to see that that is done? Yes.
2728. *Mr. Fehon.*] And that is done.
2729. *Mr. Hoyle.*] Then if that is done the evidence that Mr. Firth has given to-day is very important.
2730. *Mr. Fehon.*] Mr. Firth is speaking of constructions not of measurements. (To witness.) I would ask you Mr. Firth, whether, in your opinion, if one of these engines would draw a certain load, and it required two engines coupled to draw a similar load, which would be the more injurious to the permanent way? I should say that the two engines coupled together would be the most injurious.
2731. Although not coming under your official cognisance, are you not aware that the Commissioners since they have been in office have strengthened the permanent way very considerably, and are continuing to do so by putting down 80-lb. rails on the suburban lines, and steel rails in other places, and further that this permanent way is in a much better state now than when it was originally laid down? Yes.
2732. *Mr. Hoyle.*] I would like to ask you this: If two engines are hauling a train, and there is one in front and the other behind, would those engines so placed have a worse effect upon the rails than one large engine? I think they would.
2733. You think that one engine before and the other behind would have a more injurious effect than one engine hauling the whole load? Yes.
2734. Why? Because I think there would be more friction on the rails. When on a curve you have one engine pulling in front, and and another pushing behind, that engine behind is trying to thrust the carriages off the curve, and I think the tendency would be consequently more injurious than as though there was only one engine attached to the train. Of course that only applies to a curve. On a piece of straight it would not matter so much.
2735. *Mr. Fehon.*] It is not usual to push up engines except with goods and stock trains, and then it is not a question of hauling. If it was a question of hauling the two engines would be coupled together, and consequently there would be double friction on the lines.
2736. *President* (to witness).] Have you considered this question of the Baldwin engines yourself? No.
2737. You do not know much about that? No; I do not know much about it.

Mr. Stanley Alexander, being sworn, said :—

Mr. S. Alexander, 26 April, 1892.

2738. *President.*] What are you ? A civil engineer.
2739. In the service of the railway of this Colony? I am in the Department of Public Works.
2740. What is your exact position? I am now Examiner of Public Works proposals, but by profession I am a railway engineer.
2741. When you say that you are Examiner of Public Works Proposals, I suppose you mean that in the course of your duties you have to examine places in which it is proposed to construct new railways? Yes, and other public works.
2742. At all events, you consider the routes of proposed railways? Yes.
2743. And how many years experience have you had as a railway engineer? Since 1860 I have been earning my living in the profession.
2744. And have you ever been in the railway service of this Colony, or were you always in the Public Works Department? I was connected with the railways of this Colony for several years.
2745. How long is it since you left the railway service? I left in 1890.
2746. And what was your position in the railway before you left? I was District Engineer.
2747. On what line? On the Illawarra line.
2748. In fact you continued the line from South Clifton to Kiama? Yes.
2749. *Mr. Hoyle.*] Were you the engineer on the South Coast line from South Clifton to Kiama? Yes.
2750. Did the gauge of the platforms come under your observation? Yes.
2751. Were the platforms from South Clifton to Kiama built to a standard gauge? Yes.
2752. But you measured them before you took the line over? I constructed the railway.
2753. And you are sure that whatever buildings were erected when the line was constructed were all to the standard gauge—to the last standard gauge?
2754. *Mr. Brown.*] Is this the same standard gauge that the Commissioners wanted to make throughout the whole Colony? Yes, I think so.
2755. Are there two standard gauges? No.
2756. *Mr. Fehon.*] Mr. Whitton, in the early days of the railway, established a gauge. He found that it was too narrow and established a broader gauge, and that is the gauge that we are altering the platforms to.
2757. *Mr. Brown.*] Then the gauge that this gentleman is speaking about is the gauge that you are bringing your platforms to ?
2758. *Professor Warren* (to witness).] Was it 5 feet from the centre of the way to the edge of the platform? Yes.
2759. *Mr. Fehon.*] I think it is 5 feet 1 inch, but I cannot be sure.
2760. *Witness.*] I found at home one of the working plans of the line, if you would care to see it.
2761. *Mr. Hoyle.*] Could we not have a copy of it attached to the evidence? I will put it in if you like.
2762. And when you constructed the Wollongong station did you build your verandahs to gauge also? The plan of the verandah was sent up from Sydney, and I simply carried it out.
2763. But was it made to what is known as the standard gauge for overhead gear? I do not know of the existence of any standard gauge for overhead gear. I only know of three dimensions for the construction of station buildings. The width from the centre line to the edge of the platform, the measurement from the centre line to any fixed structure, such as the pier of a bridge, and the third dimension is the height.
2764. And did you work to those standard measurements on the Wollongong stations? Yes; excepting the height.
2765. Have you no gauge for the verandahs? I never heard of one. There may be a gauge in the office, but I have no knowledge of it.
2766. Would the verandah structures there be of the same projection as all the other verandah structures on that line. Would the dimensions of the verandahs at Wollongong be the same as the dimensions of verandahs on the rest of the line? Not that I know of.
2767. Then there is no fixed standard for that? Not that I am aware of; I simply carried out the plans.
2768. In building the line from Sydney to Newcastle, were the platforms built to the new gauge or to the old gauge? That I do not know; I was not there.
2769. *Mr. Fehon.*] I would ask Mr. Alexander whether the South Coast line was not opened for traffic before a great many of the permanent structures were erected, and whether in consequence a great many of those permanent structures, especially platforms, were not constructed by the Existing Lines Branch? A good many of them were.
2770. They did not come under the department with which you were connected at that time, they actually came under the Commissioner for Railways? Yes.
2771. *President.*] Might they be then of a different gauge?
2772. *Mr. Fehon.*] The Construction Branch of the Service would not be responsible for any error there might be in the platforms if they were constructed by the Existing Lines Branch. The Existing Lines Branch is a branch that takes their work over from the Construction Branch as it is, and does any necessary work after that but in the hurry to open this line, I believe that it was taken possession of by the Commissioner for Railways before it was properly completed by the Construction Branch. Consequently the Engineer for Existing Lines, under the Commissioner, had to undertake the work of building platforms and so on, that ought to have been done by the Construction Branch. Consequently the building of these platforms was not done under the observation of Mr. Alexander at all.
2773. *President.*] But under any circumstances, should they not have been built to a regular gauge?
2774. *Mr. Fehon.*] They should have been, but as a matter of fact we have found that they varied very considerably.
2775. *Mr. Hoyle.*] I would like to call Mr. Midelton as the next witness, and as his evidence will be very long, I should be glad if the Commission would consent to adjourning the inquiry to-day at the present stage, and proceeding with Mr. Midelton to-morrow.
2776. *Professor Warren.*] Has Mr. Midelton examined the Baldwin engines?
2777. *Mr. Hoyle.*] I understand that he has, but as he is here now, you might put him formally in the box.
2778. *Professor Warren.*] Well, we will assume that he has from what you say.
2779. *Mr. Hoyle.*] Well, I might say that I believe he has, from the fact that I saw him in the workshops on one occasion when I was there. I may add that Mr. Midelton has great faith in the Baldwin Company, and knows a great deal about their work.

WEDNESDAY,

WEDNESDAY, 27 APRIL, 1892.

[*The Commission met at 2·30, in the Board-room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

George Cowdery, being sworn, said:—

Mr. G. Cowdery. 27 April, 1892.

2780. I was for about twenty-seven years in the Railway Service of New South Wales, in the capacity of District Engineer on the Southern Line from Picton to beyond Mittagong, and on the Zig Zag works and survey works. I was Engineer for Existing Lines subsequently. I worked under Mr. Whitton first. I was Engineer for Existing Lines for about eight years.

2781. *Mr. Hoyle.*] Whilst you were Engineer for Existing Lines and when erecting structures on the permanent-way did you work to the gauge? What gauge?

2782. We understand from the evidence already given that there have been two gauges for making the platforms, that is to say, there was a difference of gauge between the platforms and rails; originally we had a gauge narrower than that at present? Yes.

2783. When you were erecting buildings in the construction of the line, as for instance, in making new platforms or pulling down an old station and rebuilding it, did you work to the standard gauge? Certainly.

2784. Can you tell us this, Mr. Cowdery; we understand that the date that the latest gauge now known, that is to say, the widest gauge, was inaugurated was on or about 1880;—is that correct? I cannot tell you, but I can tell you what caused it to be inaugurated, it was in consequence of the American engines that were introduced here. From their first introduction into this Colony we found that they struck against some of the platforms and the roadway had to be widened, that is to say, the rails had to be pulled away from the platform.

2785. You had then to widen the gauge? Yes, between the platforms and the rails.

2786. *Mr. Brown.*] Are you referring to the recent importations of the Baldwin engines? No, to the old Consolidation engines.

2787. *Mr. Hoyle.*] These were the engines brought here when Mr. Midelton was in office? Yes, or when Mr. Scott was in office; I cannot say exactly.

2788. After the alteration of the gauge did you work to it in the erection of all structures? All I put up, certainly.

2789. Are you positive that your gauge was worked too? Yes, I have no reason to think otherwise.

2790. *Professor Warren.*] As Engineer-in-Chief you cannot undertake the duty of checking the work of your officers, they were competent officers, and you had to entrust them with the work? Yes. The reason for the alteration of the gauge was, as I have already stated, on account of the new American engines.

2791. *Mr. Hoyle.*] They were 75-ton engines, I believe? I believe 75 tons was the weight.

2792. But the gauge is not altered on all the lines in consequence of these engines? No, because they were only supposed to work on the Western Line. They were working the heavy traffic there, and we widened the gauges for them. But we did not alter it on the Northern Line, and I do not think on the Southern Line. They were not intended to run in those directions, nor had they run there.

2793. They were meant for the mountain traffic? Yes.

2794. Being strong engines? Yes.

2795. None of the engines subject to these inquiries were in use when you left the service I believe? No, and I do not know anything about them. I have not been alongside one of them.

2796. Evidence has been given that when the Railway Commissioners came into office, and before that, it was found that the platforms were out of gauge, and I now ask you as engineer at the time that I have referred to whether that was so or not? All the platforms I had to do with were not out of gauge.

2797. *Professor Warren.*] You had to do with all the lines in existence at the time, had you not? The engines which are travelling over the Western Lines were still travelling there, and the northern platforms had not been altered to the extreme width to which they have now been put.

2798. *President.*] What platforms did you make? I did not make very many except at new stations.

2799. Can you give me the names of some? I could not.

2800. Have you any idea how many? I have not, it is only about an hour and a half since I received notice that I was to come here. I have not looked up the slightest evidence, it is only from memory that I can speak.

2801. *Mr. Brown.*] Could you tell us the name of one of the platforms?

2802. *Mr. Hoyle.*] Was Petersham one? No; that platform was built before.

2803. *Professor Warren.*] Stanmore was one was it not? No; all the platforms were built on that line before.

2804. But Stanmore—surely you built that? Well, if I did you may depend it was to gauge. The gauge was laid down. On one or two occasions I gave the gauges of all the platforms and bridges to the Locomotive Department.

2805. You never heard of them being out of gauge? No; I supplied the Locomotive Department with the gauges when they asked for them once or twice.

2806. Whilst you were Engineer-in-Chief of the Existing Lines you never received any reports from your officers that the platforms were out of gauge? No.

2807. *Mr. Hoyle.*] Is it possible for the rails through continual traffic to be moved towards the platform? Yes.

2808. Is it not the duty of the inspectors and the gangers to see that the road is kept in proper position and repair? Certainly.

2809. If the road had moved towards the platform would it be right to chip the platform in order to widen the road, or would it not rather be the correct thing to put the road in its place? I think the proper thing to do would be to put the road in its place.

2810. Then you would not go on chipping the platform? Certainly not.

2811. Or you might go on chipping and chipping till nothing remained of the platform? That might be so.

Mr. G. Cowdery, 27 April, 1892.

2812. The gangers are to be on the road to keep everything in gauge, and keep everything in line;—the inspector is at the head to carry everything out in connection with the lines? Yes.
2813. Do you know the weight of the Baldwin engines? No.
2814. The Baldwin passenger engines when loaded are 92 tons with 15 ton 9 cwt. on their driving wheels, and the Consolidation engines are 97 tons.
2815. Now I want to ask you whether in your opinion, as an engineer, it would be perfectly safe for any of these engines, weighted as they are on their driving wheels, to be run at a high rate of speed over the permanent-way on a 71-lb. iron rail? Well that depends a good deal on the bearings of the rail. It depends upon how many bearings you have.
2816. *Professor Warren.*] Sleepers you mean? Yes.
2817. I suppose you refer to the spacing between the sleepers—that is the distance between them? Yes.
2818. *Mr. Hoyle.*] Well, take for instance on the Northern Line where they are 2 ft. 8 in. to 3 ft. apart, would it be safe to run these engines with that weight on their driving wheels, say at 35 miles an hour, that is to be perfectly safe on the permanent-way? I daresay it may be safe for a certain time, but it must be said that when these lines were laid down they were laid down for a much lighter engine than is now running over them.
2819. *President.*] We all know that these new engines are very much heavier than those we have had here, and we now want to know if it is unsafe for these heavier engines to go over 71-lb. rails? Well I would not say that until I went into the calculations carefully.
2820. *Mr. Brown.*] You would not venture an opinion now but you want to consider it? Yes.
2821. I think it is very important from your point of view that you should consider it.
2822. *To Mr. Hoyle.*] Just state the points on which you want information.
2823. *Mr. Hoyle.*] Suppose I were to read my charge in that respect.
2824. *Mr. Brown.*] No I do not think that would be of much use.
2825. *President.*] I think it would be better to ask him directly for the information we want.
2826. *Professor Warren.*] Suppose you write the question out.
2827. *President.*] I think this question is the very gist of your case;—do you want to ask him any more questions?
2828. *Mr. Hoyle.*] I want to know from Mr. Cowdery whether he, as an engineer, would consider it safe for engines of this kind, weighted as they are to run over our permanent-ways laid with rails of 71 lb. weight? I should want the weight of the engines and the length of the wheel base.
2829. *Professor Warren.*] Do you think it would be better to put the question in writing?
2830. *Mr. Hoyle.*] Very well; I shall post it to you to-morrow night, Mr. Cowdery.
2831. *Mr. Brown.*] These questions will be furnished to you by Mr. Hoyle and you can send us the information later on.
2832. *President.*] Is there anything else Mr. Hoyle that you wish to ask this witness?
2833. *Mr. Hoyle.*] I should like to ask him something about the bridges.
2834. *Witness.*] I should like to say something about these also. There was something said at a previous Royal Commission about the cross-girders, these girders were considered to be none too strong. For my own part I think that they should be seen to, but I do not wish to say anything more about it.
2835. *Professor Warren.*] I should like to ask a question about the bridges, because I know that is a matter requiring consideration, and therefore I have asked for a tabulated statement.
2836. *Witness.*] I was very much interested in the question at one time, the engines have increased considerably in weight since these bridges were erected, and there should be more attention paid to them. There has been no attention paid to them so far as I am aware.
2837. *Professor Warren.*] You know the Wagga Wagga viaduct and the tests which have been made with regard to it;—do you consider it safe to run engines of 97 tons weight on a bridge with a girder of 29 ft. 6 in. span, such as this viaduct has;—would it be safe? I never dreamt for a moment that viaducts such as that at Wagga Wagga were not safe; it was only the motion I had in my mind.
2838. But these engines are much heavier in weight than they were in your time? Yes. Of course, I never liked these bridges, and I do not care to say too much about them. In trying the deflections of the timber girders it must be remembered that when they get old they will not deflect as much as when they were new. They get a set on them, and the more set they get upon them the worse they are.
2839. *President.*] Do you mean the less work they get to do the more dangerous they become? No; the less deflection there is the more rigid they become, consequently the more dangerous they are.
2840. *Professor Warren.*] The Wagga Wagga viaduct is a type of the others, and it was made by the Railway Department some years ago—these viaducts were of two kinds, one of 29 feet 6 inches and the other 26 feet, I believe? Yes; they were 29 ft. 6 in. spans, I believe.
2841. *Mr. Brown.*] We have evidence that the engines go over these viaducts at a moderate rate of speed? It was recommended against my advice that they should travel over them at full speed.
2842. *President.*] But evidence has been given that since the Baldwin engines arrived they were ordered to go at a less rate of speed;—would that make any difference in your calculations;—is it dangerous to take one of these engines over the viaducts at the rate of 5 miles an hour? No; the deflection would be about the same at a fast rate as a slow one.
2843. *Mr. Fehon.*] The Baldwin engines have not gone over the Wagga Wagga viaduct.
2844. *President.*] They have not run over it, you say? No, sir; they have not been used for that purpose.
2845. Have they been used for running over any similar viaduct? They have had to travel over the Penrith viaduct; they have had to travel over that to get up west where they are being used.
2846. Well, have they been over that;—is it the same as the Wagga Wagga viaduct? I cannot say personally.
2847. *Professor Warren.*] The only difficulty is in the span of these viaducts; in the one case it is 29 feet 6 inches, and the other 26 feet. The Wagga Wagga viaduct is a type of viaduct that is used very largely in this Colony. No doubt the Baldwin engines have been over many of them at Penrith, and on the Southern Line and on the Northern Line. (*To witness.*) You have not considered the question with regard to the increased weight of the Baldwin engine? No. I made up my mind that I would not interest myself in them, and do not know the weight of the engine.
2848. With regard to the other bridges, taking into consideration their spans, you have not considered the effect upon them for heavily-weighted engines passing over? 2849.

Mr. G. Cowdery. 27 April, 1892.

2849. *Witness.*] Something was said on the old Commission about the Penrith bridge and the cross-girders.
2850. *Professor Warren.*] The greatest weight on the wheels of any of the old engines on the lines in your time was 16 tons, I believe—I refer to the suburban tank engines, so that there is not such a great difference between the 15-ton Baldwin engine and the engine referred to? Well, I think there is more traffic on the bridges, and they get more wear and tear, and should be looked after more closely.
2851. *President.*] But are they not looked after? I do not know.
2852. *Professor Warren.*] Then, there is no reason to look after the cross-girders in the bridges with the Baldwin engines any more than with the tank engines in your time? Except that there is an increased rate of speed, and there are more of them going over the bridges.
2853. *President.*] If they were looked after in your time, why not now? I do not know that they are not. The rolling-stock, I think, may be increasing in weight and number without a corresponding increase in the strength of the bridges and roads.
2854. That has been going on for a long time? Yes; for years.
2855. *Mr. Hoyle.*] Considering that the witness is not prepared to express any further opinion on this subject, I have no further questions to ask.
2856. *President.*] Mr. Hoyle will post to you some questions he would like to ask? Very well; my address is FitzEvan Chambers, Castlereagh-street.

John Hordern, being sworn, saith:—

Mr. J. Hordern. 27 April, 1892.

2857. I am a driver on the railways of New South Wales, driving from Bathurst to Sydney. I have been doing that about nine years and nine months. I have been in the railway service about eleven years. Before I was driving I was firing.
2858. *Mr. Hoyle.*] Are you driving one of the Baldwin engines, Mr. Hordern? Yes.
2859. What is the number of that engine? No. 450.
2860. Will you state your experience of these engines? My experience of these engines is that I have found, since I had anything to do with them, every satisfaction. I have had every satisfaction from them as a driver.
2861. Have you found any of the parts defective? I have had one or two slight accidents.
2862. *President.*] What do you mean by slight accidents, do you mean breakages? Yes; I had a couple of valve yokes break.
2863. Have you had any mishaps with the reversing-gear? I have had one of the pins of the reversing gear break.
2864. Which one? The back pin.
2865. Have you had any failures with the brake-gear? Only a slight one, a five-eighth bolt became displaced. That is the only failure I have had in brake-gear.
2866. Have you had any draw-hooks break in these engines? One about six months ago.
2867. On these engines, I mean? No.
2868. *Mr. Brown.*] We are talking only about these recently imported engines?
2869. *Mr. Hoyle.*] Was the failure to the reversing and brake gear caused through rough handling? No; I do not think it was.
2870. In using your reversing-gear, did you set it with proper precautions? Yes; as a matter of fact, I was not setting it at all on this occasion, because I was coming down an incline.
2871. *Professor Warren.*] And at the time it broke, you were not handling it? No.
2872. Was it through the careless application of the brake or did you exercise the care, that with the experience of a driver, you should exercise? Yes.
2873. Then it was not through the application of the brake at all that this pin came out? No; it simply came out from the motion of the engine.
2874. *President.*] Do you mean that it shook out? Yes, sir; the split cotter broke, and the pin worked out.
2875. *Mr Hoyle.*] When you are coming down a bank with this engine—dropping down a bank as it is called in technical language—do you find that she rolls very much? No.
2876. Do you find it come down as steadily as other engines? Yes; quite as steadily.
2877. Have you every control over this engine? Yes; every control.
2878. So the brake on the engine is perfectly well able to control it at any rate of speed?
2879. *Professor Warren.*] Irrespective of the weight of the train behind? Yes; as a rule I do not use the tender brake on the train.
2880. Are you speaking of the passenger or goods train? I am speaking of passenger driving.
2881. What is the average load you haul? About seventeen and a half carriages.
2882. Averaging from 8 to 10 tons? Yes, averaging (say) 10 tons.
2883. *Professor Warren.*] Where do you haul that load? From Penrith to Katoomba.
2884. At what speed? Averaging about 18 miles an hour.
2885. When you are going up the hill—taking the Lapstone Zig-zag—do you find much jerking on the engine? No.
2886. It is a steady pull? Yes, a steady pull.
2887. Have you examined these engines minutely in any way? Yes; I have examined them so far as my capacity as a driver goes.
2888. *Mr. Hoyle.*] That is to say you go round your engine when you come to the depôt to see that all is right? Yes.
2889. Have you found any defects in the wheels? No, I have not found any.
2890. You are referring to this engine only? Yes.
2891. *Mr. Brown.*] You have driven two or three engines of the Baldwin Company, I believe? Yes.
2892. *Mr. Hoyle.*] Do you remember their numbers? They are numbered 448, 454, and No. 450.
2893. Driving No. 448, had you any breakages with her—did you find her rolling when she was dropping down a bank? She did roll a little more than my own engine, but very little.
2894. There was no danger in that roll? No; I do not consider that there was.
2895. What was your experience of engine No. 454—were there any breakages on her whilst you were driving her? No, not whilst I was driving her; I had her only for a trip.

Mr. J. Hordern. 27 April, 1892.

2896. Was that all;—how long had you No. 448? I had 448 for two trips.
2897. How long have you been driving No. 450? I should say about four months, but I cannot tell exactly to a day. I think it would be four months, however, since I got that engine.
2898. What service did you take? The mail and passenger service.
2899. Is 450 a passenger engine or a Consolidation engine? She is a passenger engine.
2900. You have taken seventeen and a half carriages from Penrith right through up to Katoomba with this engine? Yes, from Penrith, without a pilot.
2901. Did you use any of these engines for the mail, and did you want any assistance with them on those occasions? On one trip I had an assistant pilot engine, but I had a very heavy load then. On that trip I had nineteen and a half carriages.
2902. *Professor Warren.*] You had another engine to pilot you then? Yes, I had assistance to Katoomba to help me on. The time-table had been accelerated, that was the reason why I had to get the pilot. I had twenty-three carriages up from Wallerawang, and that was up a grade of 1 in 40, and round a 12-chain curve.
2903. Did she pull all right? Yes.
2904. And keep time? Yes.
2905. What is your time-table time;—about 18 miles an hour, is it not? Yes, sir, that is about it.
2906. From where? From Wallerawang to Eskbank, a distance of 10 miles. There is a very heavy curve there.
2907. What is the grade? 1 in 40.
2908. How much is there of it? About 3¼ miles of that grade.
2909. Have you any idea of the rate which you went up the Bank? No; I cannot say exactly what speed I went up that Bank at, but I should think that it was about 12 or 15 miles an hour.
2910. You cannot say exactly;—you were more concerned about getting the load up, I expect? Yes.
2911. *Mr. Brown.*] You did the mail time through—you did your time-table time? Yes.
2912. As a matter of fact these engines have given you every satisfaction in every sense of the word? Yes.
2913. And you are well satisfied with them as a driver? Yes.
2914. *President.*] With regard to the reversing-gear and this pin giving way, was that a pin that came out whilst you were using it? No; it holds the screw up to the boiler. There is a bracket on the side of the boiler, and this pin is screwed into the bracket and holds the reversing-screw.
2915. Is that a very serious thing to happen? It causes a serious delay.
2916. Is it a dangerous thing? There is no danger attached to it.
2917. Have you ever had to do with the driving of new engines before this one? Yes; I have.
2918. Are there more things to be put right in these engines than in other new ones that you have had to do with? No, not that I am aware of.
2919. Not necessarily? I do not find it so as far as my experience has gone.
2920. You do not find that there are more of these little things going wrong in these new engines than in other new engines that you have had to do with? No; I do not really think there are.
2921. As compared with others they are a great deal stronger in hauling power, I believe? Yes; very much stronger. There is a difference of three and a half carriages in the amount of weight that they will haul.
2922. *Mr. Hoyle.*] Do you receive 1s. a day extra for driving these engines? Yes; I received 1s. a day extra, but I do not know that it is for driving these engines or what it is for.
2923. Is it a fact that the drivers employed in driving all these Baldwin engines have got 1s. a day extra since they first had charge of them? I do not know. I cannot say of my own knowledge, and I do not rest upon rumour.
2924. Well, have you got 1s. a day more? I was told that I was to receive 1s. a day extra, but I was not informed what I was to receive the additional remuneration for.
2925. *President.*] And you did not bother about it? Well, it did not concern me why I got it so long as I did get it.
2926. *Mr. Fehon.*] I noticed that in talking of a weighted carriage you said it was about 10 tons, that it was calculated at 10 tons to the carriage; do you know exactly the weight at which it is calculated;—what is the Departmental rule in calculating the weight? Well, a few years back we had a circular issued to the effect that the loads were to be calculated for a single carriage at the rate of 8 tons, allowing 2 tons capacity for the passengers who were supposed to be in them.
2927. The 8 tons is extra to the passengers in the Departmental calculation;—the standard is fixed simply for the purposes of calculation, but that is the fixed rule? Well, I was not aware of that.
2928. *President.*] He says that he had seventeen and a half carriages behind his engine on one occasion, and instead of multiplying that by ten it is really eight times that number of tons for the purpose of ascertaining the total number of tons carried.
2929. *Professor Warren.*] Yes, more or less; of course there is an element of uncertainty in the number of passengers.
2930. *Mr. Fehon.*] There is no actual rule except in making a calculation of what the engines could draw, and in that case we would base the calculation upon 8 tons per carriage. If it is a lavatory carriage we should reckon it at the rate of three times 8 tons.
2931. *Mr. Brown.*] I should think at times when you packed the Northern carriages there are about 20 tons in them.
2932. *Mr. Fehon.*] At Easter time, I dare say.
2933. *To Witness.*] Have you ever driven an engine that would give you more satisfaction than the one you now have? No, sir.
2934. *President.*] The engines you drove before were English engines—were they Mogul engines? Yes, sir; they were very good engines for the size of them, but they are not now capable of dealing with the traffic we have on our lines.
2935. *Professor Warren.*] When you say that you never drove an engine that gave you more satisfaction, do you mean that you have never driven a more powerful engine—it is a question of power is it not? Yes.
2936. *Mr. Fehon.*] And as I take it, you have never driven an engine that has enabled you to keep your time so easily? That is so, sir

Mr. J. Hordern. 27 April, 1892.

2937. *Mr. Hoyle.*] Have you ever driven a Scotch Yankee over the mountains? Yes.
2938. And with what results? With very good results.
2939. What load did you haul? Thirteen carriages.
2940. Did she go all right? Yes.
2941. That is the maximum load—could she carry anything more? No, not to keep time.
2942. *Mr. Fehon.*] The pin you spoke of, and other small mishaps will occur in any other new engine, would they not? Yes; I have driven the engine for four months, and I have not had a brake block put on yet.
2943. *Professor Warren.*] I would have liked to ask Mr. Fehon whether he would supply the profile referred to in the letter of the 15th December, 1890. I have been looking in the *Railway Gazette* this morning, and I cannot find it. The Baldwin Company referred to it in their letter to the Railway Commissioners. They say that the profile is a theoretical one, and they give it to you. As a matter of fact, was it sent.
2944. *The Secretary to the Railway Commissioners.*] I think it was sent. I think I have seen it.
2945. *Professor Warren.*] They give figures, but it would be much better to have a theoretical profile before us.
2946. *Mr. Fehon.*] We have one, I think. I think this has reference to the Baldwin engines.
2947. *Professor Warren.*] On the Baltimore and Ohio railways?
2948. *Mr. Fehon.*] Yes; I think it is a blue print, hanging in Mr. Eddy's room.
2949. *Professor Warren.*] In a letter from R. Towns & Co., dated Sydney, 15th December, 1890, they say:—"Have never had maximum load weight taken up 17-mile grade by 1300 class engine. It is about 240 net tons at schedule speed of 22 miles per hour, exclusive of weight of engine and tender. The 240 tons of 200 lb. are equal to 214 tons of 2,240 lb. There is much curvature on the 117-foot grade, and we are informed that in some places the actual grade considerably exceeds 117 feet per mile. The latter is the theoretical grade as shown by the profiles."
2950. I think you must have that, and I hope you will try to find it. I could not find it myself in the *Railway Gazette.*
2951. *Mr. Fehon.*] The engines are doing very much better than is stated in that letter.
2952. *President.*] Call the next witness.
2953. Mr. Midelton was called, but was not present.
2954. *President* (to Mr. Hoyle).] Have you any other witnesses ready for us to examine whilst we are waiting for Mr. Midelton?
2955. *Mr. Hoyle.*] No; I thought that Mr. Midelton would have been present, but he is not. [*A messenger was despatched for Mr. Midelton.*]
2956. I think it would be desirable for the Commission, in the absence of Mr. Midelton, to examine the wheels of the engine at Eveleigh. I refer to the wheels that are defective in the Baldwin engine, No. 456.
2957. *President.*] Can that be done in an hour, Mr. Hoyle, while we are waiting for Mr. Midelton?
2958. *Mr. Hoyle.*] Yes, I think so.
2959. *Mr. Hoyle.*] Mr. President, in view of the terrible accident that has happened this morning on the Western line, and which I exceedingly regret—in view of that accident and of certain things which appeared in the newspapers to-day in reference to it, I desire to ask the Commission to adjourn until Tuesday next, in order to enable me to view the scene of the accident, and collect any evidence I may be able to collect upon the subject. This is a very serious accident, and if the reports are true that have appeared in the newspapers to the effect that the bursting of the rail had something to do with the cause of the accident, it would be a very important matter in connection with this inquiry. I would, therefore, ask that in view of these facts, the inquiry may be adjourned from its rising, this afternoon, till Tuesday next, at 2 o'clock.
2960. *Mr. Brown.*] I have no objection.
2961. *President.*] The Commission accedes to your request, Mr. Hoyle.

[The Commission, accompanied by Mr. Fehon, Mr. Stanger, Mr. Hoyle, M.P., and other gentlemen, then proceeded to the workshops, at Eveleigh, where they made a careful examination of Baldwin engine No. 447, and also of the wheels originally made for but now detached from Baldwin engine No. 456. The Commission also inspected one of the new engines recently manufactured for the New South Railways, by Messrs. Beyer and Peacock, of Manchester, and which was then about to proceed with the southern express to Albury. Draw-gear, and locomotive wheels of various makes and descriptions were examined, and the blacksmith shop was visited. The Commission returned to the Colonial Secretary's Office too late in the afternoon to hear further evidence, and Mr. Midelton being present was informed by the President that his examination would be conducted on Tuesday afternoon, the 3rd May, at 2 o'clock.

TUESDAY, 3 MAY, 1892.

[*The Commission met at 2 o'clock, in the Board Room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., M.L.C., J.P.

2962. *Mr. Hoyle.*] Previous to calling Mr. Midelton I desire to ask if the Commission will procure a copy of the depositions taken at the inquest upon the bodies of those persons who were recently killed in the railway accident at Tarana.
2963. *Mr. Brown.*] For you?
2964. *Mr. Hoyle.*] Yes.
2965. *President.*] I do not know that we could get them for you; but before going any further I think it would be well if one of the Railway Commissioners were present.

[*Mr. Fehon having entered the room.*]

2966. *President.*] Mr. Fehon, before you entered an application was made to the Commission by Mr. Hoyle for a copy of the depositions taken at the recent inquest held at Bathurst on the Tarana railway accident.

accident. I do not know whether Mr. Hoyle would be entitled to them, but they could, I should think, be got for the Commission, and then of course the Commission would lend them to him. Do you think you could procure a copy of these depositions for us?
2967. *Mr. Fehon.*] I think so.
2968. *President.*] There is no objection on your part then?
2969. *Mr. Fehon.*] Oh no, not at all.
2970. *President.*] Very well. Then I suppose the Department of Justice will supply this information?
2971. *Mr. Fehon.*] Yes, I think the Department of Justice will supply it.
2972. *President.*] We shall then, I suppose, have to write for them, as I hardly think we can get them at once?
2973. *Mr. Hoyle.*] I would also request Mr. President that the rails which were broken in the accident should be brought here.
2974. *Mr. Brown.*] There is no objection to that I suppose Mr. Fehon?
2975. *President.*] If they could not be brought here, perhaps we could go to where they are?
2976. *Mr. Fehon.*] There are only the two rails.
2977. *Mr. Hoyle.*] There are only two. They were produced at the inquest at Bathurst, and I think there can be no reason why they should not be brought here.
2978. *President.*] With regard to their being brought here Mr. Fehon, would there be any difficulty in the way. Of course the rails are, I suppose very heavy?
2979. *Mr. Fehon.*] The rail has been subjected to tests since it was brought here, and is now in several pieces.
2980. *President.*] The fracture I take it has not been touched?
2981. *Mr. Fehon.*] The fracture remains untouched. The rail was marked at each end of the fracture with a band of paint, so as to distinguish it from any other part.
2982. *Mr. Brown.*] Was it not unwise on the part of the Commissioners under the circumstances under which this inquiry has been held to have anything done to the rail at all?
2983. *Mr. Fehon.*] I do not see that sir. At the inquest it was found that the immediate cause of the accident was the broken rail, and the Commissioners accordingly wished to satisfy themselves with regard to this rail.
2984. *Professor Warren.*] I understand Mr. Fehon that you have tested a portion of the whole rail, but did not touch the fractured part?
2985. *Mr. Fehon.*] The original fracture is not touched at all, and the tests that have been applied will not interfere with the present inquiry, it simply means that instead of having a rail 20 feet long you will have a shorter piece.
2986. *President.*] In the condition that it is now in could it be brought here?
2987. *Mr. Fehon.*] Oh yes, it is quite possible to bring it into the room.
2988. *President.*] Perhaps we could see it in the workshop?
2989. *Mr. Fehon.*] Yes.
2990. *Mr. Hoyle.*] I must express my deep regret, bearing in mind the direction of the coroner of the jury at the inquest, that the rail has been touched at all. I think that the coroner in addressing the jury said that there was another tribunal sitting to inquire into the question of the weight of the Baldwin engines, and that the jury should dismiss from their mind any question concerning that matter when considering their verdict. I think the rails should have been left as they were, and no test have been made until this Commission had an opportunity of viewing them and taking evidence upon them.
2991. *President.*] In the first place the Commissioners did not know that they would require to be seen by this Commission, and we are not at all certain that we would require these rails to be viewed, and in the second place they have done nothing that would prevent the fracture from being seen. It was wise, surely, under the circumstances that they should test the rail, in order to discover if possible the cause of the defect.
2992. *Professor Warren.*] Was it the bending test?
2993. *Mr. Fehon.*] No, the drop test. I would point out Mr. President that the Commissioners have a duty to the country to perform in the management of the railways, and if we consider it desirable to test a rail or anything else, we shall do it independently of Mr. Hoyle or anybody else. It is in the interests of the Railway Department that we take this course. One would think from what Mr. Hoyle has said that something had been done to conceal this matter from the Board. Nothing of the sort. This is a most open Board, and we are doing everything we can to promote the fullest investigation.
2994. *Professor Warren.*] We have nothing to do with that Mr. Fehon.
2995. *Mr. Fehon.*] I say this because a wrongful impression might go out through the Press.
2996. *Mr. Hoyle.*] I must call your attention Mr. President that I am from time to time subjected to insult at the hands of the Railway Commissioners. I make no imputations against the Railway Commissioners, and I do not make this statement and request with any desire that I should place the Commissioners before the public in any bad light. What I am doing I am simply carrying out from a sense of duty, and so far as I am concerned in this inquiry I shall do my duty in spite of the Commissioners.
2997. *President.*] There cannot be any harm done to these rails I should think from what Mr. Fehon has said.
2998. *Mr. Fehon.*] There is no harm done to them.
2999. *President.*] The Commissioners have taken a piece of the rail and subjected it to a test, and that, under the circumstances, I should think a very wise proceeding. They have taken a piece of this iron and applied some test to it. Where the break appeared it was left entirely intact, and I do not see how any harm can have been done by testing the rest of it.
3000. *Mr. Brown.*] I think it injudicious on the part of the Commissioners to have interfered with the rail at all.
3001. *Mr. Fehon.*] There were some miles of the same road that is laid with the same kind of rail, and we wished by testing this rail to ascertain what the state of the road was.
3002. *Mr. Brown.*] This accident has added seriously to the responsibility of the Commission, and for that reason, apart from any other, I wish it had never occurred, but since it has, and since the responsibility is thrown upon the Commission, I am prepared to meet it, and I think it would have been quite as well if for the sake of forty-eight hours longer the Commissioners had left the rail alone, so that it could have been seen intact by this Commission.

3003. *Professor Warren.*] Perhaps when the rail with the original fracture is brought here the parts of the rail you have tested what you have done will turn out to be of no sort of importance.
3004. *Mr. Fehon.*] The fracture which occurred at the time of the accident is just as intact now as when it occurred, but we desire to test the rail for other causes besides those which are stated to have caused the accident.
3005. *President.*] Can the rail be brought here?
3006. *Mr. Fehon.*] Yes, it can be brought here.
3007. *Mr. Hoyle.*] I wish both rails to be brought here, there were two rails broken.
3008. *President.*] Is it practical to bring the other rail here also.
3009. *Mr. Brown.*] Can we see it just as well at Redfern as here, or do you want to call evidence with regard to it, Mr. Hoyle?
3010. *Mr. Hoyle.*] Yes, I want to examine witnesses with regard to it.
3011. *Mr. Fehon.*] One rail was the cause of the accident, and the accident caused the breakage to the other rail.
3012. *Professor Warren.*] Mr. Fehon, when I was at Eveleigh, I saw the indicator-gear on a Baldwin engine. Do you propose to make any tests to that engine, because I cannot understand you fitting indicating-gear on to an engine, unless you propose to make tests with it.
3013. *Mr. Fehon.*] Yes, I think it was proposed to make tests with a Baldwin engine, and whilst this engine was under repair it was thought desirable to fit it up with a gear in order to make these tests.
3014. *Professor Warren.*] I think it most desirable. Who will make the test?
3015. *Mr. Fehon.*] Some of our people would be present. We are not particular as to who may be present with them.
3016. *Professor Warren.*] Is it a test in which I could see the arrangements which have been made beforehand, and confer with Mr. Thow beforehand upon them, and as to what tests should be made?
3017. *Mr. Fehon.*] Yes, it is most desirable that you, as a scientific member of this Board, should have every opportunity of knowing what is to be done.
3018. *Professor Warren.*] I think Mr. Thow and I might agree as to what arrangements should be made, and what tests should be undergone.
3019. *Mr. Fehon.*] We shall agree to whatever you and Mr. Thow arrange.
3020. *Mr. Hoyle.*] Will these tests be made as originally proposed by Professor Warren, and the other engines also be tested?
3021. *Professor Warren.*] I do not think it at all necessary to test the Mogul engine, because I do not see what that would do for us. It would appear possibly that this is a much heavier engine. The only engine that could compare with the Baldwin engine is the one we looked at at the works, and which is a heavier engine, but within about 4 tons of the Baldwin passenger, and it would be a very nice and desirable thing to do, to test that engine in comparison with the Baldwin, but I take it that matter is left over until we have heard the Commissioners' evidence.
3022. *Mr. Fehon.*] We have no objection to any tests you may desire to put the Baldwin engines to, but we do not see the necessity of running one kind of engine against another kind.
3023. *Professor Warren.*] I think it would be best first of all at all events to make a test of the Baldwin engines, and the results of that may indicate what further tests may be required to be made. We may be satisfied with it, and think nothing further necessary.
3024. *Mr. Fehon.*] We can give you information with regard to all the classes of engine.
3025. *Professor Warren.*] I do not desire to do anything further than is absolutely necessary, but if I did not see that all I considered necessary was done then I would not be carrying out the work I am here to do.
3026. *Mr. Hoyle.*] The strong reason I have for making these tests is this, that we have had paragraphs in the press as to what the Baldwin engines were going to do, and I think it fair to test the strongest engine we have against the Baldwin engine, and I would suggest the Mogul (or Scotch Yankee) pressed up to 160 lb., and put her on the mountains against the Baldwin engine on a trip from Sydney to Katoomba.
3027. *Mr Fehon.*] I must protest against any such business as the running of one engine against another. There is nothing to be gained by it except the gratification of personal ends, I will not say by Mr. Hoyle, but by other persons. So far as this inquiry is concerned we shall afford every facility necessary to make these running tests for the Baldwin engines, but any tests with the object of running one engine against another we shall object to, unless the Commission itself thinks it necessary.
3028. *Mr. Hoyle.*] I think we ought to take the strongest engine before the Baldwin engine came, then take the English engine and the Baldwin, comparing their performances, each carrying the same pressure. That is my idea.
3029. *Professor Warren.*] We must not compare the Midelton engine with a Baldwin, because it is obviously not able to do the same work. It is not fair to expect it to do it, and the comparison would lead to nothing, but when you come to put it as a matter of comparison in a test with another engine built for the same purpose and the same traffic, it would, I think, be a desirable test.
3030. *Mr. Brown.*] I think before making these tests the best course would be to get to the close of the evidence, and then Mr. Hoyle could make fresh application, and the Commission could decide upon it.
3031. *Mr Hoyle.*] Very well; I shall take that course.
3032. *Mr. Fehon.*] I would ask that Driver Moses, who is an important man, engaged in running the Western mail, may have his evidence taken before Mr. Midelton, if Mr. Hoyle has no objection.
3033. *Mr. Hoyle.*] Well, since I called Driver Moses certain things have happened, and that is why I asked for the depositions, in order to examine him on what he stated there.
3034. *Mr. Brown.*] You do not want him now?
3035. *Mr. Hoyle.*] No, I do not want him now; but I will not say that I shall not want him to-morrow. At the present juncture I do not feel justified in examining this witness.
3036. *Mr. Brown.*] Could you not let the man go back to his work, and then if you want him send for him.
3037. *President.*] Do you want all the depositions or only the depositions of Driver Moses?
3038. *Mr. Hoyle.*] I want all of them.

Thomas Midelton, being sworn, said:—

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3039. I am a mechanical engineer, and have been in the service of the Railway Department of New South Wales since 1880 up to the present time. In my opinion, I am still in the service of the Railway Department of this Colony. I am a member of the Institute of Mechanical Engineers, and also of the American Master Mechanics Association.

3040-1. *Professor Warren.*] That corresponds with the Institute of Mechanical Engineers in England? Yes.

3042. *President.*] Were you Mr. Thow's predecessor? Yes. I was appointed by the Governor and Executive Council in May, 1888, as Locomotive Engineer, and was duly gazetted, and, up to the present, that appointment has not been reversed so far as I know.

3043. So you are in the service up to this day? Yes; that is my contention.

3044. Your position you mean;—your contention I take it is that you ought to get the pay? Yes. I contend that I am still appointed, and have been since I was suspended by the present Commissioners, with whom I contend that I have not had fair play.

3045. You have had some difference with the Commissioners. I am not saying that there has been any bitterness of feeling, but there is, I understand, a difference of opinion between you? Exactly.

3046. *Mr. Brown.*] Did you not accept a lump sum of £1,500 so far as the service was concerned? I was offered a lump sum.

3047. But you did take the money? Yes.

3048. What other position did you fill besides Locomotive Engineer? I was Superintendent of the Tramway Department two and a half years. I entered the service in 1880 under Mr. Burnett, the Locomotive Engineer at that time.

3049. *President.*] Had you any appointment in England before you came here;—perhaps it would be better if you gave the Commission a complete account of the whole of your past experience? Yes; perhaps it would be better. Well, I served my time on the Great Western Railway, under Mr. Daniel Gooch and his brother William, for five years, and I worked through the shops; got the best experience it is possible to have. I then left and went to London, and the next step was a job on the Great Eastern Railway as a mechanic in the shops at Stratford; then I was asked by Mr. Gooch to go to the Vulcan Foundry as draughtsman; then I went back to London again, and became foreman of the shop I had worked in. On the Great Eastern Railway I had charge of the running repairs of 152 engines, twenty-two of which were under repair constantly. Shortly afterwards I was asked to accept an engagement on the Isle of Man Railway, and one of the directors connected with it happened to be Chairman of the Tasmanian M.L.Railway Board also, and he asked me to go out there. I went there under agreement, and I had the full authority of the Board of Directors to put the Engineering Department in a proper condition. I remained there for two years performing my duties, when I got into a little trouble with the manager on account of his ideas of things differing from mine. I asked him to get instructions from the Board to alter the conditions under which I came from London, but that did not take place, and there was further disagreement between us, and consequently I left that service. Mr. Burnett, who was Locomotive Superintendent of the New South Wales Railways, asked me to stay in this Colony, and Mr. Scott, his assistant, also asked me to do so. Mr. Burnett promised me the position of chief assistant to himself. Subsequently, Mr. Burnett was suspended, and the appointment I was promised I did not receive. I then worked as a draughtsman until April, 1882, when I was made assistant to Mr. Scott, who was made chief, and I worked in that capacity until 1885. I acted for him and Mr. Downe whilst they were in England and America. I took both appointments, and received £100 (as a recognition of the satisfactory performance of these duties) from Sir Alexander Stuart, and a letter of thanks from the Commissioner of Railways for the admirable way in which I had carried out my duties in the absence of these gentlemen. In 1885 I was suspended on charges made against me by Mr. Scott. These charges were examined, and I received the greatest fair play with regard to them. I showed cause, and after fourteen months was reinstated at higher pay. I was given charge of the tramways, and subsequently I was appointed Locomotive Engineer. I served under Mr. Goodchap five months, and under the present Commission also for five months, then I was summarily removed, and I have done nothing since.

3050. *President.*] Did they give you any reason for your removal? None.

3051. *Mr. Hoyle.*] Whilst you were in the service had you any experience of the Baldwin motors? Yes.

3052. Is it a fact that whilst you were Locomotive Engineer you advised the purchase of the Baldwin locomotives? In 1883 we were very hard up for engines, and the English manufacturers were asked to build for us, but they could not do so in time, and an order was sent by Mr. Scott, on my advice, I think, to the Baldwin Engine Company for ten engines to my specification. Is that what you allude to?

3053. I believe you were pretty favourable to the Baldwin engine? Yes, I believe in American engines. I have, I believe, been the only man in the Department who has upheld the design of the American engines.

3054. *Professor Warren.*] Did you consider them in design better than the English ones? Yes; I consider them better in many respects,—I mean with reference to the road and themselves.

3055. Given a road such as we have with our railways, do you think that the American engine is better than the English engine? I should say that the American engine, if it is a good machine on a bad road, is certainly a better machine on a good road.

3056. That is to say, that the American engine would perform better on a good than on a bad road? Yes.

3057. What do you consider to be the essential difference between the type of the English engine we have here and the type of the American engine? Well, the great points in the American engine are that all the springs are equalised—the distribution of weight is thoroughly scientific. I do not consider the American engine would injure the permanent-way, as I think the English engine, with separate springs fixed in the usual manner, would do. Up to the time when I first saw an American locomotive, I was as strongly in favour of the English as other people. I saw an American locomotive first in Victoria, in 1877, and I concluded then that the American engineers knew as much, or more, than we did.

3058. Where is the centre of gravity in the American engine;—take the passenger express, for example; the three-wheeled couple—where is the centre of gravity there? I should say somewhere there between the coupled-wheels, slightly towards the driving-wheel [*pointing to a photograph*].

3059. Supposing you take it and compare it with the English engine, such a one as we saw at the works, on the American engines you say the wheels receive about the same load? They are equalised one with the

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the other so that if, for example, the leading wheel should drop into a hole the load per wheel will remain the same.
3060. Supposing the centre of gravity be about the same in each case, then the loads in the driving-wheel of the American engine would be greater. Take the engines in these photographs. [*Witness pointed out on the photograph what he believed to be the advantage in the American engine in equalising the weight of the wheels.*] The centre of gravity would be practically the same in both cases? Yes.
3061. The effect of oscillation would be in the case I have pointed out to you in this photograph to make one of the wheels strike the rail? I do not think the oscillation you speak of is likely to take place.
3062. You mean that, even admitting that the English engine has on the third driving-wheel less weight than the American engine, that the blow-stroke by the American engine would not be as great? You have asked the difference between the English engine and the American engine, the blow would be greater in the English engine, due to oscillation you name, than it would be in the American engine.
3063. *Mr. Hoyle.*] Whilst you were acting, or were in power in the Department, certain orders, I believe, went to the Baldwin Company for the purchase of ten engines? Yes; the 304 class—"Mogul."
3064. When you sent that order did you send a specification? Yes, I did.
3065. Did you state in that specification that their best material should be used—whether iron or steel? I do not know.
3066. Did you specify that the axles should be of the best quality? So far as I remember, I specified that they should be made of "Otis" steel; that is the best known material in America—it corresponds with English steel of the best makers.
3067. Why did you make that condition? Because of my experience of the Consolidation engines, which have "Otis" steel axles. They were sent here in 1878 or 1879, and gave every satisfaction. There seems to be excellent material in the axles, and they are, I believe, in use now.
3068. Will you tell the Commission why you specified this particular kind of steel? Because it is the best material for axles.
3069. Was it because you considered that it was unsafe to have anything but the best material in the axles?
3070. *President.*] He says it was because it was the best stuff for axles. He does not say that he considered it unsafe to have any other material.
3071. *Witness.*] I would not like to say that iron axles would be unsafe, but I would immensely prefer steel to an iron axle in a locomotive.
3072. *President.*] If you wanted to get the very best thing you could get you would ask for steel axles? Yes.
3073. *Professor Warren.*] And the very best steel? Yes; "Otis" steel.
3074. You mean that an axle should require the very best material you can procure? Yes.
3075. Did you, in addition to that, specify any tests to be made? No; the engines were ordered in a hurry, and I had to sit up at night to write the specification, and my sketches were made in the margin of the specification. I did not specify any test, nor is it usual in a specification for locomotive axles to do so. I have seen tests specified for boiler plates and copper plates, and it is usual only to name one or two good manufacturers of axles, and that their material must be first-class.
3076. You did not send detailed drawings of your specifications? No; not for the first lot of ten engines; there was not time, but for the second ten I did, because there was ample time.
3077. How many drawings would be made? About eighty-four.
3078. So you sent practically about that number? Yes; as a matter of fact, these later engines were made in Scotland, but the Baldwin Company had the opportunity of tendering also.
3079. Had you an inspector in England? Yes; we had Sir John Fowler in England.
3080. But you had no inspector in America? No; I do not believe in an inspector.
3081. Why? Well, for the simple reason that an inspector such as are usually appointed in these cases, they would probably pay no attention to. An inspector is generally a young man who has just served his pupilage, and it is probably his first job, that is usually so. Sometimes a Company will appoint an inspector for certain reasons, and sometimes they point out a little thing and get it altered.
3082. *Mr. Brown.*] You consider that the Baldwin Engine Company was of such high reputation that it was not necessary to appoint an inspector? Yes; I would have trusted them, or any other similar firm.
3083. *Professor Warren.*] If you did not send working drawings, still less would it be necessary to send an inspector;—assuming that you had working drawings, then you would not appoint an inspector? No; I should always prefer dealing with a firm, and trusting it, rather than appointing an inspector, unless with regard to some special case; for example, any special departure in an engine that I particularly wanted carried out in a certain way, I should certainly send an inspector to see that my views were regarded, not to see if proper material were used altogether, or anything of that kind, but simply to see that my views were carried out. Those are the only conditions under which I should appoint an inspector.
3084. *Professor Warren.*] In that case, if you did think it necessary to appoint an inspector, would you not put in a clause also that the work was to be done to the satisfaction of the engineer, &c.? Yes.
3085. And a specification that had no such clause would be practically useless? Yes.
3086. *President.*] If it is not to be done to the satisfaction of the inspector, then I take it the inspector has no use? Yes; the late Mr. Meikle had a lot of engines made at Ballarat, in Victoria, and the Minister appointed an inspector, and the locomotive engineer respected that officer, and in consequence of what happened there was great trouble and an investigation, and the matter was attended with very serious results. I think that proves my case. I daresay Mr. Fehon remembers the occurrence. It showed that the inspector was of no use whatever—rather the opposite.
3087. The proper thing is to have working drawings and specifications? Yes; that is what I would have, or an inspector under special conditions to give an official certificate.
3088. What certificate? Your own certificate for official acceptance? If an engine comes here, and passes my supervision, then I will pass it. I prefer trusting to the firm to send me a good article, and if they do not do so, then I would send it back at their risk. If a man specifies for what he understands, well and good, but if there is a false impression as to what is wanted, then perhaps you may not get the article you want exactly. It would be more risky if you had no specification in that case. If you know what you want, and send drawings and specifications, I think you may trust to the material being good.
3089. *Mr. Hoyle.*] Were you in the service when the first ten locomotives were delivered? Yes, I was, but about a week after the first engine was tried I was suspended from duty.

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3090. After they arrived did you make any examination of them? As well as I could during the week I was in office.

3091. Did you consider it any part of the officer's duty to minutely examine the engine when it was being put together to see that the specifications had been carried out? Yes. And if I could not do it myself I would depute one of my best officers to do it, and if he saw anything objectionable he should of course call my attention to it, but I should do all I could myself.

3092. When these engines arrived did you see any of them? Yes; I saw one the first day the engines were about to be tried.

3093. You were present the first time the engine was being blown through? Yes, I looked at that one, but not very closely. It is true I have seen them since in the running shed but not recently.

3094. Relative to the Baldwin passenger engine, I wish you to tell us whether that engine, having a weight of 15 tons 9 cwt. on its driving-wheel, you consider, taking into consideration our permanent-way not the 80-lb. rails in the suburban line, but the ordinary iron and steel rail on our permanent-way generally, that engine is too heavy weighted on the driving-wheel? Yes; I certainly do; I think it a most serious question.

3095. And you consider 15 tons 9 cwt. is too heavy a weight on the driving-wheel of that engine? Yes, on that or any other engine. Under the circumstances I should think it much too heavy for a 71½-lb. rail.

3096. Have you any knowledge of the weights of the engines used in the service before these arrived. Is there any engine now running on our line more heavily weighted than the Baldwin passenger? Yes; there are twelve of the 351-class of engine, built by Beyer and Peacock. Six more were built in the Colony, they have 16 tons 7 cwt. 3 qrs. on the driving-axle, yet they are the smallest engine on the Suburban line.

3097. *Professor Warren.*] Is that the newly imported suburban engine or the old? The old; the first order was given about 1882, but it was cancelled, and they were afterwards built about 1885. If I may quote from a paper I have here, the weights of engines are as follows:—

BALDWIN, 10-WHEEL PASSENGER.

L.		R.		Total.			t	c.	q.
3	9	3+3	10	0= 6	19	3	Bogie	13	19	0
3	11	3+6	19	1= 6	19	1				
7	5	0+7	6	0=14	10	0	Coupled ...	44	17	2
7	14	2+7	14	2=15	9	0				
7	9	1+7	9	1=14	18	2				
				58	16	2		58	16	2

NEW, MANCHESTER 10-WHEEL PASSENGER.

L.		R.		Total.			t	c.	q.
3	14	3+3	4	0= 6	18	3	Bogie	14	18	1
3	19	0+3	10	2= 7	9	2				
7	8	2+7	10	0=14	18	2	Coupled ...	42	11	0
7	10	1+7	10	1=15	0	2				
5	17	0+6	16	0=12	13	0				
				57	9	1		57	9	1

3098. *Professor Warren.*] I think it will be better for us to get the weights accurately. Mr. Hoyle has said, the weight on the driving-wheel of the Baldwin passenger engine is 15 tons 9 cwt. but I take it there may be a difference in the weight. Some may weigh more; you cannot adjust it nicely. The locomotive you refer to is the 351 class of which I believe there are eighteen. Can you read to us the exact weights? The weight on the leading wheel is 7 tons 18 cwt. 1 qrs.; on the driving-wheel, 16 tons 7 cwt. 3 qrs.; on the trailing-wheel, 14 tons 15 cwt. 3 qrs., making a total weight, loaded, of 39 tons 1 cwt. 3 qrs. But this is not regarded as sufficient, I believe, because I learn that a cast-iron buffer beam has been put on one engine in front to make it heavier; the weight on the leading wheels is light, and that on the driving-wheel and trailing-wheel is very heavy, to keep the engine down in front a cast-iron plate has been put on, as stated, 9 in. x 4½ in. x 9 ft. about.

3099. *Professor Warren.*] I see these engines have 16 tons 7 cwt. 3 qrs. on the driving-wheel, which is in excess of the Baldwin engines?

3100. *Witness.*] These engines never go up-country; they never go beyond Parramatta and Liverpool.

3101. *Mr. Hoyle.*] Were there not other engines besides the particular lot you have referred to, with a weight greater than about 15 tons on their driving-wheel? No, that is the heaviest I know of. The next is the 158 class, and the next the Baldwin, the new Manchester engine, and the "Vulcan" engines.

3102. *Professor Warren.*] Had any of these tank engines you have referred to run over the western line? No, the first two types of engines I have referred to have their limit—Parramatta and Liverpool.

3103. Were there any running over the western line nearly as heavy? I think the Vulcans were very nearly the same—twelve engines delivered in 1887, to surpass mine.

3104. Did you design those? No, Mr. Scott, Sir John Fowler, and Mr. Burnett did, I believe.

3105. *Mr. Brown.*] Have you the records of the Vulcan engines? Yes.

3106. They are engines similar to the Baldwin engines and employed in similar work? Yes.

3107. We do not want you to give us the suburban engines; can you tell us the weights of the Vulcan engines. The "Vulcan" type of engines No. 373 to 384. The first bogie axle carries 8 tons 11 cwt. the second carries 8 tons 10 cwt.; the driving-wheel, 13 tons 17 cwt. 2 qrs.; the trailing-wheel, 14 tons 8 cwt. 2 qrs., making a total weight of 45 tons 7 cwt. This is a 4-wheeled couple with a double bogie in front. The 158 class of tank engine have double bogies also.

3108. *Professor Warren.*] Looking at the weights on the Vulcan surely you would not say that that engine would put as great a stress on the railway line as a Baldwin engine? There are 15 tons 9 cwt. on the driving-wheel of the Baldwin and 14 tons 8 cwt. 2 qrs. is the heaviest weight on the Vulcan wheels, therefore the Baldwin engine would be the worse of the two.

3109. So you think that would be heavier on the permanent-way than the Vulcan? Yes; the "concentrated load" would be.

3110. And the English engine has 16 tons 7 cwt. on one of its driving-wheels; you say that would also be heavy on the permanent-way? Yes; and I think the new engine imported is worse, so far as the weight and the stress; I mean the Manchester engine; it has separate springs. The weights are as follows:—First bogie axle carries 7 tons 9 cwt. 1 qrs.; second bogie axle carries 7 tons 9 cwt.; leading coupled axle carries 14 tons 19 cwt. 2 qrs.; driving-axle carries 14 tons 19 cwt. 2 qrs.; trailing-axle carries 12 tons 13 cwt.; total, 57 tons 0 cwt. 1 qr.

3111. *Professor Warren.*] Is there not a difference in the English and American principle, although there may be smaller weights on the trailing and driving-wheels in proportion to the load? The object is to get the weights equally if you can.

3112. Do not English engines try to get that equality? Yes; the Vulcan engine has a cast-iron foot-plate, which goes between the frames to load wheels equally.

3113. They have overloaded it? Yes; rather.

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3114. *Mr. Brown.*] What engines were there in the service that, comparatively speaking, could compare with the Baldwin engine, with regard to the weight on the wheels? These Vulcan engines.
3115. That is the nearest approach? Yes.
3116. *Professor Warren.*] It is 14 tons 8 cwt. against 15 tons 9 cwt.?
3117. *Witness.*] I can read some extracts upon the subject, but I do not quite see what it has to do with the Baldwin engine.
3118. *Mr. Brown.*] It is interesting for us to know what engines are suitable for the permanent-ways in the Colony, for one of the things we have to inquire into is whether the Baldwin engines were fit for our permanent-way.
3119. Which engines do you think are most suitable for our permanent-way? The Mogul engines and tenders of 1885, and the corresponding ones which have lately come from Glasgow.
3120. *Professor Warren.*] Do you know class 158? Yes; I know that class. It is a suburban engine, I think; I have alluded to class 158, of which we have six.
3121. When were they imported into the service? They were imported in 1880 by Mr. R. H. Burnett.
3122. Do you know the weights on the wheels of those engines? The weights on the wheels are as follows:—On the four bogie wheels, 10 tons 0 cwt. 2 qr.; on the driving-wheel, 15 tons 1 cwt. 2 qr.; on the trailing-wheel, 14 tons 19 cwt. 1 qr. Total, 40 tons 1 cwt. 1 qr. In each case I am quoting in steam ready for a journey.
3123. So that these engines would be able to run on the permanent-way? Yes; we have been running them from 1880 to the present time. They go to Parramatta with the bogie wheels in front, but on the return journey they travel with the bogie behind, and that I think has a tendency to destroy our permanent-way. [*Here witness described, with the aid of a diagram, what he meant.*] If it is necessary to run bogie foremost in going to Parramatta, then it should be necessary to turn the engine at Parramatta, and send it foremost back to Sydney again.
3124. *Mr. Brown.*] I thought it was contrary to regulations, to run tender first? That is so, in the case of engines with tenders.
3125. *Professor Warren.*] What is the weight on the driving-wheels of your own engines, which were tested by Mr. Alison Smith and Mr. Roberts [*referring to diagram and a Parliamentary paper*]—12 tons I take it to be? Yes; in the new Dub's engines, the weight is 46 tons distributed in the following way:—The weight on the bogie axle is 8 tons 10 cwt.; on the leading axle, 12 tons 10 cwt.; on the driving axle, 13 tons; on the trailing axle, 12 tons 10 cwt. Total, 46 tons 10 cwt. My specification ordered steel fire-boxes and steel tubes, but my successor altered it to copper and brass respectively, which made the engines heavier than I intended.
3126. Then really American engines, you say, were built by an English firm? Yes.
3127. *Mr. Hoyle.*] I want to ask you, as a locomotive engineer, whether when you are designing an engine you are guided by the strength of the road or not? That is the fundamental basis of the whole thing. The weight of the rail in pounds per yard and the cross-section settles the whole thing. The late Commissioner always urged me to keep down the weight of the rolling-stock, and that it should be constructed for 72-lb. rails, which was the standard when I came to this country, and is has never been altered.
3128. The answer to the question that is now being put to you is very important;—I want to know from you, do you consider it dangerous to run a Baldwin engine with a weight as described on the driving-wheel over a 75-lb. iron rail? It depends on the size and distance apart of the sleepers, of course. If the sleepers are 3 ft. apart, as they are said to be on the Tarana section (I take the information from some of the reports), then I consider it the height of madness to run such an engine on such a road, in such a condition, I would not like to do it unless ordered by my superior officer, and then I would not take the responsibility. I do not say it is dangerous, but some day it might be awkward. I would rather confine myself to what was discreet and wise.
3129. *Professor Warren.*] You would not do it if you were the engineer in charge? No.
3130. *Mr. Hoyle.*] I am going to put a question to you about the rail, and I may say that I personally have had great experience of rails, of old rails and new ones, iron and steel; I have been constantly working and breaking them for ten years, so that I have special experience;—you know, of course, as an engineer, that by continual running over iron rails the rail becomes crystallised at the part over which the train passes? Yes.
3131. If an iron rail, having been run on, becomes crystallised on one side and some places bulged, do you consider it would be safe, then, to turn that rail over upside down and run engines of the weight of the Baldwin engines over it? Certainly not, if it is a bulged rail. If there was the slightest appearance of a bulge I would put it aside.
3132. If a rail had become crystallised by being run over, by turning it over and crystallising the other side it would be as safe as a rail which has been run over on the one side only? No; certainly not.
3133. *Mr. Fehon.*] There has been no evidence that this rail was bulged. I mention this because these statements made by Mr. Hoyle, taken in connection with the Tarana accident, if they went forth through the Press would alarm the public, who might think that the road was in this bad condition.
3134. *President.*] There has been no evidence of this kind, but perhaps Mr. Hoyle is asking these questions in anticipation of calling someone.
3135. *Mr. Brown.*] I think Mr. Hoyle is asking the witness his opinion as an expert.
3136. *President.*] Suppose you had a double-headed rail, one side of which was crystallised and there was a bulge on it, would it be safe to run upon it; I think the question may be put in that way; I cannot prevent Mr. Hoyle asking it in that form; its only value would be if afterwards he proved that some of the rails were in that condition.
3137. *Mr. Fehon.*] The evidence is given, and the public may think that questions and answers are based upon actual observation with regard to these rails, or any particular rail.
3138. *President.*] If this question is asked with regard to any rail, all I can say is that the evidence about this rail has not been given. I cannot prevent Mr. Hoyle putting a hypothetical question, which is all this question is at present. There is no evidence whatever that any such thing happened as that which he asks about; but, since these questions are put in this hypothetical way, I cannot very well object to them.
3139. *Mr. Fehon.*] In calling attention to the question I did what I considered was necessary.
3140. *President.*] There is no evidence whatever that anything put in this hypothetical way has been done.

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3141. *Mr. Hoyle.*] I am simply asking an expert for a particular opinion. I may say that I have examined the road very carefully myself, and that I have seen places where the rails have been turned over between the Tarana station and the place where the accident took place. I have seen them turned over, and some of them I noticed bulged between the chairs.

3142. *Mr Brown.*] But is not that why you get double-headed rails—in order that you may turn them over; but if it becomes defective on one side is it safe to turn it on the other side, and run this great weight over it?

3143. *Mr Fehon.*] We have inspectors, gangers—men of experience and trust—who have been engaged on the lines all their lives keeping them in repair, and these men are responsible for keeping the roads in order, and we suppose that they do so, and are satisfied that the road is kept in order, notwithstanding any amateur expressions of opinion with regard to this matter.

3144. *Professor Warren.*] I understand, Mr. Hoyle, that you said that if you turned over a rail it is not as good as it was before?

3145. *Mr. Brown.*] The reason for getting double-headed rails is that they may be turned over, but I believe they are now being done away with on account of the expenditure and the fact that part of the rail is embedded in the chair. It is considered better to use the ordinary T rail?

3146. *Professor Warren.*] When a rail has been subjected to a certain load, which is as much as it can carry safely, some process appears to go on within it which causes it to be much weaker than before, and it becomes quite what is called "fatigued," that is supposed to be some sign of weakness, and if you turn the rail over you increase the "fatigue," and it is proved by twelve years of experiments that nothing will cause "fatigue" more than the reversion of stress. I take it that that is the reason that double-headed rails are going out of use.

3147. *Mr. Brown.*] It has been determined recently to a nicety what the life of a rail is?

3148. *Mr. Fehon.*] It varies with the weight of the rail, but the life of a rail is now pretty well ascertained. It is the amount of the traffic travelling over the road that causes the wear and tear, and through it the rail would become lighter and lighter, and when the weight comes down to a certain thing that rail is discarded, and considered to be no longer suitable for the purposes of the road.

3149. *Mr. Brown.*] On the suburban roads they have to be renewed frequently, whereas on the up-country roads where the traffic is not so great they last longer?

3150. *Mr. Fehon.*] Yes.

3151. *Mr. Hoyle.*] I might point out that a double-headed rail sometimes wears a hole in the chair, and I believe that has had something to do with the failure of double-headed rails.

3152. *Mr. Brown.*] And I understand that the weight of the stuff that is put over the rail has something to do with it?

3153. *Mr. Hoyle.*] And the weight of the rolling-stock?

3154. *Witness.*] Yes; upon that depends the security of the roads to a great extent, and also that of the cross-girders on the bridges. They also would be affected by the concentrated weight passing over them. The axle that is loaded the heaviest governs the whole thing.

3155. *President.*] You mean to say that, however good a thing may be that it is not strong enough if the weakest part cannot bear the greatest strain. It is like the weakest link in a chain—the strongest part is the weakest link?

3156. *Mr. Hoyle.*] With the chairs 3 feet apart, do you consider that 15 tons 9 cwt. is too great a weight to travel over these rails? Yes, I do; 6 tons is the limit.

3157. *Professor Warren.*] That is 12 tons and a pair of drivers? Yes.

3158. *Mr. Fehon.*] Are any of the sleepers 3 feet apart in the length of the road?

3159. *Mr. Hoyle.*] Yes; I have measured them, and have seen them 3 feet 2 inches apart.

3160. *Mr. Fehon.*] Were they 3 feet apart, or 3 feet apart from the centre, because if you mean from the centre that they are 3 feet apart that is really only 2 feet apart?

3161. *Mr. Hoyle.*] The chair is on the sleeper, but the chair is only 2½ inches in width, so that the weight is on the chair and on the sleeper as well.

3162. *Witness.*] The report of the Engineer-in-Chief of 26th May, 1891, says—with regard to the permanent-way on the Northern line—this is Mr. Deane's report.

3163. "From Murrurundi to Tamworth the rails are of *iron*, single-headed and fish-jointed throughout, and weigh 70 lb. per lineal yard. They are in lengths of 21 feet and 18 feet, and are secured to the sleepers by spikes and screws alternately.

3164. "From Tamworth to the Queensland border the rails are of *steel*, single-headed and fish-jointed throughout, and weigh 71½ lb. per lineal yard. They are in lengths of 24 feet, 21 feet, and 18 feet, and are screwed to the sleepers in a similar manner."

3165. "Sleepers—From Murrurundi to Tamworth these sleepers are of iron-bark, stringy-bark, tallow-wood, and other Colonial hard-woods, 8 feet 9 inches long by 4½ inches, and rectangular in form. For 21-foot rails they are placed 3 feet 1 inch apart from centre to centre, 2 feet 6 inches at the joints; and for 18-foot rails, 3 feet 1 inch and 2 feet 7 inches at the joints.

3166. "From Tamworth to Tenterfield the sleepers are of the same description, and for 24-foot rails are placed 2 feet 8⅝ inches apart from centre to centre, and 2 feet 3 inches at the joints; for 21-foot rails, 2 feet 8⅞ inches, and 2 feet 3 inches at the joints; and for 18-foot rails, 2 feet 7½ inches, and 2 feet 3 inches at the joints." The sleepers are 3 feet 1 inch apart.

3167. *Mr. Fehon.*] The sleepers are 2 feet 4 inches apart.

3168. *President* (to Witness).] Where are you getting this evidence from?

3169. *Professor Warren.*] From Mr. Deane's report.

3170. *President.*] Why should not Mr. Deane be recalled?

3171. *Professor Warren.*] Supposing the sleepers are 3 feet 1 inch apart measured from the centre, and the rails weigh 70 lb. per yard, what is the maximum weight you would allow in that case? Six tons. I take the weight of the rail in lbs. per yard; 6 tons per wheel is the weight for a 71-lb. steel rail.

3172. If it were a 75-lb. rail, what would you allow? About 6½ to 7 tons, twelve times the weight in tons on one wheel gives the weight of the rail in lb. per yard. You will find it in Molesworth. I wish my evidence to be consistent with such an authority, and also my practice and experience tells me they are quite right.

3173. *Mr. Hoyle.*] The T rail would have a flat bearing surface on the sleeper face, therefore that would be a greater security to the rail than if it were placed in chairs? Yes. 3174.

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3174. Do you consider that a T rail, with its surface on the sleeper, unsafe to run with an engine with a weight of the Baldwin, over that road, and with an iron rail? I would not say unsafe, but it is highly injudicious and improper.
3175. I have asked already for a copy of the dimensions of these engines;—do I understand that the wheel base of these engines is 12 feet 6 inches—the rigid wheel base?
3176. *Professor Warren.*] I believe that the dimensions that you now refer to are at the Government Printer's. Here is a specification which I think shows it; I think it is 13 feet 6 inches.
3177. *Mr. Midelton.*] Twelve feet 6 inches. I think that is it.
3178. *Professor Warren.*] However, the dimensions are at the Government Printer's, and we have not got them back yet.
3179. *Mr. Hoyle.*] I think it has been stated that the rigid wheel-base is 12 feet 6 inches.
3180. *Professor Warren.*] Yes; I think it said rigid wheel base 12 feet 6 inches.
3181. *Mr. Hoyle.*] Well, taking into consideration these engines and the weight on the driving wheel, do you think they would have any tendency with the rigid wheel base of 12 feet 6 inches to strike hard at curves, and thus spread the road? I glanced at the bogie when the engines were being put together, and the swinging links hung vertically in it, and I would like to ascertain accurately by further examination first before I answer that question. If the links are in a vertical position I think the engines would swing very much at the curve at high speeds.
3182. I think you know exactly the weights on the bogie;—perhaps it would be useless for me to ask you any questions relative to it until you have seen them? I think it would be unfair to do so until I have seen it, and especially on that point, my argument is that the links are hung vertically. I have found by experience with the Baldwin and other engines that is a mistake, and I remember having had some correspondence with them regarding it. The links, as set in the original Consolidation engines are in the best possible position, but if the links in the new engines are set vertically, I do not agree with it.
3183. *Mr. Brown.*] Why should you not see these engines? I do not know.
3184. *Mr. Fehon.*] He can see the engines, but we have a strong objection to gentlemen in such a position as Mr. Midelton is, going about the works and talking to men.
3185. *Mr. Midelton.*] I hope I know my position well enough not to do what Mr. Fehon suggests.
3186. *Mr. Brown.*] He says he cannot give an answer unless he sees the engines. I do not think you can have any objection to his doing that?
3187. *Mr. Fehon.*] No, we have no objection; but one of our officers must accompany him.
3188. *Mr. Brown* (to Mr. Hoyle).] I understand you want Mr. Midelton to see the engine. Then I might make a request to him to examine the engine in all its parts.
3189. *Professor Warren.*] You mean as they are shown here (*showing a diagram to witness*);—the front end of the engine would grind severely against the rail, you thing, if the link is vertical? Yes.
3190. *Mr. Brown.*] I wish you would examine the apparent flaws in the wheels and tell us whether you consider them serious flaws.
3191. *President.*] And let him sound the wheels. When you go to examine the engines look at it not only with regard to the length, but also have a look all round it and give us the benefit of your judgment about it.
3192. *Mr. Hoyle.*] When you drew certain specifications for these engines, was there any objection raised by the Baldwin Company to work to them? It was not an objection altogether. They had a little fear that a domeless boiler would be a mistake.
3193. With reference to the domes? All my engines are domeless. I contend that an engine supplies drier steam without the dome than with it. I have very fine testimonials from the Baldwin Company saying that the suggestions I made were very successful. There were a number of alterations which were made at my request, and which have been followed out since with success. Some are embodied in the great engines for the St. Clair tunnel.
3194. *Mr. Hoyle.*] Can you tell me if you think that the piston-head in these engines was too heavy? I could not say that. I should like to see them and then I could give an opinion on the subject.
3195. *Professor Warren.*] Do you consider that the piston-rods should have been continued through the stuffing-box so as to support it? I should like to see the engine first before I gave an answer.
3196. *Mr. Fehon.*] Mr. Midelton, it must be understood, will not be at liberty to order the engine to be pulled to pieces in order to see what is inside it.
3197. *Professor Warren.*] Well, we would like to find out whether those cracks we saw in the wheels at Eveleigh were in the material or only on the surface.
3198. *President.*] Mr. Midelton will not want to break the engine open. It will not be necessary to break anything to do what we desire.
3199. *Mr. Fehon.*] We will not allow Mr. Midelton to go alone. He must be accompanied with one of our officers.
3200. *Mr. Brown.*] I want Mr. Midelton to make a critical examination. I do not want him to pull an engine to pieces, but to examine the engine as a critical person, and to come here and say all he can say about it; and I hope you will give him every facility for doing that.
3201. *Mr. Fehon.*] Yes; we shall.
3202. *Mr. Hoyle.*] It has already been given in evidence, that a Baldwin passenger engine has pulled 167 tons up the Lapstone bank, 1 in 30, would you consider it safe for the draw-gear on the goods stock to haul such a load? No; highly dangerous. If the design of draw-gear I have inspected on some new Stopper waggons at Newtown Station is the standard, I should say it would be culpable negligence.
3203. *President.*] We are talking of course about the Baldwin engines.
3204. *Mr. Hoyle.*] You think that the draw-gear might break—that the train might perhaps run back, and you would have a similar accident to that which occured at Bathurst? Perhaps.
3205. *Professor Warren.*] You did not specify in your specifications what the draw-gear should be? No. I sent drawings to Dubs & Co.
3206. *Mr. Hoyle.*] Was it safe to haul 167 tons up a grade of 1 in 30, with the draw-gear in use? I say most emphatically it would be highly blameworthy to do so, with the Baldwin engines or any other engines, to take such a load up that grade, with draw-gear such as I saw at Newtown Station on the Stopper-waggon.
3207. *President.*] I do no know what *that* draw-gear is, do you know the strongest draw-gear they have? Yes.

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3208. Well, supposing they use that, would there be any danger then? I consider there would, and if you took 160 tons up the grade you would have to sand the rails pretty well, there would not be sufficient adhesion unless the rails were sanded.
3209. *Professor Warren.*] Do you think a Baldwin engine could take 175 tons up a grade of 1 in 40 at the rate of 22 miles an hour? I question it very much—I would like to see it done. It certainly would be necessary to sand the rails copiously, and I do not think it correct to use sand when hauling; if an engine is properly proportioned it can do the work without sand, on a dry rail, such as we have.
3210. Do you consider that on an ordinary day it would do that? I do not.
3211. *Mr. Brown.*] I do not think we have got anything to do with the draw-gear of the waggons, but only with that of the Baldwin engines.
3212. *President.*] I only ask the question on account of his saying that he had seen something at Newtown; I presume the Commissioners put strong enough draw-gear on their rolling stock?
3213. *Witness.*] These wagons are available and go to Lithgow to be filled with coal, consequently are subjected to all sorts of stress.
3214. *President.*] All that we are inquiring into is whether the Baldwin engines are defective or not. The draw-gear might be a matter that it would be well for us to report upon, but we are not called upon to do so. We must assume that they have fastened their trucks with proper gear, we have not got to try that matter.
3215. *Mr. Hoyle.*] Well, I may state that it is clearly within my intention that this matter should be inquired into. I have said in my third charge that the safety of the draw-gear would be in danger if the Baldwin Consolidation engine drew the loads which it was said by the railway authorities they were intended to draw. I had in my mind not only the draw-gear of the Baldwin engines, *but of other rolling stock*, so that if the draw-gear of the first and second truck between the engine and the load should break, it would be caused by too great a load having been taken.
3216. *Mr. Brown.*] I thought that the evidence went to show that the draw-gear of these engines had been replaced by new draw-gear.
3217. *President.*] I am sorry if I have mislead you, Mr. Hoyle, I can only comply with the charges contained in our Commission, namely: that the Baldwin engines are defective, are unsuitable to the permanent-way, and do not do the work they were expected to do. It might be unsafe, to have so many waggons attached to these engines, but we have not anything to do with that.
3218. *Mr. Hoyle.*] It endangers the lives and property of people.
3219. *President.*] Well, I cannot go generally into the matter, I can only go by the terms of the Commission. I cannot go beyond the draw-gear attached to these engines. I think it is what my colleagues have also thought, that we had only to do with the draw-gear attached to the engines, not with that attached to the waggons.
3220. *Professor Warren.*] That is clearly in my mind; I thought that Mr. Hoyle referred to the draw-gear on the engine itself.
3221. *Mr. Brown.*] We are bound to presume that the draw-gear generally is sufficiently strong for its work, and if it is not, well, the Railway Commissioners will have to pay for it.
3222. *Mr. Hoyle.*] When I made a charge against the engines, speaking in Parliament, I said that it was the draw-gear on the goods vehicles more than anything else that I feared when these engines were being used, as the draw-hook of the engine itself, there is no doubt that it is very strong, but I certainly had the draw-gear on the goods vehicles in view at the time I made these charges. It is a danger, and it was the great load that these engines had to draw that directed my attention to the draw-gear.
3223. *President.*] If you could show that this was a tremendous load, and that there was ground for this supposition that perhaps might be evidence of neglect—but I cannot go outside the terms of the Commission—what we have to try is whether these engines are defective or unsuitable to the permanent way, or are not doing the work they were expected to do. If the Commissioners put a load behind the Baldwin engines which would inherently be too much, that would be a mal-administration outside the terms of this Commission. This ruling must be looked upon as final.
3224. *Mr. Fehon.*] May I read from the charges?
3225. *President.*] I do not think it necessary—I have decided against Mr. Hoyle.
3226. *Mr. Fehon.*] I was going to point out a most apparent inconsistency.
3227. *President.*] I do not think it is necessary; I am not responsible for the Commission, and I did not know what the terms of it were until I unfortunately got it. The terms of the Commission are what I have intimated, and we must keep within them. Otherwise we might go into an irregular, wide, and expansive enquiry, and anything whatever might be raked up. I did not know anything about the terms of this Commission until I got it at Hay—very much to my sorrow.
3228. *Mr. Hoyle.*] It has been said here in evidence that there would be little or no danger, or there might be no danger, in a bogie-axle breaking whilst the train was going at a speed of from 30 to 35 miles an hour;—do you think, as an engineer, from your experience on English and American engines, that it is not a dangerous thing for a bogie-axle to break? Well, of all railway accidents conceivable, the most to be dreaded is a broken axle, a broken rail, or tire—a bogie-axle above all, because it is the leading axle to guide the engine, I would consider nothing worse than a breaking of a leading or bogie-axle. The two greatest accidents in England, I believe, were in one case a leading axle breaking, and in the other a crank-axle breaking.
3229. *Professor Warren.*] Do you consider it a very serious thing? Yes, I do indeed. You cannot guard too much against wheels, axles, tires, and draw-gear breaking.
3230. Is that the reason why you stated that axles should have the very best of material in them? Yes; wheels, tires, axles, and draw-gear, should have good material in them. They cannot be examined too often, or looked after too much.
3231. *Mr. Hoyle.*] Could you explain anything you know about axle accidents? There have been a good many accidents of that kind in England. Speed has been very high, and sometimes they break without warning; sometimes a little crack will appear, and it may not be detected, and then an accident may be caused.
3232. *President.*] You need not labour to show us, Mr. Midelton, that it is a serious thing for an axle to break—for my own part I think it is a most serious thing.
3233. *Professor Warren.*] So do I.
3234. *Mr. Hoyle.*] It has been sworn here that it is not a dangerous thing.

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3235. *President.*] Well, people may come and swear that to me, but I do not agree with them, that is all, I use my common sense.
3236. *Mr. Hoyle.*] Can you state any particular case where an accident occurred in England or America, through a broken axle? I think I remember the Shipton accident, on the Great Western line, in 1875; there were about forty-five killed, and as many more injured. I forget whether that was an axle or a tire, perhaps Professor Warren will remember?
3237. *Professor Warren.*] Yes, I think it was a tire.
3238. *Mr. Hoyle.*] Do you remember any other? The Penstone accident, on the Manchester and Sheffield railway, occurred through a broken crank-axle. A locomotive superintendent was killed in that accident. There was not a more careful man in England than he.
3239. *Professor Warren.*] Do you know of any accident occurring through the breaking of the leading axle wheel? Yes, there was one on the Great Western line; if you look through the railway papers you will find that a good many accidents have occurred through that cause. We have had a good many cases of our own. For example, I think at Narrandera, I think, there was an accident caused through a broken axle.
3240. And Petersham? Yes, on the Petersham viaduct, some time ago. They do not always cause loss of life; sometimes they do. I always give great attention, in my Department, to the condition of the wheels and axles, and draw gear.
3241. *Mr. Fehon.*] The accident was caused through a truck axle at Petersham, and that has no reference whatever to the engines. (Witness) I was asked about axles generally, and the breaking of an axle is just as serious, no matter where it may be, or an engine or car.
3242. *Professor Warren.*] But if on the leading wheel it is worse than all? Yes, it may be worse than all, seeing that it is the leading wheel of the train, and governs the whole thing.
3243. It is the pilot-wheel? Yes.
3244. *Mr. Hoyle.*] These tires are shrunk on in the ordinary way, and held with a set screw? Which tires?
3245. I am referring to the tires on the Baldwin engines; I think they are fastened in this way, are they not? Yes, I think they are.
3246. Here is a template of a tire as fastened to a wheel. That you claim as yours, and you say that it has been the standard? Yes, that is mine, and it has been the standard since 1883.
3247. I want to know whether you consider that a perfectly safe fastener? It is the best that I know of.
3248. That one? The one nearest to me.
3249. Yes, this one? The other is one that Sir Henry Tyler, the late Chief Inspector of the Board of Trade, condemned as a barbarous system. Here is the rim of the wheel. This is the section of the tire when it is put on the wheel. It is heated and put on to the wheel like that, and it shrinks as it cools, and gets quite tight on the rim of the wheel. If you do no more than that to secure it there is nothing but the shrinkage of the tire that holds the tire to the wheel, and you can readily see that if it gets loose it will necessarily fly off. A hole is drilled into the tire, and this screw is put into it. That is done as a safeguard, to prevent the tire flying off if it gets slack, but as a matter of fact it will come off if the screw breaks. That is how the tires on the Baldwin engines are fastened. Now, with regard to the way in which I maintain that the tires should be secured. Here is the rim of the wheel again. That is a kind of dovetail. It hooks into the tire there. This is a separate ring that goes right round the wheel and hooks into that section of the rim and round the tire.
3250. Is that Mansell's fastening? It is a modification that I brought about from Mansell's. The other system allows the tire to turn round on a wheel if it works loose, but this system will not allow it to go round the wheel. This rivet being through the wheel and through the tire prevents the tire turning on the wheel in case it gets slack. It also prevents the tire flying off the wheel, even though it were to break in a dozen pieces. Another advantage is, the tires can be used longer.
3251. *Mr. Brown.*] Which is the barbarous one? This [*pointing to one of the models before him*] is the barbarous one; I am saying Sir Henry Tyler, the late Chief Inspector of the Board of Trade, called that a barbarous one, and I agree with him. It is not merely I who says so.
3252. And the other system is the one by which the tires are fastened on to your engines, whilst this, which has been described as being the "barbarous" system, is the way in which the tires are fastened on to the wheels of the Baldwin engines? The former is the way in which the tires are fastened to the wheels of my engines, but the other is the way in which the tires are fastened on all the wheels of all the other engines in this Colony.
3253. *Professor Warren.*] The system that you have adopted in regard to your own engine is Mansell's, is it not? It is a modification of Mansell's, no doubt, but it is really my own, and I could have obtained a patent for it years ago if I had liked, I dare say.
3254. *President.*] But I want you to tell us about the Baldwin engines;—how are the tires fastened on to the wheels of the Baldwin engines? Well, all the engines in the Department, excepting the ten engines that I obtained from Dubs and Co. from my own designs, are fastened in the manner that Captain Tyler 20 years ago described as barbarous.
3255. *Mr. Hoyle.*] Whilst you were in the Department was that modification of the Mansell fastening adopted as a standard? Yes; it was. Ever after 1882 all carriage and waggon wheels were made on that principle whilst I was in authority. The engine wheels have not been made on that pattern since, but the carriage and waggon wheels have. Previous to 1882 we had some wheels under "Ashbury" carriages fastened with Mansell's fasteners, but they were taken off, and I think are lying at Eveleigh workshops now. They were, however, some little time ago.
3256. *President.*] Do you say that the tires that are not put on by that particular method are defective? I do, most emphatically. I say that the evidence before the Department after my ten engines were ordered, with a fastening that will not allow a broken tire to come off even if it breaks, you would conclude that the Commissioners would have fitted later engines in that way, and I am very much surprised that it has not been done.
3257. *Mr. Brown.*] Then, inasmuch as the others are not fastened in that way, you say that they are defective? I do.
3258. And all the Baldwin engines being fastened like the rest of them, you say they are defective also in that respect? Yes; I may say that the first ten engines from the Baldwin works were designed like this, because I had no drawings and specifications at the time, but we took care to keep them off the Melbourne express trains.

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3259. *Mr. Hoyle.*] Have you had any experience, or had you any experience whilst you were in the service, of tires coming loose? Yes I had, and breaking too. There is an abundance of papers in the Department on that subject. I remember distinctly that, ten years ago, in 1882, the subject was taken up by the Department and thoroughly discussed.

3260. *Mr. Fehon.*] I would like a member of the Commission to ask if this evidence refers to engines or to waggons? It refers to engines, waggons, carriages, and every class of rolling stock we have in the service.

3261. *President.*] Then according to you, not only are the Baldwin engines defective, but every vehicle in the service, excepting the ten engines that you imported from your own designs, is defective also? No; not every vehicle—every engine. On the contrary, every tire on waggons and carriages has been fitted with the approved form of fastening, but the engine's tires have not, and therefore, what I say is, that all the engines except my ten are defective in that respect.

3262. Then according to you, the Baldwin and all other engines in the Colony, except your ten, have not got the tires properly fastened on? According to the experience of Captain Tyler, and my own and others, I consider they have not; and to prove that, the Americans are adopting the fastenings that I have just been describing as the better one on their engines. I can show you drawings of a tire fastening used where, I believe, Mr. Rhodes' brother is the chief mechanical engineer, on which road, I think, they are adopting the Mansell fasteners or a modification of it.

3263. *Mr. Hoyle.*] Do you know anything about the Baltimore and Ohio Company's engines? Well, I have read about them a good deal.

3264. Do you know whether the engines of which this last twelve are a copy, to a certain extent modified, are running on a 60-lb., 65-lb., or 70-lb. rail? I can only say that I have read———

3265. *President.*] How can he say what the rails are if he has only read statements regarding them in a book or paper. You can read the extract from the paper to us, Mr. Hoyle, if you like, and it will be just as valuable as anything that Mr. Midelton can say, unless he has actually seen the rails himself. A man can only speak in evidence of what he knows and not of what he merely reads. Of course you can get his experience if that is what you want. You can ask him whether such and such things are recognised as the proper things to be done, but you cannot ask him to retail statements that he has got from print.

3266. *Witness.*] It has been stated here in evidence before the Commission that the rails on the Baltimore and Ohio Railroad weigh 67 lb. to the yard, and I can show you a drawing of an 85 lb. steel rail on the same road—their standard——

3267. *President.*] If such a statement has been made, all I can say is that I did not notice it at the time, and do not remember it now. If I notice it when I come to read over the evidence afterwards it will then be my duty to tell the other members of the Commission that it is not evidence in any way whatever, and that they must dismiss it from their minds.

3268. *To Mr. Hoyle.*] You could get the effect of Mr. Midelton's answer in this way if you like. You can say to him what rail is safe for an engine of a certain weight to run upon. He may have obtained his information by reading even in that case, but he is asked his opinion, and gives you the result of his reading as his own opinion, and by his opinion he is bound, but we cannot allow him to state what the weight of these rails is unless he has seen them himself.

3269. *Witness.*] I believe the Baltimore and Ohio engines are running on 85 lb. rails, but I may say that I have heard that some of them run on 67-lb. rails.

3270. *President.*] That is really worse than what I have just been complaining about. We cannot possibly admit these statements.

3271. *Witness.*] Well, it is my business to take an interest in these things, and I consequently read a great deal about them.

3272. *President.*] Exactly, we know that it is your business to take an interest in these matters, and of course you will read a great deal about them, but it is just as if a doctor were in the witness box. He may say that so and so are symptoms of a certain disease, but he cannot go on and say I have read such and such a thing, nor can you state in evidence what you have just been doing. You can say that it is not safe to run a Baldwin engine with such and such a weight on the leading wheels, or with such and such weighting on the driving wheels over a 71-lb. steel rail or a 75-lb. iron rail, but you cannot say that certain rails are a certain weight merely because you have read that they are. In the former case you may be giving the result of your reading, but it is you opinion about it after all.

3273. *Mr. Hoyle.*] I have never seen England, but I know it exists.

3274. *President.*] It may be so, Mr. Hoyle, but I am only talking about what is evidence here. We may all hear about a murder in England, we may read about it in the paper, we may have no doubt whatever that the murder has taken place, but if you have to prove it that is quite another matter.

3275. *Mr. Hoyle* (to witness).] We were speaking about the tire of wheels just now. I want to ask you whether there is greater pressure upon a wheel after the tire has turned down to its utmost limit, and whether that wheel is as safe as when the tire is new. I am speaking of a tire fastened in the way in which the tires of the wheels on the Baldwin engines are fastened? When a tire wears thin of course it is weaker, when you get low enough you come to the end of this bolt unless it is put on one side, and near the tire flange. That cannot happen in the case of my tire, my rivet is horizontal; this stud is vertical.

3276. What I want to know is whether the wheel would be safer with a new tire than it would be with a tire turned down to its utmost limit, fastened as these Baldwin tires are fastened? Certainly it would be safer with a new tire than with a tire half worn.

3277. I am asking you that because we are going to call you again after you have examined the engines, and you will have to answer some questions about the wheels then. It has been stated in evidence before the Commission that the reason why some of the bogey axles broke, was in consequence of heating, and that the heating was caused through grit working out of bad parts of the iron. I wish to ask you whether you consider that heating would be caused in that way? If heating was caused in that way, there must have been laminations in the iron before the axles were used in the first instance. I do not think the axles would give off dirt from the interior of the iron unless there was some open fracture in the iron itself through which the dirt could work out.

3278. *Professor Warren.*] And if that were so, it would demonstrate that the axles were badly made would it not? Yes; badly forged I should think.

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3279. Exceptionally badly? Yes; when I was in the Department, if ever I saw an axle with the slightest crack in it I made a practice of putting it in the testing machine at once.
3280. *Mr. Hoyle.*] And the lamination, which you say must have been noticeable in the first instance if grit was going to work out of the iron, might have been discovered as soon as the axle-box was taken off? If a full examination had been made it might have been discovered, and should have been properly recorded at the time.
3281. *Professor Warren.*] So that if it has been stated in evidence that the heating of the axles was caused from dirt working out of the iron itself, you would say that the flaw could have been seen before the axle was used? Yes; although, as a matter of fact, it might possibly have been developed afterwards. What I mean is this. You might examine an axle before it is used and see no sign of lamination. That axle might be worked for a while, and laminations appear; and those laminations, of course, you could not see without taking the axle-box off to look for them. However, I think marks of bad forging would have been observable in the first instance before the axle had been used at all, and I should be extremely surprised to hear that the cracks had appeared afterwards.
3282. *Mr. Brown.*] You think that any fracture could have been detected before the engines had been put to any use? Yes; I think it might have been detected if there was a scale working out of the iron.
3283. *President.*] You mean to say that dirt could not work out of the axle without the place from which it was working out being discoverable? Yes.
3284. *Mr. Hoyle.*] We have evidence to show that some of these engines were lifted a number of times; and you think that if there was any slag working out of the iron it could have been discovered in the course of one of these examinations? I should have hoped that if anything was found to be working out of any of the axles any officer under me would have taken the axle off and subjected it to a careful examination before he allowed it to go out again.
3285. *Professor Warren.*] I want you to answer Mr. Hoyle's question.
3286. *Mr. Hoyle.*] We have had evidence to show that one of these engines was lifted a number of times. I want to know now whether if slag was working out of any part of the axle it could have been discovered when the engine was lifted, if the axles had been examined upon these occasions? Yes; there would have been evidence when the axle heated that there was something wrong, and if slag was in the centre of the axle when the engine was lifted there would have been evidence of its coming out. For instance, if the lamination had not been detected when the axle was new, and in the meantime heating had developed, then I should certainly have looked for the crack that I had failed in the first place to find. If I failed a second time to find them I should perhaps decide to turn it down afresh; it would be a matter to be determined purely by good judgment, careful examination, and experience.
3287. Well then if no laminations—no cracks were discovered—and the journal was perfectly clean, would there not be some other cause for the axle running hot? Well, it might be over-loaded. If an axle is overloaded you expect it to run hot whether that one was overloaded or not I cannot say. If it was badly lubricated it would have been liable to run hot also. Steel axles will run hot if they are overloaded, or if dirt gets into the box, or if there is neglect in oiling or anything of that kind, just the same as any other kind of axles.
3288. *Professor Warren.*] If the area of the brasses in which the axle revolves was insufficient, that would make it run hot, would it not? What do you mean by insufficient?—give me as an example an axle of any diameter, of 5 inches say.
3289. Yes, I want to know if the pressure on this brass is excessive—if it is more than you consider the pressure on such brass should be, would not that be the cause of its running hot? Oh, yes, undue pressure would make it run hot.
3290. What pressure do you allow? 3 tons for a 5-inch axle, and I give one quarter of the circumference for bearings. A 5-inch axle ought to carry 4 tons with safety, with a 3'0 wheel.
3291. *Mr. Hoyle.*] Would the manner in which the bogey is hung have anything to do with the axles running hot? Well it would tend that way on a curve. If the engine flies away at a tangent, which it would do, the weight would be greater on one side than on the other and the bosses would come in contact with the axle-boxes, in which case the friction must be greater on one side than upon the other, but that ought not to cause trouble, because the engines are made to run on curves of course.
3292. *Mr. Fehon.*] It has been admitted that the axles did run hot, and that they have been removed and replaced with steel ones.
3293. *President.*] Yes; the axles that came here in the first instance were very bad axles, there is no doubt about that.
3294. *Witness.*] I should like to see these axles, if for scientific purposes only.
3295. *President.*] I do not know that it is material, because it is admitted on all hands that they did run hot. Whatever was the cause of it, whether it was because foreign matter worked out of the axles, or whatever the cause was, it is admitted that they were bad axles. It might be very interesting and instructive to you from a scientific point of view to examine them, but I fail to see what it has to do with the inquiry.
3296. *Witness.*] As a matter of science it is one that is highly important to me. I have taken more trouble with axles than any other man in the country, and whilst I am inspecting the engines in order to give an opinion on their other parts, if I could examine the axles I might be able to express an opinion on them also.
3297. *President.*] Well, if they have got any of them in their possession now I don't suppose the Railway Commissioners will object to your seeing them. I do not know whether we have anything to do with the question as to whether the flaws should have been discovered when first they came here. There is no doubt that they were defective, and the question for us to determine is whether the new axles with which they have been replaced are perfect or sufficiently perfect to be run with safety. I do not wish to object to your desire to see the axles, and if you wish to see them in the interests of science I have no doubt the Commissioners will allow you to do so.
3298. *Professor Warren.*] It does not affect the inquiry—that is the only thing.
3299. *President.*] No, it does not affect the inquiry at all.
3300. *Mr. Hoyle.*] Do you consider, Mr. Midelton, that it is in any way dangerous for a trailing wheel on an engine to work loose? If it is allowed to go too far. It is not creditable for such a thing to occur in regard to any engine, and, as far as my experience goes, it is a very rare occurrence. They should be watched very closely immediately upon that taking place. If a defect of that kind is neglected you can only expect something wrong in the end.

3301.

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3301. Coming back to the load on the train—you know what our large brake-vans are? The passenger brake-vans do you mean, or the goods?
3302. What is known as our double brake-vans? I know the new lavatory brake-vans.
3303. You know our heaviest brake-vans? Yes.
3304. Do you consider that if the draw-hook—of course I have to keep to the draw-hooks on the engines now—do you consider that if the draw-hook on one of these Baldwin engines broke there would be sufficient brake power on the van to hold a train on 1 in 40—a train weighing 160 tons? Well, it would have to be caught the instant the hook broke in order to save it.
3305. What did you say about the incline?
3306. If it was going up a bank of 1 in 40, I did not say at any particular speed, but I will now say at 12 miles an hour? Well, then, if a Baldwin engine or any other engine, was hauling a train up a bank of 1 in 40 at 12 miles an hour and a hook broke there would have to be reversal of the motion immediately. If you applied the brake the moment the gear broke it might arrest the train's return, but I do not think it would if the wheels were allowed to revolve once or twice.
3307. *Mr. Fehon.*] I must object to this line of examination. It has been already stated, and I beg to point out once again, that every one of our carriages is fitted with an air-tight brake.
3308. *Mr. Hoyle.*] I am perfectly well aware of that; but I will now ask Mr. Midelton whether if the draw gear on a goods train not fitted with automatic brakes was to snap as the train was going up an incline of 1 in 40 at the rate of 12 miles an hour there would be sufficient power on the brake-van to prevent it slipping down? Well, if the guard caught it the very moment that the draw hooks snapped he might succeed.
3309. *President.*] You mean if he caught it, as we used to say at school, "on the first hop," he might prevent the train slipping down the bank again? Yes, if he caught it on the first hop he might do it.
3310. *Professor Warren.*] But you would not like to be in the van? I would not.
3311. *Mr. Hoyle.*] Do you know if compound locomotive engines are a new idea? They are not a new idea in any sense, but they are coming into use more now than a few years ago.
3312. *Mr. Brown.*] The Commissioners have admitted that they only brought out the compound engines as an experiment? The whole lot are experimental engines, as the correspondence indicates.
3313. Which whole lot do you mean? The whole of the Baldwin engines; the Commissioners say so I believe.
3314. *President.*] No, I believe not. As far as I understand it they got these Baldwin engines because they had been disappointed in some English engines which they had ordered, and having been disappointed in regard to the English engines, in order to keep the traffic going during the approaching wool season as the most expeditious and generally the best thing they could do they sent to America for these Baldwin engines. That is their statement, and then in addition to the Baldwin engines they ordered two compound engines for experimental purposes? I understood that the twelve passenger locomotives were said to be imported for running the Southern express and Northern mail passenger trains, and that to that extent they were experimental engines. At the time I asked that my engines should be tested for that purpose but they were not tested which I think was unfair.
3315. *Mr. Hoyle.*] I understood that the compound engines were a new kind of engine, but now I gather that they were tried in England as long as twenty-five years ago?
3316. *Professor Warren.*] Yes.
3317. *Mr. Fehon.*] They are running in England and America very successfully to day.
3318. *Professor Warren.*] And you knew that they would be of use to you here whether they did all that it was said they would do or not.
3319. *Mr. Fehon.*] Yes.
3320. *Mr. Hoyle* (to witness).] You know that there has been a number of failures in the reversing gear and some failures in the break gear. Fulcrum pins have broken, back pins have broken, and rods have broken in connection with the reversing gear. Do you consider, as an engineer, that so many of these parts should have failed, and that there should have been so much trouble with the engines as there appears to have been, considering the short time they have been running? I do not know what there has been in the way of breakages.
3321. *Mr. Brown.*] Mr. Midelton can only tell from what he has seen in the newspapers. If you would put before him the return of breakages that the Commissioners have promised to supply he would no doubt be able to answer your question. You could then get him as an expert to say whether these repairs were fair or unfair considering the age of the engines.
3322. *Mr. Fehon.*] I think we shall be able to give you the returns with regard to the breakages to-morrow. It has taken some time to prepare them.
3323. *Mr. Hoyle.*] We find from evidence here that the boss of the wheels of these engines has worked considerably into the axle-box? Yes.
3324. Do you think that that ought to have been the case so soon after these engines had begun to run? I do not. If the box and the wheel was properly proportioned I should expect them to run at least nine months before there was sign of such a serious thing as that happening.
3325. Do you think it would be a serious defect in these engines then, or a defect in the design or in the material, for a piece of a wheel to work into the axle-box (say) three-eighths of an inch? In nine months.
3326. I think they have been running about six months? If they have been running on the mountain lines you would rather expect the wearing of the box to a large extent; but if I were running them, and they were working into the box unduly, I should feel annoyed with myself that I had not had them properly designed, or that the work had not been according to the design.
3327. *Mr. Fehon.*] Again I submit that there was no design or specification in the question. There was not time to submit a design for these engines; they were ordered by cablegram, so that it does not affect the matter at all.
3328. *Witness.*] I may remark that these engines were ordered in a hurry by cablegram, as Mr. Fehon has just described, but engines could have been obtained more expeditiously, and I say this to show that I am not in any way unfriendly to the Commissioners.
3329. *President.*] That does not matter, Mr. Midelton. It did not affect our view of the question in the least. We have quite plenty to inquire into as it is.

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3330. *Mr. Hoyle* (to Witness).] We find that the reversing gear has broken, and that it has been necessary to put new brass brackets on to carry the screw. Do you think now that the reversing gear should have given out so soon as it has after these engines have been running? I do not but I might qualify that by saying that screw-reversing gear was specified in these engines, and that it is customary for the Baldwin Company to put a lever instead of a screw; but as the screw was specified I think it would have been the proper thing to have sent a drawing of what was required; however, if the Baldwin Company has put reversing gear into the engines that I consider defective, I shall not hesitate to say so.
3331. What do you think is defective in connection with the reversing gear? I have not examined it yet.
3332. *Mr. Brown.*] You are coming up to a point at which it will be evidently necessary for Mr. Midelton to see these engines.
3333. *Mr. Hoyle* (to Witness).] Can you go to the sheds at Eveleigh to-morrow morning, for the purpose of inspecting the engines, and come here in the afternoon? Yes.
3334. *Mr. Brown.*] It seems to me that it is the best thing for him to do that before going on any further with his evidence. I want to draw your attention to the fact that the boss of the wheel has been bored out to make room for the increased axle? I think that is a great mistake.
3335. I do not want you to answer that question now. I want you to see the engines first? It is a question which I can answer now.
3336. Then you can answer it better after you have seen the engines.
3337. *Mr. Hoyle.*] Then, under the circumstances, as I have a great many more questions to ask Mr. Midelton, I would suggest an adjournment until to-morrow.
3338. *Professor Warren.*] I have a few questions that I might ask him now.
3339. *Mr. Hoyle.*] Before you proceed, Professor Warren, and whilst the matter is fresh in my mind, will you allow me to say to Mr. Midelton that I want him to examine particularly the valve buckles, the cross-heads, the size of the cylinder, the pistons, the wheels—very particularly the wheels—and, if he can, the axles also.
3340. *Witness.*] In order to do all that Mr. Hoyle has asked me to do, it would be necessary for me to start at daylight and to go on until 12 o'clock (noon.)
3341. *Mr. Hoyle.*] And I want to know the position of the gauge-glass on the boiler.
3342. *President* (to Witness)]. As far as I am concerned—I want you, of course, to do all that Mr. Hoyle has asked you—but, for me particularly, to notice the spokes with the so-called cracks in them, where undoubtedly some putty has been put in.
3343. *Mr. Hoyle.*] Engine No. 447 is the one we were looking at, and also engine 456.
3344. *President.*] Engine No. 456, I remember. If you will look at them you will see that there are places where you can put your knife in a little way, and also if they give you a hammer you might sound the spokes.
3345. *Mr. Brown.*] Let us settle how this gentleman is to go down there, and what officer the Railway Commissioners will instruct to meet him.
3346. *Mr. Fehon.*] The best thing is for Mr. Midelton to get a note from Mr. McLachlan, our Secretary, and for us to appoint an officer to meet him.
3347. *Mr. Brown.*] Would it not be better for you to give him an order now, say, that he is to go with Mr. Howe or with Mr. Stanger, or some other officer.
3348. *The Secretary for Railways.*] Here is an order that will answer that question.
3349. *Witness.*] At 9 o'clock, to-morrow morning, I will be at Mr. Howe's office, I dare say that will be convenient for the Commissioners' officers.
3350. *Professor Warren* (to Witness).] We were referring a short time ago to the Baldwin passenger engines as shown on the photograph over there. I want to ask you whether the hauling power of an engine depends upon the weight of the driving wheels? Hauling power depends upon the weight upon the driving wheels and the cylinders, and the pressure, of course.
3351. Yes; but I am assuming that the proper proportion is maintained between adhesion and driving power. Supposing you have a weight of 45 upon the driving wheel and you reduce it to 43 tons? That is too little.
3352. But never mind that? Then she will slip and not haul at all.
3353. But supposing the engine power is adjusted to the weight upon the driving wheels, what then? If the weight is adjusted to the power of the cylinder she will haul the full load that was intended when you designed her, whatever that may be. If she is loaded too lightly as regards the cylinders she will slip. Many engines are over-cylindered—that is, the adhesive weight is not sufficient for using up the cylinder power. Here we have a case, and the engine is too heavy for our rails, yet not heavy enough for the reasons given.
3354. But would not the engine haul so much less in the proportion that 45 bears to 43? Yes; just the same as a horse with a man on its back and a man off its back. If you have a horse in a dray it will pull more if the load upon its back is increased by the weight of the shafts as against traces.
3355. That is to say, that the reduction of the weight upon the driving wheels would reduce proportionately the power of the engine? Decidedly.
3356. Your own engine was tested by Mr. Roberts, of South Australia, and also by Mr. Alison Smith, was it not? Yes; the early one was tested in 1887.
3357. The loads that it would draw up the Lapstone incline were demonstrated by that test? Yes.
3358. And the speed was taken during the test? No, I do not think the speed was taken; it was a question who would get there first. I contended that Mr. Scott's engine was wrong and I have proved it.
3359. Mr. Hoyle was asking that your engine should be tested as well as the Baldwin engine? Yes.
3360. *Mr. Fehon.*] We test it every day.
3361. *Witness.*] It has been tested for the last five years, and it has done the work of the country for long before these ten-wheeled engines came here.
3362. *Professor Warren* (to Witness).] Can you give any reason why your engine should be tested? Yes; because the weight is properly adjusted according to the cylinder power. It will pull more in proportion to its cylinder power than the Baldwin engine. It will pull its full load, which I consider the Baldwin engine will not do without the use of sand.
3363. *Mr. Fehon.*] We have never questioned the power of Mr. Midelton's engine to draw its load. It is a very good engine, and was the most powerful engine we had before the arrival of the new engines.

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3364. *Professor Warren.*] My object in asking the question was to find whether Mr. Midelton, as the designer of the engine, could offer any strong reason why the test should be made. Otherwise, I should be obliged to oppose it, as I do not see what useful purpose it serves in connection with this inquiry.
3365. *Mr. Fehon.*] We should object very strongly to anything of the sort.
3366. *Witness.*] My reason for asking that the test should be made, is that the weight on the driving wheels is in proportion to the cylinder power of the engine, and is properly adjusted. That is not the case with the Baldwin engine, or with the new Manchester engines, and I want to prove that I am right, and that they are wrong.
3367. *Professor Warren.*] Yes; but we are not trying your engines, the Baldwin engine was ordered to do certain work, and we want to ascertain whether it will do that work? The new Manchester engine was brought out for a similar purpose, and indeed it was brought out to do more work. If I might make a suggestion, I should like the Baldwin engine and the new Manchester engine tested as Professor Warren suggests, and then to have my own engine tested against both.
3368. *Mr. Brown.*] My mind is not made up with regard to the necessity for these tests.
3369. *Witness.*] It is the most important question before the country.
3370. *Mr. Hoyle.*] I shall press for these tests afterwards.
3371. *Professor Warren.*] I shall ask for whatever tests I think necessary.
3372. *President* (to Mr. Hoyle).] Have you got any other witnesses this afternoon?
3373. *Mr. Hoyle.*] No, I have not.
3374. *President.*] I do not want to hurry you in the least, but how long do you think your case will take?
3375. *Mr. Hoyle.*] Well, I suppose now, in consequence of the new development, it will take the whole of this week and probably the best part of next week.
3376. *Professor Warren.*] I think we should meet oftener?
3377. *Mr. Hoyle.*] If you meet oftener it will be a very serious matter to me. I will point out to the Commission that I have my business to look after, and that I have to employ a man to take care of it in my absence.
3378. *President.*] If we do not meet oftener and bring this matter to a conclusion it will be a very serious thing to me. I also have my work to do, and I cannot get anyone else to do it for me.
3379. *Mr. Hoyle.*] I should suggest, Mr. President, that we should meet earlier.
3380. *President.*] Professor Warren is not able to attend earlier than two o'clock; he has his lectures to attend to. So far as I am concerned I should feel inclined to meet more frequently, but Professor Warren cannot meet earlier.
3381. *Mr. Brown.*] We must also consider the officials. They are already working fifteen hours a day.
3382. *President.*] Have you any other witnesses that you could call now, Mr. Hoyle?
3383. *Mr. Hoyle.*] No, I do not think that I have.
3384. *President.*] We are desirous of meeting you in every way in our power, you will understand that; but can you give me any estimate of how long a time your case will last. It seems to me, as things are going at present, that we shall have a lease of this room for a long time.
3385. *Mr. Fehon.*] Driver Moses is still on the premises.
3386. *Mr. Hoyle.*] I have already stated the reason why I cannot call Driver Moses.
3387. *President.*] If what you refer to as being necessary for you to read before calling Driver Moses is in the original depositions, I have got them. They have been sent down from the Justice Department.
3388. *Mr. Hoyle.*] I want to ask Driver Moses certain questions, and I should like to see the depositions before doing so. As far as I am concerned, I wish to get through this matter as soon as possible, but I have the public to consider as well as myself. However, if the Commission will intimate to me they do not think there is anything in my charges, I am prepared to give the case up at once.
3389. *President.*] On the contrary, that would be the strongest reason for going on, to allow you to finish your charges. If we thought there was nothing in the evidence that you have called so far, it would be very wrong of us to stop you. I do not know what view any other member of the Commission has. I only know what my own view is, and at present it is a very undefined one. The fact that you have so far not made out your charges would be the last reason for stopping you.
3390. *Mr. Brown.*] That would never do, Mr. Hoyle.
3391. *Mr. Hoyle.*] I am very anxious to meet the convenience of the Commission in this matter.
3392. *President.*] We quite understand that. Mr. Midelton will inspect the engines to-morrow morning, and attend here to continue his evidence at 2 o'clock in the afternoon.

WEDNESDAY, 4 MAY, 1892.

[*The Commission met at 2 o'clock in the Board Room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

3393. *Mr. Hoyle.*] Before Mr. Midelton comes in I wish to ask the Commission if they would ask the Engineer-in-Chief to supply me with a section of the rail or rails now in use between Wallerawang and Bathurst. I wish to have a sketch of the sections of these rails.
3394. *Mr. Fehon.*] That comes in Mr. Deane's department, and he is a Public Works officer, and is not under the control of the Railway Commissioners.
3395. *Professor Warren.*] Would it not answer our purpose if the Secretary to the Railway Commissioners sent a letter to Mr. Deane asking him to supply the particulars you desire.
3396. *Mr. Fehon.*] Yes, I think we could do that.
3397. *Mr. Hoyle.*] There is one other matter I would like to bring before the Commission before going any further. I have called Mr. Midelton to give evidence before this Commission, and as he is outside the Railway Department, I have thought that, under the circumstances, he and other gentlemen whom I may call, being professional men, and being put to loss of time and inconvenience in coming here, the Commission might make some arrangement to give these gentlemen some recompense for their attendance, and as this is a matter which the Commission might have to consider, I thought it would be well to raise the question now. I think that in the case of Mr. Midelton such an allowance as I have mentioned might be made.

3398.

3398. *President.*] Very well, Mr. Hoyle; we shall see about it.
3399. *Professor Warren.*] Quite so. Mr. Midelton has been instructed by the Commission to do certain things, and we shall take your suggestion into consideration.

Thomas Midelton further examined:—

Mr. T. Midelton. 4 May, 1892.

3400. I wish to ask the permission of the President to kindly allow me to correct an error I made yesterday with regard to the newest Manchester engines. I said they were upon separate springs, but I now find on closer examination, made by me this morning, that the driving and leading springs are compensated. That was alluded to yesterday in looking at the photographs. The trailing wheels, I may mention, are separate as I first said.
3401. *Professor Warren.*] The two first driving wheels are, you say, compensated, and the wheels behind are on separate springs? Yes, which is rather worse, I think, than what I said before.
3402. *Mr. Hoyle.*] When we concluded yesterday afternoon it was arranged that Mr. Midelton should visit the Eveleigh shops and inspect the Baldwin engines now under inquiry. I should like to know, Mr. Midelton, if you have made that inspection? Yes, I have seen engines 456 and 447 this morning.
3403. In examining these engines perhaps it would be well if Mr. Midelton would state his opinions about them, without interrogation? The first question alluded to was, I think, the valve buckles. I have carefully examined a broken buckle from No. 456 or 447, I do not clearly remember which, but it was one of the class. On first appearance it struck me that the buckle was light; as to the quality of the material I could not see since it was quite rusty in the fracture. Comparing that buckle with the English designed buckles, I consider it to be light, but there is a set-off against that in the fact that as the slide valves are "balanced" in the American engines, these buckles, compared with the English buckles, appear strong enough. In the English engines the buckles are very strong, because the slide valves are not "balanced." Making them light must be looked on favourably on account of the valve being "balanced," but even under these conditions I think they are a little weak. I should have made them stronger, but that will perhaps be rectified a little later on. With regard to the reversing gear as originally constructed, the fulcrum pin of the main lever is decidedly defective. The bearing portion of the pin is large enough for the stress, but it was reduced in diameter where it screwed into the bracket fastened to the boiler. That reduced its strength and made it very weak. It should have been slightly larger if anything. This, I understand, has been rectified here and acknowledged by the makers.
3404. *President.*] The defect in the pin of the reversing gear was the only defect you found in that gear? Yes; that was an original defect, but it has been made right by the company. With reference to the piston cross-heads of the passenger engines, they are fitted with gun metal slide blocks, which, I believe, will be found to wear very rapidly. I should certainly object to them. It is a detail certainly. Some engineers consider particular material best, some prefer gun metal, and some cast iron. I prefer cast iron. But I do not consider that a very grave defect. I am rather surprised that the company have put in such metal, but I suppose they have some reason for it which I do not understand.
3405. With regard to the pistons? They are not excessive in weight. I refer to the passenger engine. I had not an opportunity of looking at the goods engine, but I think they would be rather heavy on the slide bar when the engines run without steam, the connecting rods being so very long.
3406. *Professor Warren.*] Gun metal would be dearer as a matter of fact? Yes, and I think it would wear faster.
3407. So that it would not be put in for economy, I suppose? No; I imagine it has been put in to test some mixture of metal. It may be Ajax metal or some similar material—a patented article perhaps. For my own part I prefer cast iron.
3408. *Mr. Fehon.*] I would call the attention of the Commission to the fact that these are all little matters of detail in connection with the building of the engines, and not affecting the question of their being "faulty in design." Those are the words used by Mr. Hoyle, I think, in his charge. It is a matter of opinion between makers which they will use. One may adopt one design, others another.
3409. *President.*] We do not care about any other charges except that these engines are defective, and the other matters we are required to investigate by our commission. It does not seem to me that this evidence with regard to the metal shows that the engines are at all defective; on the other hand, if a dearer article had been put in, it would seem to be for some special purpose of the makers.
3410. *Professor Warren.*] I think Mr. Midelton's evidence shows that this is a matter of opinion, and that this was not done for economy; however, it is obviously a matter of opinion. (*Witness.*) I examined a piston; there was a spare one for a passenger engine; it is not too heavy for a cylinder 21 inches in diameter, but an effort has been made by the company to reduce the weight of pistons, and a lighter kind has been recently designed, so that the importance of reducing the weight was recognised. All engineers recognise the importance of reducing the weight of the piston, crosshead, &c.
3411. *President.*] Well, there is nothing wrong with it? No, I did not see anything wrong with it really. The axle-boxes I saw did not show much with regard to lateral wear; I asked if they had run over the mountains, and I was informed that they had run in the Bathurst district. The axle-boxes had a tendency to wear into the wheels, but not unduly in the engines I saw. I know that the boxes do wear unless they are properly designed, looked after, lubricated, and so on. I think it is an unnecessary and improper expenditure to put brass axle-boxes on the engines.
3412. *President.*] We do not care about that. It is not necessary to enter into the question whether the Commissioners have gone to more expense than was necessary or not; we want to know whether these Baldwin engines are defective or not.
3413. *Witness.*] I have no doubt the leading coupled wheel axle-boxes will wear fast on the mountain curves, but not perhaps on the Northern and Southern lines, but any box will wear more on the mountain road than on the other portions, they may wear perhaps more than others from the nature of the general design, and I think that was a departure not justified in any way. I examined the swinging links of the bogie, and they hung perfectly vertical; that is objectionable according to my experience. The firm in question and others I believe have experimented some twelve years now, on the question of links, whether they should be hung outwards, inwards, or vertically. I think this departure in hanging these links in a vertical position is not wise, and the engines in running round an 8 or 10 chain curve at 30 or 35 miles an hour would in consequence have an undue tendency to fly off at a tangent from the curve, and wear the flanges of the leading coupled wheels unduly.

3414.

Mr. T. Middleton. 4 May, 1892.

3414. *Professor Warren.*] You mean it increases the oscillation in front? Yes, on curves and straights, through hanging the links vertically, I think the engine would be likely to wander in front, and on the curve she would go to the outside rail of course, whereas if the links were hung in the old way the movement would be less and the engine would go as required theoretically.

3415. Then if there were any defect in the road the engine might be likely to leave the rails, or more likely than if the links were hung obliquely? Yes, I think there would be more likelihood of its doing so than if they were hung in the old manner. The Manchester engine links are slightly oblique, but not so much as the American. The present Baldwin engines are hung vertically, but all previous engines sent here have the links hung as I prefer, excepting Mr. Scott's ten engines, which were hung the reverse way. I have found that the links hung as in the original engines are the best. I examined No. 456 engine, wheels, and axles—the wheels minutely. The manufacture seems to be fairly good for a new article and a new system. They are not so nicely made as a mechanic would expect so far as regards finish. The "ring" of the material seems to be fairly good. There are defects in the way of "galls," and crevices, and so on, but not in the way of weakening the wheel. On the whole they seem to be fairly well manufactured considering the new process; but at the same time they are decidedly light for that class of engine—the arms are further apart than is usual. I compared them with wheels of English design. Making that comparison I consider that in these engines the arms are too far apart.

3416. *President.*] By the arms I suppose you mean the spokes? Yes, and that tends to weaken the wheel. I do not say they are too weak for the purpose, but they are weak in proportion. The design is not symmetrical, nor what I think the company should do with their experience of cast-iron. The wheels are certainly light and hardly up to the thickness and size I should like to see them for that weight of engine. With reference to the bosses of the wheels they are particularly light, the metal surrounding the axle being only 2¾ inches, whilst in the English make they are from 3½ to 4 inches; the English practice is to make them too heavy, and the American practice—in this instance—is to make them too light; I should prefer to have them between the two. They are certainly light as regards the metal round the axle, and also the metal round the crank pins; I dare say that in heavy pulling defects will develop; it will be found difficult to keep the wheels tight on the axles—they may get loose on the axles.

3417. *Professor Warren.*] With regard to the flaws in the spokes I suppose you sounded the spokes in each wheel? Yes, with a hammer; some of them sounded rather dull, as if cracked, but that was an exception—about one in each wheel; there were signs of bad welding, and the material of the wheels seemed to be imperfectly distributed.

3418. In some of the spokes did you notice an apparent flaw so that you could put a knife in them? No, I looked very carefully, but I found flaws in the balance weight.

3419. And did you see no crack? No; I asked Mr. Howe to point them out to me, but I could not see any in the wheels of No. 456, and in No. 447 the latter wheels were under the engine and I could not see so well; I failed to discover cracks alluded to by the President yesterday as being in the arm. Mr. Howe pointed out to me one little crack near the rim, but I did not think it very important.

3420. *Mr. Brown.*] You made a fairly careful examination? Yes, considering the time I had at my disposal.

3421. *Professor Warren.*] You did not consider the spokes likely to fracture in the places you have mentioned? It is necessary to be very cautious, and I think there will be flaws develop as the wheels are used. If I am right I may congratulate myself on the correctness of my view. I am afraid something may develop later on. They are inappropriate wheels for the class of engine, and I think the company will agree with me in what I have said, and make them heavier in future. The company were especially asked to reduce the weight of the engines; in the letters to the Railway Commissioners the Baldwin Engine Co. protested, so that they are justified in reducing the weight of the wheels in complying, as far as possible, with the specifications sent here for consideration. I looked at the water gauge-glass, and I am told by a Government representative that the water-gauge is in its original position, but an additional gauge had been placed on the engines in order to give the driver an opportunity of watching the levels. I could not say at what height it has been placed with reference to the top of fire-box, but I was told it was placed properly; that could only be found out by measurement, but, of course, I could not do that.

3422. *Mr. Brown.*] On the whole your examination shows that these engines are a rough but fairly substantial job? Well, I have stated my opinion and enumerated the various details examined.

3423. *Mr. Brown.*] Have you examined them sufficiently to say that there are defects in the engines which render them unsuitable for our railways? No; but I say they are too heavy for our roads, and therefore unsuitable. I did not see anything in the wheels in the sense which defect is understood, they are not the class of workmanship one would expect from the Baldwin Co., but it is to be remembered the work was done in a hurry; indeed I know the job was done in a hurry. On the whole they seem to me to be a fairly good job, but they are not right.

3424. *President.*] That is to say they are not finished like the Beyer and Peacock engine that we saw at Eveleigh—there is not the same finish upon them as upon the English engines, but supposing the permanent-way to be suitable for them do you think that the wheels of the engines are defective? I think they will show defects in the course of time. I think there will be development which we would prefer not to have.

3425. *Mr. Brown.*] Did you examine the bogie wheels where they had been bored? Yes; and I think it a most indiscreet, injudicious, and wrong thing to do. To bore out the wheels to put larger axles in is a most stupid thing to do, the friction is greater now than before with the same weight, as the circumferential speed is greater.

3426. *Mr. Fehon.*] Has it not been the practice of the Department within your own experience to put on axles in this way and then shrink on an iron ring? It has been the practice of my successor and predecessors, but I would not have allowed it; it has many times been done wrongly, and not for reasons that could be justified.

3427. It has been done with your own engines, I believe? Yes, the first ten, and I actually saw one of the ten from Dubs in which a larger axle had been put, and brass boxes had been put in, quite unnecessarily.

3428. *Mr. Brown.*] Then you don't agree with it? No, I do not.

3429. But it was the practice of your predecessors? Yes.

3430. *Professor Warren.*] How much has the axle been increased in diameter? I think from 5 to 5½ inches; I think that would be the dimension.

3431.

Mr. T. Midelton. 4 May, 1892.

3431. Assuming it to be 5½ inches? I do not quite know the dimension, but it is a considerable increase.
3432. Well, assuming it to be that you say that the friction has been increased, that is to say, the friction would be increased in proportion to the radius, the radius has been increased a quarter of an inch, the friction I suppose would also be increased by the extra weight of the axle? The weight of the axle has only been slightly increased—due to the extra diameter, the weight on the bearing is the same.
3433. The friction is greater? It was less than it is now.
3434. The load upon the wheels will be about 3½ tons? Yes.
3435. So that it is a very small degree of weight? Yes, but it is an increase of working expense.
3436. In boring out the boss to a larger diameter in order to get a larger axle in, you have a larger journal, the increase in surface would be proportional; for at all events it would mean a larger brass and a larger surface, the pressure per unit of area would be less than before, and there would be a tendency to heat? Would be greater;—how do you justify that?
3437. In this way, you are trying to show that the speed does not affect it? No, I am not.
3438. Well, I must misunderstand you. I think your doctrine is that if the axle is increased in diameter the speed of the axle, on account of the greater circumference, is faster. Why not increase the journal up to the size of the wheel? You have a better bearing perhaps, but there is an increase of friction. I consider that an axle of 5 inches is better than 5½ inches. Axles are made larger in diameter now for strength and tortional resistance.
3439. Your evidence is that by increasing the diameter of the journal you increase the friction? Yes; due to the extra speed.
3440. *President.*] In this way, if I take this pencil and turn it round, then in order to turn round a bigger one in the same time the circumference would have to go faster? Yes; and the consequence is the friction and the consumption of oil is greater, I think it would be a very unwise and unnecessary step to take.
3441. *Professor Warren.*] But have the axles been increased also throughout, so as to give extra strength except in the journal? I do not know whether they were increased, but they were quite large enough. It is a ridiculous alteration, and I think a most injudicious one. These tender axles are of iron, mine are steel.
3442. Then these axles you say have not been increased to give extra strength, do you know why? I do not know why, but it seems to me a most unwise thing to do, and I would like to know the reason why it was done. I know of no reason except that it was to alter things that were right before.
3443. They ran hot I believe? That may not be the fault of the brasses or the axles, it was perhaps the fault of some one connected with the supervision of the engines.
3444. If the axle had flaws in it, would that have any effect? These steel-axles have no flaws.
3445. But assuming there were flaws in the axles through which dirt would come out—would no that make the axles run hot? Yes; I should think it would increase the friction.
3446. Well, we had evidence to that effect?—
3447. *President.*] Do you refer to the heating of the bogie-axle of the Baldwin passenger engine? No, I am referring to the Dubs engines.
3448. Oh, I understood you were referring to the Baldwin engines; we do not want to know anything about any engines but the Baldwin.
3449. *Professor Warren.*] I also thought he was referring to the Baldwin engines? No; I meant the Dubs' engine.
3450. *President.*] We have evidence that the axles on the Baldwin engines were running hot, and it was said that this was because some slag worked out, got through the metal, and increased the friction; well, do you say that this was due to bad management, or want of supervision, or is it an inherent defect in the axle itself? I saw a Baldwin axle this morning which had laminations in the surface, such as I described yesterday; if the dirt came from these laminations it would tend to make the boxes run hot, but whether it is so or not I cannot say, but seeing that these axles showed laminations when put in the engine, it was for the driver to look particularly after them to see that they did not run hot. As to the axle of No. 447, Baldwin engine, if I had been superintendent I do not think I should have allowed it to go under, judging from the appearance of it; it was a 5-inch axle. I also saw an old engine of Stephenson's with iron axles, and two—the leading and trailing—had laminations in them. The crank axle was of steel, and looked very good indeed. I also saw a Beyer and Peacock iron axle, it also had laminations; Stephenson, Beyer and Peacock, and Baldwin engines, with iron axles, each had laminations, but they were not so defective that I would reject them; but with regard to the Baldwin engine bogie—5-inch axle—I would hesitate before I put that axle under the engine.
3451. Will you tell us now about the Baldwin engines;—the boxes of the Baldwin engines have been increased in size? Yes.
3452. Do you consider that injudicious? Yes, I do. I think it a wasteful expenditure.
3453. Well, whether it was wasteful or not, that is not the question to determine. Did this boring out make anything unsafe;—has it left the boss too small? No, I do not think it has been made unsafe.
3454. *Professor Warren.*] It has merely increased the friction in the manner you have described before? Yes.
3455. But the axle is not so likely to break? If the axle is 5 inches and good, it is not likely to break.
3456. Have you any other point to make? No, I think these remarks cover all I was requested to investigate.
3457. *Mr. Brown.*] We were told, Mr. Midelton, that certain alterations were made in these engines at the request of the officers of the Government. You will find them contained in the first part of the correspondence.

(A.) "The engines require, however, the following modifications:—Our coal being good, the grate area might be somewhat reduced, lessening the weight on each driving-axle to not exceed 14½ gross tons, or 32,500 lb.

Our water being bad, the fire-box should be copper, and the tubes brass.

No bell is required.

Hand-brakes and Westinghouse automatic are wanted on all driving and all tender wheels.

Screw reversing-gear is wanted.

Trailing sand-pipes behind rear driving-wheels are wanted.

The sand-boxes would be preferred on or under the foot-plate, instead of on top of boiler.

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Bushes are preferred on coupling-rods.
The connecting-rod would be preferred with adjusting cotters, and split brasses as usual, but without straps.
The capacity of the tender should not be less than 3,600 American gallons.
The gauge of road is 4 ft. 8½ in.
The extreme height of chimney should not exceed 13 ft. 6 in.
The extreme width of engine should not exceed 9 ft. 6 in., and, if possible, should not exceed 9 ft. 3 in."

I may explain that they were talking with regard to an engine described in the *Railroad Gazette*, 18th June, 1890. A conference of Government officers, who had that engine before them as a pattern, was held, and they agreed that this engine appeared to be suitable and sufficiently powerful for our requirements if certain alterations were made, and they consist of what I have just read to you. What I wish to call particular attention to is the first part,—"Our coal being good, the great grate area might be somewhat reduced, lessening the weight on each driving-axle, to not exceed 14½ gross tons, or 32,500 lb.," and the next is that the extreme width of the engine should not exceed 9 feet 6 inches, and if possible, should not exceed 9 feet 3 inches. Now, I want to know from you if these modifications would interfere with the efficiency of the engine? Yes, and it saddles the whole responsibility on the manufacturer instead of on the person drawing the specifications.

3458. *Mr. Fehon.*] We had no specifications at the time? You had the *Railroad Gazette*.

3459. *Mr. Brown.*] I am not quite satisfied upon this point. What I want to know is, whether the amendments made by the officers, and which I have read to you, would interfere with the efficiency and speed of these engines, because I understand that the Company would not guarantee the speed of the engines if the alterations were made. I wish to obtain your opinion, and you have said that it would interfere with the efficiency and speed of the engine, and you also say it throws the responsibility on the makers.

3460. *Witness.*] It is unfair to throw such responsibility on the makers, seeing that the Government officers had the design and specification of the Baltimore and Ohio engines before them.

3461. *Professor Warren.*] Mr. Brown has asked questions with regard to the reduction of speed;—you said yesterday that the decreased weight on the driving-wheel would reduce the speed in proportion to that reduction? I said it would reduce the tractive force. The Baltimore and Ohio engine is, in my opinion, rather light also. To ask the Company to make our engines lighter is to ask them to make the engines still more unfit for our lines.

3462. The weight on the wheels could only reduce the hauling power, so that the hauling power would be reduced in proportion? Yes; the engine for the Baltimore and Ohio Railway is light, according to my experience, for the cylinder power, and to ask the Company to make a lighter engine still, and yet make it like the Baltimore and Ohio engine, is rather a paradox to me. I do not see how it can be done.

3463. Is the cylinder power the same as the Baltimore and Ohio engine? No; the latter has 2 inches larger stroke, and the tractive force is greater.

3464. There is not the same adhesion? No; the Baltimore and Ohio is the better of the two. The Railway Commissioners' officers wanted an engine like the Baltimore and Ohio. They specified for something else, and they got what they asked for. They wanted a lighter engine, and specified material which would make it heavy.

3465. *Mr. Brown.*] I think you have said that the road was not strong enough for these engines; well, do you know Dr. Williams? Yes. Would he not be qualified to give an opinion on that question? Yes, if he had seen our road lately, I would not ask for a better opinion.

3466. Well, supposing he says—"We recommend you to take a Baltimore and Ohio engine, because we believe it will be suitable for your roads." Do you consider that would be a reliable opinion? I do not think he would do so, unless he actually knew the actual dimensions of our rails, &c. He might say that he believed our roads to be suitable, but he would not know it. It was the duty of the Government to furnish the Company with the weight of the rail, and all particulars, and then he might have given an opinion which would be absolutely safe to act upon.

3467. You say that these gentlemen—the officers of the department—in making the amendments I have read, committed a mistake? Yes, there is no doubt about that in my mind—they made a grave mistake.

3468. *Professor Warren.*] You have given us a limited weight on the 71-lb. rail, I think? Yes, all the authorities agree on that point, Molesworth and others. Mr. Whitton, Mr. Burnett, myself and others all agree upon this point, until my successors came in, and they have increased the weight.

3469. *Mr. Brown.*] I am going to read part of the correspondence from the Baldwin Engine Company about the suitability of these engines to our roads. These gentlemen, writing on the 10th October, 1890, say that:—"Basing our estimates on Dr. Williams' experience with the engines shipped per "Niobe" in 1879, we are willing to undertake the erection under steam at 300 dollars each, exclusive of cost of shop space." From this you will see that Dr. Williams was there at the time, and that they were able to consult with him, for they say subsequently, "As we understand that the permanent-way of the New South Wales railways is of a much more substantial character than the Baltimore and Ohio railroad, we see no reason why the engines built for the latter should not be adopted entire." Do you not think that Dr. Williams was speaking from an intelligent and authoritative point of view? Yes; I think he was doing quite right; he was endeavouring to induce the Government, from his experience, to adopt the Baltimore and Ohio engine intact, and, from his knowledge gained here, he estimated that our permanent way was strong enough to carry these engines. He does not say from his own knowledge that it is, but he thinks so.

3470. But I understood you to say that the Baltimore and Ohio engines would be too heavy, how do you reconcile that with this recommendation? Seeing that the Government officers ask for a lighter engine than the Baltimore and Ohio this is *prima facie* evidence that they thought our rails not heavy enough, and they should have known that the reduced engines would be too light. Dr. Williams recommends the heavier ones. I do not think that Dr. Williams, with all due deference to his opinion, from his experience gained here twelve years ago, leaving here in 1878 or 1879, could carry in his memory the condition of our road up to the present time; he simply advises the Government to do what he thought best.

3471. I suppose that he knew that our rails were 71-lb. or 75-lb.? Yes; I dare say.

3472. *Professor Warren.*] Do you think he was wrong in his opinion? No; I think he was doing right, speaking in Philadelphia as he was, with the object of introducing business in the best way.

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3473. *Mr. Brown.*] You do regard Dr. Williams as a reliable authority? Yes; his visit to these colonies was one of the best things that ever happened to them. Had his advice been fully acted upon, we should have benefitted much.
3474. *President.*] What do you mean by "talking from that end from a business standpoint?" The Company say, we fear it will cause disappointment to you if you have the engines much lighter. You had better accept the Baltimore and Ohio engine intact.
3475. *Mr. Brown.*] He says, I think your permanent-way is suitable for these engines.
3476. *Professor Warren.*] I take it your evidence shows that both engines were too heavy? Yes; the Baltimore and Ohio engine was too heavy, but they asked for a duplicate of that engine, "only that it should be lighter," and Dr. Williams is consulted, and he says he thinks the heavier engine would be suitable for our roads and the altered engine end in disappointment.
3477. *Mr. Brown.*] But he says the Baltimore and Ohio engines—that is, these Baldwin engines—are suitable for our permanent way;—is he not a competent man, with a knowledge of our railways? Yes; but he only expresses an opinion based on what he believes.
3478. *Professor Warren.*] What is the practice in America, from your knowledge, with regard to the weights on the driving-wheel and the rails;—is it a fact that the Americans put heavier weights on their wheels than the English think prudent? Yes; if you read the last number of *Engineering News* you will see the folly of doing that. In the Eastern States that is a thing of the past.
3479. The March number? Yes; I think there is an article on the very question there. They state that the Baltimore and Ohio road is a very heavy one, 85 lb. to the yard, steel rails, Vignoles section.
3480. The Baltimore and Ohio railroad? Yes; they are 67 and 85 lb. to the yard rails.
3481. *Professor Warren.*] Are the Baltimore and Ohio engines running on a 67-lb. rail? I do not know—I question it very much; speaking of course of those we are now considering.
3482. Which do you mean, the express or the ten-wheel? If you ask me whether the ten-wheel engine is running on a 67-lb. rail I should say I do not think it does. If it does the sleepers must be very close together. In any case that fact, if it is a fact, does not show that it is the right thing to do.
3483. The American practice would justify a heavier weight being put on the rails; is not that a fact? Yes; they have used heavy engines on light rails to their cost, and I refer you to the article in *Engineering News* to justify what I say.
3484. *Professor Warren.*] The general tendency is to use heavier rails, following the English and German practice, is it not? Yes; in America they now go in for necessary heavy rails.
3485. *President.*] Dr. Williams, I understood you to say, was out here? Yes; he was here in 1878.
3486–7. *President.*] Will you look at page 5 of the correspondence, about eight lines down, it is said, "We presume our supply of September 5th made this clear. Basing our estimates on Dr. Williams' experience with the engines shipped per 'Niobe,' in 1879, we are willing to undertake the erection under steam at 300 dollars each, exclusive of cost of shop space." What do you understand by those words, "basing our estimates on Dr. Williams' experience, that the engines shipped per 'Niobe,' in 1879, we are willing to undertake, &c."? That refers to the cost of delivery only.
3488. *President.*] I cannot answer questions; I want you to do so. Will you now go down about twenty-five lines further in the next paragraph, or the paragraph after. It says:—"As we understand that the permanent-way of the New South Wales railways is of a much more substantial character than the Baltimore and Ohio railroad, we see no reason why the engines built for the latter could not be adopted entire." Who could they understand that from except it was Dr. Williams? They say, "as we understand that the permanent-way of the New South Wales railways is of a much more substantial character than the Baltimore and Ohio railroad." Who could tell them that but Dr. Williams? If he had said distinctly: "as I know that your permanent-way is more substantial," then I could understand it; but it is not worded in that way.
3489. The Baldwin engine people are speaking, and they say: "as we understand that the permanent-way of the New South Wales railway is of a much more substantial character than the Baltimore and Ohio railroad." Who could they understand that from but Dr. Williams? No one.
3490. Then it is quite clear that he believed the permanent-way of this Colony was more substantial than that of the Baltimore and Ohio railroad. Yes, I suppose that is the inference.
3491. If so, surely the Commissioners did no wrong in leaning to the right side by asking for an engine of a lighter type than the Baltimore and Ohio engine? Yes; but they say to wind up: "we should be gratified if, on further consideration, this is decided upon"; asking again for the adoption of their Baltimore and Ohio engine.
3492. It is stated in this letter: "We see no reason why the engines built for the latter"—meaning the Baltimore and Ohio railroad—"could not be adopted entire." I suppose that it would be more trouble to the Company to alter the engines to the design required in the modifications than to send out the original Baltimore and Ohio engine? Yes; and the Government officers actually asked the Company, after they had reduced the dimensions, to reduce the price also.
3493. We have nothing to do with the price, but assuming that Dr. Williams was a competent person, and you admit that? He is an eminent man, the head of the firm.
3494. Well, if he told them that our permanent-way would do for the Baltimore and Ohio engines, what wrong did the Commissioners do in asking the Company to make something lighter for them? They did this wrong;—if they knew he was right in his opinion there was no necessity for any alteration. Dr. Williams' firm said: "We should be gratified if, on further consideration, this is decided upon," meaning if they would take the Baltimore and Ohio engines it would be more satisfactory for everybody.
3495. But what wrong did the Railway Commissioners do if the permanent-way could carry a heavier engine, and they order a lighter one? What wrong was there?
3496. Yes, what impropriety of conduct was there? That is what we have to consider? The wrong they did was to reduce the efficiency of the engine.
3497. If the permanent-way would have carried one of the ordinary Baldwin engines, was there any harm done in asking the Company to make a similar kind of engine, only a little lighter? The wrong has been done in asking the Baldwin Company to build a heavier engine than we had before. They saw that the Baltimore and Ohio engine was too heavy for us, and they asked the Company to make a lighter engine.
3498. Yes, I know that is your view, but do you agree with Dr. Williams? The Baldwin Company was asked to build these engines in a hurry; they say, "You appear to want a Baltimore and Ohio engine,—we have

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have duplicates of these, and hope to induce you to take them intact, but you must decide whether you will have them intact or whether we shall make them lighter"; and they preferred the lighter engine—the altered one.

3499. If Dr. Williams is right in telling them that the permanent-way here would carry an ordinary B. and O. engine, supposing that the Commissioners here and the Baldwin Engine Company took his advice, if he said they were substantial enough to carry an ordinary Baldwin Engine, was there any harm done by the Commissioners in saying, "We shall not have an ordinary Baltimore and Ohio Baldwin engine"? If he said so, but he does not say so. He gives the Government the best advice he can give.

3500. Well, what do you understand by that sentence, "As we understand that the permanent-way of the New South Wales railways is of much more substantial character than the Baltimore and Ohio railway, we see no reason why the engine built for the latter could not be adopted entire;" do you think they understood that from Dr. Williams, do you not think they did; and then they say, "we see no reason why the engines built for the Baltimore and Ohio railroad should not be adopted in New South Wales? Yes; they say, we see no reason why we should not take the Baltimore and Ohio engines intact.

3501. Most naturally they do so; but I suppose they had them in hand;—but what we want to know is whether the engines ordered were suitable to the permanent-way of the Colony or not? Yes.

3502. You say they are unsuitable for the permanent-way, do you say that for any other reason than that they are too heavy? Yes; they are too heavy.

3503. Well, do you not see that it is only fair that we should also know what the gentleman who was on the spot and had seen our railways, and who was, as you say, a most eminent man, had to say? But since Dr. Williams had been here steel rails have come into use. Dr. Williams, as I say, advises his firm in this correspondence; and his firm says, "We should be gratified if, on further consideration, it is decided upon." The Government rejected his advice.

3504. He would be gratified, no doubt, if the Government did not depart from the standard of the Baltimore and Ohio engine; but the Company said, "As we understand that the permanent-way of the New South Wales railway is of a much more substantial character than the Baltimore and Ohio railroad." Now I want you to say what harm you think the Commissioners did in ordering a still lighter engine, when their road was even more substantial than the Baltimore and Ohio railroad. Did you not say that some of the rails on the Baltimore and Ohio line weighed 67 lb. to the yard? Yes; and some 85 lb. to the yard.

3505. But the road for the purpose of the engines going over it would be no stronger than the weakest part of it; do these Baldwin engines run over the 67-lb. rails? I have not said so. The Commissioners, I believe, are going to prove that. I leave it to the Commissioners.

3506. Where did these engines run between? Between Philadelphia, Baltimore and Washington.

3507. Is there any part of that road laid in 67-lb. rails? I think 85-lb. rails are laid throughout. Considering the weight on the driving-wheels of the Baldwin engine working the "Royal Blue" express, I do not think a 67-lb. rail would carry them.

3508. What is the weight on the driving-wheel of our engines—I mean the Baldwin engines? Six and a half tons on the Moguls.

3509. *Mr. Hoyle.*] In any case, then, you believe that Dr. Williams was wrong in his calculation? I venture to say that he went a little further in the expression of his opinion, perhaps, than he intended to. The firm certainly threw all the responsibility on the Government by writing, "We should be gratified if, on further consideration, it is decided upon."

3510. If he recommended these engines with the weights on them they bear, considering the strength of our rails, he would be wrong? I think he would say that the engines are too heavy if he knew that we had 71-lb. rails. I suppose he did not remember the weight of the rails; it was the duty of the Government to send him a section. If they wanted a heavier engine than the rail would carry they should have sent a section and all particulars.

3511. Do you know Mr. Price Williams? I do not know him personally, but I have heard of him.

3512. He is a man of some considerable repute? Yes; some people think so.

3513. Well, I find in his report laid upon the table of the Legislative Assembly on the 13th August, 1889, that he recommends, with regard to the Great Western Railway, Granville Junction to Bathurst, as follows:—"On the down line between these two places (the Junction and Penrith) there are still about 12 miles of iron rails, which, with the exception of occasional replacements, have been on the road for periods varying from twenty-two to twenty-nine years; here and there in the 12 miles small portions of the road have been rerailed with steel rails. The whole of this mileage, however, should be entirely relaid with steel rails, resleepered, and ballasted with blue rock ballast. The few steel rails and sleepers removed being utilized for repairs." Mr. Price Williams believed that the iron rails were not right, and recommended that they should be removed. Do you consider, taking into consideration the weight of these engines, that these rails should be removed? Yes, I do; I quite agree with the report there.

3514. You say you examined the valve gear this morning, and that you think it too light? The valve buckles are certainly light.

3515. Now there have been repeated failures of the reversing gear? So I understand.

3516. I ask you as an engineer do you think these failures ought to have taken place within so short a time of the placing of engines at work? No, I do not think failures of this kind should take place in new engines.

3517. What faults did you find in them? The fulcrum pin of the main reversing lever is too light for the strain put upon it, and it has yielded. The valve buckles are also too light; neither is strong enough.

3518. Could the reversing gear be caused to fail by reason of rough usage on the part of the driver? Yes, but it would be excessively bad usage, and I do not think a driver would be guilty of anything of the kind, except in case of an accident, or if there were very great danger ahead. I do not think that with ordinary fair usage such gear as that could get out of order in such a short time. Of course, if an engine were reversed in the event of accident or anything of that kind you might expect all sorts of things to happen.

3519. Did you examine the brake gear of the engines? Yes.

3520. Did you consider the rod connected with the brake—the blocks—strong enough? No, I do not think it is strong enough considering the fact that the Westinghouse brake is applied very quickly. The joints of the rod appear to me to be too light.

3521. Suppose an engine were coming down one of our roads with a heavy load on it, and this rod broke, would it be dangerous? It might result in some trouble; being a light rod unless it got under a wheel I do not think it would cause a very serious mishap. The drivers examine these parts of the engine every day, and if anything is coming out or looks wrong they keep their special eye on it.

3522.

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3522. Suppose a driver is approaching a station and the signal is against him, he would in the ordinary course turn off the track, and suppose the brake gear broke, then would it be dangerous? Yes, if the rod got under the wheels, a three-quarter rod might throw the engine off, if on a curve, but ordinarily I do not think there would be much probability of any exceptional danger arising from the rod breaking.
3523. The driver could brake his carriages even if the gear failed? Yes.
3524. You speak about bad welding in these wheels, now I want you to be particular about this point. You have said that the band of the wheel was rather light. Suppose the tire were turned down to its utmost limits would that be safe with the defects you have discovered? Well I should limit the turn down to $1\frac{5}{8}$ inch instead of $1\frac{1}{2}$ to that engine on account of the wheels being so light.
3525. You say there is a likelihood of danger arising from these wheels overlapping, galling, etc. Considering that you hold that opinion, do you think there would be any danger if the tires were turned down even to the distance you have stated? An inch and three quarter thickness of tire there would be less danger, but under that I should think it would be an unnecessary risk to run.
3526. Do you think there is any danger of the boss of the wheel bursting? Yes.
3527. That is of the leading, driving, or trailing wheel? Yes; on account of the smallness of the metal round the axle.
3528. Did you hammer the cranks? No; it is such a lump of metal I could not very well do that.
3529. You have seen the size of the crank and you consider there is metal enough above the boss of the crank? Do you think that the crank boss might burst? Yes; I think the crank boss will yield sooner or later, and also the crank pins.
3530. Would the bursting of the boss of the crank be a serious matter? Yes, it would be a very serious matter.
3531. I mean the boss of the crank? Yes.
3532. Did you make any examination of the boiler? No; I should want to see it stripped down in order to examine it inside and out.
3533. From your knowledge of, and what you could see of the boiler, did you think the pressure of 160 lb. to the square inch would be too high? I should have to measure the thickness of the plates, the diameter, and so forth. I cannot give an opinion from seeing the back of the firebox, which is all I saw.
3534. Did you consider, in connection with the bogie wheel, whether the running hot has been caused more by over-weighting on the bogie than by any laminations of the iron? It has been caused by laminations of the iron with inattention to lubrication. I do not think the bogie is overweighted, although it has got quite enough weight. It is rather heavy per wheel, and that is undesirable.
3535. Whose fault was the want of lubrication;—was it the fault of the engine or the driver? I did not look at the oil-cups on the bogie boxes, but, I suppose, there would be proper provision made for lubrication, but, if not, it is evidently want of foresight in the design.
3536. It has been admitted that new provision for lubrication must be made, and this has been put on the engines since they came here. Supplementary provision was made for lubrication? I noticed that there was some provision on the Baldwin engines for additional oil supply coming down from the side of the boiler to the coupled axles, but I did not see the same with regard to the bogies.
3537. You examined the wheels of 456? Yes; and one was off the axle.
3538. Can you assign any reason for that axle working loose;—is it usual for axles to work loose so shortly after the engines have been running? It is unusual, and the only answer is that the axle must be too small for the wheel.
3539. *Professor Warren.*] Which wheel are you referring to? The driving wheel. Axles are usually stamped with the pressure at which they are put on, but that was absent here.
3540. *Mr. Hoyle.*] What is the usual pressure? It is 10 tons to each inch of diameter usually.
3541. Did you specify for any special pressure? Yes; it is usual to do so. Eighty tons to a diameter of 8 inches—that is, 10 tons to every inch of diameter. That is the rule I observe.
3542. The Baldwin Company must then have known that the axles were not tight? The man who put the wheel on the axle must have known it.
3543. Did you consider that the reversing gear on these engines was defective in any other way than you have stated? No; I think the reversing gear fairly good now, with the alterations that have been made. A catch has been put on to keep the screw from running backwards and forwards; the new fulcrum pin has been put in. The gear is not so simple as it might have been, but that is a matter of design on the part of the maker. It might have been smaller and less expensive, but it is not bad gear.
3544. That has been done since the engines came here? Oh, yes.
3545. Seeing that screw-reversing gear was specially mentioned in the specifications, the Government should have sent drawings of what they meant by that. You think the specification is indefinite, do you not? Yes. Seeing that we had a special kind of reversing gear put on the original engines of twelve years ago, and since that we have got more experience, we seem to be going backwards. The screw put on the original Baldwin engine is the same as our standard, and I presume the drawing was sent for it, but in this instance there is a futher departure. We talk of interchangeability, but this is an instance of not carrying it out.
3546. The only reason you can give of these axles running hot is that they were manufactured of imperfect iron? Yes; they were made of imperfect iron, and there was a want of attention, and I think that if the Chief Mechanical Engineer had seen the axles he would have hesitated before they were allowed to go under the engine. I know that I should have hesitated. In fact I am surprised beyond measure that they are iron axles in this day. I thought they would be Otis steel for certain, but I think it was specified "iron or steel"—what does that mean?
3547. *Professor Warren.*] Whichever way you like, I take it? Yes.
3548. *Mr. Hoyle.*] Taking into consideration the alterations made to the valve-gear and the reversing gear, and the breakage which, according to the evidence, have occurred, do you think that they ought to occur, or that alterations should have to be made so soon after the engines commenced to run? No.
3549. Have you any experience of engines failing in a similar way? No, not in a similar way; but I have known of English engines failing in a worse way. The cylinders got loose on the frames, and many other grave defects.
3550. *Professor Warren.*] I will give you the details of the cost of repairs to these very engines. The costs of all repairs have been as follows to twelve passenger engines:—

I have the honour to forward herewith information as asked for with reference to the cost of repairs of the Baldwin locomotives recently supplied.

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I may say I have omitted the cost of repairs in connection with the replacements of the axles which were admittedly defective, and the cost of which was charged against the Baldwin Company, as shown in statement already put in.

TWELVE PASSENGER ENGINES.

The cost of repairs and alterations have been as follows, and statements are attached giving details—

	Total. £ s. d.	Average per engine. £ s. d.
A.—Alterations	113 9 10	9 9 2
B.—Shop repairs (excluding cost of repairs through accident—£79 9s. 10d.)	375 17 4	31 6 5
C.—Running repairs	481 2 7	40 1 11

With regard to the first item I may point out that the cost was principally for small extras which the makers could not be called upon to supply, and which we, in conformity with our practice, thought it well to provide—such as fixing hand-rails in front of tenders, fixing coal board to tenders, shield plates for fire-room doors, frames for departmental notices in cabs, part cost in connection with testing axles, and for slight alterations to brake-gear and shoes.

With regard to the cost of shop repairs, the heaviest items were in connection with repairs necessitated through errors on the part of employés.

The running repairs, considering the work the engines have done (being seven months at work and running 213,861 miles) are reasonable.

3551. *Witness.*] What is the total cost per engine since they have been here?

3552. *President.*] We will add that up for you. The total cost is £970 10s.—that will make £80 17s. 6d. per engine.

3553. *Witness.*] Does that include the brass boxes on the bogie?

3554. *Professor Warren.*] Do you consider that these alterations and repairs are excessive for the time these twelve engines have been running—about seven months, I think? I think there must be a little error in the statistics.

3555. You think the cost is over or under—which? It includes the reversing gear, the new axles, the boxes——

3556. *Professor Warren.*] It includes everything except the axles.

3557. *Witness.*] How can that be a fair estimate of the cost of the engine when you except the cost of the axles. I think it is excessive. What time and how many miles per engine did they run during these six or seven months. We ought to have the running repairs, taking into consideration the work the engines have done during the seven months, together with the number of miles they have run.

3558. *Professor Warren.*] The mileage is 213,600 miles.

3559. *Witness.*] That for twelve engines is not very much.

3560. Well, I will read the letter to you again? I do not think it would alter my opinion if you did so. The data is somewhat misleading. I should want to know more before I formed an opinion as to whether the cost of repairs is excessive or not. I must know the mileage, the work, the time, the cost of running, repairs, &c.

3561. You say this report is not complete? I do not say it is wilfully wrong, but it is not such a return as I would like; it is incomplete.

3562. It is only a preliminary report? Then it is utterly worthless if it is only a preliminary report. I do not think you should be guided by it. I should like to know the mileage, the time, and the cost of each engine.

3563. *President.*] It is over 17,800 miles for each engine? Well, that is given for seven months. Are you quite sure of the figures, sir?

3564–5. *Professor Warren.*] Yes, that is right. That is equal to about twelve months work in England—twelve months work in England is from 18,000 to 20,000 miles per engine. But you do not care to answer that question? No, I certainly do not care to answer without the complete data, and I should like to scan over the data myself before I did answer it.

3566. *Professor Warren.*] It is quite useless for me to ask you any questions about the twenty goods engines, then, because the data in regard to them is no more complete than it is in regard to passenger engines.

3567. *Mr. Hoyle.*] I think you ought to have the data laid before you with regard to the repairs done to these various engines after the whole of the evidence is over, because a number of engines are now undergoing repairs. Engine No. 456 is having a new set of wheels. Engine No. 447 is undergoing repairs also. Then, too, there are engines in the Penrith shop undergoing repairs as well; and, if I might make a suggestion, I think a return should be supplied from the time-sheets, as that is the only way in which their completeness can be ensured.

3568. *Witness.*] Some of these repairs might have been unnecessary, as I have hinted, with regard to the axles. I might say that repairs, so-called, were done to my engines when they arrived here first—the Westinghouse Brake, with which they were fitted, was in the opinion of someone not sufficient, and, as a consequence, they chose to spend £50 or £60 per engine upon the addition of a hand-brake, and they have to this day allowed a similar engine (105) to run without a hand-brake.

3569. *President.*] Well, if they have spent so much more money than was necessary upon the engines, so much the worse for the Railway Commissioners; but, assuming it to have been properly spent, in other words, assuming the repairs to have been really necessary, are you now prepared to say that the amount involved in repairs was excessive? No; I cannot possibly answer the question now; I must decline to do so until I have seen the complete list of repairs.

3570. *Professor Warren.*] Mr. Midelton cannot answer the question—clearly, the return is incomplete.

3571. *Witness.*] Before I can answer the question, I must ask to be allowed to see a complete list of repairs taken from the time-sheet, the repair books, the running sheets, and the casualty book.

3572. *Mr. Hoyle.*] Perhaps the best thing would be for me to put in writing exactly what I want these return sheets to comprise.

3573. *Professor Warren.*] I have no doubt, Mr. Hoyle, that the Commissioners thought this was a complete return, but, apparently, it is not.

3574. *Mr. Hoyle.*] I think that completes the list of questions that I want to put to Mr. Midelton.

3575. *President* (to Mr. Fehon).] Have you any questions to put to Mr. Midelton.

3576. *Mr. Fehon.*] I would like to ask one or two questions, not upon the expert evidence that he has given, but upon the facts. Mr. Midelton stated he was a member of the Master Mechanics' Association—a society composed of locomotive superintendents from various parts of the world. *To witness:* Do you get their returns regularly, Mr. Midelton? I do.

3577. Do you know that in June, 1891, they limited the weights on driving-wheels to certain weight? I do.

3578. Do you remember what the weights were? No, I do not.

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3579. You are not aware that it was decided by them that they would allow a weight of 32,000 lb. on the driving-wheels; that is, 14¼ tons for rails under 60 lb. to the yard, and a weight of 36,000 lb., or 16 tons 1 cwt. for rails over that weight? I will look it up. I do not know from memory.
3580. *Mr. Brown.*] If that is so you would be guided by the judgment of such a society as that, I suppose? I should, of course, but it is commonly known that the sleepers are put rather closer together in America than in England, and it all depends upon the sleepers and how close they are put together. That is a matter for Mr. Deane, the Engineer-in-Chief for Railway Construction, and not for me. He should fix the load per wheel.
3581. *Mr. Fehon.*] As you are a member of the Master Mechanics' Association, I thought you might know something about it? The decision of weights upon the driving-wheels rests with the Permanent-way officer and not with the Locomotive officer. The Permanent-way officer is, as a rule, a gentleman who thinks he is superior to the person who designs the engines; unfortunately, the Permanent-way officers and the Locomotive officers fight like demons at times on many railways in the world. There are some exceptions, however, in which they do work in harmony of the most complete, but it is not here.
3582. I think it is here then, for we all work in harmony now? It is the first time in your life then; as a matter of fact, there is not a more disorganised and demoralised Locomotive Department under Heaven than that of New South Wales.
3583. You say that, in the ten engines which you claim to be yours, the tyre is fitted in an improved way and the proper way, and that there are no other engines in the Department that are fitted properly? That is so. I am supported by the Board of trade.
3584. That is to say that you pit your opinion against that of all other makers? No, I do not; you are trying now to show me in the light you always have done. Every Locomotive Superintendent ought to know that a tyre fastened with a stud is an improper way of doing it. I wish to be very emphatic and very clearly upon this matter, because I have been working for this railway for the last twelve years to try and provide the best possible things for it, and the late Commissioner will allow that I think.
3585. You have stated that Dr. Williams must have been wrong in giving the advice he did as to the weights of engines running upon the railways of New South Wales? It is on record what I said.
3586. Are you not aware that the permanent-way of the New South Wales railways is much better than it was when Dr. Williams was here? Yes, I think it is.
3587. Therefore, if it was capable of carrying the weight of a Baltimore and Ohio engine when Dr. Williams was here, it ought to be very much more capable of carrying it now? It ought to be.
3588. Speaking of tyres, did you ever know a tyre come off an engine whilst you were on the railways of New South Wales? I never said that a tyre did come off.
3589. Well, at all events, a great deal of evidence has been given about what would happen if a tyre did come off and the advantages of providing against the calamity? It does not follow that because you never have had a tyre come off you never will have one. The Jolimont accident in Victoria is an instance of what I mean.
3590. You say that it was always specified that there should be 10 tons per inch pressure on the wheels of our engines;—did you specify that in regard to the ten engines that you ordered upon your own design? No, I did not. I ought to have done it, but considering that the Commissioners hurried me beyond measure and beyond reason to get these drawings ready, I think it is too bad to chide me for any little oversight now. When I sat down coolly and calmly to draw my designs, I did not forget anything. In 1883 I specified this for the six suburban engines built by the Vulcan Company. You carefully avoid referring to that specification, which I also wrote myself. Dub's people knew that it should have been in the specifications, and the Baldwin Company knew it too.
3591. *Professor Warren.*] You admit that it was an oversight in your specifications? I do. If I had noticed the omission I should certainly have it in, and for that matter my head draftsman might have called my attention to it, he knew my views.
3592. *Mr. Fehon.*] Did you specify the pressure on the driving-wheels in regard to the engines that were ordered from the Baldwin Company? No; considering that that specification also was written in three nights, with my own hand, in my own house, I do not think you could wonder that I did omit to include it. If you had had to do the same you would probably have made the same omission. That specification was written under great pressure to catch the mail, and, as I say, I wrote it in my own time after I had done my work at the office.
3593. You have stated that you consider that 15 tons 3 cwt. on the wheels on the Baldwin engine is too heavy for the roads of New South Wales? Yes; with the sleepers 3 feet 1 inch apart, and iron rails at that—Murrurundi to Tamworth to wit.
3594. And yet you admit that a crank engine with a weight of 16 tons 7 cwt. on the driving-wheel was alright. You allowed that to run? I did nothing of the kind. I objected to it. I protested against their being imported twice over in 1883 and in 1885.
3595. Well they did run? Yes.
3596. Did they do any damage? Yes, they did, and I pointed it out to Mr. Eddy the first day he was here. I pointed it out to him in front of the Stores at Eveleigh, and he immediately sent for Mr. Cowdery about the state of the permanent way; the joints were very low.
3597. Are you aware that those engines are running now on the main line? The 351 class do you mean?
3598. Yes? I know they are running to Liverpool and Parramatta, but you have put an 80-lb. rail down to carry them.
3599. Some evidence was given just now with regard to the boss of a wheel breaking. Did you ever know the boss of a wheel to break on this road? Yes; I have known them to break.
3600. But not on this road? No; I do not say that I have.
3601. Do you know when it happened? It was when I was serving my time.
3602. About forty years ago? You consider that honorable, I suppose. You do not get much honour in this country at all events.
3603. Well, it must have been very many years ago? It is about thirty years ago.
3604. You gave some evidence about the strength of draw-gear, although, I think, it was disallowed by the President after it had been given? Yes; I hope you will go into that; the weakest link in the draw-gear signifies the weakness of the entire train, and not the strength of the draw-gear on the engines.
3605. *President.*] But that is not what we have to inquire into. I should think that it is just what you say. That the train itself cannot be any safer than the safety guaranteed by the weakest link in its draw-gear, but that is not what we have to inquire into. It is altogether outside the Commission that has been sent to us.

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3606. *Mr. Fehon.*] Mr. Midelton has been called as an expert, and the chief part of his evidence has been given from the standpoint of an expert, and not with regard to actual fact. Although it is a very unpleasant thing to do, I think I shall have to ask him two or three questions as to his justification for taking the position of an expert in mechanical engineering. He has stated to the Commission what his career has been.
3607. *Mr. Brown.*] You had better ask him the question?
3608. *President.*] Yes, you had better ask him the question, and if there is any objection to it we will then say that it ought not to be put. I understand that Mr. Fehon is saying this by way of apology for having to do something which he feels unpleasant.
3609. *Witness.*] He is doing it to damn me, if he can. His motive is obvious.
3610. *Mr. Fehon* (to Witness).] You have stated to the Commission that you were in the employ of the Main Line Railway Company, in Tasmania? Yes.
3611. Were you not summarily dismissed from that road? No.
3612. *Mr. Hoyle.*] I have been called up several times in the course of my examination of witnesses for irrelevancy, and I now ask you, Mr. President, whether Mr. Fehon is in order in putting such a question as this to the witness? It has nothing to do with the Baldwin engine, and can answer no useful purpose. It is also cowardly.
3613. *President.*] You, Mr. Hoyle, have been so far, as it were, examining your own witnesses. Although you have called a great many employees of the New South Wales Railways, they have really been your witnesses. Now, you call a witness who is not employed upon the New South Wales Railways, and amongst other things his credibility is called into question. This is done for the purpose of showing, if it can be shown, that although he professes to be a very skilful expert, and a very competent engineer, and so on, still various people have at different times found fault with him. These questions are being put to him with the object of affecting his credibility as an expert, and his credibility generally. You will have the same opportunity when the Commissioners begin their case. If some witness called by them says that the Baldwin engines are perfect machines, you will have a similar opportunity of saying to him with the object of affecting his credibility, "Has not such and such a thing happened to you," or, at all events, of showing that whatever the witness may think of himself, other people do not think he is such a great expert as he believes he is.
3614. *Mr. Hoyle.*] My objection is that these questions have nothing to do with the Baldwin engine inquiry. I might have asked Mr. Thow what he did in South Australia when he was in the witness-box.
3615. *President.*] But Mr. Thow was your own witness, and you could not cross-examine him. If the Railway Commissioners call Mr. Thow you will be at perfect liberty to ask him that question. When you are cross-examining a witness you can always question his credibility—his credibility as to whether he is speaking the truth, or as to whether he knows what he is talking about.
3616. *Mr. Hoyle.*] If that is allowed I can see no end to the inquiry. I must claim, under these circumstances, to ask Mr. Midelton all that he has done in the Locomotive Department, and I therefore think that for every reason—to save the personal feeling of witnesses, as well as to keep the inquiry to the subject of the Baldwin engines—it is better that such questions should not be put.
3617. *President.*] Mr. Midelton is here as an expert, Mr. Hoyle, and he is here as your witness. You cannot therefore ask him whether he has done this and that, and the other. His skill as an expert is believed in the first instance. He says that he is a member of such and such a society, and all that is assumed until in the course of cross-examination questions are put with the object of discrediting the value of his evidence as an expert, and he is asked by Mr. Fehon whether such and such a thing has not happened to him. That is a perfectly fair question in the course of cross-examination. You in your turn will have a right to obtain from him an explanation as to why that happened to him. Personally, I am sorry that the question has to be put, but if it is pressed I do not see that I can prevent it. Supposing that a person gets into the witness-box as an expert in surgery, and he says, "I am a member of the Royal College of Surgeons; I have had thirty years practice, and this is my opinion of the case." In the course of cross-examination it is perfectly fair to attempt to prove that, although he has been all that he says he has been, he had yet made some important mistake in diagnosis, and that by reason of that mistake he had been dismissed or disrated by some board or body charged with the duty of looking after the public health. It all goes to affect his credibility. I am very sorry that it is necessary to press this question, and I hope Mr. Fehon will take this intimation not to go any further than he thinks absolutely necessary with this line of cross-examination.
3618. *Mr. Hoyle.*] Very well, Mr. President, if this is done I shall claim my right to cross-examine in this way other witnesses who are brought forward as experts.
3619. *President.*] Very well, Mr. Hoyle, you will claim your right, I cannot help that; but I am not going to be deterred by anything you say from ruling in this matter as I think proper. I will rule upon the questions that you may wish to ask in the course of cross-examination as occasion arises. If this was Mr. Fehon's own witness I should not allow him to put that question under any circumstances, and I hope now he will not go any further than is necessary.
3620. *Witness.*] Mr. President, all I ask is this: If Mr. Fehon is going to test me, that he may do so to his heart's content, and I hope that the Press will record all that is said on both sides, and that I shall have fair play. I desire no more.
3621. *President.*] I do not suppose that Mr. Fehon would have any desire to do anything that is not fair, and if he did it will be my duty to prevent him. (To Mr. Fehon) What do you want to ask the witness?
3622. *Mr. Fehon.*] I ask whether Mr. Midelton was not summarily dismissed by the Main Line Railway Company of Tasmania, and he says no. I take his answer.
3623. *Witness.*] My answer is no. Mr. Fehon's object is obvious. I was sent out from England by a Board of Directors to do a certain thing and I did that thing, but in doing my duty in Tasmania I displeased my superior, Mr. C. H. Grant, a friend of this gentleman's (Mr. Fehon), and one who has hired him as a business man to arbitrate between the Government's contention and his own.
3624. *Mr Fehon.*] He is speaking of a case in which I was an arbitrator.
3625. *Witness.*] Exactly. Mr. Grant and Mr. Fehon are friends, and Mr. Grant is the General Manager of the Tasmanian Main Line Railway—at least he was—but he has gone too now. Mr. Grant was general manager, and I had two years with him, and I carried out what I was sent out to do by the Board of Directors. Mr. Grant was annoyed to see me succeed, and tried to drive me out of the service. Indeed, he called me up and did what this gentleman has learned from him to do. He said go, and I went next morning; but Mr. Grant paid me £200 for his trouble, and Mr. Fehon may question me on that if he likes.

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3626. *Mr. Fehon.*] No, I do not want to do that.
3627. *Witness.*] You can ask me any question you like; I am quite prepared to go any length into my career that you think fit.
3628. *Mr. Fehon.*] Mr. Midelton has stated that he had the full confidence of the old Commissioner, Mr. Goodchap. (To Witness): Is not that so? I have every reason to believe that I had; but if Mr. Goodchap listened to every little tale from other people, no doubt he would have had ample cause for displeasure.
3629. *Mr. Hoyle.*] I will call Mr. Goodchap himself.
3630. *Mr. Fehon.*] I have no wish to injure Mr. Midelton. I simply wish to explain to the Commission the value of his evidence as an expert, and I wish to ask him a question affecting his relation with Mr. Goodchap.
3631. *President.*] I can only decide as to the admissibility of the question that is really put through the Commission after you have stated what it is.
3632. *Mr. Fehon.*] But my question would be very unpleasant.
3633. *Mr. Brown.*] I think you had better put it; as you have gone so far, it leaves an unwholesome feeling behind unless you ask the question.
3634. *Mr. Fehon.*] Mr. Midelton may remember some trouble there was about some State carriages for the Governor? Yes; perfectly well.
3635. Perhaps he might remember a portion of Mr. Goodchap's minute. It is rather a long one; I will read only a portion of it:—"Mr. Midelton has shown himself to be so self-willed and incompetent in these matters that I must recommend that he be called upon to show cause why he should not be removed from the position of Locomotive Overseer. Regard for the public safety compels me to make this recommendation."
3636. *President.*] I do not know that you have any right to ask that. You have no right to get indirectly what Mr. Goodchap's views were. We have nothing to do with Mr. Goodchap's view. You can get the mere facts of whether he was disrated, found fault with, or criticised by Mr. Goodchap, but you cannot get from any minute what Mr. Goodchap's opinion about Mr. Midelton was. In order to do that it will be necessary to call Mr. Goodchap himself.
3637. *Mr. Fehon* (to Witness).] Are you aware that Mr. Goodchap recommended your removal from the service? I may say that that was in 1885, and I suffered fourteen months' suspension. Yes; and in justice to Mr. Goodchap I beg to say that he saw his error, and subsequently recommended me for the position of Locomotive Engineer three years afterwards.
3638. *Mr. Hoyle.*] These accusations are cowardly, very cowardly, and I must protest against them.
3639. *Mr. Fehon.*] I must protest against Mr. Hoyle making any such remark. I have said already that these questions are being put for the purpose of explaining to the Board, to whom Mr. Midelton may be a perfect stranger, the value of his expert evidence.
3640. *Professor Warren.*] But how does that injure his credibility as an expert? You must remember that he was taken back again.
3641. *Mr. Fehon.*] Mr. Midelton has stated that he is not aware why he had left the service of the Commissioners. Is not that so, Mr. Midelton?
3642. *Witness.*] I am aware of this: I was summoned before you, the Chief Commissioner, and Mr. Oliver; and the Chief Commissioner told me abruptly, while talking about the business of the department, that I had not shown the qualifications necessary for the reorganisation of the department, and then I was summarily dismissed.
3643. *President.*] Was that after your reappointment upon Mr. Goodchap's recommendation? Yes; about five months after.
3644. It was in Mr. Goodchap's regime that you went back again? Yes, after he had suspended me in 1885. He recommended me subsequently in 1888. Gave me the highest recommendation for the position then held by Mr. Scott (my accuser), and I then served five months under him. Previous to that I had been two and a-half years under him as Superintendent of Tramway Rolling Stock. I served under these gentlemen (the Commissioners) for five months also, and I was told without explanation that I was not any good.
3645. *Professor Warren.*] When were you suspended? In August, 1885. In 1889 I was dismissed; kicked out like a dog.
3645½. At all events, at that time you were assistant to Mr. Scott. Then you came back to the department upon Mr. Lyne's recommendation, approved of by the Executive Council, to occupy a better position, so far as salary was concerned, in connection with the Tramways than you occupied before, and Mr. Goodchap, who had formerly recommended your suspension, recommended you for the higher position. It is only fair that both sides of the case should be stated? Mr. Goodchap, like a man, saw his mistake and the error he had been led into.
3646. *Professor Warren.*] Well, he proved it by recommending you.
3647. *Mr. Hoyle.*] Did you not receive a letter from Mr. Goodchap, congratulating you upon the manner in which you had discharged your duties during Mr. Scott's absence? Yes, and the Government gave me a bonus of £100 in addition.
3648. *Mr. Hoyle.*] Mr. Price Williams has made a report upon the railways of this colony.
3649. *President.*] How can that be admitted. You cannot read Mr. Price Williams' report as evidence, unless the Railway Commissioners themselves like to admit it.
3650. *Mr. Fehon.*] We do not deny that Mr. Price Williams wrote that report.
3651. *President.*] Very well, you may read it.
3652. *Mr. Hoyle.*] The report says: "The double line between Newcastle and West Maitland, which I carefully examined, I found to be in a very defective condition, both as regards rails, sleepers, fastenings, &c., and maintenance. This portion of the line was opened in 1857 to 1858, thirty-one years since."
3653. *President.*] Do the Baldwin engines run over that portion of the line?
3654. *Mr. Hoyle.*] They have run there until recently.
3655. *President.*] Between Newcastle and East Maitland or between Newcastle and West Maitland?
3656. *Mr. Hoyle.*] The report refers to the line between Newcastle and West Maitland.
3657. *President.*] And do the Baldwin engines run over it?
3658. *Mr. Brown.*] One or two have run over it, I believe, but not with passengers.
3659. *Mr. Hoyle.*] The contention has been that engines have been employed in the service with greater weight on the driving-wheels than these Baldwin engines, and, as those engines have run over this road, I

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want to show what the result of the greater weight upon the line has been. The report continues: "This portion of the line was opened in 1857 to 1858, thirty-one years since, and according to Mr. Cowdery's statement, showing the age of the permanent-way, there are still 11½ miles of the original iron-rails in the road. The ironbark sleepers here or elsewhere have been its salvation; although many of them were, I observed, rather crushed, there is still a good deal of life in some of them. Having regard to the heavy character of the traffic on this line, I would advise that the whole 11½ miles be entirely removed. I gather from Mr. Cowdery's tabular statement that there are in addition 33 miles of the Great Northern line, where the age of the iron rails varies from twenty-four to twenty-eight years, and 71 miles more from sixteen to nineteen years old; so that, altogether, there are 115½ miles of rails on the line, whose age at present exceeds sixteen years. This mileage corresponds very closely with that between Newcastle and Murrurundi, 119 miles, which was opened to the latter place in April, 1872, just seventeen years since."

3660. *President.*] Do the Baldwin engines run over this line. If the Railway Commissioners admit the report, you have got a right to read it, but if the Baldwin engines do not run on this line, what good can it do?

3661. *Mr. Hoyle.*] It will show what has been the effect of a heavier engine than the ordinary Baldwin engine where it has been allowed to run. I have almost finished with the report. In conclusion, Mr. Price Williams says "Having regard to these facts I consider that the immediate renewal of the 5 miles of this permanent rail between Newcastle and West Maitland, 2½ miles between Branxton and Blandford, and 1 mile between Blandford and Werns, laid down in 1872, is the least that should be done with the view to restoring the permanent-way on these portions of the main line as quickly as possible to a sound condition."

3662. *Mr. Fehon.*] The Baldwin engines were not in existence when Mr. Price Williams wrote that report.

3663. *Mr. Hoyle.*] I am speaking of the Tank engines as referred to by Mr. Midelton just now as carrying over 16 tons on their driving-wheels.

3664. *Witness.*] And the Vulcan engines too.

3665. *President.*] Of course the report will be put in. We know the conditions under which it was made.

3666. *Professor Warren* (to Mr. Fehon).] Do you want to ask Mr. Midelton any further questions.

3667. *Mr. Fehon.*] No, I do not.

3668. *Mr. Brown.*] There has been such a lot said in the newspapers and elsewhere about the putty that was found in the spokes of the wheels of the new Baldwin engines that I should like you to refer to it in your evidence? I do not think that anything can be made of the fact that there is a little putty in the wheels, it is what anybody would do to make a smooth surface for painting.

3669. *President.*] And your contention is really this. You say as an expert that in your opinion the engines are too heavy for the roads? I do, and yet not heavy enough for their cylinders.

3670. But if the road were suitable for the engines you would not say that much was wrong with them? Certainly.

3671. What you say, boiled down, if I may use the expression, comes to this: granted that the road is good enough, the engines themselves are all right? Well, in answer to that I beg to state that a great deal has been made in the Press and by the Commissioners and Premier of the Colony about the interchangeability of the various parts of engines, and the necessity for uniformity, amongst the engines instead of the large number of types of engines such as we have at present. That is what I have been striving to bring about for the last twelve years and yet since the Commissioners came into office they have actually increased the number of types by the addition of these Baldwin engines and others from 42 to 49.

3672. *President.*] We have nothing to do with that. If in your opinion the permanent-way were strong enough you would not have much objection to the engines? If there were 80-lb. rails throughout the Colony I should say that we do not want Baldwin engines of that weight; we want Baldwin engines of a lighter weight.

3673. *President.*] But come to my question. Suppose the permanent-way were strong enough, what do you think about the engines. Do you see anything wrong with them? No, I cannot say that I do; but they are not the type of engine that I should prefer.

3674. *President.*] No, exactly; but I understand you to say that you do not see anything wrong with them.

Joshua Rushworth, being sworn in and examined, said:—

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3675. I have been over thirty years a ganger on the railway line.

3676. *President.*] In this Colony? Yes; at least, it is over thirty years since I started first, and about six years since I left that particular work.

3677. Then you are not now in the Railway service? Not now.

3678. Were you a ganger all that time? Yes, for the biggest part of it.

3679. *Mr. Hoyle.*] You were a ganger on the line for about thirty years? Yes.

3680. In the service of the New South Wales Government? Yes; but not a ganger all that time; I mean that it is about thirty years since I came here first. My first work here was to relay a piece of road on the Duck River line.

3681. Were you at Tarana when the recent railway accident occurred? I was.

3682. Were you on the scene of the accident soon afterwards? Yes, about three-quarters of an hour afterwards.

3683. Did you see the rails that were broken? Yes.

3684. Did you see any other bent rails? I saw one bent in that position (bending his arm); it was about 1 foot in the belly from being straight.

3685. Was that in the road;—did it form part of the permanent-way? Yes; it formed a part of the permanent-way.

3686. You have had a lot of experience in lifting roads, have you not? Yes, I have.

3687. Have you examined the road between Tarana and the scene of the accident? Not since the accident occurred.

3688. Have you ever been on that part of the road? Yes.

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3689. When was that? About twelve months since I was along the road, and also a week before the accident happened. On that occasion I was out shooting, and walked along a portion of the line down as far as the creek.
3690. Would you know from the appearance of the road whether it had been recently lifted? Yes.
3691. Do you think it had been recently lifted? If it had not been recently lifted it had been recently ballasted.
3692. Can you say what state the road is in about there at the present time? Well, from what I saw of it, I should not say it was in a very good state of repair. The sleepers still keep shifting out of their regular place; they vary a very great deal; some of them are very little more than 11 inches from the joints, and others are nearly 2 feet from the joints. They naturally work loose, and if they are not put back again the bearings of the road will not keep equal. Instead of all the sleepers being 2 feet 9 inches apart, there are some sleepers over 3 feet apart.
3693. You mean that the chairs upon which the sleepers are fixed are in some cases 3 feet apart? Yes.
3694. Did you see on that road in any part of it that the rails had been crushed? Oh, there are a good many rails crushed.
3695. *President.*] Is a crushed rail the same thing as a spread rail? Yes; it means spread out on either side.
3696. *Mr. Hoyle.*] In examining the road, did you see any rails that had been turned,—did you see any rails that had been worn by running on one side, and then turned and run upon the other side? Yes; a good many.
3697. Did any of them show evidence that they had been bulged? Some of them had been bulged before they were turned.
3698. That is to say, the bulged side is now down? There is a bulged side uppermost and also a bulged side down.
3699. From your experience as a ganger, would you consider that that weakened the rails? Yes; it does.
3700. From what you know of an iron rail, and the action of cold weather upon it, do you consider it safe for a Baldwin engine to run over the road in its present condition? No, I do not; nor for any heavy engine to run over it either.
3701. *President.*] What do you call a heavy engine? An engine of 60 or 70 tons.
3702. Is it not safe for an engine of 60 tons to run over that portion of the line? No; I do not think it is safe.
3703. *Mr. Hoyle.*] Were any of the sleepers bad? Yes, there are plenty of places where I could go and lift the rail—places where the spikes would draw out of the wood and leave the sleepers below. The chairs have worked that much with the oscillation of the engines that you could lift the spikes out.
3704. *Professor Warren.*] You are alluding to the spikes that are in the chair, I suppose? Yes, to keep the rail firm.
3705. If the key was in the rail, could you then lift it? The chair would come up with the rail, but the sleeper would be left in the ballast because of the spikes having no hold.
3706. *Mr. Hoyle.*] Did you find any other defects in the road, such as keys being out, and so on? Oh, there are keys out. The Sunday before the accident I walked down to the quarries, and saw a good many keys out, but it is not an unusual thing to find that. The ballast is the greatest thing for keeping the keys in.
3707. Then if the road were well ballasted the sleepers ought to stop in their places? Well, if even the key was in, the sleeper would naturally work.
3708. Do you know what length there is for each gang to look after? I think it is about 6½ miles.
3709. And how many men are there on that gang? About five.
3710. Do you consider that, with these heavy Baldwin engines going over the road as they do, it is enough to have five men and a ganger in order to keep it in repair?
3711. *Mr. Brown.*] Is that not a question of administration?
3712. *President.*] I was going to say before Mr. Brown spoke that, if the road is not properly looked after, that would be a matter of negligence—I do not say that it is not properly looked after—I know nothing at all about that;—but even supposing you proved that it was not properly looked after, and in that respect the Railway Commissioners were guilty of negligence, how would it prove that the engines were not suited to the permanent-way of the country, because the engines are supposed to be suitable for the permanent-way, provided that it is kept in order. If you say that the permanent-way is kept in order, and still that the engines are too heavy for it, and would crush it by reason of their weight, that is to the point clearly enough; but how can you show that by calling evidence to demonstrate that a certain length of line has been neglected?
3713. *Mr. Hoyle.*] I am not calling this evidence with any intention of showing neglect on the part of the Commissioners. I am merely calling it for the purpose of showing that this line is not fit for these heavy engines to run over.
3714. *President.*] But it would not be fit for any engine to run over if it is in the condition that has been described by the witness. I imagine that a permanent-way requires hourly, or very nearly hourly, attention; and if the necessary attention has not been given to it, and as a consequence the permanent-way has got into disrepair and would be dangerous for the Baldwin engines to run upon, you cannot say that therefore the Baldwin engines are unsuitable for the permanent-way of the Colony.
3715. *Mr. Hoyle* (to Witness).] Do you know the weight of the Baldwin engines? No.
3716. Well, the Baldwin passenger engine weighs 92 tons, and the Baldwin consolidation engine and tender weigh 97 tons;—do you think that an engine and tender of that weight would have a tendency to knock the road about? Certainly, particularly in a bend coming out of a straight on to a curve, because in going on to a curve the engine always strikes the rail heavily, and the heavier the engine the more strain there is on the rail.
3717. Do you think then that these heavy engines continually passing over the road have injured it, and caused these sleepers to work? Undoubtedly, to a certain extent. Of course, a heavy engine will cause it to happen more than a light engine would, and the longer it runs on it the more liable the sleepers will be to shift, particularly at the beginning or end of a curve. The oscillation in the case of the Baldwin engines is greater than it would be in the case of lighter engines.
3718. *Professor Warren.*] That is from your own observation? Yes.
3719. You say that the oscillation is greater? Yes; you can see it is greater on entering a curve than on a straight.

3720.

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3720. Do you say that the Baldwin engines oscillate more than any other engines? I do not say that they oscillate more, but I say that the weight of the oscillation is greater.
3721. *President.*] Of course, we all know that if two things oscillate the heavier one will do the more damage, if damage is done by oscillation. I suppose that is what he means.
3722. *Professor Warren.*] He said that the Baldwin engines oscillated more than other engines.
3723. *Witness.*] No; only I say that being heavier it is harder for the oscillation to stop.
3724. *Mr. Hoyle* (to Witness).] Have you worked much about the mountains in your time? No, I have not.
3725. In your experience on the railway has it been anything like a common occurrence for rails to break? Oh, it is a common occurrence for rails to break. I have known the old Barlow rail to break, and it is one of the toughest rails that was ever made. It is a hollow rail. They were the first rails laid between Parramatta and Sydney.
3726. Do you know any other part of the road near Tarana—I mean towards Bathurst? No, I have never been working at it, though I have walked over different parts of it.
3727. But did you examine the road recently? Well, of course a man who has been so long on the line cannot shut his eyes as he walks along. If he sees a defect he must notice it.
3728. And from your experience would you say from walking along the road that there are many defects in it? Yes, a great many.
3729. Can you describe to the Commission what they are?
3730. *President.*] Pardon me, Mr. Hoyle; I do not wish to interrupt you unnecessarily, but I hardly see what all this is leading to. If it helps your case, then by all means bring out the evidence that you are endeavouring to get at; but do not pursue it unnecessarily, for it is a matter that must necessarily be inquired into presently, because I suppose there are sure to be some actions arising out of this accident, and it is not right that the question should be prejudged in any way. Personally, I do not see how it can help us in arriving at our decision. Supposing, for the sake of argument, a part of the road had been left unattended to, that would not show that the engines were not suitable to the permanent-way. It will only help us if you can show that the road, being in a fair state of repair, it has been crushed and spread by the Baldwin engines.
3731. *Mr. Hoyle.*] Well, I want to show that the Baldwin engines are knocking the road about. I have been told that the road has been relifted within the last four months, and, if that is so, it ought to be in good condition now. I contend that if the road has got out of repair within so short a time it is the Baldwin engines that are doing the damage.
3732. *President.*] Very well.
3733. *Mr. Hoyle* (to Witness).] Will you describe to the Commission in what condition you saw the road between Bathurst and Tarana? Well, that portion of the road has been running a long time without being relifted, and, of course, when a road has been running a long time it gets bad; the rails spread and the sleepers work, but I do not say that it is in a dangerous condition.
3734. *Mr. Brown.*] You would say it was safe enough for ordinary traffic? Yes.
3735. *Mr. Hoyle.*] If the road was lifted within four months and reballasted, as it evidently has been, do, you consider that the ordinary traffic—such traffic as it had been subjected to before the Baldwin engines arrived—would have left it in a better state of repair than it is at present? With the ordinary traffic it is my opinion that the road would have been in a better state of repair.
3736. *Professor Warren.*] And you think that the Baldwin engines have knocked the road out of line? Yes, particularly going on to the curve.
3737. Entering a curve and leaving a curve? Yes.
3738. *Mr. Brown.*] I suppose you have turned a bulged rail yourself when you have been fettling? I have.
3739. It is not an uncommon thing to do when you are short of rails, is it? Well, when a rail is bulged out one side you turn it to the other side.
3740. *Professor Warren.*] Do you mean when a rail is bulged on the face? Yes, on the face.
3741. Will you show us upon these rails exactly what you mean? (Witness proceeded to explain by the aid of some rails brought from the scene of the late accident the purport of his answer.)
3742. *Mr. Brown.*] To Mr. Fehon: Have you had that flaw in the rails microscopically examined?
3743. *Mr. Fehon.*] No, we have not.
3744. I would have as careful an examination of it as you can, and bring as much expert evidence before us as you can.
3745. The Commissioners have appointed a Board of experts to investigate the matter.
3746. That is all very well, but that will not help us to arrive at our decision, we want as much expert evidence as you can bring.
3747. *Mr. Hoyle* (to Witness).] This is the rail that broke when the train was going over it, can you tell us whether that is a turned rail? Yes, it is; evidently this rail had been worn out on one side and turned.
3748. You have seen these two rails, and I will not ask you to swear, but will only ask you to give your opinion upon this matter, because at the time of an accident like the recent accident at Tarana, a man may be a little bit excited, but do you think there was any bent rail besides these two? Yes, I am sure there was.
3749. And it was after the accident occurred that you saw it? Yes, by the appearance of the rail I should say that after the carriages got off the line they bent it.
3750. *Mr. Brown.*] I do not quite follow you? Supposing the carriages got off the line here, they bent a second rail there?
3751. *Mr. Hoyle.*] There is a rail that was bent in the accident that has not been produced here at all.
3752. *Mr. Fehon.*] Very often there will be a dozen rails bent in an accident? Oh yes, it is quite a common occurrence if a train gets off the road that it will smash the chairs and bend the rails one after another.
3753. Do you consider that the road as you have seen it has the sleepers the proper distance apart? Not for those engines; the sleepers are too far apart for those engines.
3754. What distance apart do you think they ought to be? For those engines they ought to be more than ——
3755. I want to ask you first of all how far ought the sleepers to be apart on a curve, and then I want you to tell me how far they ought to be apart on a straight? They ought not to be more than 2 ft. 4 in. apart on a curve.

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3756. From centre to centre you mean? Yes; and about 2 ft. 10 in. apart on a straight.
3757. *Mr. Brown.*] And what are these sleepers in the immediate vicinity of where this accident took place. Have you any evidence on that point? Well some of them are over 3 ft. apart.
3758. That is from centre to centre? Yes.
3759. *Mr. Hoyle.*] I measured some myself that were 2 ft. 3 in. apart, others that were 2 ft. 8 in., and so on. They were different distances.
3760. *Professor Warren.*] You might give evidence yourself on that point, Mr. Hoyle.
3761. *Mr. Brown* (to Witness).] What are the gangers doing not to put them back in their places. That is what they do when they go along the line? They put them to their uniform distances, and often they shift them to a uniform distance when lifting the road.
3762. *Mr. Hoyle.*] How much ballast is there from the sleepers to the foundation? I never sank down to see, but if it is on a level from the grip to the curbstone the ballast must be somewhere about 2 ft. deep.
3763. You have not measured it, however, and do not know how much there is? No.
3764. *Professor Warren.*] From your experience as a ganger, you say that the road is knocked about by the Baldwin engines more than by other engines? That is my opinion.
3765. I take it that you have seen the Baldwin engines running on the permanent way? I have seen the Baldwin engines running and I have seen the others running, and my experience is that the Baldwin engines knock the road about more than the light engines do.
3766. Have you been on the Tarana section very long? No; I was only there for a week or a fortnight on a shooting excursion. I was up there enjoying my holidays.
3767. I only ask you the question because you have seen the other engines go over the line, and you know what you have to do to the permanent way by way of driving in keys and seeing that everything is right? Yes.
3768. And you say that the Baldwin engines damage the permanent way more than the old engines? Yes.
3769. *Mr. Brown.*] In bending a rail for the purpose of a curve, is it likely to crack it or make a flaw in it, or do anything else to damage the rail? I have seen rails break in two when we have been making a curve.
3770. And is that more likely to occur in old rails than in new ones? It depends on the material on the rail. An old rail will often curve better than a new one.
3771. And not be likely to give signs of breaking? If, when you were curving a rail with a hammer, there was the least flaw in it, you would find it out under the hammer.
3772. But would that flaw be liable to disclose itself after you had finished with it and trains had been running over it for a while? No; if it was injured at all, it would show when we were hammering it.
3773. *Mr. Brown* (to Mr. Fehon).] Would you like to ask the witness any question?
3774. *Mr. Fehon.*] I would like to ask a few questions. (To Witness): Are you now in the employ of the Railway Commissioners? No, sir.
3775. When did you leave? Six years last Easter?
3776. And what do you know about the Baldwin engines, seeing that they have been here only a few months? Well, I have seen them running.
3777. However, you know nothing about them practically. You have not worked on the road since they have been here? No, I have not, but I have seven or eight years' experience on the line at home before I came to this country, and if I am standing on the road whilst the engine is passing, I know how it is knocking the road about. I have got experience enough for that.
3778. Speaking about the crushed end of rails, as you have had experience at home as well as in the colonies, you can tell whether it is a common thing or an uncommon thing for the end of rails to be crushed? It is a very common thing.
3779. You spoke about the weight of the engines being too great for the permanent way—do you know how the weight of an engine is calculated in relation to the strength of the permanent way? The weight on the wheel.
3780. Yes? I do not know.
3781. But you know that it is calculated on the wheels? Yes.
3782. Do you know the heaviest weight on the wheels of the Baldwin engine? No.
3783. Well, how can you say that those engines are too heavy for the road? It is not the down weight that tells so much as the oscillation.
3784. Then you think the down weight is all right? No, I do not.
3785. But if you do not know the weight how can you say that it is too great? Because the oscillation is so great it is liable to move the road.
3786. I am not speaking about the moving of the road. What is your opinion as to the strength of the road to bear the weight on the driving-wheel. But as a matter of fact you say you do not know the weight on the driving-wheels, and therefore perhaps it is hardly worth while asking you a question on the subject. You say that it is the ballast that holds the keys in? Yes, very largely.
3787. How do you make that out? Because most of the keys are made in the colony, and are not down long before you can shift them about with your hands.
3788. Where does the ballast cover the keys? In many places.
3789. As a matter of fact, are not the keys exposed to sight? Very often they are.
3790. *Mr. Brown.*] Is not a man engaged every morning in hitting them with a hammer, to see they are all right? Yes.
3791. And if they are covered with ballast how can he do that? He can see the heads.
3792. *Mr. Fehon.*] Which would do the least harm to the permanent way—two lighter engines coupled on to a train or one heavier engine? One heavy one.
3793. You do not know anything about the Baldwin engines as to the way they are made to suit the permanent way of the Colony? The only thing that I know about them is from looking at them; the frame is all built in one piece, there is no give in them.
3794. You say that the sleepers are not sufficiently close together on the curves? No.
3795. What is the rule about sleepering a curve? Well, on a curve they put eight sleepers under a 21-foot rail, and nine if it is a curve of 8 chains radius.
3796. What do they do if it is a straight road? They put seven sleepers then.
3797. Suppose it is anything under a 15-chain curve do they not put two extra sleepers? No.
3798. At all events you say that you put in two extra sleepers in an 8-chain curve? Yes.
3799. And what distance does that bring them? About 2 feet 9 inches apart.

3800.

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3800. *Mr. Hoyle.*] We understood you to say that it was the sleeper being well packed—kept rigid—that kept the keys in? Yes; that is it.

3801. May I ask that the section of the rail and plan of Liberty's Creek Bridge and Duck's Creek Bridge may be produced.

3802. *Professor Warren.*] On that subject I take it that Mr. Foxlee will give evidence from the returns that he gave me. I have a number of questions to ask him, and possibly it may be necessary to ask him for plans and designs of other bridges. As an evidence of the interest taken in this matter from outside, I may say that I had a letter from a member of the Bridges Commission to-day—a man in a high position—who knew that I was aware of certain things that he was also aware of, and who thought it very necessary that I should look into these matters. It may be necessary for me to call for these plans and designs, and if it is, I shall do so, but I shall not do anything in that way that does not appear necessary.

3803. *Mr. Hoyle.*] Do you think it would be a good thing for us to have any of the plans of the bridges?

3803½. *Professor Warren.*] I shall wait until after Mr. Foxlee's examination before I make up my mind. Necessarily, anything that I can do must be done superficially; it would take too long to go into these matters fully. All I care about is whether the bridges are strong enough, and Mr. Foxlee's calculations so far, I may say, show that they are strong enough.

THURSDAY, 5 MAY, 1892.

[The Commission met in the Board-room, Colonial Secretary's Office, at 2·30 o'clock.]

Present:—

F. E. ROGERS, Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., M.L.C., J.P.

Henry Joseph Moses, being sworn, said:—

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3804. I am an engine-driver in the New South Wales Railway Service; I was driver of the western mail-train that left Sydney last Tuesday week. There was an accident to that train at a place on the line two miles and a-half this side of Tarana.

3805. *Mr. Hoyle.*] Previous to the examination of the witness, I wish to take this opportunity—and in doing so, I think I may speak, not only for myself, but for the public—to congratulate Driver Moses on the splendid manner in which he carried out his duties on the night of the accident. The forethought, care, and discretion he exercised, and the meritorious conduct he displayed on that occasion deserve for him not only the gratitude of the people of Sydney, but of the Colony generally, and I think it is only fair to state here what is the general feeling with regard to Driver Moses' conduct on that occasion. I have heard a great number of people speak about it, and I not only congratulate Driver Moses myself upon the splendid service he has rendered, but also on behalf of many others who have expressed to me their appreciation of them.

3806. *Mr. Fehon.*] The Railway Commissioners perfectly recognise all that Mr. Hoyle has said, and have recognised the services of Driver Moses in a substantial manner.

3807. *President* (to Witness).] I am sure it must be very gratifying for you to hear what has been said.

3808. *Mr. Hoyle.*] How long have you been driving the Baldwin engine? I have been driving these engines for three months. The number of mine is 452. That is the engine I have been driving since the 31st January of this year.

3809. Have you driven any others? Yesterday I had No. 457 for one trip. That is the only other engine I have been driving except No. 452.

3810. Did you find many defects in these engines during the time you were driving them either in the reversing-gear or the brake-gear? No, sir; I can only speak for my own engine, that is the one I am driving now, and she is just the same as when she came out of the shop.

3811. Have you had no repairs to the brake-valve or reversing-gear? No, she is just the same now as when she came out of the shop.

3812. Has she had many repairs made to her in other ways than those I have mentioned? No, only those you would expect from an ordinary locomotive, that is to say, the ordinary running repairs. The second trip that I ran her I noticed on the tender that one pair of the wheels, the trailing bogie wheels, on the leading end, were wrong. One of the wheels had shifted. I reported it to the Locomotive-Inspector at Bathurst. This pair was taken out and another pair substituted, and, so far as I know, three pairs of the original wheels are still under the engine.

3812½. Those taken out were replaced, you say? Yes.

3813. That, then, has been the only defect you know of in that particular engine? Yes, sir. The wheel worked loose on the axle.

3814. Have you ever minutely examined the wheels on these engines? Yes; on my own engine. I have not examined the others.

3815. Did you find any cracks on the spokes? No, I did not.

3816. You were driving the engine on the night of the accident. When the engine is going round a curve there is always a bumping motion is there not? Yes.

3817. When you were passing over the rail at the time of the accident, did you feel anything beyond the ordinary motion of the engine? No, nothing at all. I felt a shock at the end of the train, and I said to my mate, "It is an air pipe burst," and I put the brake on the train.

3818. You know the weight of these engines is about 92 tons, do you think that the engines being this weight have a bad effect upon the road? No, sir, I do not.

3819. What causes you to come to that conclusion? Well, for the simple reason that they are so constructed that they take the curves more easily than other kinds of engines. I had the misfortune to report the road several times on account of it having been cut about, and I was told the other day that the Yankee engines did not knock the roads about so much as the others do. They take the curves more easily. They do not jump into the curve but take it gradually.

3820. *President.*] When you reported about the road being knocked about, what engines were running then? The Scotch engines, sir. It is our duty if we find a bad place on the road to report it. I referred to the Scotch Yankees. These were on the mail service previous to our getting the Baldwins.

3821.

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3821. And you say that they knock the road about more than the others? Yes; because they jump into the curve instead of taking it gradually.
3822. *Mr. Hoyle.*] How do you account for that? I don't know how it is.
3823. Do you know that the weight on the driving-wheel is greater on the Baldwin engines than on the Scotch Yankees? Yes; I am told that it is greater, but I do not know whether that is a fact or not. I am told so. I do not know what weight the Scotch Yankee is on the driving-wheel.
3824. It seems you have driven the Vulcan? Yes; I was the first man to take a Vulcan over the Mountains. They are very rough and heavy on the roads.
3825. What is their weight? About 75 tons altogether.
3826. Well, your evidence at Bathurst, where you state that it is 85 tons, is incorrect? Yes; I have written to the Coroner correcting that statement.
3827. *President.*] Pointing out to him that you had made a mistake in saying 85 tons? Yes.
3828. *Mr. Hoyle.*] You say that that engine, the Vulcan, with a weight of 14 tons 7 cwt. on the drivers, would do more damage to the road than an engine like the Baldwin, with 15 tons 9 cwt. on its driving-wheel?
3829. *President.*] What he says is that the Vulcan engine, for some reason which he does not explain, is very heavy on the roads. *Witness*:—From the construction of the engine, I think it does more damage to the road than the Baldwin; that is what I say.
3830. *Mr. Hoyle.*] Don't you believe that the weight of an engine has something to do with the knocking about of the road—on account of the oscillation, for example? It is the way they take the curve; they jump into the curves—that is, the Scotch engines do, but the Baldwin engines take it gradually.
3831. But there is oscillation on the straight run, and it is greater there than on the curves? Yes.
3832. Then the additional weight of an engine about 20 tons heavier than the Vulcan would have a worse effect upon the road running upon the straight than the Vulcan, is not that so? Well, I have given you my experience so far as I have been a driver on the New South Wales railways; and I have also had it confirmed by what the permanent-way inspectors have said.
3833. Do you know what was the weight of the train behind you at the time of the accident? At the time the accident happened it was about 132 tons; before it happened I had an exceptionally heavy load from the Mount to Wallerawang, but the engine had no difficulty in taking this load over the heaviest grade of the mountain, the 1 in 33.
3834. What was the heaviest load between Katoomba and Wallerawang? I do not know; I did not make it up. The officer whose duty it is would know that.
3835. How many carriages had you? I had carriages equal to twenty-two and a half vehicles.
3836. Is it not a down grade? No, sir; there is some pulling.
3837. What is the heaviest grade? 1 in 33; what we call the Gins, between Bell and Clarence.
3838. How long is the hill? I could not say.
3839. About 5 miles or 3 miles? No.
3840. What would you imagine it to be? About a mile, at 1 in 33.
3841. And you had equal to twenty-two and a half vehicles? Yes.
3842. Was the train crowded? Yes, it was; there was only just sitting room.
3843. Have you ever taken the train from Penrith to Bathurst with one of the Baldwin passenger-engines? Yes.
3844. Have you had any assistance to take you up the bank? Yes, on one trip.
3845. Why was that? Because I did not know the stated load for these engines. A notice had been issued specifying the loads that were to be taken, and I did not know what it was. It was given out at the time, and, in my estimation, it was safer to take a pilot with me, than risk taking too heavy a load. As a matter of fact, I found that the load was a little short of what I might have taken.
3846. Do you think it safe to take a load of 225 tons up that grade with the draw-gear at present used? I think it is quite safe for that road with the strongest draw-gear. I think it is quite safe, and I don't think there is any reason to question it.
3847. With a train equal to 22½ vehicles, had you to shift your train to suit the platforms often? No.
3848. In your evidence at Bathurst inquest you say you were fifteen minutes late at Bathurst—you said, "I am not allowed to make up time." Why are you not allowed to make up time? An order was recently issued by the Chief Mechanical Engineer with regard to this making-up of time. He forbade drivers to make up time, especially on a falling grade, and it behoves every driver to obey this order; or, if he does not, he must bear the consequences of not doing so.
3849. Does this order apply to other engines as well as the Baldwin? Yes, I take it to do so.
3850. Did you receive a printed order to that effect—an order such as is usually given to drivers? Yes, and I signed it.
3851. Do you know whether it applied to the Baldwin engines only? I do not know whether it applied to the Baldwin engines only, but I know it said the Baldwin engines.
3852. As a driver, having your experience and care, do you think it would be dangerous to drive an engine over a road such as that between Sodwalls and Locksley, with about six miles of iron rails, at a higher rate than 25 miles an hour? Yes, certainly; because on parts of the road we have to reduce our speed—that is, where the road is in bad order. The outdoor inspector issues weekly notices, and we receive them and sign them, and they specify the speed at which we have to travel at certain portions of the road that are in bad order. We have to obey these orders, and we reduce our speed accordingly. We do not care what class of engine we are driving, we have to follow instructions all the same.
3853. Can you tell us at what particular parts you have to slow down in consequence of the roads being in bad order? Between Bathurst and Tarana to the 121 mile post, going round the Slip.
3854. Where is that? On the Bathurst side of Tarana.
3855. What speed do you slow down to? Twenty miles an hour.
3856. Do you then, in passing over that particular part of the road with your engine, find any extra motion with it? No; and we often wonder why the out-door superintendents keep those orders out so long.
3857. You have the regular gangs on the road? Yes, sir, on the regular length; and if we find anything wrong with the road we report it at the first station we come to.
3858. In what way was the train running when it struck, and the accident happened? (Here the witness viewed the iron rail, which had been placed by the Railway Commissioners in the Board-room for inspection, and pointed out what he believed to be the end of the rail that had pointed towards Sydney.)

3859.

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3859. *Mr. Brown.*] Do you know certainly that that is the end—do not say it if you are not certain? Well, I do not know certainly. I did not examine the place myself. I can say which surface it is, but I cannot say exactly which end it is.
3860. [*The Railway Commissioner present and several others examined the rail.*]
3861. *Mr. Fehon.*] There is a question as to whether the witness is not in error as to which end it is.
3862. *Mr. Hoyle.*] Is it your opinion, Mr. Moses, that your engine did not break the rail? Yes.
3863. It is your opinion, you say, that your engine did not break the rail? Yes; not in the manner it is broken.
3864. Do you think that in passing your engine had anything to do with the break? I cannot say. I think that if it had gone towards the breaking it a little, it is likely that I should have felt it.
3865. Taking the closeness of your engine-wheels and the wheels of the carriages following and the speed you were going at, it would not take you long to skim over 25 yards;—taking that into consideration, do you think the bogie could cause the breaking of the rail? I do not believe the tender would have gone over, because it was heavily laden, and there is a long space between the engine and the leading wheel of the tender.
3866. But is it not possible that it might have broken it, and since you got over so quickly you might not have noticed it? I believe the first to strike was the back carriage—I mean to strike the end of the sleeper.
3867. But you do not know? I do not know whatever.
3868. *Mr. Fehon.*] I would ask you, Mr. President, is not this making the inquiry an inquiry into the Tarana accident.
3869. *President.*] The point which Mr. Hoyle wants to make is that the Baldwin engine on account of its weight broke the rail, so I understand.
3870. *Mr. Hoyle.*] I think, Mr. Moses, that the line near Locksley has been relaid. Did not you find a great difference in your engine passing over that road and the part I am now speaking of? Yes; for there new rails and new ironbark sleepers have been put down. There are about 11 miles of that road that have been relaid, resleepered, and reballasted. Part of that line has been relifted, and that has been the case for the past four months.
3871. You have the order about the speed,—can you let us have it? Yes; but I think you can get one in Sydney. Every one has received it up the line as far as Bourke, on the Northern line, and on the Southern line as well.
3872. Do you not know, as a driver, that the weight upon the driving-wheel has a most severe effect upon the road? Yes.
3873. Then, if the weight on the driving-wheel of the Baldwin engines is greater than the weight on the driving-wheel of any other engine you have driven, do you still believe that the Baldwin engine is less injurious than an engine with a lesser weight on the driving-wheel? Yes; I do.
3874. *Professor Warren.*] Will you explain that? The reason is because the weight is more evenly distributed.
3875. So that it does not matter what the total weight may be so long as it is distributed evenly? Yes; distributed as it is upon the Baldwin.
3876. So that you might have 50 tons on the wheels, and so long as that weight was perfectly distributed over the wheels it would not matter—no harm would be done? The wheels of the Baldwin engines are closer together and the weight is evenly distributed, and they take the curve more easily than the others do.
3877. Suppose this [*drawing a diagram*] is the sleeper, and you got a weight of, say, 15 tons 0 cwt., and this line represents the rail, would not that be more likely to break it than a weight of 12 tons? Well, that depends upon circumstances.
3878. Suppose the circumstances are equal in both cases? There may be oscillation.
3879. Supposing they are the same in that respect also, would not the greater weight tend to break the rail more than the less weight would? Yes, under those circumstances.
3880. Well, if that is so, why did you say that the weight of the Baldwin engine would not tend to break the rail because the weight was evenly distributed;—does it not, as a matter of fact, depend upon the greatest weight upon the driving-wheel? Yes, to a great extent; and also the way in which your springs are balanced.
3881. Do the Baldwin engines oscillate less than other engines or more? The one I am driving I can safely say oscillates very little.
3882. Less than, say, the Scotch Yankees? Yes, sir, it does.
3883. I believe that I am right in stating that the Midelton engine is 12 tons on the pair of driving-wheels.
3884. *Mr. Fehon.*] Fifteen tons 1 cwt., I think.
3885. *Mr. Midelton.*] Thirteen tons on the pair of driving-wheels, that is it.
3886. *Witness.*] I know that they oscillated very much.
3887. *Professor Warren.*] Take the 304 class? I have driven both what Mr. Midelton calls his own, the 304 class, the Scotch Yankee, and the Baldwin.
3888. Which of these oscillates the most? The 304.
3889. And which next? The Scotch. Both of these oscillate more than the Baldwin.
3890. Is it not a mistake to say that because one engine oscillates more than another it tells more upon the road. Does it not depend upon the weight of the driving-wheel as well as upon the oscillation. You do not know, you have not measured it? I judge by the way it takes the curves, and the way the men have to hang on—I mean the firemen.
3891. You have made a statement that the Baldwin engines are not so destructive on the roads as the other engines. Now, what I want to get at is this, how do you know;—do you arrive at that conclusion only because you have measured it from appearance? Yes; it is my own experience.
3892. You would not swear it? It is my impression.
3893. *Mr. Hoyle.*] The reason you believe the Baldwin is less destructive is because the wheels are closer together,—at least you give that as one reason? Yes.
3894. Do you know that the rigid base of the Vulcan driving-wheel is 8 ft. 3 in., and the rigid base of the Baldwin driving-wheel is 8 ft. 6 in.? I do not know. I only know that I took the Vulcan over the mountains, and found it very rough.
3895. Do you know what the weight of the Baldwin wheel is? No.

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3896. On the Mogul? No.
3897. On the Vulcan? No.
3898. Then if you do not know the weight on the driving-wheel how can you tell the effect on the road, it is only a matter of what you think? It is how they take it. The Baldwin engine would take the curve very easily.
3899. I was not speaking of the curve? I only say the Baldwin will take it easily, but the Vulcan and Yankee will jump into the curve, and throw you off the foot-plate if you are not careful, and that is the reason why I say the Baldwin is less destructive than the other.
3900. At what speed do you mean? The same as with the Baldwin engine, 25 miles an hour. I have seen on the road between Tarana and Rydal times when the fireman has not been able to stand on the foot-plate to do his work with the Scotchman.
3901. The Baldwin engine has a four-wheeled bogie? Yes.
3902. Then do you say that a four-wheeled bogie can take a curve easier than a "pony," the Vulcan I believe only had a "pony," that is a two-wheeled bogie, or a pony-truck as it is called? I should think it could.
3903. You are not aware that the principal engineers of America have decided in favour of the two-wheeled truck? No, I do not profess to know anything about these affairs, all I know about is the driving of my engine.
3904. *Mr. Brown.*] That is your special duty; you are not a mechanic? No.
3905. Perhaps it would not be wise to have a mechanic on the engine?
3906. *Mr. Hoyle.*] Then it is only a matter of your opinion as driver? Yes, and what I am told by the permanent-way inspectors.
3907. *Professor Warren.*] And you form that opinion without knowing the actual weights on the driving-wheel? Yes; we are only told to take an engine and to drive her; that is our duty.
3908. *Mr. Brown.*] Until she will not go any further; and then they send for another, and you drive her, eh? Yes.
3909. *Professor Warren.*] I do not say anything about that; I only want to show that if you do not know the weight on the driving-wheel you do not speak from any knowledge, but your own experience? The superintendents say that they would rather have a Baldwin engine over their length than any other engine. As for the weights of the driving-wheel, I do not know anything about them.
3910. *President.*] What I understand is, that you know as a matter of practical experience that the Baldwin engine takes a curve more easily than the Scotch engine? Yes, sir.
3911. It does not give a jump, you say? No, sir.
3912. Have you ever driven when there have been two regular engines drawing the train at once? Only with a pull on the mountains.
3913. Have you ever been aided by having two engines coupled? Yes.
3914. Well, what is your idea of the effect on the road of two engines coupled together, contrasted against the effect of one Baldwin engine? I should think the two engines coupled together would be far more injurious.
3915. Why? I cannot say why, but that is my opinion. Of course I am not prepared to go into these matters, but I give it as my opinion that two engines coupled together would be more injurious to the road than one Baldwin.
3916. You do not think your engine, on the night of the accident, caused the breakage of the rail? No.
3917. Why? Because if the rail had broken with me under my engine we would have all gone overboard, and no one would have been saved; it would have been a far worse accident than it was.
3918. *Professor Warren.*] But an engine may break the rail and yet not leave the rails? Yes, it may happen so, but the chance is that it will leave the rail. However, it is my belief that the engine did not break the rail, and for this reason, the engine-tender was fully loaded with coal and water. I filled with coal at Eskbank, and with water at Wallerawang. I had a horsebox, a louvred fruit van, a first-class composite carriage, and a second-class carriage, all of which passed over the rail besides the leading part of the sleeping car, and that is the reason why I believe the engine did not break the rail.
3919. Is it not likely that the engine may have broken the rail and the remaining carriages may have spread out the iron so that the last carriages were thrown off? If the engine had broken the rail I think the accident would have happened in the first part of the train.
3920. Was the carriage which broke the rail in your opinion—was that a sleeping carriage? Yes, according to the evidence given by two of the passengers, they said it was the bogie of the sleeping car, that is the heaviest car in the train.
3921. *Mr. Midelton.*] It has eight wheels and weighs 22 tons, that is under 3 tons per wheel, whilst the Baldwin engine might have struck 7¾ tons.
3922. *Professor Warren.*] So that the weight on the sleeping carriage could not have been half as much as that on the engine? Of course the engine might have broken it, I cannot say.
3923. *Mr. Robert Smith.*] If the Commission will allow me, I might point out, as I conducted the inquest at Bathurst, that it appears on the depositions from the evidence of two witnesses that the accident did not arise from the transverse strain of the weight, but from the leverage of the train on a crack whilst passing over it, it was a lateral strain, that was the view of the jury. I do not know if you have looked at the break in the rail; but if you do, I think you will see that it was not broken by the weight at all.
3924. *Professor Warren.*] You must not say that.
3925. *Mr. Brown.*] We have nothing to do with what the Bathurst jury found. They may find anything they like, it has not got anything to do with this Commission.
3926. *President.*] It appears that the witness, as he has already stated, wrote a letter to the coroner of that inquest, of which he produces a copy, and I think that under the circumstances I had better read it.

J. D. Graham, Esq., P.M., Coroner.

Sir, May 2, 1892.

I see in the Bathurst *Daily Times* of the 29th April a report of my evidence at the late inquest in connection with the accident at Tarana, and that several questions were answered by me incorrectly. One question I answered as to weight of engine being distributed over twenty-six wheels, whereas it should have been eighteen wheels. My answer to the previous question shows that it was unintentional, as I then correctly gave the number of wheels under engine and tender separately. As regards the weight of Vulcan engine, it should be 75 tons, not 85 as reported, distributed over fourteen wheels. Just about this time I was rather roughly handled by the foreman of the jury, and was rather confused. When I said the average wheel pressure of the Vulcan would be greater than the Baldwin, I did not mean that the weight was actually greater, but that the Vulcan engine from its construction bore more heavily on the rails. When in reply to

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Mr. Smith that I would be fined or punished if I made up time I should have been more explicit, and stated that a recent order had been issued against making up time between stations, especially on falling gradients, and that I would be liable to be dealt with in the usual manner when important orders are disregarded. I much regret that these mistakes crept into my evidence, and respectfully request that you will place this letter (the accuracy of which I am prepared if necessary to state on oath) with my depositions in explanation.

I am, &c.,
H. J. MOSES.

3927. *Professor Warren.*] You consider then that the carriage and not the engine broke the rail? I am not able to form any opinion whatever.
3928. The last straw breaks the camel's back, and it may have been that this last pressure of the heavy sleeping-car finished what had already been begun.
3929. *Mr. Fehon.*] It is a matter which cannot be settled if you talked over it for fifty years.
3930. *Professor Warren.*] I quite agree with you there. My reason was that I did not like any definite opinion to be formed.
3931. *Mr. Hoyle.*] You say that you believe that your engine did not break the rail; will you explain to members of the Commission how it is that as your engine weighed 92 tons total weight, and you had 15 tons 9 cwt. on the driving-wheel, that when the lighter weight of the carriages passed over the rail it broke then and not before.
3932. *Professor Warren.*] He says he cannot answer that; how can he.
3933. *Witness.*] I do not profess to go beyond my driving. My duty is to drive the engine, and I do not pretend to know anything beyond that. It is true that the oscillation of the carriages may have had a tendency to cause the breakage.
3934. *Mr. Fehon.*] In your experience I suppose you have known rails break from various causes, and not altogether from weight? Yes, I have been steadied up from the same part of the road with a Scotch-Yankee; I was steadied up by a red flag when there was a broken rail, and I was told that I must go over the place at 4 miles an hour; that was on the other side of Tarana Station.
3935. You have had no personal experience of broken rails in your own driving? No; this is the first accident I have had anything to do with.
3936. You said you received an order to reduce the speed, was that when the road was being relaid, or lifted with large gangs of men working over it? Yes; when the permanent way was undergoing repair.
3937. A large mileage has been relaid, since the Commissioners came into office, with steel rails, do you know that? Yes; between Bathurst and Tarana.
3938. Eleven miles or more? Yes; laid with new steel rails, iron-bark sleepers and new ballast. Where it has not been relaid it has been newly lifted.
3939. *President.*] Do you know the road well? Yes, sir. I have been over it.
3940. Do you know how far the sleepers are apart at the curve? No, I do not, sir. But I know that on the new curve they are laid latterly very much closer than they used to be.
3941. But this particular part, this is in a new part, is it not? No, sir. It has only been newly lifted, that is packed up with ballast under the sleepers.
3942. You would not take up the sleepers to lift it? You would have to lift the sleepers up with a bar.
3943. Then do you know if the position of the sleepers has been altered at all? No.
3944. *Professor Warren.*] In driving the Baldwin engine, did you like to sit on the side of the engine? Yes; I sat on the side.
3945. Would you rather do that than stand in front? That is just a matter of opinion.
3946. If the engine went over you would have a bad time? Yes. But we do not look at those things. We take our chance.
3947. *Mr. Fehon.*] Either driving or sitting it would be equally bad, how did you find the engine do its work? I found the engine do its work perfectly well.
3948. *Mr. Hoyle.*] Did you ever drive the original Consolidation engine, I mean the old Consolidation goods engine? No.
3949. Have you ever fired them? Yes, I believe I have.
3950. How did they take the road? Well, that is a matter for the goods driver to say.
3951. You only know the Baldwin passenger engine? I cannot say anything about the Baldwin engines outside the new Baldwin passenger engine that I have been driving, but I think that if you were to ask the goods drivers of the other Baldwin engines they would say that they liked them very well, in fact, that they like all that class of engine.
3952. *Mr. Brown.*] However, yours is a good engine? Yes, it is a good engine, and I should be very sorry to lose it.
3953. *Mr. Hoyle.*] As a matter of fact you like the American engines better than the English? Yes; and do not think it is because Mr. Midelton is sitting there that I say so, now.
3954. *Mr. Midelton.*] I do not know you, I do not think I ever saw you.
3955. *Witness.*] I was under you when you were in office, Mr. Midelton.
3956. *Mr. Midelton.*] Yes, I know that.
3957. *Witness.*] We both agreed about the principles of the American engines.

William Wilson, being sworn, said:—

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3958. I am a ganger on the Mount Victoria to Bell section.
3959. *Mr. Hoyle.*] How long have you been a ganger? Twenty-two years.
3960. Is your length iron or steel rails? Part of it is steel and part iron.
3961. Have you had any rails broken on your length recently? Yes, a piece out of the end of a steel rail.
3962. When was that? On the 4th of this month.
3963. *Mr. Fehon.*] I must call attention to the irregularity of the way this information is conveyed. The information which Mr. Hoyle is now asking for has been surreptitiously obtained from the servants of this Department; he could get it in no other way; it is a most irregular proceeding that Mr. Hoyle should be hunting the Department through in the way he is doing. Wherever he can find a disaffected man he gets him and obtains information from him. I know where he has got this information, and I make a public protest that this information is got from disaffected men in the service.

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3964. *Mr. Hoyle.*] I regret again that so much temper should be shown on the other side. I get my information in no such manner as Mr. Fehon has indicated. I get it legitimately, and I may say that I am conducting my own case and do not want Mr. Fehon to conduct it for me. I got my information from thoroughly legitimate sources. I have had no communication with the employees of the Department, and between myself and my God I swear that I have not spoken to a single employee in the service outside the Sydney yard as to the state of the road.
3965. *Mr. Fehon.*] Where did you you get this information from?
3966. *Mr. Hoyle.*] I got no information from the servants of the Department, and I decline to say where I did get the information from.
3967. *President*, to witness.] When did this breakage occur? On the 4th of this month, sir.
3968. Do you mean yesterday? No, sir; yesterday week I mean.
3969. But that was not the 4th of this month; yesterday was the 4th. I mean yesterday week, sir.
3970. *Mr. Fehon.*] It occurred on the 27th of April.
3971. *Witness.*] You could not call it a break; it was only a bit out of it.
3972. *President.*] We do not know how information may be got; that is a matter we have nothing to do with. Mr. Hoyle said he did not get it surreptitiously, and we cannot inquire into that.
3973. *Mr. Hoyle.*] I do not know a single soul on this length, and I never spoke to any man on that length in my life. Surely I shall be allowed to go on without again being insulted in this matter. I would like you to assure the witness, sir, that whatever evidence he gives he will be thoroughly protected in giving it.
3974. *Mr. Fehon.*] There is no need for such a remark. The Commission will take no steps with regard to any witness that comes forward and gives honest and truthful evidence.
3975. *Mr. Hoyle.*] Do you know what state this road was in (to witness)?
3976. *President.*] With reference to the Baldwin engine do you mean?
3977. *Mr. Hoyle.*] Yes, with regard to the Baldwin engine.
3978. *Witness.*] I found no difference in it with regard to the Baldwin engine.
3979. You found that they made no difference:—are you sure? I do not say so, because I could not be sure. They have not been running long enough on the road to justify that.
3980. Has any part of your road been relaid? A mile and a quarter.
3981. When was that? In 1892; this year.
3982. Have you had to open out any of that relaid portion, and pack your sleepers since? Yes, we have.
3983. Have these Baldwin engines been running continuously over your lengths? Yes.
3984. Well, considering that this mile and a quarter was reballasted and relaid in 1892, do you think it ought to be necessary to open out your road and repack the sleepers? Yes; a new road always requires repacking, the joints in particular. You always find that a new road requires packing.
3985. Have you ever had to remove any defective rails beside this one? New or old rails?
3986. The old rails? Yes; that has been one of the chief works I had to do. The rails got defective, and that was the case before the Baldwin engines came at all.
3987. Were they bad before the engines commenced to run? The iron gets into holes, and the flanges get worn off them.
3988. But were they in a bad state before the Baldwin engines commenced to run? They were not as they ought to be, that is a sure thing. They had been on the road for twenty-two years, and there must be some wear and tear in that time—very considerable, I should say.
3989. Then you consider that these engines have no worse effect than the lighter engines? The only difference is that they used to grind against the high rail on the curve, but any new engine is inclined to do the same thing. It has not got the play of an old engine.
3990. Did you find them knocking your road out of gauge? No, not so much as some of the others, they are better on the road than the 60 class.
3991. You say you have had nothing but a broken rail with a piece out of it since the Baldwin engine has been running? Yes.
3992. What other light engines knock the road about more than the Baldwin engines do? The six-wheel-couple engine, the 60 class do, they were running the mail at one time.
3992½. How long ago—about twelve years ago? Yes.
3993. Did you find since the Baldwin engines have been running on your length that there has been a greater liability for the keys to work loose? The keys all depend upon the weather, in hot dry weather they will work loose.
3994. *Mr. Hoyle.*] From the contraction of the wood and expansion of the chair?
3995. *Professor Warren.*] Yes.
3996. *Mr. Brown.*] Twenty-two years you say you have been a ganger? Yes, continuously.
3997. Have you done more of that kind of work since the Baldwin engines have been running than formerly? No.
3998. *Mr. Hoyle.*] Have you had to pack your sleepers oftener since these engines have been running? No, I do not think I have.
3999. Are you sure of it? Yes.
4000. Have you found the joints of your rails that they give you more trouble since these engines have been running? No; joints always work down.
4001. *Professor Warren.*] Are you the ganger on the line where the accident occurred? No; I am on the line between Mount Victoria and Bell.
4002. *Mr. Hoyle.*] I have nothing more to ask.
4003. *Mr. Brown.*] I should think it was very manifest, from the evidence that some of these witnesses give Mr. Hoyle, that you have had no previous conversation with them.
4004. *Mr. Fehon.*] I may as well put in this document to show what this witness was called to prove. It was merely a chip out of the rail. [*Mr. Fehon here put in a diagram showing a section of the rail in question.*]
4005. *Mr. Hoyle.*] I believe Mr. Goodchap was summoned, but I believe he is not present. I hope to finish my case on Tuesday next.
4006. *Professor Warren.*] In that case the Commissioners will be prepared to go on with their case on Wednesday next.
4007. *Mr. Fehon.*] Oh, for that matter, we could go on now; we are quite prepared.

[Subsequently Mr. Goodchap appeared, and explained that he had not received the summons to attend until that afternoon.]

Walter

Walter Marshall Foote, being sworn, said :—

Mr. W. M. Foote. 5 May, 1892.

4008. I am an iron and steel worker and maker, and have had some thirteen or fourteen years' experience in that trade in the old country.
4009. *President.*] Have you done any of that kind of work here? There is none of it done here at the present time; I am preparing the way for it.
4010. *Mr. Hoyle.*] Have you had much experience in the manufacture of iron and steel rails? Yes.
4011. Could you tell me where your experience has been gained? Yes; I had experience at Swindon, Llandore, Dowlais, and Tredegar.
4012. Have you had some experience of the Welsh manufactured steel? Yes.
4013. You have heard the evidence in this case? Yes.
4014. And you have heard it stated in the evidence that the bogie axles of these engines ran hot, and that the running hot was attributed to the working out of cinder through the laminations of the iron;—now, from your experience as an iron manufacturer, do you think that their running hot could be caused in that way? Well, if any man were to make a statement of that kind to me, and said at the same time that he knew anything about iron, I should think that he was either crazy or had been drinking.
4015. Then do I understand you to say that the working out of cinder would not cause the bogies to run hot? Certainly not. I do not see how cinder could work out of a cold axle, the iron of which axle is malleable, and worked together by a steam-hammer. The axles are either forged into shape or rolled out, and the journals are turned up afterwards. Between the bars of iron that are welded together there are usually certain impurities, and it requires the application of very great heat to get these out. There is always a certain quantity of this cinder between the particles of iron, just as you will see ice between gravel-stones. There is always some of this left in the axle, and before it could work out the axle would require to be tremendously hot. But for any man to talk about it working out of a cold axle in the form of grit, and so producing friction between the journal and its brass, would show that he knew nothing about what he was saying.
4016. *President.*] You say that it must be at a very great heat before it will work out?
4017. *Professor Warren.*] And that the iron must be hammered or rolled? Yes. Before it could work out it would have to be tremendously hot, over orange red, which is very nearly welding heat, representing a temperature of 2,100 degrees or something over.
4018. *Mr. Hoyle.*] If it were shown that any axles were shedding cinder, could it possibly be that this came from the inner portion of the axle? No; it is simply impossible. There might, perhaps, be some scales on the outside of the axles which had not been cleaned off, but I do not think so, because the action of the tool in the lathe would probably take off any such small laminations or scales.
4019. Could it be produced through roughness of workmanship in making the axle;—could the heating take place by reason of the rough scaly surface on the journal? I think it very probable that that might have led to heating; that is to say, if the journals were roughly turned, and did not present a clean surface to the brass; but it might also be occasioned through want of lubrication.
4020. *Mr. Fehon*]. It is admitted by the Railway Commissioners that a journal has been twisted off, and that these axles have been replaced by, and at the expense of, the Baldwin Company; is it necessary to go into the question of the material of these axles, does it matter at all?
4021. *President.*] This evidence I take it goes to show that the running hot could not have been brought about by the working out of cinder as has been suggested.
4022. *Mr. Hoyle*]. I want to show that it is through a defect in the design of these engines that they are running hot. (To Witness.) How would you account for the axle twisting off? It was one of four on a bogie truck, the wheel was twisted off it, and the end of the axle itself was tapered off in that fashion [*drawing a rough design*], and showed signs of the wheel, with the boss, having been twisted off; it was twisted off just as you might take the end off a lump of putty; I examined the metal and I saw it was such stuff as I should be sorry to ride over in a railway carriage. It was very inferior metal indeed, just a common, rough, scrap-forging.
4023. Do you think the twisting could be caused by one wheel being larger than another? No, I do not. I think it was caused by the wheel jambing in the brasses, and that I think caused it to twist itself off, with the momentum of the train behind it forcing it to revolve, or twist off.
4024. Why if this cinder did not work out did the bearings run hot? Well, I think the chief reason must have been the inferior, and I might say the rough quality, of the metal, coupled with the inefficient means of lubrication. The only means of lubrication that I could discover were small oil cups without oil reservoirs, and of such small capacity that if a driver wanted to keep his axle brasses cool he would have to pull up his train every few miles in order to put oil in them.
4025. *Professor Warren.*] It was not due to insufficient bearing on the surface of the brasses? No, although they appeared to be rather small and narrow.
4026. You have stated several ways in which the bearings might have run hot, and there is just one other way, namely, one of insufficient bearing surface, and that is why I mention it? The brasses were smaller than the usual size, but not small enough to cause the heating of them. One was shown to me, I may mention, in which the heat had been so great that the inner face was fused—I am referring to the brasses; and the brass that had been fused seemed to have been of a very inferior quality. I saw no trace of white metal in it, such as it is usual to put in English brasses.
4027. *Mr. Hoyle.*] Did you examine the brasses of the axles? One was shown to me in which the brass had been fused, and, as I have just said, I saw no white metal in it such as is usually put into English brasses. In England it is customary to let white metal into the brasses in order to equalise the wearing of the bearing surface.
4028. You say that the breaking of these axles arose from the fact there was insufficient lubrication, and the material out of which the axles were made was bad? Yes; that combined with the fact that the brasses jambed on the journals.
4029. *Professor Warren.*] Mr. Hoyle asked you what was the cause of the axle breaking; I suppose he only referred to that axle which was twisted? Yes, so I understood; and I spoke only so far as I saw that particular axle.
4030. *Mr. Brown.*] The one that came into Redfern was twisted off.
4031. *Mr. Hoyle.*] The journal of a tender axle on the Newcastle line also was broken.
4032. *Witness.*] I was informed that this axle was from Newcastle. I took an opportunity whilst I was there of looking at some other wheels and axles, and they seemed to be of the same material and workmanship.

Mr. W. M. Foote. 5 May, 1892.

4033. From your experience as an iron manufacturer, will you tell me whether, in your opinion, these axles were hammered or rolled? They seem to me to be rough forgings.
4034. Of course you know from the evidence the weight of the Baldwin passenger engines? Yes.
4035. And have you closely examined the broken rail? I have seen it since it has been in the room.
4036. You have had some large experience in the manufacture of rails;—will you now examine the rail carefully, and give us your opinion as to the weight it ought to carry, and also your opinion as to how it was broken?
4037. *Mr. Fehon.*] I must appeal against any evidence being given about the material in the broken rail, or indeed anything else that refers to it, except as affecting the Baldwin engines.
4038. *Professor Warren.*] Of course.
4039. *Mr. Brown.*] I think when you say that, you give up the whole case; all those particulars affect the question of the Baldwin engines.
4040. *Professor Warren.*] How the rail was broken is very important, since the Baldwin engines pass over it.
4041. *Mr. Fehon.*] As to the spacing between the sleepers, and any question as to the construction of the permanent way, I admit it comes properly within the scope of the inquiry; and I may say further that we admit at once that this rail is a bad one. Any one who understands iron at all will see that it is not a good rail. It developed a defect which it is impossible to see, and that defect only shows itself after the rail had been used for many years. It would have been impossible for any one to have detected the defect before the rail actually broke.
4042. *President.*] If it had lasted for a number of years, does that prove it a bad rail;—would it not get into a granulated condition, such as was spoken of?
4043. *Mr. Fehon.*] Yes; as a rule iron rails will stand the same test after a few years' wear, making allowance for the iron that has been worn off the face of the rail. A rail should stand a test nearly equal to its original test, allowing, as I say, for the iron that has been worn off. That particular rail would weigh within a fraction of a pound of its original weight.
4044. *Mr. Brown.*] You are now giving unsworn evidence, Mr. Fehon, as against sworn testimony, and that is surely not right.
4045. *Professor Warren.*] It is not evidence at all.
4046. *President.*] We shall quite understand when we come to consider the evidence before arriving at our decision that you are now only speaking by way of argument. We want to know what objection you have to the course Mr. Hoyle proposes to take?
4047. *Mr. Fehon.*] I was explaining whether the quality of the rail should not be taken into consideration by this Commission. Whether the engine broke the rail, or whether the carriage broke it, or anything else, is immaterial to this inquiry. The rail developed a flaw—a weakness—that was the cause of the accident, and it was impossible for the men on the road—the Railway Commissioners, or anyone else throughout the length and breadth of this department—to know that it was a defective rail.
4048. *President.*] Exactly. But how will the proposed evidence hurt you, and what is more, how is it inadmissible whether it will hurt you or not?
4049. *Mr. Fehon.*] I understand that Mr. Hoyle wants to examine Mr. Foote on the quality of the material used in the rail. But the quality of the iron, I submit, has nothing whatever to do with the effect of the Baldwin engine upon the rail.
4050. *President.*] It is part of the permanent way, is it not?
4051. *Mr. Fehon.*] When the Commissioners took charge of the road they had to take everything upon the strength of its appearance, and soon after we took charge we had to lay 250 miles of new rails.
4052. *President.*] This defective rail, however, was a part of the permanent way, was it not, and the purpose of the inquiry is to find out whether the Baldwin engines are suitable to the permanent way. As I understand it, a piece of iron may, without any warning, give way at any time. There is no imputation that you were at fault in regard to this breakage, and you cannot object to Mr. Hoyle putting the question. Its value, or the value of the evidence that it will elicit, is quite another thing.
4053. *Mr. Fehon.*] My only object in making the remark is that no fault may be attached in this inquiry to the quality of the iron that this rail is made of.
4054. *Professor Warren.*] But do you not think that, assuming that the rail is of a good quality of iron it would have a very important bearing upon the case.
4055. *Mr. Fehon.*] We know this is not a good quality, we have made tests of it and discovered for ourselves.
4056. *Professor Warren.*] Have you made tensile tests? No; we have not made tensile tests, we have only made drop tests.
4057. Will you make tensile tests, and supply the Commission with the result of them? The drop test is a very good thing in its way, I think a great deal of it, but it is not everything. The real quality of the iron is best discovered by making tensile tests and ductility tests.
4058. *Mr. Fehon.*] I may say that if the Commissioners had known the state of the rail they would not have allowed the lightest engine to run on it.
4059. *Mr. Brown.*] I understand that this inquiry has become more complicated by the recent accident at Tarana. We were called upon to decide whether the Baldwin engines were suitable to the permanent way, and in the meantime an accident of a very serious character has taken place.
4060. Are we not called upon as a Commission to decide not only with regard to the suitability of the Baldwin engines to the rest of the road, but also as to whether the Baldwin engines ought to run over that portion of the road of which this rail was a part; is not that the position in which the Commission find themselves to-day.
4061. *Mr. Fehon.*] It is not for me to define the extent of the Commission.
4062. *Mr. Brown.*] I very much wish that the question involved in the breaking of this rail had never arisen, because the matter would then not have been complicated by it, but in-as-much as it has arisen I feel that it is part of the Commission to inquire into it.
4063. *Mr. Hoyle.*] I hold in my hand the report of Mr. Price Williams of August 10th, 1889, which led me to make this one important charge, because Mr. P. Williams states where certain rails ought to have been taken out and other rails put in, and that has not been done, and we have no evidence to show that there are not similar rails on the road at present.

Mr. W. M. Foote. 5 May, 1892.

4064. *Mr. Brown.*] Well, if you are going to put it on that ground, it is a very different thing; there may be negligence, I do not say whether there has been or not, and I should not like to give an opinion upon the question, but it is not material, I think. You must look upon the permanent-way as a whole. If there are certain parts in which there are known defects it is the fault of the officers who ought to look after it; but it would be very wrong for us to allow you to go into that question now. It is not included in our Commission. The permanent way means the permanent-way of the Colony, and what we are called upon to consider is whether the Baldwin engines were suitable or unsuitable for the permanent-way; it is supposed to be in good condition. No engine should be allowed to run over rails that are really defective.

4065-6. *President.*] What is the authority delegated to this Commission? It is to examine whether the Baldwin engines are suitable to run over the permanent-way of the Colony. That is, supposing that the rail is made of good iron, that it is properly weighted and properly fastened down, and it is apart from the question whether or not somebody has said that these rails should be taken up. I think this is admissable evidence to show that this rail is a good or bad piece of iron. But in this Commission inquiry into negligence might interfere with any actions that may be brought against the Commissioners in connection with the recent accident. (To Mr. Hoyle):] You may ask Mr. Foote to examine this rail and say whether it is good or bad iron. It is all in your favour if it is good iron, and if it is bad iron it is not in your favour so far as this inquiry is concerned.

4067. *Mr. Hoyle* (to Witness).] I would ask you to make a careful examination of this rail. I want you, Mr. Foote, to say whether it is good or bad iron; you must remember that you are on your oath, and you must be just to the Commissioners and to myself. Examine it carefully.

4068. [*Witness proceeded to make a careful examination of the broken rail*], after which Professor Warren said: These rails have been faced in certain places, there was no necessity to do that, was there; I suppose they were cut, and faced afterwards? I suppose so; those are the breaks, where the red paint is, I believe.

4069. *President.*] Which side of the line was the broken rail on?

4070. *Mr. Foxlee.*] The left-hand side as you sit facing the engine going from Sydney.

4071. *Professor Warren* (to Witness).] Do you think it broke as a result of lateral pressure? I do not see the slightest sign of that in the fracture. If there was any sign of that in the fracture there would be a set of the fibres, and there is no indication of that. This depression in the running face of the rail is evidently not the result of steady running, but the result of some other movement, and you want to find out what caused that to happen.

4072. You think that it was something, as it were, jumped on the rail that caused the break? Yes, something causing a sudden blow, and of course that something has yet to be found out.

4073. *Mr. Hoyle.*] Have you examined that rail thoroughly? I have.

4074. And what is your opinion of the quality of the material? My opinion is that the quality of the material is good and fit for any purpose, but there are one or two small signs in the web of the rail of the presence of cinder, but nothing to affect the strength of the rail. I should say that the rail, when new, was a good and sound one, and fit for the use that has been made of it.

4075. Do you consider then, taking into consideration the strength and manufacture of the rail, that it could be broken by the weight of the wheels of a carriage? No; I certainly do not.

4076. You must reckon 3 tons on each of the wheels of the carriage;—do you consider that that was enough to break it? No; I certainly think not. I do not think it would be possible to break it with the weight that there is upon a carriage wheel unless you lifted the carriage up several feet and then let it drop on the rail, and even then I doubt if you would break it; but with ordinary traffic I do not think that the rail could be broken by a carriage wheel.

4077. Do you think it is a clean break? No; I regard it as a tear.

4078. Do you think that it was done at the one time, or that there was a flaw previously? I think there is evidence of a crack extending from the lower head of the rail about one-third of the way up the web; and then there is a fresh crack that has evidently been caused quite recently extending backwards; and then from the edge of that crack, which is where the original flaw ends, there is a diagonal fracture or tear up to the upper head of the rail.

4079. Well, do you think that the weight of the engine could break the rail? Not if the weight was steadily applied, but since I have examined it I have seen a rather serious depression on the head of the rail just above where the fracture begins, and I think that we ought to examine the rail on the other side of the break to see what made the engine jump. I think she must have jumped. If she had run steadily over it I think it might have carried her safely; or might not.

4080. You cannot account then for the fracture unless by saying there must have been some unevenness of running on the part of the engine? Well, suppose it could be done this way: You say we might take these pencils to be three sleepers, and this one will be the rail on the top, suppose that the two outer sleepers were high and the middle one low, and consequently the rail lower on the centre than upon the two higher sleepers;—do you think that passing over the lowest portion of the rail the engine would jump unduly? Yes, most decidedly; and it would very probably fracture the rail if the depression were a serious one.

4081. Could it be done that way by the sleepers being uneven? Yes.

4082. With sleepers laid at a distance of about 2 ft. 8 in. from the centre? Yes; quite easily.

4083. But do you think that it could be caused by a carriage exactly in the same way? No; I do not, unless the weight on the carriage wheels was a great deal more than you have mentioned. You must remember that that rail was an iron rail, and therefore rather more pliable than a steel rail would be.

4084. As this was a cold night—of course I want to be very fair in this matter—if it was a cold, frosty night, as we know that it was, do you think that owing to the cold temperature the rail could be broken by the wheels of a carriage passing over it? In the first place, I should like to know about what the temperature was;—was it somewhere about zero? I cannot say what the temperature was there. We could find out by Tuesday. I think it would be better to do so before answering a question of that kind. It would be better if you could refer to the Government Astronomer.

4085. But the temperature would have something to do with the breaking of the rail, would it not? The temperature might affect it, but not to the extent that some people think.

4086. *President.*] Supposing it were freezing—you couldn't put it stronger than that I should think—would

would that make the rail break more readily than it would in the ordinary May weather on the mountains? Well, it would make it a little more brittle than it would be at the ordinary temperature, but I am not prepared to say that it would make an ordinary carriage wheel able to break it. I do not think it would.

4087. *Mr. Hoyle.*] Then you do not think, as a matter of fact, that the weight on any of the carriage wheels could break that rail? I do not think that the weights that you have mentioned as being those of the carriages could break the rail. Of course, if you bring along a carriage above normal weight it is a different thing.

4088. Say a carriage of 3½ tons on each wheel? No, I certainly do not think so.

4089. Do you think that had this rail been steel it would have been perfectly safe with the Baldwin engine going over it? With a weight of 15 tons 9 cwt. on the driving-wheel, the rail being a 71-lb. single T rail, you mean?

4090. Yes? I do not think it would be advisable to run such a weight over it.

4091. *Mr. Fehon.*] As a matter of fact, the weight on the driving-wheels is not 15 tons 9 cwt.; it is 15 tons 6 cwt.

4092. *Mr. Hoyle.*] You do not think it would be advisable to run an engine of that weight over a 71-lb. steel-rail? No; I do not think it would. The practice in other countries is to use very much heavier rails for such locomotives as I see in these photographs.

4093. Do you know anything about the way in which rails are laid in England? No; I have never had anything to do with permanent-way work. My experience has been confined to the making of the rails; I have had nothing to do with laying them.

4094. Did you examine the wheels of these locomotives? Yes; I had an opportunity of examining them when I accompanied the Commission through the engine-shed at Eveleigh; I think it was last week.

4095. Having viewed these wheels; having seen what appear to be fractures or cracks in the spokes, do you consider them safe? Well, according to the hammer-test of those spokes, I should decidedly say that a great many of them were not sound. As a matter of fact, however, you could hardly tell what the actual state of those spokes was unless you could get a wheel and have the paint scrubbed off, and the wheel made perfectly clean. We were at a little disadvantage the other day because the wheels were painted, and the flaws were puttied up. Unless we had a wheel scraped quite clean—the paint and putty burnt out, for example—it would be perfectly impossible to say whether the spokes are properly welded. As far as I understand they consist of two half-round bars of iron welded together, and, of course, if the welding is good the spoke becomes as perfect and as strong as a solid bar; but if they are not properly welded together, then the spokes are imperfect. From the hammer-test the other day I am strongly of opinion that, if the wheels were properly cleaned and scraped, we should find many of them imperfect, in consequence of imperfect welding.

4096. In other words, there are galls in the iron? Well, I do not know whether the flaws would be due to cinder in the iron or to imperfect welding, but that the wheels are imperfect the hammer-test certainly indicated.

4097. *President.*] They are imperfect? Yes; there is no doubt that some of the spokes are imperfect.

4098. *Mr. Hoyle.*] Looking at the wheel itself, have you any notion of the strain that would be placed upon the wheels by the shrinking of the tire? I do not know that I could give an opinion on that from the examination I made of the wheel.

4099. If the tire was a little small and was shrunk on to the wheel, the compression that must necessarily take place would affect the wheel more or less, I suppose.—Do you think, for instance, that if there was too much compression—if very great care had not been taken in putting the tire on to the wheel, in boring it out to fit on to the band of the wheel—such defects as you have seen might arise as a consequence? One of two things might happen: either the tire might become unduly strained, or the extra pressure placed upon the wheel might cause the spokes to open, particularly if there were any imperfect welds in them. If excessive pressure were brought to bear upon the wheel in such a way, I think the tire might be unduly strained, and that would affect its strength, or else if the tire held good the pressure might tend to open up the imperfect welds in the spokes. Whether such has been the case or not it is impossible to say upon the examination made by me, because if the imperfect welds were filled up with putty you could not see them properly.

4100. *Professor Warren.*] That is to say, that if the wheel were put into the fire and all the putty scraped off, then you could tell what it was like? Exactly; that is what ought to be done. If one of these wheels were put in the fire and the putty burnt out, we should have a much better chance of telling what the wheel was like.

4101. Have you anything to do with the making of these wheels? No.

4102. Have you ever seen it done? Yes; there was a large wheel shop at Swindon, where I served my time.

4103. You are speaking with some knowledge of the subject. Apparently you are. But I wanted to know whether you have had any experience in the actual manufacture of these wheels? If I had not, I could not venture an opinion.

4104. *Mr. Hoyle.*] Supposing that we put one of these wheels into a furnace and raised it into a blood-red heat, and a little water were sprinkled over it, could we discover whether there were serious defects or not? First of all you would have to burn the paint off.

4105. I mean put it into a furnace and let it get blood-red hot, and then clean it with a file, and then pour water on to it. Would not that be a good test? It would tend to open up imperfect welds, but it would not open them up very much. I doubt whether a blood-red would do; it would have to be more of a bright-red heat.

4106. *Mr. Fehon.*] What drop test should that rail stand? Do you mean in the way of tons?

4107. A ton weight falling on that rail, say on 3 feet bearing centres, how much weight should it stand? That rail certainly ought to stand 22 tons if sound.

4108. *Professor Warren.*] Foot tons, you mean? Yes.

4109. *Mr. Fehon.*] At a fall of how many feet to one ton? It would be equivalent to a fall of about 7 feet 6 inches or 8 feet.

4110. *Professor Warren.*] Do you mean to say that you would repeat it to make it to 22 tons? No; at one drop I mean.

4111. *Mr. Fehon.*] But that rail should stand a blow of 22 tons without breaking? Equal to a fall of 22 tons raised one foot and dropped.

Mr. W. M. Foote. 5 May, 1892.

4112. Are you aware that broken rails both of steel and iron are of frequent occurrence on different railways? I am quite aware that rails do break on railways from various causes.
4113. Are you a member of the Institute of Civil Engineers? No.
4114. Are you a member of the Institute of Mechanical Engineers? No.
4115. How long have you been in the Colony? About nine years.
4116. Have you followed your profession since you have been here? As lecturer to the Government on iron and steel manufacture.
4117. How long have you followed your occupation in that capacity? I took a long engagement in 1885 as a lecturer under the Board of Technical Education in Sydney and various parts of the Colony, and the year before last I filled a similar position under the Education Department.
4118. What position do you occupy now? I am a journalist.
4119. Are you not the contributor of various articles that have appeared in the *Sunday Times* condemning the Baldwin engines?
4120. *Mr. Hoyle.*] I do not see what that has to do with it.
4121. *President.*] If he has written articles condemning them, it is possible that his evidence may be unfairly tinged with a bias in favor of the views that he has expressed in those articles. That, I presume, is what Mr. Fehon wishes to get at, and it is a perfectly fair question.
4122. *Mr. Fehon.*] Have you written the articles that I have referred to in the *Sunday Times?* I think, according to the ordinary rules of journalism, I should not be expected to answer such a question.
4123. At all events you are not prepared to say that you did not write them? I am not prepared to answer the question at all.
4124. That will do; I am perfectly satisfied with that answer.
4125. *President.*] At all events, Mr. Foote, if you have any authority with the *Sunday Times*, I would suggest that it would be fair in every way, and more consistent with the views which that paper sometimes advocates, that there should be no comment about this Commission whilst the case is proceeding. I say this because I happened to see a copy of last Sunday's *Sunday Times*. I think it would be much better if no comments were made upon the work of the Commission whilst it is sitting. If the *Sunday Times* is opposed to the Baldwin engines such a course will not further its object, and it is not fair to Mr. Hoyle, because it cannot do his side anything but harm. I am not saying this unkindly at all. Of course I cannot forbid comments, as a court could, but I just mention the matter to you in the hope that you will accept my suggestion.
4126. *Witness.*] I will make it my business to mention what you have said to the editor.

TUESDAY, 10 *MAY*, 1892.

[*The Commission met at 2 o'clock, in the Board-room of the Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E., | ALEXANDER BROWN, Esq., M.L.C., J.P.

Charles Augustus Goodchap, being sworn, said:—

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4127. Before the present Commissioners were appointed I was Commissioner for the railways of New South Wales, and held that position for eleven or twelve years. The whole of the railways of the Colony were at that time under my supervision. At the present time I am a member of the Legislative Council.
4128. *Mr. Hoyle.*] Whilst you were Commissioner for Railways do you know whether, when new structures were being made on the road, that the gauges in existence were adhered to—that is to say, that the distance from the rails to the platforms was in every case uniform? Yes.
4129. You say that the gauge was always adhered to? Yes, I believe so. I should have made some objection if I had understood that they were not adhered to. It went without saying that the gauge of the lines was always the same.
4130. And has been uniform? Yes.
4131. Whilst you were Commissioner for Railways, did Mr. Halligan make some recommendation with regard to the widening of the platforms on the Northern Line? I have not any recollection of his doing so.
4132. Do you know the weight of a Baldwin passenger engine, and the consolidation goods Baldwin engine?
4133. *Mr. Fehon.*] I would ask if it is a fair position to place Mr. Goodchap in, to ask him this question. The Railway Commissioners have abstained since they have been in office from reviewing what had been done during Mr. Goodchap's administration. Mr. Hoyle has asked Mr. Goodchap a question with reference to the Baldwin engine; we, I say, have carefully abstained from opening up or reviewing any of Mr. Goodchap's actions during his administration, and it is scarcely fair to put him in a position of criticising the Commissioners' actions as an expert, as he may know nothing about this particular engine under inquiry.
4134. *President.*] It is a matter of taste for Mr. Hoyle, and also a question for Mr. Goodchap himself to consider whether he is inclined to answer the question or not.
4135. *Mr. Fehon.*] I only raised the question because I thought it proper to do so.
4136. *President.*] Mr. Goodchap is asked if he knows the weights of these engines, and we have it in evidence what these weights were.
4137. *Mr. Hoyle.*] I do not desire to open up the question of the management of the railways. I only want to ask certain questions as to the Baldwin engines alone.
4138. *President.*] We shall see whether it is admissible, and whether Mr. Goodchap has the requisite personal knowledge to answer it. You may ask it, but I do not know whether he is prepared to answer it or not.
4139. *Mr. Hoyle.*] The weight of the passenger engines, Mr. Goodchap, is 92 tons, with a weight on the driving-wheel of 15 tons 9 cwt. The Baldwin consolidation engine weighs 97 tons with a weight of 16 tons 9 cwt. on the second driving-wheel? Yes.
4140. You are aware that a Royal Commission sat upon certain questions relative to the bridges of the Colony.

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Colony. Can you tell us whether any alterations have been made to these bridges since that report was brought out? Some alterations were made during the time that I was Commissioner, after the report of the Commission was made, but I am not aware that any alteration has been made since October, 1888.
4141. With your knowledge of the permanent-way, and of the age of the road, and now knowing the weight of these engines, do you consider these engines safe to travel over the permanent-way, with your experience of railway management?
4142. *President.*] Are you an engineer in any way, Mr. Goodchap? Not a professing engineer.
4143. Are you in a position to express an opinion of any value upon this matter; for instance, I might think a person was sick of a certain thing, but that would not be the opinion of a doctor. Other persons have been asked this question—an engine-driver—but the opinion of a high-class Civil engineer would, I should think, from my view, carry more weight if he expressed it, and chose to say what that opinion was.
4144. *Mr. Fehon.*] I will call attention to the fact that Mr. Hoyle has mis-stated the weights.
4145. *Mr. Brown.*] Has Mr. Hoyle finished his question?
4146. *President.*] This might happen to be a very unpleasant thing, and place Mr. Goodchap in a very unpleasant position, but if he has sufficient knowledge to answer the question, of course he may answer it; but I do not want any opinion to be got unless Mr. Goodchap says that he has a special knowledge upon this question to enable him to answer it.
4147. *Mr. Brown.*] Put your question again, Mr. Hoyle?
4148. *Mr. Hoyle.*] Perhaps I have miscalculated the weights, but if so, that is not my fault, I have asked the Commissioners for the diagram, but I have not received them, and have not got them before me.
4149. *Mr. Brown.*] It is an important question you are going to put, and perhaps the Railway Commissioners can give you the weights.
4150. *Mr. Fehon.*] The weights are 15 tons 6 cwt. on the driving wheels of the passenger engine, and 15 tons 9 cwt. on the driving wheel of the Consolidation goods train.
4151. *Mr. Hoyle.*] With a total weight on the driving wheel of the passenger Baldwin engine of 15 tons 6 cwt. and a total weight of 15 tons 9 cwt. on the driving wheel of the Consolidation engine, do you consider—taking into consideration your experience in railway matters—that that weight is too great for the permanent-way of New South Wales, that is with the iron and steel rails, steel rails being 71 lb., and the iron rails 75 lb.? I think you have left out an important factor in your question, namely, the speed at which the engine is driven.
4152. The speed of the passenger engine is 25 miles an hour, and on the Consolidation goods engine it is, I think, 18 miles an hour.
4153. *Professor Warren.*] The rate of the passenger engine I think is 40 miles an hour.
4154. *Mr. Hoyle.*] Well, then at a rate of 40 miles an hour for the passenger engine, and of 18 miles an hour for the goods engine? I should think the weight of the goods engine would be immaterial if it were driven at not more than 18 miles an hour, but I consider that a passenger engine driven at 40 miles an hour round 8-chain curves—if driven at that rate round the curves——
4155. *Mr. Fehon.*] They are driven at 25 miles an hour on roads with curves and with down grades, evidence has been given before this Commission that 25 miles an hour was the speed of the train at the time of the accident at Tarana, that speed was an instruction to the men, it is only on a straight level road that the engines would run at the speed of 40 miles an hour.
4156. *President.*] I understand that down grades and round curves the drivers are not permitted to go at a speed beyond 25 miles an hour. Now Mr. Goodchap, taking that fact into consideration what do you say is your opinion? I should certainly say the weight is not excessive for the road, provided, of course, that the road is in good order and well sleepered.
4157. *Mr. Brown.*] That is to say, provided the road is now as you knew it to be in your time? I see by some evidence that has been given that the sleepers were said to be over 3 feet apart, well I consider that to be a very dangerous thing.
4158. *President.*] But you know the road as you left it. Suppose it had been kept in a proper state of repair since you left, would the weight then be excessive? I think not at the speed stated
4159. *Mr. Hoyle.*] In taking the speed of from 30 to 40 miles an hour, and with the sleepers 3 ft. 2 in. and 3 ft. 4 in. apart, what would your opinion be?
4160. *Mr. Fehon.*] The regulation width is 2 ft. 7 in. All the new road relaid by the Commissioners is 2 ft. 7 in. in width from centre to centre.
4161. *Mr. Hoyle.*] I have measured the road at Tarana, and I have found the sleepers to be from 3 ft. to 3½ ft. from centre to centre. Now, Mr. Goodchap, taking into consideration that there are places in our road where the sleepers are 3ft. apart, and that a train travelling at 40 miles an hour, with the weight I have stated on the driving-wheel, do you consider it safe? Well, I think it is a debatable point.
4162. *Mr. Brown.*] But you won't say it is unsafe? I won't say it is unsafe.
4163. *Mr. Hoyle.*] When orders were sent out of the Colony for rolling-stock was the weight taken into consideration? Certainly.
4164. In all cases? Yes, the report from the engineer was sent to the head of the permanent-way, and the weights were referred to him, in order to see if they were proportioned to the rails and the works on the line.
4165. They were referred, you say, to the engineer of the permanent-way? Yes.
4166. The one officer corrected the other? Yes.
4167. I suppose it is unnecessary to ask if it is usual to supply specifications? Yes, they were always supplied, unless we ordered a special class of engines. For example, No. 105 class; there was no specification sent; they were engines constructed by the Baldwin Engine Company, and that class was ordered for its good repute and for the work which it had done in other countries.
4168. You ordered them from the published design of the engine, you took the published design as submitted to you by the Baldwin Company into consideration? Certainly; I am not sure that the Baldwin Company suggested these designs to us, but it was from that Company that we ordered them.
4169. *President.*] You sent for them in consequence of their design? Yes, but I do not think it was at their instance.
4170. *Professor Warren.*] You knew it to be a suitable class of engine for the railway, and sent for it in consequence of that? Yes.
4171. *Mr. Hoyle.*] Would you approve, if you were in power to-morrow, of engines travelling at the rate of 40 miles an hour with the weight of the Baldwin passenger engine over a straight road? I should be

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guided entirely by the Permanent-way Engineers. I should refer the matter to them, and ask them would an engine with that weight on its driving-wheels driven at 40 miles an hour over that road be safe; and if the Permanent-way Engineer said it would be safe, I should authorise it.

4172. *Mr. Brown.*] Have you seen any of the Baldwin passenger engines here? No.

4173. Have you ever seen them elsewhere? I have seen the Consolidation engine in America; it is a similar class to the goods engine here.

4174. Would you consider that class of engine suitable to the permanent-way of New South Wales? So far did I consider it suitable that I got a drawing or engraving of it, with full particulars of hauling power, from the Baldwin Engine Company when I was in Philadelphia, with the object of bringing it under the attention of the present Commissioners as an engine which I thought would be very suitable for our lines.

4175. *President.*] For the purpose of recommending this engine? Yes; I am alluding to the Consolidation engine. I regarded it as being very suitable for our roads, believing that it would not be driven at a greater speed than 18 or 20 miles an hour.

4176. *Professor Warren.*] And your intention was to work the Blue Mountain and Picton grade with it? Yes, in order to take up a good load, which with our present engines we were unable to do; with a view to the reduction of working expenses and a reasonable charge to those who send their goods by rail, the greater the load that could be carried the less, of course, would be the expense of carrying.

4177. Per ton you mean? Yes, of course, per ton.

4178. *Mr. Brown.*] Is the Baldwin Engine Company considered a respectable firm? Yes, the leading firm in America.

4179. Suppose that you heard that the axles of the engines imported here were bad in material, would you consider that dishonest on the part of the firm? No; very few engine-makers make their own axles, they arrange with other firms for their manufacture, and stipulate for the best material to be put in the axles no doubt they are disappointed at times, the same as in other matters.

4180. And you regard that as an accident on the part of the company? Yes; certainly. My opinion of the company is very high, and I am sure they would not do anything of a dishonest character. In my time they always came forward and accepted the responsibility wherever it was proved that they were in the wrong.

4181. *Mr. Hoyle.*] Whilst you were Commissioner did you receive any reports from any of the permanent-way officers as to the weight of the engines running on the line? No.

4182. Have you the weights of the engines you saw in America? I think there was 135,000 lb. actual weight on the eight driving-wheels. That was in a paper drawn up by the company. That gives 15 tons 1 cwt. on each pair of driving-wheels. That was drawn up by the company itself.

4183. *Professor Warren.*] That corresponds with 15 tons 9 cwt. on the driving-wheel of the present Baldwin so that it is practically the same engine.

4184. *Mr. Fehon.*] Yes, exactly.

4185. *President.*] That is on each axle? Yes—each pair of wheels.

4186. *Witness.*] I would like to make some observations with regard to some evidence given to the Commission published in a newspaper about the weight on the driving-wheels of certain engines, the weight on which it was said was greater than the weight on some of the Baldwin engines.

4187. *Professor Warren.*] Yes.

4188. *Witness.*] I should like to say with reference to that, whilst the fact is that this engine did weigh more, it was well known to the Department that it was a condemned engine, and if I may be permitted I can explain it by some observation I made in the Legislative Assembly on the alleged state of the rolling stock. This was a tank engine which had been introduced by a locomotive engineer of the name of Burnett, and I think I cannot do better than read this extract from my speech on that occasion. The papers in the office will support the remarks I made there: "There was also recommended for the suburban lines a tank engine which I venture to say, judging from the reports made to me by the officers, for I do not profess to be a permanent-way or locomotive engineer, I am speaking upon reports made by men placed in charge of various departments as engineers, and whose duty it was to advise me upon these points. I was about to say that according to these reports this particular engine, introduced by Mr. Burnett, has cut the suburban line all to pieces. This is the engine which is to be selected as a future type." At that time it was proposed to take this heavily weighted engine for a suburban tank engine; I believe they have been taken off the suburban line, and have been sent up north to work on the coal lines. That engine, as I said, cut the suburban line all to pieces. I then went on to say, "It is an engine of which Messrs. Beyer, Peacock, & Co. are the makers. Mr. Burnett is responsible for the introduction of that engine upon our lines, and it was one of the circumstances which led to his removal from the Railway service. A type of engine had been used upon the line which weighed 29 tons, and orders had been repeated for that style of engine. Mr. Burnett, after calculating the tractive force of the engine, having regard to the work for which it was required, recommended that an engine weighing 33 tons should be adopted in its place. After consultation with other officers whose advice I could obtain, this recommendation was agreed to. But when the engine arrived in the Colony it was found that, either from a miscalculation as to the weight of the parts, or because the manufacturers wanted to make an engine of that character, it weighed 40 tons—that is, 11 tons in excess of the engine in use, and 7 or 8 tons in excess of the weight authorised. This is the engine which the Locomotive Engineer is recommending to be used." I should have said nothing about this engine if the full particulars had been given at the time the evidence of its weight was brought under the attention of this Commission. It was a tank engine that was introduced into this Colony in a surreptitious and unauthorised way, and the officer who was responsible for its introduction was removed from the Railway service for his misconduct partly in connection with this matter.

4189. *Mr. Hoyle.*] They were I understand condemned on account of their excessive weight, which was I understand destructive to the road? Yes.

4190. There is another matter upon which I should like to ask a question,—you will remember, when Mr. Midelton was in the box, certain things were said to him that I thought ought not to be said, and I should like to ask Mr. Goodchap a question relative to this in justice to Mr. Midelton.

4191. *Mr. Goodchap.*] I think you had better not ask me the question.

4192. *President.*] Let us hear what the question is.

4193. *Mr. Hoyle.*] When Mr. Midelton was in your service did you find him an efficient officer? I found him

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him in some respects a most inefficient officer, with regard to the two actions I took in reference to him I can only say that if the circumstances occurred again I should pursue a precisely similar course, I should dismiss him from the position he held for reasons not altogether concerned with his qualification as an engineer, and I should install him in the position to which he was afterwards promoted for adequate reasons, not that I believe he was the most efficient officer that could be found, but because he was the most efficient officer I could find at that particular time.

4194. *President.*] I should like to know exactly about that. When you first found it necessary to move Mr. Midelton what was his position then? He was an assistant to Mr. Scott.

4195. What was Mr. Scott? Locomotive Engineer.

4196. And when you found it necessary to take this step you re-appointed Mr. Midelton to some other position, what position was that? That was the position that Mr. Scott had held, that gentleman resigned and I had to make provision for a Locomotive Engineer, I had only two officers to choose from, and I selected Mr. Midelton as the better of the two. He had been assistant to Mr. Scott when his removal occurred, that was when he was Assistant Locomotive Engineer, I removed him and afterwards appointed him as Locomotive Engineer.

4197. Having only two persons to choose from? Yes.

4198. *Mr. Brown.*] He was under suspension? Yes, but I do not think it was for a long period, he was made Superintendent of the tramways.

4199. *Professor Warren.*] That was a better position than that which he held under Mr. Scott? I do not know.

4200. He said it was? I found his chief fault was an indisposition to work with Mr. Scott, and he was disorganising the department, and although he was a very good Mechanical Engineer he was not efficient to fill any position under a man above him whose office he was seeking, and for that reason and for other reasons I thought it was desirable that he should be removed from the position of Assistant Locomotive Engineer.

4201. *President.*] You have stated about the heavy tank engines, that they were a condemned type. With a knowledge of that class of engine in your mind are you prepared to say that the present Baldwin engines driven at the rate of 40 miles an hour, over a straight level road are too heavy for the permanent way of this Colony; I mean, looking at their weight and speed? No: always provided the roads are well sleepered and in good order.

4202. *Professor Warren.*] Yes; presuming that, of course.

4203. *President.*] And having that knowledge of the engine and the road in your mind, will you say that the goods engines going at the rate of 18 miles an hour are not too heavy? No; I do not think so.

4204. And the passenger-engines going down the grades and round the curves at 25 miles an hour? I do not think so.

4205. *Professor Warren.*] What is the minimum weight of the iron rails—(to Mr. Fehon)?

4206. *Mr. Fehon.*] Seventy-five lb., I think.

4207. *Professor Warren.*] I thought it was 71 lb.

4208. *President.*] That is the weight of the steel rail.

4209. *Mr. Fehon* (to Witness.)] The tank engine you speak of was a six-wheeled rigid base; is it the fact of the six wheels being rigid that made the engine knock the road about? They had a bogie, I think.

4210. No; they were six-wheeled rigid base. Would not that, in your opinion, cause the road to be knocked about? Yes; it would do very considerable harm; a rigid wheel-base does assist in knocking a road about.

4211. Going at 35 miles an hour, which the suburban lines are required to do—travelling at that rate with a rigid wheel-base, would it not tend to knock the road about? Yes; it might have that effect.

4212. *Professor Warren.*] When you are answering questions with regard to the safety of the Baldwin engine on the permanent way, you are thinking of the 75-lb. iron rails, and the 71-lb. steel rails, I presume? Yes; but I do not think they are equivalent; I think the 71-lb. steel rail is better than the 75-lb. iron rail; the equivalent would be about 15 lb. more.

4213. *President.*] That is to say the iron rail ought to be 86 lb.? Yes.

4214. *Professor Warren.*] So that the iron rails is the weak point. We understand if the road is in as good order as when you were Commissioner, with the speed and the weight of the engine—I refer to the Baldwin engines—would not be unsuitable to the permanent way of New South Wales? No, I do not think they would.

4215. *Mr. Hoyle.*] These tank engines were the four-wheeled coupled? With a bogie at one end, I think.

4216. With a four-wheeled bogie in front, and with a 7 ft. 4 in. rigid wheel-base? Yes.

4217. Was it the wheel-base or the weight of the engine that was doing the destruction to the roads? I think it was the weight. No doubt the rigid wheel-base would contribute in some degree.

4218. *Professor Warren.*] That engine is a two-wheeled coupled with a bogie in front? Yes.

4219. I believe that engine is the one that they designed the cross-girders of the bridges for?

4220. *Mr. Hoyle.*] That is one having the same weight, and doing the same work? Yes.

Mr. Cowdery being recalled, and further examined:—

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4221. *Mr. Hoyle.*] When Mr. Cowdery was giving evidence before, he wanted certain information about the wheel-base and the weights of the engine, &c., now that information has been supplied to him I desire to ask him whether he considers these engines to be safe on the permanent way of the Colony, taking into consideration the iron rails upon the road.

4222. *Mr. Brown.*] Have you the information Mr. Hoyle furnished you with? Yes; I have not written my opinion; but I will answer the questions he asks me.

4223. *President* (to Mr. Hoyle.)] What do you want from him?

4224. *Mr. Hoyle.*] What I ask Mr. Cowdery is this, taking into consideration the state of the roads and weight of the rails, do you consider it safe for the Baldwin engines to travel over our permanent way, when I asked this question before you said you had not the weight of the engines, and you could not give an answer at that time, I have since given you the weight, and now with a knowledge of them in your possession, and taking into consideration the state of the roads and bridges, do you consider it safe for these

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these engines—I mean the Baldwin passenger engines, travelling at 40 miles on the straight road, and 25 miles on the curves and grades, and the Consolidation goods engine travelling at eighteen miles an hour—do you consider then it is safe for our permanent-way?

4224½. *President.*] Forty miles an hour is the speed on a straight level road?

4225. *Witness.*] I have taken it on the base of an extreme case on the Mountains at a rate of say, 25 miles an hour.

4226. *President.*] Well, what is your opinion? I do not say that they are not sufficiently strong vertically on the sharp curves of the Mountains; but I think the greatest danger is to be looked for from the lateral pressure, or knocking or bumping against them, particularly on entering curves.

4227. What would be the effect then;—would the rails be shoved on one side? Yes; shoved on one side or broken, as it very often happens, as I daresay three out of four or four out of five are broken going round the curves.

4228. Then do you say that the engines are unsuitable to the permanent way? I say that they are unsuitable to the road laid originally by Mr. Whitton. The engines at that time were very little more than half the weight that they are now, and unless the rails had been very much increased beyond what was then required, they must be very much under weight now, and besides that, there are a great many more rails broken now.

4229. *Mr. Brown.*] Then, are these engines suitable or unsuitable to the permanent-way of New South Wales? Well, I do not think any man can settle that.

4230. *Professor Warren.*] But you are called as an expert;—what is your opinion? My experience is that the rails are too light for the engines.

4231. *Mr. Brown.*] Or that the engines are too heavy for the rails? It is the same thing.

4232. *Professor Warren.*] Do you consider that the Baldwin passenger engine, having regard to the 15 tons 9 cwt. on the driving-wheel is too heavy for the 75-lb. iron rail? I do not say it is too heavy for the vertical pressure, because we have heavier engines on the lines—but not running over the Mountains, not running any distance from Sydney.

4233. Do you consider it safe, then, with a 71-lb. steel rail? Well, I think they are quite light enough for these long based engines running at the speeds they do. When the roads were originally laid down they were laid down for a much less speed and a lighter engine, and the practice in England is that when they commence running heavier engines at a greater speed, to increase the weight of the rails, and in America also they increase the weight of the rails wherever they put these large engines, and also they put much more timber under the rails than we do here.

4234. *President.*] Where do you say they do that? In America.

4235. *Professor Warren.*] Timbers are placed much more closely there than here, timber being cheaper in America than it is here.

4236. *Witness.*] I produce a sketch of a section of one of the rails on the Philadelphia and Reading Railway. [*Sketch produced.*]

4237. *Professor Warren.*] Then you consider that these rails are weak laterally? I do.

4238. *Mr. Hoyle.*] You were engineer for existing lines under Mr. Goodchap? Yes.

4239. Do you know if any of your officers at any time reported that the American engine—the Consolidation engine, the 75-ton engine—were injurious to the permanent-way? Yes, frequently. They frequently told me verbally. I frequently went over my own work, and the inspectors and gangers told me that these engines were knocking the road all to pieces when they came out; and at the entrance to the curves they had to strut the rails.

4240. *President.*] What do you mean by strutting? Putting logs from the sides of a cutting to the edge of the rail or end of sleepers, which ever was most convenient.

4241. To keep the rails in position? Yes.

4242. *Mr. Hoyle.*] Well, as these engines were only 75 tons in weight, and the Baldwins are 90 tons, do you consider that the latter are doing more damage than the ones you have just spoken of? Well, yes; the tendency is to do so, but I do not know the result of these engines running upon the lines, because I have not had anything to do with the roads since they have been imported; but the tendency, of course, would be to increase the damage to them.

4243. Do you think the wheel base of the engines would have anything to do with that? Yes; a great deal. The length of the wheel base has a great deal to do with it; but at the same time, there is a great weight thrown on the bogies, and when they come off a straight line into these curves the centrifugal force must push the road out unless you secure it by struts.

4244. Does that endanger the rails? Yes; it not only endangers the rails but damages the road, and the road, unless kept in place by these struts, would be forced out, and the engines would, in running round the curves, perhaps run off the road.

4245. So that there ought, with these engines, to be more care and supervision with regard to the roads? I do not think any amount of care or supervision would prevent it unless by strutting the roads. I know that when some of these Baldwins first came out they shoved the roads out of line, particularly round the curves; that is a proof that the force was very considerable.

4246. *President.*] That refers to the Baldwin engines ordered when you were there? Yes.

4247. *Professor Warren.*] The 75 tons engine? Yes. I do not know anything about the present Baldwin engines except by hearing of them.

4248. *Mr. Hoyle.*] Are you referring to the Consolidation engine or the 304 class, generally known as Midelton's? I could not tell you the difference, but I know the first American engine that came out that complaint was made to me as I have stated. (*Diagram shown to witness.*) Yes, that is the old Consolidation engine to which I refer.

4249. *Mr. Hoyle.*] The rigid wheel base is, I think,

4250. *Professor Warren.*] Perhaps you can give it me.

4251. *Mr. Hoyle.*] It is 14 feet 9 inches.

4252. *Witness.*] That cannot be the engine I am speaking of. The wheel base of the engine I am referring to was, I think, about 20 or 22 feet.

4253. *Professor Warren.*] No; the base is 14 feet 9 inches.

4254. *Witness.*] The great length of these engines running round these curves knock the lines out of place, and we had to strut them.

4255. *Mr. Hoyle.*] Well, if the old Consolidation engine knocked the lines out, these new engines with a rigid base of 14 feet 3 inches must knock the road about more? Yes.
4256. *Professor Warren.*] You are speaking of the new Consolidation goods engine now? Yes.
4257. *Mr. Hoyle.*] With regard to the Board of Trade rule, do you consider that these engines running over the Solitary Creek bridges would be perfectly safe? The speed makes very little difference over a straight road like that; but I think the cross-girders of the Penrith bridge were not too strong.
4258. *Professor Warren.*] Does not that apply to all bridges included in the report? In the original report it is shown that they are weak—the main girders are strong enough.
4259. Do you think that the Solitary Creek bridge, which, according to this report, is stressed with 6·75 tons in tension, would be strong enough? Well, that is in excess of the Board of Trade rules.
4260. If this Solitary Creek bridge, which was tested with the Consolidation engine, and the calculations here show that the stress is 6·75 tons in tension;—do you think that the new Consolidation engine will make the tension more than 8 tons, and would that be safe? I should think it would be.
4261. *Mr. Hoyle.*] Was that safe? No; I do not think so.
4262. *Professor Warren.*] Neither was the first, and the second makes it still less so.
4263. *Mr. Hoyle.*] Were these bridges strengthened in the cross-girders in 1888? No; not to my knowledge. That is the Penrith bridge and the Solitary Creek bridges. There has been very little done to them since the Commission sat.
4264. *Professor Warren.*] They were for your consideration, but you did not think it worth while to strengthen them? No; it was not left to me. I should have done a great deal more to them if it had been left to me. Indeed, that was the reason of the Royal Commission—I wanted to do more to them than was thought advisable by others.
4265. The Royal Commission, in its report, says there were 9 tons on the cross-girders of these bridges? That is too much.
4266. Yes.
4267. *Mr. Hoyle.*] Did you receive any written complaint of the roads from your inspectors or gangers? I do not remember; but I am perfectly sure I could bring men, and telegraph for them, who have stated to me that they could not keep these roads in order, on account of the engines knocking them about so.
4268. Have you seen the broken rail from the Tarana accident? No; I have not.
4269. It is here? Then I should like to see it [*here the witness inspected the rail*].
4270. Having seen the rail, can you tell us whether it is a lateral strain that broke it;—could you form an opinion? I do not think I could form an opinion from that inspection of it. It might be either the weight on it or not.
4271. *Professor Warren.*] The vertical weight must have acted until it left the rails, and if there was any lateral pressure that would probably add to it? Yes.
4272. There would be the resulting pressure due to both forces? Yes.
4273. *Mr. Hoyle.*] You know the weight of the engine;—well, if the weight of the engine did not break the rail, do you think that the weight on the carriage wheel would break it? I have no faith whatever in the carriage having broken the rail.
4274. *President.*] Well, how would you account for the engine and the first carriages passing over before anything left the track? Well, that is very often the case. I have known several trains go over a broken rail before any damage was done; in fact, I have known no damage at all to be done, and yet the rail to be fractured. An old inspector of mine, who has retired from the service, and whom I met the other day, told me of a case which he knew of as happening at a place beyond Glen Innes, going down towards the Border. The driver reported to him that a rail was broken, and told him as nearly as possible about the place; he walked the ground all over, up and down, and a gauger on the length also went over it and yet neither of them could find the fracture. He talked with the driver again, and told him to throw off a big piece of coal at the place where he found the engine jump. He did so, and yet they could not find it. Finally, the driver pointed out the place as he passed, and the ganger sat down at it, and the inspector then saw the cause of the jump, and he said it was almost necessary to take a microscope to see where the fracture had happened. It had come together in exactly the same place, and there was only a fine hair line to indicate where the rail was broken. There was only one crack, and the sleepers on either side kept the rail in place.
4275. *Professor Warren.*] What about your lateral strain? Well, if this was on a curve it must have been on a very little one; it could not have been an 8 or 10 chain curve.
4276. *Mr. Hoyle.*] Do you know on what line that happened? No, I do not. I only happened to see my informant yesterday. He was in town from Newcastle. I suppose there are hundreds of rails broken to one accident that happens through such breakages. It depends entirely upon how the rail breaks.
4277. Are rails more likely to break in cold weather or hot weather? Yes; they are more likely to break in cold weather.
4278. And especially frosty weather? Yes. They creep in the hot weather, and there is a great tension on them—they are strained; in a mile of road down a long incline the hanging on the fish-bolts will be very tight indeed, and in such a condition they would be more likely to break if they got a blow.
4279. Will iron creep more than steel in a given space? I do not think there is much difference in that. Very little, if any.
4280. *Mr. Fehon.*] Are you a member of the Institute of Civil Engineers? I am not.
4281. You say that you consider that these engines are not suited to the road because they are so heavy? Yes; but that is not my whole reason.
4282. *President.*] What is the whole reason? I say the great length—that also is a reason.
4283. *Mr. Fehon.*] Are you not aware that it is the weight on the driving-wheel that governs the safety of an engine on the road? Not altogether. I stated that before, and I think I gave my reasons.
4284. Why is it so—I am speaking of safety? The lateral pressure on the rails going round sharp curves—that is the side pressure—is very much more likely to break the rail than the vertical pressure.
4285. Which do you consider would do most harm to the road,—an engine of the weight of the Baldwin engine, or two engines coupled together? The one engine certainly will knock the road more about than the two, if they are lighter engines.

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4286. Do you know what was the heaviest weight on the driving-wheel when you were in charge of the existing lines? I do not know; but they were considerably less than now.
4287. Will you be surprised to hear that the weight was a ton more—it was 16 tons 6 cwt.—and these are only 15 tons 7 cwt.? Oh, yes; I know that is the tank engines, and they were very much too heavy; they were not favourites of mine. One jumped off at Newtown. We had a Wade engine; I objected to her; her driving-wheels were too heavy for the leading-wheels.
4288. Was it not the bad state of the permanent way? No; I object to that. Other engines passed over the road, and it was not on account of the road.
4289. After a fall of rain did the mud squirt out from under the rail? Well, so it will from under the English roads.
4290. Will it do so on the permanent road now? It will in some places.
4291. Will it at Newtown? No, because it is now heavily ballasted; I will go in myself for all matters such as the increase of rails and ballasting of roads. I never objected to that.
4292. What was the weight of the rail in your time? Seventy-five-pound iron rail, but a good deal of road was afterwards laid with steel that was renewed.
4293. Suburban road was the same as the main road now, as far as the 75-lb. rails were concerned? Yes; I believe so.
4294. And you consider it safe for these tank engines to run on that rail? I never said that; they were only tank engines, and never went far beyond Sydney.
4295. How many years were these running? I cannot say; I cannot tell you.
4296. *Mr. Brown.*] You did not like them—they were running too long for you? No; I did not like them.
4297. *Mr. Fehon.*] You say that in America they have the sleepers placed more closely together;—have you ever been in America? No.
4298. Then you do not know this of your own knowledge? No; I do not know myself, but I have read it.
4299. Do you consider a T rail stronger than a double-headed rail? Yes; I say that a T rail is stronger laterally than a double-headed rail.
4300. Are you not a patentee of the hydra-headed rail? Yes.
4301. What became of it? You pulled it up before it was necessary; it was not pulled up on account of the chair, but because the sleeper was too weak for it. I admit, that although it was my own sleeper; but that rail never cracked, and a safer one you could not have.
4302. *Professor Warren.*] The deflection of the sleepers caused the rails to come together? Yes; it was through the outer end of the sleeper lifting.
4303. Suppose, Mr. Cowdery, that the gauge was altered from 4 feet 8½ inches to 4 feet 7½ inches? Oh, it was not affected that much—that is 1 inch. I think it was only affected about the sixth of an inch.
4304. But I am sure of it? But you did not find that.
4305. Yes I did; I measured it.
4306. *Mr. Fehon.*] Did you not find the American engines more pliable than the English? That depends whether they have bogie frames on them or not.
4307. The American engines have bogie frames on them? Some of the English have also.
4308. Is not the American engine pliable, and less likely to knock a road about than the English? My experience is that the American engine will knock the road about a great deal more, as I have stated before, and I know that has been the condition on the mountains; the men could not keep the road in repair.
4309. Speaking about broken rails, you have seen a good many broken and with cracks during the time that you had charge? Yes, latterly, a good many.
4310. And from what causes did they break? I do not know.
4311. Well, they did not break from the Baldwin engines running over them? I could not tell you whether any engine caused a fracture.
4312. But not the present Baldwin engines? I do not know anything about them. I kept away from them on purpose.
4313. *President.*] Why? Well, because I did not want to give evidence about them.
4314. *Mr. Broun.*] You did not keep out of it? No; so it appears.
4315. *Mr. Fehon.*] Mr. Cowdery, will you tell me how you would calculate a strain on a bridge? No, I will not; I shall not answer you a question like that.
4316. But can you? I suppose I can; I have done so before.
4317. *Mr. Hoyle.*] I think the question is insulting, and should not be put? (Witness:) No; I do not think Mr. Fehon means it in that way.
4318. *Mr. Fehon.*] No; of course I do not.
4319. *Witness.*] I could work it out for you; but I could not do it on the rough.
4320. Could you not tell us roughly? No, I do not intend to tell you roughly; if you want me to do it, I will do it.
4321. You have seen the rail—what do you think of it? I do not think it was a good one; it was crystalized. It is done. I dare say it has been a good one once.
4322. Do you not think it fit for the roads? Oh; I dare say it is as good as the ordinary run.
4323. What test should it take; how many feet falling per ton should that rail stand before breaking; I mean taking the drop test? I do not know how many tons that should stand.
4324. How many do you think; how many tons falling per foot should that rail stand before breaking? I do not know per foot.
4325. How many feet ought one ton fall before it broke this rail? I could not tell you from memory; I have not made any calculation.
4326. *Mr. Fehon.*] There is no calculation about it? My memory is not good enough for that.
4327. But your memory is good enough for many things? Yes, it is.
4328. *President.*] You would not care to commit yourself to an answer? No, I would not.
4329. When you were Engineer for Existing Lines did you make any recommendation for the quadruplication of the line from Sydney to Granville? Yes, certainly.
4330. It was recommended in your time? Yes.

4331.

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4331. Did you make any calculations? Yes, a rough calculation, simply a plan.
4332. What are you alluding to now, Mr. Hoyle?
4333. *Mr. Hoyle.*] I want to get to the platforms.
4334. (To Witness.) Did you also recommend the alteration of certain curves on the mountains? Yes, certainly, lots of them.
4335. If you knew at the time of the quadruplication of the line that certain platforms would have to be demolished in order to carry out such quadruplication, would you have put those platforms in gauge before quadruplicating the line I mean, and provided there was no danger to passing rolling stock? I would not consider it worth while.
4336. *Mr. Brown.*] I do not think anybody else would.
4337. *Mr. Fehon.*] There was a standard gauge fixed for the platforms and tunnels when you were in office. What was the gauge of the double-road tunnel—what was the width of it? I could not tell you from memory what the width of the tunnel was.
4338. Can you tell us what was the width of the single-road tunnel? I think it was about 15 feet in the widest place, but they have curved sides, and I do not know which part you would take.
4339. Can you tell me what was the height of the platform? I think it was 2 feet 9 inches.
4340. And what was the width from the centre of the road to the edge of the platform? Of what time are you speaking?
4341. Mr. Whitton's last standard gauge? I do not think he made a standard gauge; I think we made it for him. I think it was 2 feet 5 inches from the coping of the platform to the outside of the rail.
4342. What was it to the centre of the road? We never took it from the centre; it was from the inside of the nearest rail we took it.
4343. At all events the platform had to be 2 feet 9 inches high, and 5 feet from the centre of the road to the edge of the platform? Yes, I daresay that would not be far away; what I have stated was the way it was measured for Mr. Whitton's standard gauge. I can assure you that it was so, because I have put up many platforms for him.
4344. *Professor Warren.*] Taking it at 2½ feet?
4345. *Mr. Fehon.*] As a matter of fact it is 5 feet.
4346. *Mr. Brown.*] That is what we understood as the uniform gauge.
4347. *Mr. Fehon.*] Do you remember putting up the Rocky Ponds platform? No.
4348. Do you remember the North Menangle platform? Yes, I remember the latter; it was a short little platform, and it was put up before I was Engineer for Existing Lines.
4349. It was in your time the North Menangle platform was 5 feet 4¾ inches from the centre of the road and 2 feet 10¼ inches high? I did not put that up.
4350. Do you say that you did not put up the North Menangle one? No.
4351. Did you put up the Douglas Park platform? No.
4352. The Maldon platform? I do not know where it is.
4353. *Mr. Brown.*] Can you remember any you put up? Yes, Mittagong.
4354. *Mr. Fehon.*] Do you remember Galgong platform? No, I do not remember.
4355. I think we can give evidence to show that Mr. Cowdery put up all these platforms, and that they were out of gauge.
4356. *Mr. Brown.*] Perhaps the foot rule was not the same length as it is now.
4357. *Witness.*] There was never a platform put up without the drawings being made out and figured in.
4358. *Mr. Fehon.*] You did put up the Arncliff platform? No; Mr. Whitton did that.
4359. Did you alter the gauge of that? When the first Baldwin engines came out to this Colony we had to reduce some of the platforms to allow them to pass.
4360. Oh, you had to do that in your day? Yes; or in Mr. Mason's.
4361. How many did you alter to make room for these engines? Some of them we did not alter.
4362. But how many altogether? Not many.
4363. Thirty or forty? Not so many as that. We altered the roads in some places, and in some places I think we could scarcely have the 6 feet between them, which I do not say is the correct thing. We could not have a uniform gauge.
4364. *Professor Warren.*] Certainly, you could not have a uniform gauge, when you had to alter some platforms and not others? When these engines first came out they were to run only on the Western line, and we altered all the platforms there. Then again, a good deal depended upon whether they were on the curves, as the long vehicles made a great difference.
4365. And these Baldwins were not allowed to run on the Northern line you say? They were only required on the western lines.
4366. So that if the present Baldwins were required to run on the Northern and Southern lines, and since they are larger than the old Baldwins, the platforms on the Northern and Southern lines would require to be altered? Yes, certainly.
4367. And the platforms would have to be altered for the old Baldwins if they run on the Northern and Southern lines? Yes, I daresay they should. I do not see why they should not.
4368. *Mr. Hoyle.*] There are some of the witnesses here whom I have called—the drivers on some of the engines, and though it may perhaps be a serious inconvenience to the Department to have them remain down here to night, still for certain reasons I cannot call them this afternoon. I do not like to put the Commission to inconvenience, but for certain reasons I cannot call them now, and I would ask the Commission to allow their evidence to stand over till to-morrow.
4369. *Mr. Fehon.*] It is most inconvenient to keep these four drivers away. They are running on the same road, and it is a very serious for these men with their regular trains to drive and their regular duties to perform. They cannot go to Bathurst to night and return here by to-morrow.
4370. *President.*] But still Mr Hoyle might have some very strong reasons.
4371. *Mr. Hoyle.*] I have very strong reasons indeed.
4372. *President.*] I am quite sure of this that Mr. Hoyle would not ask for the postponement of this evidence unless he had some reason that appears very strong to himself. I do not for a moment suppose that he would willingly put the Department to inconvenience.
4373. *Mr. Brown.*] I think that on the other hand he has manifested throughout this inquiry a desire not to put the Department to any inconvenience.
4374. *Mr. Hoyle.*] I would not ask what I do but for very strong reasons indeed.

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4375. *President.*] You might consider the matter Mr. Hoyle whilst the next witness is under examination. Will he take long? Yes, I think he will, there are a great many questions I want to ask him

4376. However inconvenient it will be I cannot help that, and I do not think for one moment that Mr. Hoyle would willingly put the Department to any inconvenience, although as a matter of fact, I do not see how I can help it under any circumstances, but he has some strong reason you may depend upon it.

James Isaac Haycroft, being sworn, said:—

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4377. I am a civil engineer.

4378. *President.*] What are your qualifications. Are you a member of the Institute of Civil Engineers? I am a corporate member, I am also a Master in Engineering of the Queen's University, Ireland.

4379. Have you been connected with any railway service in the old country? Yes.

4380. Where is that, in Ireland or England? England.

4381. With what line? The Great Western, London, North-western, and the South-eastern.

4382. In what capacity? Well I was assistant to a firm of civil engineers. I was with Mr. Wells Owen, son of the chief engineer on the Great-western railway, and through his good offices I had introductions to the chief engineers on these various lines, and they gave me *carte blanche* to make inspections for myself.

4383. But have you been engaged upon any of these lines in the capacity of an engineer to a railway company? Yes, on the Hounslow and Metropolitan Railway and also upon a branch line to the Great Western Railway at Bridgewater.

4384. What was your duty on these lines? I was engaged in constructing the permanent ways on the Hounslow and Metropolitan Railway.

4385. *Professor Warren.*] Did I understand you to say that you were a member of the Institute of Civil Engineers? I am a corporate member.

4386. An associate member—it is usual to state that? It is a matter of taste.

4387. Yes, but people differ as to matters of taste.

4388. *Mr. Hoyle.*] You have had considerable experience on the English railways? Yes.

4389. On the English railways you have to take into consideration the strength of the rails? Yes.

4390. And when you are taking into consideration the strength of the rails do you not also take into consideration the weight of the engines that have to run along them? Not exactly the weight of the engines, but the weight on the driving-wheel.

4391. You also have had experience with regard to the difference in the sleepers? Yes.

4392. Do you know the weight of the Baldwin engines? Not personally, but I have heard the weight stated in the course of evidence.

4393. You have read the evidence that has been given before the Commission in the daily papers, I suppose? Yes, and I have heard some of it.

4394. You may have heard to-day if you have been in the room that the weight on the driving-wheels of the Baldwin passenger locomotive is 15 tons 6 cwt., and that the weight on the driving-wheels of the Baldwin Consolidation engines is 15 tons 9 cwt.? Yes.

4395. And that the passenger engine is to travel 40 miles an hour on a straight road and 25 miles an hour on curves, and that the Consolidation engine is limited to a speed of 18 miles an hour all round? Yes.

4396. I want to ask you to give us your opinion as a railway engineer as to the suitability or otherwise of our permanent ways with an iron rail weighing 75 lb. to the yard, and a steel weighing 71 lb. to the yard for these two classes of engines. I want to ask you whether taking the weights of these two rails into consideration, and taking into consideration also the weights of these engines on the parts named, do you consider that they may be run with safety over our roads? I can only give you an opinion with regard to the iron rail, which I have investigated, and that is, that the weight of a Baldwin engine upon it is excessive. I have not examined the steel rail, but judging from analogy I might be able to give an opinion.

4397. *President.*] What is the weight of the iron rail? Seventy-five pounds to the yard.

4398. And you say that the weight of the engine is excessive for that rail? Yes.

4399. *Mr. Hoyle.*] Would you kindly give the Commission the result of your investigation. You have had a sketch of a section of the rail, I believe? Yes, I have.

4400. And you have investigated the matter from that sketch? Yes, from the sketch supplied by the Department for Railway Construction; and though I am sure it has not been wilfully done, still the sketch is not to scale although it is full size. However, upon seeing that sketch I have come to certain conclusions which amount to this, that with the chairs 3 feet apart, or in other words, with the centre bearings of the rail 3 feet apart, the stress in the case of a Baldwin engine with 15 tons 9 cwt. on the driving-axle would amount to 5·18 tons per square inch, and with the chairs, 2 ft. 3 in. apart centres.

4401. *Professor Warren.*] Do you mean the sleepers? Not exactly the sleepers, which, of course, are approximately the same distance apart themselves, but the chairs placed in the centre of the sleepers. I say that, with the chairs 2 feet 3 inches apart in the case of a Baldwin engine with 15 tons 9 cwt. on the driving-axle, the stress on the fibres of the rail would equal 3·83 tons. Those may seem small figures to the non-professional mind, but when it is remembered that the working stress on a rail is much less than in any other kind of ironwork, it will be seen that they are by no means unimportant. It has been found from recent investigations by German scientists that ultimate strength of a structure such as a rail is 13·38 tons per square inch, and that the ultimate strength of steel is 21 tons per square inch. Adopting a factor of safety of 3, the allowable stress on an iron rail should not exceed 4·46 tons per square inch, and adopting a factor safety of 3, the allowable stress on a steel rail should not exceed 7 tons to the square inch. As a matter of fact, 3 is a rather low factor of safety for a rail. It should be increased to at least 4, due to the direct impact of the load on the rail, and if 4 is adopted as a factor of safety, the allowable stress in an iron rail then becomes 3¾ tons to a square inch, and the allowable stress in a case of a steel rail becomes 5·25 tons to a square inch.

4402. Might I ask how you arrive at these figures? In the ordinary way any professional man would arrive at them.

4403. Yes, but that is hardly definite enough. How did you, as a professional man, arrive at them? By investigating them.

4404. *President.*] How did you investigate them? By getting the maximum bending moment due to the load on the driving-axle.

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4405. *Professor Warren.*] Where is the maximum bending moment? On the centres between the chairs.
4406. Then I understand you to say that you took it just as if the rails were cut off at the chairs? No.
4407. Then how did you do it? I treated it as a continuous girder, and as a girder which was firmly fixed at the ends.
4408. You took it as a continuous girder, and yet you say that the maximum bending moment was at the centre between the chairs? No; I never said so.
4409. You said in the first instance that your maximum bending moment occurred between the chairs; now you say you took it as a continuous girder, and the maximum bending moment occurred elsewhere. Where was that? I forget for the moment, as I have not the investigations with me.
4410. But where would it occur? Over the piers.
4411. On what assumption is the continuous girder theory founded? On a principle which cannot exist in the case of sleepers—namely, that the supports are rigid and in one plane.
4412. You cannot adopt the continuous theory. In the case of a rail on sleepers you should take it as a beam firmly fixed at the ends, and even then you are arguing in favor of the heavy weight that comes on the rail.
4413. You say you took that as a close beam, and the maximum moment was in the centre? Yes; the span is divided into three parts. The central span was half the length, the load being supported midway between the chairs.
4414. Where are the points of inflexion? Nine inches. That would give 36 inches between the centres, and a central span of 18 inches. Then of course you allow, as it is usual in good practice, a percentage for the dynamic effect on the rail. I allow 33 per cent. Some engineers go as high as 50 per cent., but 33 per cent. is ample.
4415. That is to say, you first of all assume the rail is a fixed beam, and then you allow for your load by adding 33 per cent. to it, or in other words you increase your bending moment by 33 per cent.? No; get the stress due to the bending moment on a fixed beam, and add the percentage to that. That would be the course if it were a quiescent load, but the dynamic effect of a load is 33 per cent. more.
4416. And you consider that to be good practice? Yes; because that has been found to be the proper mode to design iron subject to treatment such as an iron rail or the lactice in a girder receives from a live load.
4417. Whose experiments are you quoting? I believe this is the opinion of Wohler, Weyrauch, and Bauschinger. I then investigated the effect of the engine in use before the Baldwin engines arrived. That engine belongs to the 265 class, weighs 63 tons 16 cwt., and has on the driving-wheel a weight of 13 tons 13 cwt. With chairs 3 ft. apart the stress caused by it on the fibres of the rail would equal 4·57 tons per square inch, and the same engine with chairs 2 ft. 3 in. apart would cause a stress on the fibres of the rail equal to 3·3 tons per square inch.
4418. *Mr. Fehon.*] Which engine is that? An engine belonging to the 265 class.
4419. Is that a Mogul engine? I do not know. It is called the Express, 265 class. I may say that I got these weights from the report of the Royal Commission on Bridges.
4420. If you are speaking of the Mogul engine you are quite wrong? It is what is known as the 265 class in the report of the Commission on Bridges. It has an exceptionally heavy load on the driving-axles considering the weight of the engine.
4421. *Professor Warren.*] Yes; that is right. It has a load of 13 tons 13 cwt. on the driving axles.
4422. *Witness.*] I found on investigating that engine that the stress on the rails amounted to 4·57 tons per square inch, with the chairs 3 feet apart, and that the same engine with chairs 2 feet 3 inches apart would cause a stress on the fibres of the rail equal to 3·3 tons per square inch. Then, with regard to the Consolidation goods engine, weighing 75 tons 3 cwt. 1 qr., and 9 tons 15 cwt. on the axle, I find that the stress in the fibres of the rail with chairs 3 feet apart equal to 3·27 tons per square inch, and with chairs 2 feet 3 inches apart centres, the stress would amount to 2·45 tons per square inch. One thing in an investigation of this sort which is bound to be taken into consideration is the fact that, although the primary investigation could be taken as between a maximum of 3 feet bearings, one sleeper may not be properly packed, and thus give no support to the engine, in which case the 3 feet bearings would be increased to a 6 foot bearing, and then if the Commission wished I could give them the stress with which a Baldwin engine and other engines would strain the rail. As a matter of fact, the strain would run very nearly to the ultimate strength of the iron.
4423. *Professor Warren.*] You mean that by doubling the span you double the strain? Yes; it is an allowable case.
4424. But do you consider that treating a rail as a fixed beam is fair? Yes; when it is the only way in which you could arrive at the strength of it—when you have to throw overboard the rigid theory of the continuous beam, and it is certainly in favour of the weight resting on the rail.
4425. You mean to say? That the strength is increased by that supposition. If there is an error it is on the safe side. I was going to say that in the case of the 63 ton engine, that if unsupported by one of the chairs as a result of one of the sleepers not being properly packed, the stress on the fibres of the iron would reach 9·15 tons per square inch. That is presuming the rail to be unsupported for a distance of 6 feet; but if the length of the unsupported rail equalled 4 feet 6 inches, the stress on the fibres would then reach 6·7 tons. In the case of the Consolidated goods engine No. 134, with 6 feet bearings, the stress on the rail would amount to 6·5 tons per square inch, and with 4 feet 6 inch bearings, the stress would equal 4·9 tons per square inch. Sir John Fowler's test for New South Wales double-headed rails, weighing 75 lb. per yard, are that a length of rail 4 feet 6 inches be placed on iron supports 3 feet 6 inches apart centres, and then subjected to three blows of 1 ton falling 12 feet, and that under this test it shall deflect not less than 6½ nor more than 7½ inches without signs of fracture.
4426. *Mr. Hoyle.*] Then having investigated the strength of the rail from very many scientific stand-points do you, Mr. Haycroft, consider that the rails are too light to carry the Baldwin engines? Well, I would not classify them as too light, I would rather classify them as not strong enough. If the 75 lb. iron rail were made of steel I should certainly not call it too light.
4427. Then do you consider that a 75 lb. iron rail is not sufficiently strong to carry these Baldwin engines? Yes; I do.
4428. That is the conclusion at which you have arrived after investigating the matter from the various scientific stand-points that you have alluded to? Yes.

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4429. I want to ask you a question now relative to bridges, I want to know whether you consider, taking into consideration the weights of the two different kinds of Baldwin engines, as already indicated, that the load per foot per ton run due to them would be safe over the Solitary Creek and Penrith bridges? Assuming certain facts, it would be unsafe, the assumption being that the bridges are in the same condition now as when their strength was investigated by Professor Warren for the Royal Commission on Bridges. According to the experiment then made by Professor Warren, unless the strength of the bridges has been increased to an even greater extent than that Commission stated would be necessary, they are too light for the Baldwin engines. I would like to qualify that by saying that because an engine goes 4,000 times across a bridge safely, it is not necessarily safe when it travels over it the four thousand and first time. We saw an instance of that recently in the case of the Monchestien bridge in Switzerland which, though badly designed, carried the traffic for several years, but ultimately collapsed without any warning, due undoubtedly to its not being strong enough when erected. I am perfectly certain, taking as facts the deductions brought to light by the Royal Commission on Bridges, that, unless steps be taken to increase its strength, the Baldwin engines running over the Solitary Creek bridge will sooner or later lead to a collapse.
4430. You may have investigated the Penrith bridge in the light of the facts adduced by the Royal Commission, and I would like you to give us your opinion of it, taking into consideration the report of the Commission and the weight of these engines? Well, the Penrith bridge was designed, and I believe is capable of carrying, with a few exceptions of rivets and bearing area of the web, a live load of 1¼ tons per foot run on each line of rails. The weight of the Baldwin engine however reaches 1·87 tons on each line of rail. That of course is very much in excess of the weight which the bridge is calculated to bear, and the only possible deduction is that the Penrith bridge is not sufficiently strong to bear the rolling load placed upon it by the Baldwin engines. The Baldwin engines place a strain of two-thirds of a ton more upon the bridge than was imposed by the test load which the members of the Bridge Commission considered it safe to carry. According to the evidence of the Commission the consolidation engines impose a stress of 14 tons on a bearing area of portion of web-plates. Whereas according to the Board of Trade Rules, 6⅔ tons strain is the outside strain which should be permitted.
4431. *Professor Warren.*] There are differences of opinion on the matter. A Committee was appointed by the Institute of Mechanical Engineers, and I have no doubt you have seen a report of that Committee, on the question of rivet joints. Do you think that, taking that report into consideration, 6⅔ tons is excessive on the bearing area? No, I consider it a limit.
4432. Well, supposing the stress was 8 tons on an iron rivet, do you consider that that would be excessive? It depends upon the class of treatment to which it is subjected; for instance, a rivet in a boiler should stand a greater strain than a rivet in a bridge.
4433. Taking the case of the Penrith bridge into consideration, do you consider that 8 tons is too high? Yes, in the case of any bridge I consider that 8 tons on the bearing area is too high.
4434. Are you not aware of the conclusion arrived at by the Committee appointed by the Institute of Mechanical Engineers was that the joints appeared not to be injured when the ultimate bearing pressure did not exceed 40 tons per square inch and in the case of steel 50 tons per square inch? I am not aware of it.
4435. Are you also aware of what Professor Unwin says in his text book, that he thinks too much has been made of this pressure on bearing area? I have seen his remarks quoted.
4436. And he quotes the report of the Committee appointed by the Institute of Mechanical Engineers to the effect that the joints appeared not to be injured when the ultimate bearing pressure did not exceed 40 tons per square inch in iron structures, and 50 tons per square inch in structures of steel. I am speaking of the ultimate stress of course? Oh yes, but you would have to adopt the old Board of Trade rule of reducing the working pressure down to 5 to get 8 tons on the bearing area. Of course it all depends on what the material is that the structure is made of.
4437. Have you worked out the bending moment of the Baldwin engines on the Penrith bridge? No, I have not, I have simply taken the fact that the report of the Royal Commission on Railway Bridges says that the bridge was constructed for the carrying of a live load of 1¼ tons per line of rails, whereas the test load is only 1·1. I may be right, or I may be wrong. The other point was that 1¼ tons per foot run induced the stress on the bearing area of the web plates of 14 tons, and on the rivets of 9·3 tons. In order to ensure the safety of the bridge, the Commission recommend that the ⅞-inch rivets be taken out for certain distances from the ends and 1-inch rivets substituted for them; also that the pressure on the bearing areas were larger than desirable. If that was necessary for such a small load, of course it is very much more necessary for a load such as is represented by a Baldwin engine. However unsafe the Penrith bridge may be, the Solitary Creek bridge, if in the condition it was in the year 1886, becomes now a matter for very serious consideration.
4438. What is the greatest stress you make in the Solitary bridge as the result of a Baldwin engine running over it? Treating it in the same way as you treated it on the Commission, I have found the stress on the centre of the booms to be approximately 8 tons per square inch. Whereas even under the Board of Trade Rules 5 tons is the limit and where the difference between the life load and the dead load is so marked, it should not exceed 4½ tons.
4438½. Do you think that, taking the stactical strength of the iron as 21 tons, that the breaking strength, allowing for the ratio between maximum and minimum stress, is equal to 14 tons? I really would not like to give any direct answer to that question, because, as a professional man, I object to giving anything in the nature of a guess.
4439. *Mr. Hoyle.*] With what firm did you serve your time? With B. B. Stoney, chief engineer, of the Port and Docks Board of Dublin, and celebrated as an authority on stresses. He is not a railway engineer, however, and all the railway experience I have had has been in England.
4440. Have you any knowledge of the distance which in England it is usual to place the sleepers apart? I find that the London and South-western Railway have a 82-lb. steel rail, with sleepers 2 feet 10 inches apart centres, the sleepers being the same size as those used in New South Wales, namely, 10 inches by 5 inches.
4441. *Mr. Brown.*] You said just now that you found that such was the case; do you mean that you found it from personal experience, or as the result of reading about it? Well, it was by refreshing my memory.
4442. It is not from personal experience, then? Yes; it is from personal knowledge of seven years ago, but I cannot be expected to carry all those details in my mind. The South-eastern Railway has a rail of

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of 82 lb. per yard, with a distance between the sleepers of 2 feet 8 inches. That is a double-headed rail. The North-eastern Railway has 82-lb. double-headed rails, with the sleepers placed at a distance of 2 feet 9 inches apart. A non-reversable rail is used by the Midland Railway. It is 85 lb. weight to the yard, and the sleepers are 3 feet apart. The London and North-western Railway also use bull-headed rails, and they are 84 lb. per yard, with a distance between the sleepers of 3 feet 1 inch. The Great Northern Railway is laid with bull-headed rails, weighing 82 lb. per yard, and the sleepers only 2 feet 8¼ inches apart. The Great Western Railway has 86 lb. bull-headed rails, with the sleepers 2 feet 9 inches apart, the sleepers in that case being 12 feet by 6 inches. The Metropolitan Railway is similarly constructed of bull-headed rails, 86 lb. to the yard, and sleepers 2 feet 9 inches apart.

4443. *President.*] But you have not been over all these railways, have you, Mr. Haycroft? I can give evidence from personal knowledge of the Great Western, the London and North-western, the South-eastern, and the Metropolitan.

4444. *Mr. Brown.*] Can you say that the rails that you have just referred to are the kind of rails they are laying now, or merely those are the kind of rails they were laying seven or eight years ago? They were laying them about seven or eight years ago, and if anything, they have increased their weight in the meantime.

4445. *President.*] Very well; you may continue, Mr. Hoyle.

4446. *Mr. Hoyle.*] Can you tell us whether these rails are laid only for the purpose of economy or to meet the strain of heavier classes of rolling stock, such as are being introduced of late years? Well, the strength of the rails has no doubt been adopted for the purpose of carrying additional weight, but the material in them is used from the point of economy. Steel is used, as being more economical than iron. The life of the steel rail might reach twenty-five years. The life of an ordinary iron rail, if it exceeds five years, it is a very good rail.

4447. That is speaking of English traffic, I suppose? Yes. I have no knowledge of colonial traffic at all.

4448. And I suppose the price of material will have something to do with that as well? Yes; steel rails were much dearer than iron rails, but economy is gained in the life of the rail.

4449. If you had to design a railway, and you had within your knowledge the fact that the Baldwin engines had to run upon the railway, would you consider it safe for these engines to run, or would you make a line with the 75-lb. iron rail? Certainly not. Not with sleepers anything over 2 feet apart. When I say sleepers, I mean chairs.

4450. Have you any experience of the weights on the driving-wheels of the engines in England? Well, I have done very little in that line. I have known cases on the Metropolitan railway in which the weight of the driving-axle has been 17½ tons, and I have heard it alluded to in the Institution as a remarkable instance of how people will dare to run abnormally heavy engines.

4451. Where did you get the knowledge with regard to the permanent way? In London. During my spare time I made it my business to study the permanent way, and that has enabled me to offer these opinions to the Commission.

4452. *Professor Warren.*] With reference to the weights on the driving-wheel, have you ever designed a railway bridge? Yes; several.

4453. And you use cross-girders in your bridges? Yes.

4454. And did you not consider the weights on the driving-wheels? In constructing a bridge you must consider the driving-wheels, because the strength of the cross-girders is regulated by the weight on the driving-wheels, and the stress of the main girders is regulated by the load per foot run. In the construction of branch lines in England, necessary information with regard to the strength of bridges and permanent way is always furnished by the company for which the branch runs, and by that means I have been made conversant with the weights on the driving-wheels allowed there.

4455. *Mr. Hoyle.*] Do you know whether the Board of Trade in England controls the strength of the bridges? Yes; they inspect them before they are opened for public traffic.

4456. Do you think, then, from the calculation of the Royal Commission on Bridges, that the Board of Trade would allow such an engine as the Baldwin engine to be used over the Solitary Creek bridge? It stands to reason that they would not, because its ultimate strength is 5 tons tension.

4457. *Professor Warren.*] Do you believe in the Board of Trade rules? I do not. I think they are not keeping up with the investigations of to-day in that respect.

4458. *Mr. Hoyle.*] Well, considering that the Board of Trade rules are out of date, let me ask you the question in this way. Do you consider that the Solitary Creek bridge is safe for the Baldwin engines to travel over? I am bound to believe that it is not. I am very sorry to have to do it, though.

4459. Can you tell us if it is the custom for the Board of Trade officers to examine all lines of railway before they are opened for traffic? It is absolutely necessary to get a certificate from the Board of Trade before you can open the lines. I have known the opening of lines delayed on that account.

4460. I have no further questions to ask at present. If additions have been made to the strength of the bridges, I should be glad for them to be submitted to the witness that I might obtain his professional opinion upon them.

4461. *President.*] You mean that supposing the Railway Commissioners say that these bridges were strengthened before these calculations were made you want to know in what respect they have been strengthened?

4462. *Professor Warren.*] Supposing Mr. Foxlee or Mr. Deane gave evidence would you be satisfied with that? ——

4463. *President.*] Assuming that Mr. Fehon supplies the information now, as Mr. Hoyle suggests, it might obviate the necessity of his giving, what in a court is called, evidence in reply.

4464. *Mr. Fehon.*] There will be no gainsaying the evidence that we shall submit. It will be taken from actual facts, and will not be the opinion of any man.

4465. *Professor Warren.*] I may say that Mr. Foxlee wrote to me to-day, saying that he was going to bring certain drawings of bridges—some that you asked for, Mr. Hoyle, and some that were asked for by the Commission.

4466. *Mr. Fehon.*] How long have you been in the Colony? Six years.

4467. How long have you been an associate member of the Institute of Civil Engineers? About two years. Would you like to know why it is such a short time?

4468. I do not ask you? Well, I would like to qualify the answer. The reason that I did not become an associate before that was that when I contemplated coming to Australia I was certainly not aware

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aware that they thought so much of the fact that a man was a member of the Institute, but when I arrived here I found to my surprise that they thought more of that Institution, in which the greatest number of duffers that I know in the profession are congregated than of the University Degree, which I hold one of the highest in the United Kingdom. Learning that such was the case I became a member, as I say, two years ago. As a matter of fact I could have been a member at least ten years previously.

4469. But you are not a member now? I am a corporate member now.

4470. An associate member? Yes; one and the same thing.

4471. What occupation do you follow now? I am borough engineer at Woollahra.

4472. That is why you got your associate membership, is it? No; it certainly is not.

4473. How is it you have taken so much trouble to work out the fractions and decimals—the weight of the Baldwin engines and the effect they would, in your opinion, produce upon the rails and bridges of the Colony. How is it you have taken so much interest in the Baldwin. You came here prepared with a great amount of scientific evidence? Yes, I was asked to come and give expert evidence upon it. If I had been asked by the Commissioners to do so I would have done the same.

4474. *Mr. Brown.*] And you do not come armed with a bow and arrow, do you? No.

4475. *Mr. Fehon.*] But still I do not understand what your qualifications as a railway engineer are? I explained how I had become conversant with the different railways of England through being in Mr. Wells-Owen's office. He was the son of Mr. George Owen, of the Great Western Railway. Work being slack for a few months, and, consequently, not being required in the office, I got *carte blanche* to go over nearly all the different lines, and I confined most of my time to observations concerning the permanent way.

4476. You have given evidence concerning the weights of the bull-headed rails that were used on some of the English lines six years ago.

4477. As a matter of fact were the bull-headed rails in use at that time? Yes; I put them down myself on the Hounslow and Metropolitan Railway over nine years ago.

4478. Those were the first that were put down? I think so.

4479. Do you know what the weights of the rails on the New South Wales railways are? I heard to-day that they were 75-lb. rails when iron and 71-lb. when steel.

4480. Would you be surprised to hear that there are 110 miles of 55-lb. rails? That is on the suburban line, I believe.

4481. At all events, you are aware of the fact that in America they are running much heavier engines on much lighter rails than those used by us in this colony? No; I am not aware of it.

4482. *President.*] You have heard of Dr. Williams? Yes.

4483. Is he not a very eminent man in his profession? Yes; he is accounted eminent by his profession.

4484. Well, that is really the only way in which any professional man is accounted eminent. His abilities are approved by the members of his profession? Yes, no doubt.

4485. Well, Dr. Williams is one of the firm of the Baldwin Company? Yes; I believe he is.

4486. You would imagine that he would know what the respective weights of the engines and the permanent way in this Colony are? He should have been able, from his experience, to form a very good opinion.

4487. *Mr. Fehon.*] Are you aware that the greater number of rails in America are iron rails? Yes; I know that the American practice is very dickey.

4488. Do you know how far the sleepers are placed apart in England? Well, they are placed at different intervals on different railways.

4489. No there is a standard distance for placing sleepers? I am not aware of the standard.

4490. I am referring to the Board of Trade standard? I do not swear it, although I am on my oath, but I am under the impression that the distance apart is 2 feet 9 inches on the Board of Trade standard.

4491. You will be surprised to hear that it is 3 feet, I suppose. How long should a 75 lb. iron rail last? It would depend altogether on the nature of the traffic.

4492. I understood you to say just now that it should last five years? I was speaking then as to how long it should last under ordinary traffic.

4493. What do you call ordinary traffic? Well, much more frequent than the traffic on the mountain lines?

4494. How long ought a 75-lb. rail to last, say, on the Western line at Tarana, for instance? If it was a good rail, I should not be surprised to hear that it lasted eight or ten years with a fair amount of traffic on it?

4495. Should it not last twenty years? It might.

4496. What makes an iron rail wear away? When the fibres begin to strip.

4497. So long as the top of the rail remains sound, you consider it a good rail? So long as the outer surface lasts, do you consider it a sound rail? If there is no other defect in it, I do.

4498. If there is no fracture in it? And no flaw.

4499. In England, is it not the custom to allow the head to be worn to a certain depth before the rail is taken up? Yes; 10 per cent. of the weight may be taken off the head and yet the rail is safe.

4500. Do you consider that a rail, which had lost only 1 lb. and a fraction per yard would, at home, be considered a safe rail? Undoubtedly, because the ultimate strength would not be reduced at all.

4501. Have you looked at that rail? You mean the rail that was broken in the Tarana accident;—yes; I have looked at it.

4502. Do you consider that a sound rail? Barring the flaw, it is a fair rail.

4503. That rail has only lost 1 lb. and a fraction to the yard. Do you consider it a safe rail? With the exception of that flaw it is a sound rail.

4504. I will ask you a question that I asked Mr. Cowdery, and that he did not answer. Perhaps you, as a practical engineer, might answer it. What drop-test should it stand; how many feet can you drop 1 ton, or how many tons should it stand dropped 1 foot? Before answering that question, I may say that that rail was never designed to stand a drop-test at all—it was designed to be subject to a bending test. It was designed by Sir John Fowler, and, as I have already stated, Sir John Fowler's tests for New South Wales double-headed rails, weighing 75 lb. per yard, are that the length of rail, 4 feet 6 inches, be placed on iron supports 3 feet 6 inches apart, centres, and then subjected to three blows of 1 ton falling 12 feet, and that under this test it shall deflect not less than 6½ inches, nor more than 7½ inches, without signs of fracture.

4505.

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4505. You say that that rail was designed by Sir John Fowler? I did not mean that particular rail. What I meant was that the double-headed 75-lb. rail was designed by Sir John Fowler, and that the test he applied to it was what I have just stated.
4506. Well, you, as a practical man, should be able to tell how many tons that rail should stand? It should stand at least between 15 or 16 tons falling a foot, or 15 or 16 foot tons without fracture. No man can tell me what weight would fracture it until he had tried the experiment.
4507. Not an ordinary rail like that? No; but then there are other tests that rails should be subjected to, and one of those is for the purpose of ascertaining its toughness.
4508. You say that steel rails are not used in many instances because they are dearer than iron? I am not aware of having said so.
4509. Do you know the relative value of steel and iron? No; I do not.
4510. *Mr. Brown.*] Are you quite certain that one is dearer than the other? Well, that is the impression that I gained when I made inquiries into the matter about six years ago. Of course, the market value of steel and iron may have greatly altered since then.
4511. There was a time, of course, when steel rails were dearer than iron rails, but that is not a fact now. Steel rails are really cheaper than iron rails? I am not surprised to hear it.
4512. *Mr. Fehon.*] You have not given us exactly what your railway experience has been. Would you kindly tell us how long you were in the employ of the various Railway Companies. I do not wish you to include the place at which you served your time? My length of time on the Hounslow and Metropolitan, which was the first railway I was employed upon professionally, was eight or nine months. During that time I was employed upon the extension from Ealing to Hounslow.
4513. What was your particular position there? I was one of the assistants to Mr. Wells-Owen, the Chief Engineer.
4514. And what other railways were you on in the old country? I laid out a line from Bridgewater to Highbury, on the London and South Western.
4515. And how long were you there? A matter of two months, I think; and during the greater part of six months I travelled over the other railways that I have referred to.
4516. And what other railways were you professionally connected with? Those are the only two that I have been connected with professionally, except as an observant professional man.
4517. Do you read the *Engineering News* of America? No; I cannot say that I do.
4518. Did you ever hear that the Baltimore and Ohio railway were using 86-lb. steel rails? No; I did not.
4519. *Mr. Brown.*] What process of deterioration goes on with an iron rail where the fibrous matter becomes crystallised, so as to destroy its value as a rail, and how long does it take before that is accomplished? My own opinion is that no such thing ever happens. I do not believe that the rolling load ever crystallises the fibre in a rail, no matter how long it is down. All that really happens is, judging from the texture of a rail after fracture, that a waste of the material itself takes place as the result of wear and tear. As to whether the interior of a rail appears granular or fibrous after fracture depends entirely upon the nature of the fracture itself, and in my opinion you cannot prove the crystallisation theory by it.
4520. Then you, as an engineer, state that the length of time the rail was down would not make any difference;—suppose that a rail had been laid in 1860, and that there had not been much traffic over it, is there any process known to engineering by which crystallisation, or some other process destructive to the fibrous or other nature of the rail, takes place, so as to make it in the course of time unfit for traffic? Atmospheric action is detrimental to the rail.
4521. *President.*] You mean rust? Yes.
4522. But that is not what Mr. Brown is alluding to. We all know that iron left in the open air will in the course of time become rusty. What Mr. Brown means is this: Does the structure of the rail alter? I am of opinion that it does not alter.
4523. So that, if you put rails down in 1860, and to-day those rails are still there, nothing have gone over them in the meantime—we all know of course that they would be tremendously rusty;—but would any other change have taken place? I cannot see that any other change would have taken place.
4524. *Professor Warren.*] But if they had been in use? If they had been in use in the case of a fibrous iron rail, they have stripped to some extent. They would tend to wear upon the bearing surface.
4525. *Mr. Brown.*] But, in your opinion, that is all? I am of opinion that there is no such thing as crystallisation due to working, and that a rolling load has no such effect upon a rail so as to change the material from fibres to crystals.
4526. *Professor Warren.*] You do not believe in cold crystallisation;—you do not believe in crystals being formed in metal as the result of rolling loads? No; I believe that crystals can be formed in manufacture, but not by use, if stressed within the safe limit.
4527. *Mr. Brown.*] I suppose the Commissioners will furnish some evidence with regard to that?
4528. *Witness.*] If you were to put 50 tons of rails down in a store for fifty years, they would be just as good, barring rust, at the end of that time as they are now.
4529. *President.*] Take this rail. It must have been bad from the very first, must it not? Yes; but there was an inherent flaw in it.
4530. *Professor Warren.*] Is it not a fact that Wöhler and Bauxhinger have found that if iron was tested by a stress repeated five million times, it might not break during those five million stresses but that it might break upon the next repetition of the test. How do you account for that? It is a scientific question that I would not like to express an opinion upon, but I know that an equally eminent man, Claxkton Fiddler, disagrees with them on that point. Personally I have not given the question a great amount of thought.
4531. But I want to know whether it is not a fact that you can strike a piece of iron a very great number of times without fracturing it and that when you strike it again it will break? Yes; it is a fact, but I will not attempt to explain the cause of it, it is attributed to fatigue.
4532. Leaving the crystallisation theory out altogether you say that iron is just as good after it has been in use a certain number of times as when it is new, allowing for ordinary wear and tear? Exactly; it will not deteriorate from age unless it is in use. That is to say the structure itself does not change is the result of use, provided the stress which it is subjected to does not exceed the safe limit.

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4533. Not a rail in use? A rail in use, making due allowance for wear and tear, is as good on the day it is taken up as it was on the day it was put down. By that I mean that the material of which the rail is composed is as good on the day it is taken up as on the day it was put down.
4534. *President.*] Then stuff that is bad now must have been bad always? Undoubtedly. Traffic will not improve it.
4535. *Mr. Hoyle.*] Do you think that a series of percussive blows on a rail would injure its strength? For instance, do you think that the jumping of a wheel would tend to weaken a rail? It undoubtedly tends to the increase of the stress of the fibres over and above the static stress. Every engineer makes allowance for dynamic action in the different members of the structure, more or less according to position, and of course more particularly so on a rail where dynamic action is direct in its incidence.
4536. And does not dynamic action reduce the strength of the rail? Undoubtedly it does. In calculating the strength of a rail the dynamic action should be taken into consideration.
4537. Well, do you think that the dynamic action has reduced the strength of that rail? I can hardly go to that length, but it is a foregone conclusion that a rail with a flaw in it would probably suffer most severely from dynamic action.
4538. Suppose that it had received a number of percussive blows on one side, and that we then turned it down and subjected it to the same process on the other side, do you not think that that would tend to weaken the rail? Undoubtedly, I should think so, as the stress would be reversed. That is the most severe treatment that you can possibly subject iron to—alternate stresses. It has been proved by latter-day investigation to be the most detrimental to the life of any material.
4539. Would not that alter the structure of the iron? Well, I do not hold that theory. I hold that it would affect the fracture, though by different means altogether. There is no means that I am aware of by which the structure of a rail can be ascertained. Whether it is granular or fibrous or any thing else, all depends upon the nature of the fracture to which it has been subjected.
4540. *Professor Warren.*] What about the fracture in the testing machine? That gives you a better chance of observing the material than a fracture by sudden impact.
4541. *Mr. Hoyle.*] If we were going to test that rail, ought we to do it by steady pressure or by the drop test? Steady pressure is one way, but the drop test is more in accordance with the treatment that it is subjected to in actual practice.
4542. *President.*] Then the drop test is the one that you would apply? Yes.

Alexander Duff, being sworn, said:—

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4542½. *President.*] How long have you been District Superintendent at Penrith? For three years.
4543. You have been there ever since the Baldwin engines have been running? Yes.
4544. Do they haul a greater load than was hauled by the ordinary heavy goods engines that you had previously. I am speaking of the most powerful goods engines that you had on the road before the Baldwin engines came to the Colony. I do not want to know anything about the light goods engines that you had on the road, but I want to know the difference in the load hauled by consolidation engines and the heaviest class of goods engines you had in the Colony before they arrived? The difference is 25 trucks as against 19. The Baldwin engines haul 25 trucks, and the heaviest of the old engines haul only 19.
4545. Then the Baldwin consolidation engine hauls 6 more trucks? Yes.
4546. I take it that you are referring to the goods load? Taking the true load right through.
4547. That is to say that one can haul 6 more trucks than the other? Yes.
4548. Computing the weight at 8 or 10 tons a truck, as the case may be, do you very often employ a push-up engine? In all cases.
4549. Why is that? It is a question of safety.
4550. But in what respect is it a question of safety? In the event of a breakaway going up the mountains.
4551. Would there be a danger of a breakaway in the draw-gear with such a load unattended by a shove-up engine. Supposing there was no engine shoving up behind, would there be a danger of the draw-gear breaking? Certainly, the push-up engine is there for that purpose.
4552. A breakaway would be a very serious matter if it occurred on the mountain gradient? Oh, undoubtedly.
4553. When you are sending your Baldwin passenger engines out, do you often have a pilot engine in front of them? No.
4554. Was there not a pilot engine last Thursday night? As a matter of fact, I was in the train myself, and I know there was a pilot engine.
4555. Can you tell me what load was on the train? No, I cannot; I was away from duty attending the inquest.
4556. Well, as a matter of fact, there were 16½ carriages on the train? I do not think they would employ a Pilot engine with a load of 16½ carriages.
4557. Do you consider they should have a pilot engine to assist in drawing that load? If they had, I think it must have been for some other reason.
4558. A Baldwin engine takes the mail train at night, does it not? Yes.
4559. Does she ever have a pilot? No.
4560. Does she ever have an engine shoving up behind? No.
4561. No assistance at all? No.
4562. About what speed per mile would they have to run between Penrith and Katoomba in order to keep her time-table time? Between 14 and 15 miles an hour.
4563. Do you know whether there have been many fractures of the draw-gear on the trains that the Baldwin engines have been hauling? Not particularly many.
4564. But I imagine that any breakage that did occur would have to be reported to you? Yes, in every case.
4565. Have you received many such reports? No.
4566. Can you say how many you have received? No; I cannot give you the number, but I can say that the percentage is no greater now than it was before the Baldwin engines were introduced into the mountain traffic.

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4567. Does that apply to the passenger or the goods stock? To the goods stock.
4568. You could not have a break-away with the passenger stock, could you, as it is fitted with the automatic break? No; not very well.
4569. But is the draw-gear ever broken in the passenger traffic? No; not to my knowledge.
4570. *Mr. Hoyle.*] Is the draw-gear very much stronger on the passenger than it is on the goods stock? We use the screw couplings.
4571. You do not use them with the goods stock? Not with goods stock, but we do with live stock.
4572. In what part of the draw-gear has the breakage generally occurred? That depends upon circumstances; you very seldom get the breakages alike; the breakage might occur on the rear of the train, or it might happen in the centre of the train, but it has happened very seldom in the front part of the train.
4573. And I suppose that jerks will account for all that? In many cases, no doubt.
4574. And did you find the breakages as numerous when the older engines were doing the hauling? I believe that they were greater six months ago than they are now.
4575. How long have the Baldwin engines been running? Not more than six months, I think.
4576. Can you give me a record of the breakages? Yes; we can supply you with that, I have no doubt.
4577. *Professor Warren.*] They have been supplied already, and are now with the Government Printer.
4578. When you were employing the most powerful engines you had in the service before the Baldwin engines, had you a shove-up engine then? Yes; previous to the present Commissioners taking office I ran more single trains over the mountains than we do to-day. We run them now—particularly double; very seldom single trains.
4579. But when you had a load of nineteen carriages, did you then employ a push-up engine? In what part of the journey are you speaking of?
4580. From Penrith to Katoomba? The utmost load that we should take previous to the introduction of the Baldwin engines was a load of fourteen carriages over that part of the line.
4581. Fourteen carriages without assistance? Yes; without assistance.
4582. And when you had a load of nineteen carriages you had assistance? Yes.
4583. Did you ever try to haul nineteen carriages without the assistance of another engine? Yes.
4584. Did you ever do it? Yes.
4585. Do you remember an occasion, some short time ago, that an engine known as the passengers express engine preceded the Baldwin engine with a load, and got stuck up on the mountains? Yes.
4586. And do you know what engine it was that was stuck up? I cannot speak from memory.
4587. And do you know what class it belonged to? She was one of the old class of engines, and I think that the load was about equal to nine carriages.
4588. Equal to nine carriages, and she got stuck up with it? I believe she did.
4589. Could you tell me what particular engine it was that got stuck up in that way? I could not tell you the number of the engine from memory.
4590. Could you tell us this: if the Baldwin engine could haul the load that they say she could, and she was able to take the additional train as we have been informed she did, why did you send the first engine at all with those nine carriages? She did not take the whole of the train on.
4591. The driver swore before this Commission that the train got in his way—I am referring to the driver of the Baldwin engine—and that he had to take the whole of it on.
4592. Why did you not put them on the Baldwin engine in the first instance? Because it was over the limit of the load laid down for the guidance of the officers.
4593. Is it not a fact that when you run engines to shove up the trains hauled by the Baldwin engines the engine used for shoving up comes back light? It all depends upon the need of the traffic.
4594. Is it a frequent occurrence for these engines to run back light? Yes.
4595. Of course, you know nothing about the engineering branch of your service at all? No; nothing.
4596. *Mr. Kehoe.*] Previous to the Baldwin engines running on the mountains with passenger trains, you invariably run the trains with two engines? Yes; it was the rule to do so, not the exception.
4597. The exception is to run one? Yes.
4598. And the two engines used to keep very bad time as compared to the good time kept by the one engine now? Yes; the one engine keeps very much better time than the two did.
4599. You were asked about the breaking of the draw-gear;—breaking of the draw-gear occurs with all engines, does it not? Undoubtedly.
4600. Has the draw-gear been very much strengthened by the Commissioners since they took office? Undoubtedly.
4601. Throughout the whole of the goods stock? Yes.
4602. You stated just now that twenty-five trucks was a load as against nineteen as the load of the old engines;—just think again of the particulars—consider whether you are right? Yes; I am thinking—a through load to Bathurst; but the load that we take from Penrith to Katoomba is twenty-two trucks as against fourteen—a much greater percentage.
4603. Twenty-five trucks against nineteen is like the ruling load;—but is it twenty-five or twenty-eight? It is twenty-eight. When I said twenty-five I was thinking of the number of trucks hauling when they contained live stock. Live stock trains are much heavier than goods trains.
4604. Is it your practice to assist all goods trains with a push-up engine? We do it for safety.
4605. And it has been the custom for years past? Yes.
4606. In fact since the Western road was opened? Yes.
4607. *Mr. Brown.*] So far as your knowledge goes, and your observation enables you to judge, you consider the Baldwin engines suitable to the New South Wales railways? Speaking from a traffic point of view?
4608. I say as far as your knowledge goes, and as far as your observation enables you to judge, do you consider the Baldwin engines suitable for the railways of New South Wales? I do.

WEDNESDAY,

WEDNESDAY, 11 *MAY*, 1892.

[*The Commission met in the Board-room, Colonial Secretary's Office, at 2 o'clock.*]

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

Jeremiah Tuite being sworn, said:—

Mr. J. Tuite. 4609. I am manager for Messrs. Proudfoot & Co.

11 May, 1892. 4610. *Mr. Hoyle.*] Previous to going on with the evidence of this witness I wish to make a request to the Commission. I find in the evidence given by Mr. Goodchap yesterday, that he made certain statements which reflect upon the professional ability of one of my witnesses—reflections which I consider are likely to do my witness, Mr. Midelton, serious injury in his profession. I wish to know if the Commission will allow Mr. Midelton to read, without comment, the minutes of his appointment to the position he occupied as Engineer, the letter of thanks he received from Mr. Goodchap during his absence from the position of Engineer, and the minutes upon his reinstatement. They will not take more than ten minutes or a quarter of an hour in reading, and it is a matter of very great importance to my witness that this matter should be cleared up.

4611. *Mr. Brown (for President).*] I do not see how we can go into a matter of that kind. In the inquiry yesterday, you asked a question of Mr. Goodchap with the full knowledge of the responsibilty attacking to it. I do not think that I can comply with your request; I have allowed you to make a statement here so that it may go into the report of our proceedings, and that will perhaps have the same effect as if Mr. Midelton were permitted to read the documents you have referred to.

4612. *Mr. Hoyle.*] I also wish to ask that the cost-book or order-book be produced by the Divisional Engineer of Newcastle, Mr. Halligan, dating from the 1st June, 1891, to the present.

4613. *Mr. Brown.*] You have no objection to furnish it, I presume, Mr. Fehon?

4614. *Mr. Fehon.*] Yes; I have a very strong objection.

4615. *Mr. Brown.*] What objection is it?

4616. *Mr. Fehon.*] The objection is to the cost-book. I do not know exactly what it would include.

4617. *Mr. Hoyle.*] I want it from the 1st June, 1891, up to the present?

4618. *Mr. Fehon.*] That would include the whole of the working of the railways during that period. That is to say, long before the Baldwin engines were thought of. If Mr. Hoyle wants any information with regard to any particular item, we shall be glad to furnish it to him.

4619. *Mr. Brown.*] What objection can there be to having the cost-book here for the use of Mr. Hoyle?

4620. *Mr. Hoyle.*] I want the cost and order-book from the 1st June, 1891, up to the present. I want the book for the use of the officers of the Commission to pick out certain information. I wish to point out what I want to them.

4621. *Mr. Brown* (to Mr. Fehon.)] I cannot see any objection with regard to its production. I know I had to supply a cartload of books myself before now for the purposes of inquiry.

4622. *Mr. Hoyle.*] I also want the casualty books since the Baldwin engines commenced to run, and the fitters' repair book to be produced for each district from the commencement of the running of the Baldwin engines, for similar purpose.

4623. *Mr. Brown.*] I suppose you have no objection, Mr. Fehon; as you have agreed to one I suppose you will agree to the other.

4624. *Mr. Fehon.*] It means obtaining the books from all parts of the line, wherever the Baldwin engines have been running.

4625. *Mr. Brown.*] Perhaps Mr. Hoyle will give the Commission some reason why these books should be produced.

4626. *Mr. Hoyle.*] My reason is this. I am not at all satisfied with the return up to the present. I may want it for purposes of verification and comparison.

4627. *Mr. Brown.*] You want it for the purpose of correction; you are not satisfied with the present return, you say.

4628. *Mr. Fehon.*] We shall produce the book and the officer who made the return, and the return shall be ratified by him; but at the same time I think it is a gross insult to us to say that we furnished the Commission with wrong returns. We furnished the Commission with these returns, and are prepared to take all responsibility in connection with them, and I think it is a gross insult to question our honour in this matter.

4629. *Mr. Hoyle.*] I do not question the honesty of the Commissioners, but I wish to have these books simply because I am not satisfied with the return I have seen.

4630. *Professor Warren.*] But there is another return, Mr. Hoyle, which perhaps you have not seen.

4631. *Mr. Hoyle.*] If there is another return I desire to have time to look into its contents. The return I saw was not complete.

4632. *Mr. Brown.*] Then you withdraw your request for all these books to be produced?

4633. *Mr. Hoyle.*] No; not for the cost-books.

4634. *Mr. Fehon.*] Will you specify what cost-books you want?

4635. *Mr. Brown.*] He says he wants them from the time of the importation of the Baldwin engines.

4636. *Mr. Hoyle.*] I want them from the 1st June, 1891, up to the present dates, the cost and order books; there may be more than one book.

4637. *Mr. Fehon.*] I cannot see how the production of these books bears on the inquiry. If Mr. Hoyle wants to make any inquiry, we will produce the man whom it concerns; but we object to hand our books over to Mr. Hoyle or Mr. Midelton, who seems to be the prime mover in this matter.

4637½. *Mr. Hoyle.*] I have before stated that Mr. Midelton or anyone else has had nothing to do in the investigation of this matter. I take the responsibility of my own actions in this or any other case.

4638. *Mr. Brown.*] You have no right to say that, Mr. Fehon.

4639. *Mr. Fehon.*] Well, they will be supplied here in the custody of the Commissioners, and you may see them yourself; they will be supplied in that way, but not to Mr. Midelton.

4640. *Mr. Hoyle* (to Witness).] I believe you are manager for Messrs. Proudfoot & Co.? Yes.

4641. Where are you employed? From the 92 to the 143, at the bottom points of Bathurst district.

4642. Have you been employed always in that district? Well, for about a month or six weeks, some eighteen months ago, I was working between Springwood and Bathurst. 4643.

Mr. J. Tuite. 11 May, 1892.

4643. Had you any other experience of the line before you became manager? Not on any other portion.
4644. How long have you been between the bottom points and Bathurst? About eighteen months.
4645. Have you carefully examined all portions of the road? Yes.
4646. Did you walk the road on foot or go on a tricycle? I walked.
4647. And you carefully examined the road? Yes.
4648. Were you on board the train on the night of the Tarana accident? Yes.
4649. Were you asked any questions by the police relative to the state of the road on the night of the accident? A policeman asked me to tell him what I knew about the accident.
4650. *Mr. Brown.*] We cannot have a question about the police.
4651. *Mr. Hoyle.*] Well, what is the state of the road between the bottom points and Bathurst? Some of it is in first-class order, and some inferior.
4652. Do you consider it safe for the Baldwin engines to run over the whole of the road? Well, portions of it are quite safe. Other portions I do not consider safe, taking the weight of the road into consideration. I do not say this with regard to the Baldwin engines only, but to other engines as well.
4653. *Mr. Brown.*] He says he does not confine himself to the Baldwin engines.
4654. *Mr. Hoyle.*] You do not consider the road in some places safe for the Baldwin or any engines? Portions I say.
4655. What portions? Different parts.
4656. In particular parts you say?
4657. *Professor Warren.*] Give us a list as far as you can say? Well, from the 114 miles 60 chains to the 124 miles; that is one part.
4658. That is on the Western line? Yes.
4659. *Mr. Hoyle.*] Do you know the stone bridge at Bowenfels? I have seen it.
4660. Do you know anything about it? I have seen flags and flagmen there to steady the train.
4661. Have there been many rails broken in your district between Bowenfels and Bathurst? I have seen two.
4662. When? One on the morning of the accident, and the other some months ago.
4663. Is that since the Baldwin engines have been running? Yes.
4664. *Professor Warren.*] When you spoke of one on the morning of the accident, you meant I presume the particular one that broke? Yes.
4665. *Mr. Hoyle.*] And you have seen one other besides that? Yes.
4666. What distance are the sleepers apart? They vary from 10½ inches, that is the joint sleeper, to 3 ft. 2 in., and 3 ft. 3 in. On curves they are not so far apart.
4667. *Mr. Brown.*] What are they in the curves? They are from 2ft. 5 in. to 2 ft. 7 in.
4668. There are some on the straight at 3 feet? Yes, and over 3 feet.
4669. *Mr. Hoyle.*] Do you consider the road is in a fit state at the place you have indicated for the Baldwin engine to travel over it at the rate of 30 miles an hour? Portions I consider are not safe.
4670. *Professor Warren.*] Those portions you have indicated? Yes, as far as I know. I was not employed to look after the road. I was employed to look after the interests of my employers.
4671. But you know this because you had to look after that section? I have seen it; I have been on the road.
4672. *Mr. Brown.*] That is, you know it from your own actual observation? Yes.
4673. *Mr. Hoyle.*] Do you know if the train slowed down anywhere else except at Bowenfels? Yes, at Tarana, at the 120 miles.
4674. *Professor Warren.*] That is the last of the Solitary Creek bridges? Yes; they call it the Solitary Creek.
4675. *Mr. Hoyle.*] Did you notice many chairs broken on the road? Yes, a good few.
4676. And many keys out? Yes. In hot weather an awful lot of keys come out, but in wet weather not so many, the damp swells the wood and holds the keys, but in hot weather the keys cannot help coming out very well.
4677. If the sleepers were properly packed and were kept in a rigid position, would that hold the keys in, or would they work out more if the sleepers were loose? If there was ballast on the outside of the road it would help to keep the keys in, but in any case in wet weather it would not be so bad, since the timber swells up, consequently the keys are not so liable to come out.
4678. Can you tell us whether the road between Sodwalls and Tarana has been lifted? Yes, it has all been lifted.
4679. Lifted and reballasted? It has been lifted on old ballast. The portions we have relaid between Sodwalls and Tarana have been lifted on new ballast. The only road we have lifted 80-lb. rails have been put down with new ballast, the others have been lifted on old ballast.
4680. Was the new ballast put on after the road had been lifted with the old ballast? Yes.
4681. Did you take the ballast from under the sleepers to lift the road? In some parts, but in other parts we had sufficient, there was no occasion for doing it.
4682. What do you know about the condition of the sleepers? The majority of the sleepers are very good. The ironbark ones we have taken out are nearly as good as the new ones we are putting down.
4683. How long have they been put down? I do not know. Perhaps twenty-one years. The chairs have worked into the sleepers and made them loose.
4684. Would the working into the sleepers make the chair loose? Yes.
4685. Are there straps placed between the side of the cutting and the end of the sleepers to keep the line in position? Yes.
4686. *Professor Warren.*] That is on the reversed curves? On a close radius curve, about 22, I think.
4687. *Mr. Hoyle.*] Do you think from the time you have been on the road that the Baldwin engines have knocked the road about much? Yes; I do. I do not mean to say that the 70-lb. rail, with the sleepers closer together, would not be able to carry heavier engines.
4688. If the sleepers were closer together it would make the road more rigid? Yes.
4689. Can you tell us what is the condition of the rails on the portion you have done at Sodwalls and beyond, and on the Tarana portion? Some are very fair and others are inferior.
4690. Did you notice any of them at the joints? Yes; they are all up and down, most of the rails are crippled, and no man could make a good road of it.

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4691. *Mr. Brown.*] You said just now that you did not specially refer to the Baldwin engines, what did you mean by that? There are Yankee engines which I consider almost as bad on the road as the Baldwins.
4692. And any other engines? The lighter engines I do not say anything about.
4693. Can you speak generally about the rolling-stock of New South Wales? Yes.
4694. And that includes it all? Yes.
4695. You say with regard to the whole of them, in what way do you explain that the road is unsafe? I consider the sleepers in some places too far apart, and a lot of the rails are crippled and cannot be made good.
4696. *Professor Warren.*] Do you refer to the iron rails, the 75-lb. to the yard? Yes.
4697. You say the road wants re-sleepering and new rails in certain places, and then it would be perfectly safe for ordinary practical work? Yes; I think so.
4698. *Mr. Brown.*] Would that be a heavy expenditure? I do not think it would.
4699. Is there anything now so far as the public is concerned to alarm them with regard to the traffic on the road; need the public be in any way apprehensive with regard to these roads. You must remember that you are giving evidence for the Commission with a large responsibility, and I now ask you if the road if safe, and whether there is any necessity to create any public alarm with regard to the state of the road? No; I do not think so.
4700. You are speaking for Mr. Proudfoot, and you are a practical man? I am not speaking for Mr. Proudfoot.
4701. But you have been under him, and he is a large railway contractor and understands his business, and you are speaking with a practical knowledge of the line, do you say now that the road is safe so far as the public are concerned, and they need not be under any apprehension with regard to them?
4702. *Professor Warren.*] The 114 miles 60 chains to the 124 miles is, I take it, mostly of iron rails? I believe there is a little steel rail.
4703. Do you consider that portion bad also? Yes; for the sleepers are wider apart.
4704. It is bad then because the sleepers are too widely spaced? Yes.
4705. And the rest of the road you say is bad because the rails are crippled, that is, practically worn out? Yes.
4706. Then they are bad for that reason, and also because the sleepers are too widely spaced? Yes.
4707. You say the engines still slow down over Tarana bridge? Yes.
4708. Do you know the reason for that. Tarana is the last of the bridges that are known as the Solitary Creek bridges. There are about six of them I think, and five of them are before you come to Tarana. Tarana is a double spanned bridge, but the others I think are single spanned. Do you know why they slow down there? Yes, they slow down at Bowenfels for about 4 or 5 miles an hour.
4709. Bowenfels is a stone bridge? Yes.
4710. Did you ever notice them slow down between any of the bridges between Bowenfels and Tarana? No, I cannot say that I have.
4711. So far as I know there is no difference between Tarana and the other bridges, they are all Solitary Creek bridges; you say you noticed broken chairs? That is on different portions of the line.
4712. You say you think the Baldwin engines knock the road about. Do you mean the Baldwin engines which were running on the road before the recent importations, you were not referring to the Baldwin engines shown in the photographs placed in this room? No, not particularly.
4713. You say they knock them about, and the other engines also knock them about? Yes.
4714. Do you think that if these sleepers were more closely spaced, and the iron rails were replaced with say, 71-lb. steel rails, there would be any danger? Not if they were properly lifted and ballasted, and the sleepers put closer together and the rails renewed. If that were done, I think the road should be competent to carry a heavier rolling stock than now.
4715. If the permanent-way were put into position, and the present rails replaced by heavier ones, you say the road would carry heavier engines than the Baldwin engines? Yes.
4716. *Mr. Fehon.*] Are you now in the employment of Mr. Proudfoot? Yes, sir.
4717. Are you working on the road now? No, I am looking after his plant at Tarana.
4718. You are not working on the road then? No.
4719. Your contract has been discontinued? So far as my part is concerned, I do not know with regard to others.
4720. What was your contract with the Commissioners? It was for re-laying and re-ballasting.
4721. And the Commissioners have stopped Mr. Proudfoot from relaying and reballasting? Yes.
4722. You say you have seen broken chairs; well, I suppose you have seen broken chairs whenever you were engaged on permanent-way works? It is the usual thing.
4723. Have you seen a larger proportion than is customary on most roads upon this one? Yes; I have seen as many as four chairs broken in a 21-foot length.
4724. Probably that is the result of an accident? I cannot say; but I have seen as many as four in one 21-foot length of rail.
4725. You say that the keys dropped out, and that they might be kept in with sufficient ballast; now is it customary to ballast the road in order to keep the keys in? No.
4726. Speaking of the spacing; will you tell the Commission what the spacing is that you have had to carry out under the Commission from centre to centre on the road you have relaid, what is the standard? From 10 inches to 2 feet 8 inches.
4727. 2 feet 7 inches you mean? Yes; 2 feet 7 inches.
4728. That is from 10 inches then to 2 feet 7 inches, and that is the maximum allowed in relaying; now with 2 feet 7 inch spacing, and a 71-lb. steel rail, or an 80-lb. iron rail, would you not consider that road secure? Yes.
4729. What rail have you been relaying with? 80-lb. rails.
4730. That is the rail they are supplying in all relaying? Yes.
4731. And for some time past; in fact, during the time you have been on the road? Yes.
4732. How long have you been on the road? About 18 months.
4733. And you are laying 80-lb. rails, and were doing so long before the Baldwin engines arrived here? Yes.

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4734. You say that the road gets knocked out of line by these engines, but I understand you also to say it is knocked about by all engines more or less; was the road knocked out as much last year by the Yankee engines as it is by the Baldwin's? No; do you mean at the end of last year?
4735. Yes; what is called the Mogul and the Scotch-Yankee engines? Yes, it was; but it was on account of our lifting the road with the old ballast, and there was not enough ballast to keep the road in repair; any engine would at that time I believe be liable to knock the road about.
4736. Would two engines coupled together hurt the road more than one heavy engine? No, I do not think it would.
4737. *Professor Warren.*] [*Producing a drawing of the old Consolidation engine.*] Did that engine knock the road about? Yes; if the road was not in good repair that engine would knock it about.
4738. Did you notice whether this engine knocked it about more than the present engine, the newly imported engine? I do not say it does.
4739. *Mr. Hoyle.*] Do you consider that, presuming the road had been properly ballasted with new ballast, the Baldwin engines would still have a tendency to knock the road about, that is, taking the sleepers as they are and not as they are going to be,—the width they are apart. Do you consider that the road would then have been perfectly safe for the Baldwin engine? With the same rails?
4740. Yes, with the same rails and the same sleepers? I have just said that I would not think them safe.
4741. *Mr Fehon.*] How many miles have the Commissioners relaid in your length? 14 miles, as near as I can remember.
4742. And you have relaid the worst portions of the road, and the inspectors and engineers have supervised the work.
4743. *Mr. Brown.*] I think that goes without saying; you would commence with the worst portion of course? (Witness) We simply did what we were told.

Alexander Ferrier Watson, being sworn, said:—

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4744. I am Divisional Engineer in the employment of the Railway Commissioners. I have been in the employment of the Railway Department for seven and a half years.
4745. *Mr. Hoyle.*] Will you kindly tell us where your district extends to? I had charge originally from Springwood to Bourke; I have now charge from Wallerawang to Bourke.
4746. Did you ever make any representations to the Commissioners that the road was being injured by the use of the Baldwin engines? No, sir.
4747. Are you sure about that? Quite sure.
4748. Did you make a report at all? Yes, I made a report on the effect on the road.
4749. And what was the effect on the road?—
4750. *Mr. Brown.*] Give it to us just as far as your memory serves; if you cannot remember the contents of the report, then probably the Commissioners will supply it to us.
4751. *Mr. Hoyle.*] Did you report that the effect of these engines was injurious? I reported that the road was being knocked a little out of line. Until it was reballasted, and when the ballast was put on it stopped that action.
4752. Do you consider the road from Wallerawang to Bathurst is now in a fit state to carry the Baldwin engines? Yes, sir, I do.
4753. You do? Yes.
4754. Do you know the strength of the bridges? The ultimate strength, do you mean?
4755. *Mr. Brown* (to Mr. Hoyle).] Tell him the weight of the engines passing over them. Do you know the weight of the Baldwin engines? Yes.
4756. The passenger engine is about 92 tons, and the consolidated goods engine from 97 to 98 tons? Yes, so I understand.
4757. Do you know the weight on the driving-wheels? On the passenger engine it is about 15 tons 6 cwt., and on the goods 15 tons 9 cwt.
4758. *Mr. Hoyle.*] Now, do you consider that with that weight on the driving-wheel that the whole of the road between Wallerawang and Bathurst is perfectly safe? Yes, I think it is safe.
4759. Can you tell us how the sleepers are placed on that section? On the iron road 3 feet 1 inch, and the joint sleepers are about 2 feet 4 inches apart generally speaking, on the curves they are closer.
4760. Can you tell us the distance from centre to centre of the sleepers on the curve and on the straight respectively? On the straight they are about 3 feet 1 inch, and on the curves they are about 2 feet 10 inches to 2 feet 8 inches. I mean from centre to centre.
4761. *Professor Warren.*] What is the distance of the joint sleepers on the curve? Two feet two inches.
4762. *Mr. Hoyle.*] Are you taking the centres? Yes.
4763. In what condition are the rails between the 117 miles and the 223 miles beyond Bathurst—do you know? There are various rails on that portion; there are iron double-headed, steel double-headed, and steel T rails on that length.
4764. *Mr. Brown.*] Generally, Mr. Hoyle wants to know the condition of the length? Steel rails are in first-class order; the iron rails are not in such good order.
4765. *Mr. Hoyle.*] Not in good order? Fair order.
4766. Do you know when the rails were made—I mean the iron rails? There are various brands—the Parkgate, and so on.
4767. Is it a fact that when the outer skin is worn you turn a great many of these rails? Yes, they are turned when they get too thin or flat, or when they bulge.
4768. What do you think would be the proportion of the weight lost by the wearing off from the rail—what proportion do you reckon would be worn off when it becomes necessary to turn a rail round? About 2 to 3 lbs. per yard.
4769. You then turn the rail over, and that process of decrease goes on upon the other side? Yes.
4770. Do you know if there have been many chairs broken between Tarana and Bathurst? Yes, sir; there have been many chairs broken.
4771. Have there been more since the Baldwin engines have been running? That is a hard question to answer, and could not be answered unless by counting the numbers. We have always found broken chairs on the road, and are continually changing them.
4772. Have you found more since the Baldwin engines have been running?— 4773.

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4773. *Mr. Brown.*] You can say generally what you think? Since the road was lifted I have found more.
4774. *Mr. Hoyle.*] Were you ever notified that the road where the accident happened was not in a fit state to run on and wanted repairs? No, sir.
4775. Have you received any complaints from your inspectors or gangers about the state of the road since the Baldwin engines commenced running? They all complain of the work.
4776. Since the Baldwin engines have been running? No; generally in the busy season.
4777. Have you received more complaints since the Baldwin engines have been running either from inspectors or gangers? No, I cannot say that I have.
4778. Did you ever make a request that this portion of the road should be relaid? Yes, sir, I have.
4779. Why? Because the sooner we put down steel rails the stronger and better our road will be.
4780. Do you mean in view of the weight of the rolling-stock, &c.? No, generally, to keep the road better for general traffic. It is not on account of the Baldwin engines.
4781. When was that request made? When we started relaying, about September or October, 1890.
4782. Is it a fact that new materials were laid along the line for that portion? Yes, sir, they were laid along a portion of the road.
4783. That is the portion where the accident occurred? Yes, there were some rails laid along there.
4784. And why were they removed? Because a programme of the amount of work to be done was curtailed.
4785. Do you know why?
4786. *Mr. Brown.*] He cannot tell you. I suppose it was want of money.
4787. *Mr. Fehon.*] Yes, sir.
4788. *Mr. Hoyle.*] Has not a portion of that road been lifted and packed with new ballast within the last twelve months? Yes, a good deal of it.
4789. Which portions? From September and October, 1890, up to date, we have relaid and repacked with new ballast 13½ miles between Wallerawang and Tarana.
4790. When the road was packed between Wallerawang and Tarana with old ballast, did you expect the road to stand then? Yes; we expected it to stand, but being lifted it would take a little time to consolidate again. We lifted the old road on top of the old ballast, and it requires consolidating and boxing up with new ballast.
4791. *Mr. Brown.*] That is the case with every road? Yes, sir.
4792. Have you found many broken fish-plates on your length of road lately? Yes, sir.
4793. Did you find many before the Baldwin engines commenced to run? They were not reported specially. We did find broken fish-plates.
4794. How many rails have been broken in your division within the last nine months? Nine months—do you mean broken across in two pieces?
4795. Either broken or fractured in any way—cracked? Yes; we had a good many.
4796. Since the Baldwin engines commenced to run? Yes, and before.
4797. Did you find the proportion any greater since the Baldwin engines commenced to run? We found more fractured rails because the road has been lifted, which shows us more of the defects—because the road is raised and all the defects are visible.
4798. Then it could not be safe if sunk into the old ballast.
4799. One of your witnesses told us that in one case it almost took a microscope to see a fracture.
4800. *Mr. Hoyle.*] Do you think, taking the road between Tarana and Bathurst, that it would be perfectly safe for a passenger engine to run on that road at a pace of 40 miles an hour?
4801. *Mr. Fehon.*] Where?
4802. *Mr. Hoyle.*] Between Wallerawang and Bathurst. I want to know if there are portions of this road between these points that it would be safe to run the Baldwin passenger engine over at a speed of over 40 miles an hour? Yes; I should think it would be safe on the long straights.
4803. You think it would be perfectly safe with the sleepers placed as they are, and with your knowledge of the condition of some of the rails? Yes; I think so.
4804. *Professor Warren.*] On the straight portions you say? Yes.
4805. What about the curves? The speed must be limited round the curves.
4806. How much? To 28 miles an hour.
4807. Then you could run round a 10-chain curve with perfect safety on this road at 20 miles an hour? I have only one 10-chain curve, and that is laid with steel. The next smallest curve I have is a 12-chain radius.
4808. Well, say a 12-chain curve at 28 miles an hour—do you think that would be safe? Yes; I think so.
4809. *Mr. Fehon.*] The speed is 25 miles an hour round the curves, and not 28 miles.
4810. *Mr. Brown.*] The witness says that it is 28 miles an hour, and that is what the question was based on.
4811. *Mr. Hoyle.*] Well, say 25 miles an hour—do you think it would be perfectly safe to take that curve at that rate? Yes, sir. The reason I said 28 miles an hour was on account of the super-elevation of the rail which is made to suit.
4812. Do you consider it safe to run any of these engines over the bridges of your district at this rate? Not at a high rate of speed.
4813. Have any of the bridges in your district been strengthened? Was the Solitary Creek bridge strengthened? That is an iron bridge; that has not been strengthened.
4814. And the wooden bridges? Some of them; we have strengthened small flood-openings.
4815. But have they been strengthened since you have been in that district? No, not generally speaking. I have put some little additions to the bridges, but I have not strengthened them all generally.
4816. Have you used the slow-down notice to any of the drivers passing over the road between Bathurst Wallerawang? Yes; over the bridges.
4817. And not over any portion of the road? No, except where lifting or relaying.
4818. I mean, you know, slow over the bridges; and, except where you state it is unsafe, you travel on the road at a high rate of speed? Yes.
4819. Do you consider that if we had bad wet weather on the mountains that these engines would still be safe to run at the speed indicated on portions of the road between Wallerawang and Bathurst? Yes, sir, because the ballast has been added to.

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4820. Are there portions where you have recently had no new ballast, where they have not been ballasted recently? Yes.
4821. Would it be safe on those portions? Yes; between Kelso and Bathurst there has been no ballast.
4822. How long is it since the order has been issued to slow down over the bridges? Seven or eight months ago.
4823. Are there any portions of the road in your district where it is in a worse state than that portion where the accident occurred? Yes, I think so.
4824. What portion is that? Between the 121 miles and 18 chains and the 124 miles.
4825. And would it be perfectly safe for these engines to run over these portions at 30 miles an hour? Yes, I think so; it is a question of worn rails, and the rails are very much worn.
4826. Were you on board the train when the accident happened? No, I was not.
4827. Can you tell us whether there has been a rail broken between the scene of the accident and Tarana since the accident occurred—any broken rail? Not actually broken across; there have been rails found, by careful examination, having little flaws in them.
4828. Cracks? Yes; cracks, fractures.
4829. But not actually broken across? No.
4830. Are you not now renewing with iron rails many of the old rails between Tarana station and the scene of the accident; are you not now taking out a number of rails and putting others in their place? Yes, sir; we have been doing that every day both before and after the accident.
4831. Have you had any extra men on besides the usual gang on the road lately? Yes; I have put on temporary men to assist the fettlers with extra work.
4832. Have they ever complained to you since the Baldwin engines commenced to run that the work was too great, and they found it difficult to keep the road in a proper condition? They say that a great deal of time is taken up changing rails and keys and chairs both before and since.
4833. But have you more complaints since than before these engines commenced to run? I cannot say; it has been a general complaint for the last five or six years. Men brought from the Western line, where the T rails are used, have found the work so hard that they have complained.
4834. *Mr. Brown.*] Do you consider, from what you know of the Baldwin engines, that they are suitable for the permanent-way of the railways of New South Wales? Certainly, sir.
4835. *Professor Warren.*] You say that the engines slow down over certain bridges;—did you receive instructions from the guard of that, or was it due to reports made to you? I did it on my own responsibility.
4836. What speed did the engines run over the Solitary Creek bridges? They run over five bridges 15 miles an hour, but on one bridge the speed is limited to 10 miles—that is at Tarana.
4837. Do you consider them to be safe with the trains travelling at those speeds? I do.
4838. I suppose you base your opinion on what you actually know of the bridges? Yes; I tested them for deflection.
4839. And what did you infer from the test;—the deflection produced by a heavy engine, what does it tell you? I noticed a marked difference between a low speed of 20 miles an hour and a high speed of 40 miles an hour.
4840. And how did your infer the safety or otherwise of the bridge from these deflections? We found that the cross-girders deflected more than the main ones.
4841. Do you consider then that the cross-girders are weak and the main girders strong enough;—what, in fact, is the weak point? The cross-girders.
4842. You consider the main girders are fairly strong? Yes; fairly strong. That is my opinion.
4843. What do you consider to be a safe stress on a bridge of 60-foot span, loaded with an ordinary engine—a bridge such as the Solitary bridge? I think it should not be strained more than 5 tons to the square inch of tension.
4844. Do you know what the strain is in the case of the Solitary Creek bridges? No; I have not worked it out.
4845. What is the good of giving an opinion if you have not worked it out? I give it from the deflection.
4846. Can you infer the stress from the deflection? You can infer the stability of the bridge.
4847. The stability of the bridge differs from the strength, and the strength differs from the stiffness;—what do you infer? That the bridge is not stiff enough.
4848. Yes, that is very true; you did not work out what must have been the stress on bridges in consequence of that deflection? No; I think that was worked out by yourself and another gentleman on the Royal Commission held with regard to bridges some years ago, and you then made certain recommendations to strengthen these bridges.
4849. You remember that; then I will quote from that report the total load on the Solitary Creek bridges; it is 6·75 tons per square inch in tension;—would you consider that bridge to be strong enough? The load should not be more than 5 tons.
4850. Well, the Baldwin Consolidation engines weigh more than the Baldwin engines used in this particular case, and therefore, if it was not safe for the ordinary Consolidation engine, would you not consider it less safe with a greater load of the newly-imported engines? Yes, sir; but does it not depend upon the base covered?
4851. The bridge is 60-foot span, and you have the base of the Baldwin engine; you can get one Baldwin engine on that bridge, and you can only get one old Mogul, so that the bridges, if unsafe for the lighter engines, are still more unsafe for the heavier? But you do not limit the speed for the lighter.
4852. So then you think the speed has got something to do with it? Yes; and the deflection which you get on the bridge, and the load you use, and the engine which you use.
4853. Can you tell us what engine you used in making your test? Yes; it was the new Baldwin passenger engine.
4854. It produced what deflection? Well, the records are all in the Sydney office, they are not with me, and I have not seen them for months since. It is a long time ago, and I could not give it to you from memory. I should prefer to refer to the cards themselves.
4855. Do you know about what the deflection would be, was it about half an inch? I think it was about five-eighths.
4856. And what speed was that? Well, we made the engine stand on the bridge first, and then I ran her over at 30 miles an hour, and increased to 40 miles, I made the man go as hard as he could.

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4857. Did it make much difference? Yes. The deflection was so great and the vibration so much that I wish no other engine to go over at that speed.
4858. Did it deflect an inch? I cannot say exactly.
4859. However, an inch is a great difference? Yes.
4860. The stress as stated in the Report to the Commission is 6·75 tons;—well, now, the total load on the bridge was 2·26 tons per foot;—with the Consolidation it is 2·76 tons per foot;—it is merely a question of arithmetic, and it produces 8·24 tons, now is that safe? Was that with the engines standing, or going at a high speed.
4861. It merely takes the load itself, it does not mean that the engines run at a high rate of speed;—now is it safe with 8 tons? It may be safe, but I should like to see the bridge stiffened and strengthened.
4862. If you say it is safe, I must ask you some more questions, the ratio of the standing load to the running load is as ·76 to 2·76;—when the live load goes on from the Baldwin engine the ratio rises from ·76 to 2·76, what would be the breaking strength of iron with a number of repetitions, assuming that it would take 21 tons with the stress first applied, what would it take when applied under these conditions for ten or twelve years;—from ·76 to 2·76 would be about 16 tons, the iron would stand say 21 tons, when first put down would it stand more than 16 tons under these conditions for breaking? It depends upon the quality of the iron.
4863. Take it at 21 tons at a fair average, you know perfectly well that the strength of the bar is determined by the manner in which it is loaded;—if it has always a certain steady stress on it it may stand say 21 tons, what would it stand if it varies from ·76 to 2·76 that is about the range? It would stand something less than that.
4864. About 16 tons do you think;—well, assume it to be 16 tons, what average of safety have you? For a steady load it ought to be a quarter. I should say they were considerably strained, but I would not positively say they are unsafe.
4865. Have you ever heard of a bridge being strained so much even in America, which still stood up? These bridges are built on the skew, therefore they are a little stiffer.
4866. But you get five-eighths deflection? Yes.
4867. I do not think you are far out, because I know what it goes with the others, you say means have been taken to strengthen these bridges, you know what they are? My chief engineer, Mr. Foxlee, has the matter in hand. I do not know how far it is in hand, but I believe there are plans got out for the strengthening of these bridges.
4868. Now, with regard to the iron and steel rails on this length, you admit that there are many broken rails from time to time, and broken chairs;—with sleepers 3 feet each apart on the straight, and with steel rails 71 lb. per yard, do you consider they are safe to carry a Baldwin engine—passenger or consolidation engine? Do you mean the double-headed steel rails.
4869. We have it in evidence that the rails are 71 steel and 75-lb. iron? I have always considered the rails to be 75 lb. per yard, and we have a few miles of double-headed steel rails.
4870. What do they weigh per yard? They were considered to be about the same weight as the iron rail, there are 3 miles of the double-headed rails.
4871. Are they the oldest? No, the oldest are T rails. We have 71-lb. T rails beyond Bathurst.
4872. You have all sorts of rail sections in this length, and I take it you have some of the double-headed iron and double-headed steel rails? Between Wallerawang and Bathurst we have double-headed steel, in the west we have steel T rails.
4873. And these weigh about 71 lb. per yard, do you consider the Baldwin engines safe with the double-headed iron, double-headed steel and T rails on the line? Yes; taking into consideration the curves, and if you do not travel too fast on the rails they will carry you.
4874. *Mr. Fehon.*] You say that the road is a good deal knocked about? Yes; I mentioned that in my report.
4875. Because it was not properly ballasted? Yes,
4876. And since it has been lifted and reballasted you have got rid of that complaint? Yes.
4877. Did you not write to Mr. Foxlee that you found the Baldwin engines were running as easily as any other engines on the road? Yes; and I think they go remarkably evenly on some parts of the roads.
4878. When sleepering a curve what is your custom, a curve over 15-chains radius, and a curve under, when it is over how many additional sleepers do you put in in? For a 15-chain curve you would put in one additional sleeper, and under fifteen you put in ten sleepers to a 24-foot rail.
4879. What do you put in when it is under fifteen? You put in an additional sleeper in 15 chains, and under we put in one additional sleeper.
4880. Under 15 chains you put in two additional sleepers? Yes.
4881. Do you know the English custom of putting in sleepers? I have not had any practice in the English custom.
4882. You say that the broken chairs and fish-plates were the result of the road being lifted? Yes; a great deal.
4883. And that it was not due to any particular class of traffic running over it? It was due to continual traffic, such as heavy wool trains running over it.
4884. You say it would be more likely to break a fish-plate or a chair on a newly made road? Yes, sir.
4885. *Mr. Hoyle.*] You said you had some double-headed steel rails on some portion of the road, do you know the weight of those rails? No, I do not.
4886. Are you a member of the Institute of Civil Engineers? No, I have not that distinction.
4887. Are there any men in your portion of the district now being started to relay the line? Yes, sir.
4888. Have you received any orders from head-quarters that gangs of men are to be put on to relay any portion of your district? Yes, sir I have. From 114 miles 60 chains and carried on.
4889. You say that you sent in a report about the state of the road since the Baldwin engines began running, do you know if that report is in existence? Yes, I think it is.
4890. *Mr. Brown.*] How can he tell you that?
4891. *Mr Hoyle.*] I should like to have the report put in.
4892. *Mr Brown.*] Well you can have it if the Railway Commissioners can find it.

Henry

Henry H. Park recalled :—

Mr. H. H. Park. 1 May, 1892.

4892½. *Mr. Hoyle.*] Is it a fact that on one of the engines now in your district there was a wheel with a broken tyre? No, not exactly, not a wheel of the engine.
4893. Is there a broken tyre in any of the tender wheels? There has been one, but it has been replaced by another tyre.
4894. Can you tell us when or where it was broken? I cannot; the number, I believe, was 485.
4895. Is it a tender or an engine wheel? It is the tyre on the left leading wheel of the tender.
4896. Is it a bad break? It is broken right through.
4897. Is there anything else the matter with the wheels of the engine, is there a loose tyre on any of the wheels? There is one showing signs of being a little loose when it is hot, but when cool it is quite sound by sounding it with a hammer, it shows signs of being loose when it is hot.
4898. You say it has been evidently loose? Yes.
4899. What wheel is that? It is on the engine 485 on the second leading wheel.
4900. Have you had any tubes leaking in any other engines since you were here last, was there any leaking in No. 485? I cannot say from memory.
4901. Can you tell us whether one engine broke down on the 1st May, and returned from Langton with reversing-gear carried away? On the 1st May?
4902. Yes, did an engine break down since you were here last, from the reversing-gear giving way? I cannot call it to mind.
4903 Are there any of the engines in your district cutting into the boxes or with the connecting rod point out of gear? I do not think there are in my district.
4904. Are there any more engines in your district with loose tyres? No.
4905. Or loose wheels? None that I am aware of.
4906. The only one you know of, apparently, is the loose tyre on the engine wheel when it is hot, and the tyre on the tender wheel? Yes.
4907. *Mr. Brown.*] How many engines come into your shed? Eleven in my district, and two from Bathurst.
4908. Since that time, in the matter of the tyre, is the only thing of importance that has occurred with regard to these engines? Yes.
4909. Is it not a dangerous thing for a tyre to break? Most decidedly it is.
4910. And is it not dangerous to have a tyre loose on the wheel? Well, that is according to how loose it is.
4911. *Professor Warren.*] Do you consider the second tyre that is working loose to be dangerous? No, I do not say that I would stop the engine at once for it.
4912. *Mr. Hoyle.*] Will this engine now be allowed to go out with the tyre loose? Yes.
4913. You do not consider it sufficiently dangerous to keep it in? No; I say I would not stop it from running.
4914. How is it fastened? With bolts.
4915. *Professor Warren.*] Would it tend to any accident? No, sir.
4916. *Mr. Hoyle.*] Do you know if any of the engines gave any trouble through the tubes leaking? I could tell you one if I looked at my note-book. [*Referring to note-book*] No. 502.
4917. Is anything the matter with No. 485? Not that I am aware of.
4918. No. 488? Not that I am aware of, more than ordinary repairs.
4919. Can you tell us whether the mail has been running to time since the accident? The up or down mail?
4920. The up mail? I cannot answer that question.
4921. It does not come in your department? Yes, it does; but it is a Bathurst engine, and is not run by me.
4922. If they do not run to time would it be reported? There is a note made in the book, but it is reported back to Bathurst, to their inspector.
4923. *Mr. Fehon.*] Have you ever noticed that the tyre on any other engine wheel would become loose from excessive braking down the Mountains? Yes, sir; I have known many.
4924. And this is not exceptional? No, sir.
4925. Have you reported this loose tyre? No, sir; I did not consider it of sufficient importance to report, as it is at present.
4926. Can you tell us, then, how Mr. Hoyle has got this information about a trifling thing, so small that you did not consider it worth reporting?
4927. *Mr. Brown.*] Ask him something easy?
4928. *Witness.*] I do not know; I know that he did not obtain it from me.
4929. *Mr. Fehon.*] Are you related to Mr. Midelton? No.
4930. *Mr. Midelton.*] Mr. Fehon knows perfectly well that I have no relatives in Australia.

George Gasgoigne, being sworn said :—

Mr. G. Gasgoigne. 11 May, 1892.

4931. I am an engine driver stationed at Penrith, sometimes I drive to Sydney, and sometimes to Bathurst. I have been in the Government service for twelve years and six months stationed at Penrith. I have been driving for seven years, and was firing five years before that.
4932. *Mr. Hoyle.*] Have you driven the Baldwin engines? Yes, every class of them, except the passenger Baldwin. The old goods Baldwin, and the new goods Baldwin I have driven.
4933. Had you any trouble with these engines? I have had a little; they have been a little short of steam sometimes, but nothing extra.
4934. Can you tell us this, is there any special class of coal kept at Penrith for these Baldwin engines? Yes.
4935. And are other classes of engines allowed to use this special class of coal? Oh, no.
4936. You said just now that you had some trouble with the steam—what caused that? We mostly reported it through inferior coal.
4937. Do you know what it was in the Baldwin engines that made you use a special coal? No.
4938. Is it only kept for the passenger engines? I believe it is kept as far as I am informed for the goods engines, that carries the mail train to Katoomba.

Mr. G. Gasgoigne. 11 May, 1892.

4939. Had you any leaking tubes in the engines you were driving? Yes, I have.
4940. Have you had any breakage on reversing or brake gear? I have had the brake-gear give way.
4941. Why? I think it is too light.
4942. Was it through rough handling? The guard never complained to me about using the gear roughly.
4943. Were you ever reported for using it roughly? No, I think it was through bad rolling and bad welding. I know for a fact there were bad welds.
4944. Did any of the engines run hot? Yes, I had a great deal of trouble with No. 491. The engine was running hot before I got her.
4945. What wheels were running hot? The trailers and leading bogies, the right bogie especially. I was asked once to leave this engine in Bathurst, but I asked to have her for another trip, to try and get her round, and I found I was successful. I found the boss of the wheel was cutting into the boxes very badly, and I used artificial means to enable the oil to drop between the boss and the wheel, and so put a face on the wheel boss, and so with a little skill I got the engine to run very passably, she was very bad when I first took her in hand. It appears that the first trip she ran from Sydney this was caused.
4946. Was this the bogie wheel which was renewed? I do not think it was renewed, or if so it has been renewed since, but I do not know.
4947. Had you ever any trouble with the feeders and injectors? Yes, I found that the flange of the leading tender wheel shut the water off and I complained to my inspector about this. There is a stop-lock which is at the back of the leading tender wheel, and in the curves of the flange of the wheel touches it so as to shut the water off. There is no doubt about that.
4948. Did you find that these engines consumed much coal? There is no doubt that they consumed a great deal of fuel, because they haul such a very large load.
4949. Did you have an engine to push up behind? Generally.
4950. Do you know whether that engine brings another load back to Penrith or comes back light? Well, I have pushed up and I have come back light.
4951. Did you generally come back lighter? Sometimes at Glenbrook they pick up a part of the load left by the Baldwin engines or other engines, thrown off there. I saw many light engines. The last time I was at Katoomba I came back with a light engine.
4952. Did you think the tender strong enough to carry water? Well the tender is on a little slope, and the plates were loose on the top of the tender. I have found there were several rivets beginning to leak, and when the tender is full of water you would see the plates heave up and down with the weight of the water.
4953. *Professor Warren.*] Do you mean that they will buckle? Yes; but when the water gets a certain distance down there is no harm done, and if you have filled the tender right up with water then the plates buckle. It is the weight of the water through the tender being sloping. You will see the plates rock and buckle.
4954. *Mr. Hoyle.*] Do you think that the strength of the piston with the brake gear is strong enough? I never gave it any consideration. I never had any trouble with the brake.
4955. Did you find the wheels moved loose on their axles? I was told that they had been found by the fitter to move as much as 2 inches. That fitters name was Wilshire.
4956. Is that serious? Well it is not very pleasant.
4957. Did you find with these engines that they rolled much? If you go into the curves at any pace they do.
4958. You say you have been a driver for seven years? Yes.
4959. And have run over the Western road with all classes of engines, except 447 class. Well, do you consider, in all the experience you have had, that it would be safe, say on a 12 chain curve, to run these engines at 25 miles an hour? I should not like to do it.
4960. Would you do it? No.
4961. Why? Because I do not think it safe.
4962. *Mr. Fehon.*] His engine is only allowed to run at the rate of 18 miles an hour.
4963. *Mr. Hoyle.*] Well, would you take a curve at 18 miles an hour? Well, I have not done so and I would not like to. They are rough enough at a steady pace. They are a good driving engine on a straight road, and they are not so bad in the curves if you are going at all steadily, but if you come into the curves at a good pace they give you a nasty chuck.
4964. Then you must go very steadily into the curve less you be thrown off? Well, I do not know that they would throw you off, but I think it would be detrimental to the engine, the boss of the wheel touches the box and starts it to heat with the pressure put on the boss.
4965. You have had some experience of driving over the road before the Baldwin engines came here, what did you drive at that time? The old Baldwin, the 131 class.
4966. That is known as the original consolidation engine? Yes; and I fired on that class for four years.
4967. When travelling a driver can feel the road can he not? Yes, to a certain extent.
4968. Do you find that you feel the road more now than before you drove the new Baldwin engines? Well, it is pretty rough.
4969. Do you consider it worse now than before? I think that the greater portion of the old road that has not been relaid is worse, actually worse than it was before.
4970. Do you know whether the engine is severe on the draw-gear? Well, I can say that there is more broken draw-gear since the new engine came than before. I was driving for some seven years and I never had a broken draw-hook before these engines came, but since then I have found that I am not more infallible than any other men.
4971. Have you had much draw-gear broken? I think I have had seven hooks.
4972. Was that on the engine or trucks? On the trucks. On the engine I have had one because I had the engine coupled in front.
4973. Oh, you had one on the engine? Yes; from Clarence to Bell. I had a load of thirty-one of coal and two brake vans.
4974. Do you consider it safe on the draw-gear to haul such a load as that? I thought it was too much. I once came into Sydney on a deputation from the drivers *re* hauling loads on the mountains; the drivers thought that they were dangerous, and I was sent to represent the drivers *re* the heavy loads, that must be nearly two years ago.

Mr. G. Gargoigue. 11 May, 1892.

4975. Would you prefer to drive one of these engines to the Scotch Yankee? No; I would rather drive the Scotch Yankee.
4976. Did you find a tendency in the Baldwin engines to throw you off the foot-plate in taking the curves? Yes. I think they have a tendency that way, they are so high for one thing.
4977. Have you ever heard the drivers complain about these engines; those who have driven them? Yes.
4978. Do you know any of the men who have thus complained? I have heard Driver Elliott say he hopes he will never go on them again, and he has driven both classes, and when starting work about a fortnight ago I met a fireman and he said, "I am glad I am off them, and hope I will not go on them again."
4979. Why? They consider they are heavier, and they are not so healthy as the other engines.
4980. What do you mean by healthy? They are so hot, and then you have so very little room.
4981. *Professor Warren.*] You did not like the arrangement on the side; in fact, you would rather stand in front, with your hand on the regulator? It is not like the old Baldwin; there is more room in them. I refer to the 131 class. I never wish to drive a better engine than the old Baldwins; you can stand safer to your work, and see where you are going.
4982. Did you drive them like the ordinary engine? No; there is a regulator just like that on the new ones; but they are not so high up, and you can stand in the front to your work.
4983. They do not have such high boilers as the new ones, you mean? No; the new ones have a very high boiler, and you have to stand at the side, and if you put your head out at the window you are liable to be knocked out by some obstruction if you are driving in the dark.
4984. Then it would not be safe to stand on the side in the dark? It would not be a safe place to sit in the window.
4985. *Mr. Hoyle.*] Do you think it would be safe in the case of a passing engine? Well, I have seen an order not to lean out on the cabs, as it is dangerous to do so.
4986. Is there any notice to that effect on the engines? Well, I believe there is.
4987. Is there on your engine? I am not driving one now.
4988. Have you ever driven the engine that takes the mail—have you ever driven the Western mail train? I have not driven the mail from Penrith to Katoomba with one of the Baldwin engines.
4989. Can you tell us what was the greatest load that you have taken from Penrith to Katoomba without assistance of other engines? Do you mean the new ones?
4990. Yes? I am sure I cannot remember just now.
4991. *Professor Warren.*] Does it matter?
4992. *Mr. Hoyle.*] Perhaps not.
4993. *Professor Warren.*] We are mostly concerned with the other ones—with the new Baldwins.
4994. *Witness.*] I can tell you the largest load I have hauled with the new ones on the mountains.
4995. *Professor Warren.*] You may as well do that.
4996. *Mr. Hoyle.*] Give us the heaviest load that you have hauled with them? I think it was 219 tons, including two break-vans.
4997. Two hundred and nineteen tons, exclusive of the engine? Yes.
4998. *Professor Warren.*] What speed can you travel at with such a load as that? I can hardly say exactly.
4999. Well, tell us approximately—as near as you can; did you go at the rate of 4 miles an hour? A little faster, but not much.
5000. Could you do 10 miles an hour up the 1 in 30 with that load? No, not up the 1 in 30.
5001. Well, how fast did you go up that incline, do you think? At the rate of about 6 miles an hour.
5002. *Mr. Hoyle.*] Then you had two break-vans? Yes.
5003. Had you any assistance? No other engine was attached to the train. They were all heavy waggons; it was a train of ballast that I lifted at Emu Plains.
5004. What is the biggest load that you have hauled with the other engines? I cannot say.
5005. What do you think? I took 219 tons (nineteen trucks and one large break-van) up Dargen's with a pressure of 110 lb. to the square inch; that was up an incline of 1 in 33.
5006. And what is the pressure in the Baldwins? 160 lb.
5007. *Professor Warren.*] The pressure, I take it, has been reduced in the old engines; you do not run them at the pressure you used to? No; they have been very good engines, but they have worn down a little.
5008. *Mr. Hoyle.*] Do you think you could take 200 tons up Dargen's with one of the old Baldwin engines with 160 lb. to the square inch pressure? Well, I cannot say, Mr. Hoyle. I never tried. If the 200 tons were put on, I daresay I would have a good try.
5009. *Professor Warren.*] If you burst the cylinder? Well, it would be more likely to burst the boiler.
5010. *Mr. Nelson.*] Do not all engines run hot during the few first weeks? Yes, the majority of them do.
5011. The Baldwin engines have not run hot yet more than engines ordinarily do, I presume? Well, I had a great deal of trouble with this engine in the first instance. Every man had reported her before I put her right.
5012. At all events you did put her right? Well, I believe that I did.
5013. And she is right now? I am not using her now.
5014. Have you ever driven Vulcan? Yes.
5015. Are they not very rough? Yes.
5016. Are they very much rougher than the Baldwins? Yes, they are very rough.
5017. Do not all engines shake you up when you enter a curve? Yes, they do more or less.
5018. Nothing unusual in it? Too usual sometimes.
5019. At all events you would rather ride round a curve on the Baldwin engine than on the Vulcan at the same speed? I would.
5020. Did you report to anybody that the feed-cocks touched the wheel? I did.
5021. Who did you report it to? To Inspector Stuart, and I also entered it in the repair book.
5022. Have you reported that you considered the plates of the tender weak? No; I have called my superior officer's attention to it, and he has ordered no fireman to break lumps of coal on the tender.
5023. Mr. Park is the only one to whom you have mentioned it? Yes; he is my superior officer at Penrith.
5024. *Professor Warren.*] You say these engines will not steam well? Well, those engines do not steam well.

Mr. G. Gasgoigne. 11 May, 1892.

5025. But you found that when you got better coal that you had no trouble from want of steam? I never had the better coal. It was always Eskbank coal that I used. I was never allowed the better coal, although I believe the engines would have steamed better with it.
5026. What coal would you have preferred to Eskbank coal? I should have liked Helensburgh coal. There is no doubt about that, if I could have got it.
5027. *Mr. Fehon.*] That is South Coast coal? Yes, sir.
5028. *Professor Warren.*] You think the Baldwin engines knocked the road about more than any other engines? I think they are too heavy for the road, and I think they ought not to go so quickly on the curves. From what I read, I see that the Board of Trade are issuing orders on the English railways of 10-chain curves shall be check-railed, and that the speed running over them must not exceed 12 miles an hour.
5029. But from your own experience? I find that they are uncomfortable to ride upon; they throw you.
5030. You broke one hook on the engine? Yes; I only had one break on the engine.
5031. Well, we have nothing to do with anything but hooks on the engines? There was only one engine-hook broken.
5032. *President.*] And that you put down to the other engine? Yes; it was the front hook.
5033. You say that you would rather drive the Scotch Yankee? I would.
5034. Is it because it is a more comfortable engine to ride upon? Well, they are very good engines to work—that is the Dubbs engines; but the principal part of my time has been on the 131 class and the 304 class—the old Baldwin engines.
5035. You do not dislike that class? I like them very much. I believe that the Baldwin Company can build as good an engine as any English firm can.
5036. You say that it is not healthy on the new Baldwins;—you mean that they are too hot? Yes; they are too hot.
5037. *Mr. Fehon.*] Have not push-up engines been used for all trains for many years past? Yes.
5038. That is nothing unusual? Oh, no. As long as I have been at Penrith they have been used.
5039. You spoke of breaking the coal on the tender;—is there not an order saying that that must not be done on any American engine? I believe that Mr. Park has issued an order to that effect.

William Nield, being sworn in, said:—

Mr. W. Nield. 11 May, 1892.

5040. I an engine-driver on the N.S.W. Government railways.
5041. *President.*] How long have you been driving? About 19 years.
5042. Always in the service of the N.S.W. Government? Yes; I have been about 30 years in the Railway service.
5043. What were you doing before you began to drive? I was in the traffic department for a short time. I have been a gatekeeper; I have been looking after points at Newcastle, and driving a pump; also cleaning and firing.
5044. Where have you been driving lately? For about three years I have been driving between Sydney and Newcastle.
5045. *Mr. Brown.*] And I can add that he is a very good driver.
5046. *Mr. Hoyle.*] Did you drive the engine of which the axle broke coming into the Sydney yard? Yes.
5047. That was on the Northern express, was it not? Yes.
5048. You have driven these American engines on the Northern line? I have driven only one of the new Baldwin engines—that is 457—one of the new Baldwin passenger engines.
5049. Will you kindly tell the President and the gentlemen of the Commission your experience of these engines? I like the engine very well; it did the work very easily; but, of course, after the axle broke, we had nothing more to do with it. I think that is putting the thing in a nutshell, and all I can say about it is, that the engine did the work very well, and so I liked it up to that time.
5050. What was your speed? Our average speed was 34 miles an hour, but we would have to do between 40 and 50 miles sometimes in order to keep up that average, on account of easing down for staves and the going up banks. We have to go slowly up the banks, although we do not care much for them, because they take the banks very fast. But then, as I said before, we have to pick up staves, and sometimes we miss one, and in that case we have to stop in order to pick it up.
5051. Then you were allowed to make up time? According to the rule it is not allowable, but we have to get into time if we can, and we prefer to make up time than to be always writing to explain why we were late.
5052. Have you had any experience of driving on the mountains? I ran for a short time to Katoomba with the tourists on Saturdays.
5053. Not with the Baldwin engines? No; with the Dubbs 'American' or Scotch Yankee.
5054. Do you consider that after your experience of 19 years driving, and your 30 years' experience on the railways, and your experience for I do not know how many years on the foot-plate? About 23 years, a little more or less.
5055. Well, then, after all that experience, what is your opinion about the weight of these engines on the road;—do you consider them too heavy for the permanent-way on which they run? I think not on the Northern line.
5056. *Mr. Fehon.*] I submit that this is a question of a permanent-way, and an engine-driver can scarcely give an opinion as to the road over which he runs.
5057. *Witness.*] I merely answer that question because I was not afraid to take the engine over that road again.
5058. *Mr. Hoyle.*] What weight of rail is there of steel or iron? I do not know.
5059. As a matter of fact, you have not thought anything about the permanent-way at all? No; I never do anything to it—I simply report to some of the men if I notice a slack bit on the road.
5060. But would you consider it safe to run the Baldwin engine over a 75-lb. iron rail?
5061. *Mr. Brown.*] Is that a fair question? He tells you that he has driven this engine over this road, and that he was satisfied with it, and he further says that he is prepared to drive it over again if the Commissioners desire it.
5062. *Mr. Hoyle.*] Was this a clean break in the axle, or was it twisted off?

Mr. W. Neild. 11 May, 1892.

5063. *Mr. Fehon.*] I submit that this question is quite unnecessary, the Railway Commissioners have already admitted that the axles were defective, and that they have been replaced at the cost of the Baldwin Company.
5064. *President.*] Yes, that is admitted, and I do not see what object Mr. Hoyle can have in putting the question.
5065. *Mr. Hoyle.*] Yes, but it has been said that many of the failures have been the fault of the drivers, and that want of lubrication caused the axles to twist off.
5066. *Witness.*] I was sent for by Mr. Thow on the Saturday following the day the axle broke, to tell me that the Commissioners considered it was my fault, and that has not been recalled to my knowledge.
5067. *Mr. Hoyle.*] Did you attend to the lubrication? Yes.
5068. You saw that there was plenty of lubrication? Yes, I attended to it as well as a driver possibly could.
5069. What did you do? As soon as I smelt the hot bearing I stopped, got down, and oiled it, and packed the keep with greasy waste, and went ahead and oiled it whilst running.
5070. Then you did everything that you possibly could? I did as much as though the engines were my own.
5071. *Mr. Fehon.*] You have not been blamed at all for the wheel coming off.
5072–3. *President* (to Witness).] You hear that you have not been blamed for the wheel coming off, and you are not blamed for it now;—does that satisfy you? But it has not been recalled before as far as I know.
5074. It is recalled publicly now at all events. You were satisfied with the engine before the axle broke, were you not? Yes, I expressed myself to some of the officers in that way, and I think to Mr. Stanger. I said that I liked the engine very well.
5075. Did it take curves well? Yes.
5076. *Professor Warren.*] Did it roll? No, not much.
5077. It did not shake you when you took a curve? No; of course we always slow the engine for our own convenience, and for the purpose of keeping the axle-boxes cool.
5078. *President.*] Is there room to work? I have never tried the goods engine.
5079. But in the passenger engine is there? There is room enough for me.
5080. You are a bigger man than the man who said just now that there was not room enough for him.
5081. *Mr. Hoyle.*] That was a goods engine and that would make all the difference.
5082. *Mr. Brown.*] I suppose that the best of drivers must get a hot box occasionally? Oh, well I have seen one on every class of engine I have had.
5083. *Mr. Hoyle.*] Do you drive the Scotch Yankee? Yes.
5084. Were they good engines? Yes, very good running engines.
5085. Did you find that they took a curve well? Yes, but I think they are not quite as easy in taking a curve as the Baldwin engines are; at the same time I like them very well.
5086. They do not throw you off the engine or anything of that sort? No.
5087. *Mr. Fehon.*] I may say that nobody has ever said anything about throwing people off with those engines; indeed, the Commissioners have already said that they considered them very good engines indeed. I might say that the remark I made just now in reference to driver Neild applies to all the drivers. The Commissioners do not blame anyone in connection with what occurred with the Baldwin engines. We think that they took all care, and under the circumstances did the best they could.

Alexander Page, being sworn, said:—

Mr. A. Page. 11 May, 1892.

5088. I am an engine-driver on the New South Wales Government railways.
5089. *President.*] How long have you been driving? About eight or nine years.
5090. How long have you been in the railway service? About ten years.
5091. What were you before you were driving? Firing and cleaning.
5092. Were you ever engaged on the railway of any other country? Yes. I was working on the railway of New Zealand before I came here.
5093. *Mr. Hoyle.*] You drive one of the Baldwin engines, do you not, Mr. Page? I do.
5094. Have you driven more than one? Yes.
5095. Driving these Baldwin engines, have you ever had any trouble with them? Yes, I have.
5096. In what respect have you had trouble with them? The boxes running hot.
5097. Have you had any trouble with the reversing gear? Yes, with the reversing gear breaking. I have also had a valve buckle break, and have also had some trouble with the engines slipping.
5098. What engine do you drive—a goods or passenger engine? One of the consolidation goods engines.
5099. What failures have you had with the reversing gear? The back pin connecting the reversing gear broke. That was caused by a very bad flaw in it.
5100. In other words by inferior material? A fracture half-way through.
5101. When you have been driving your engine, going the round after you had finished your journey, have you examined the wheels minutely, and if so, have you ever found any defects in them? I have.
5102. What were they? Broken spokes and a loose tyre.
5103. What engine was that? The broken spokes were on No. 447, and the loose tire was on No. 496.
5104. Did you report that loose tyre? Yes.
5105. And the broken spokes? Yes.
5106. And is that engine still running? Engine No. 496 is still running.
5107. No. 496 you say was the one with the loose tyre? Yes.
5108. How did you discover that it was loose? After doing a considerable amount of braking the tyre got hot through the brake being applied to the wheels.
5109. And did the tyre then break, or did it merely show that it was loose? It showed that it was loose through the grease coming out between the tyre and the rim when it was heated. When cold no indication of it was perceptible.
5110. Have you ever had any break down with this engine other than the mishaps you spoke of? Any break down—the question is what do you call a break down.
5111. Has anything else gone wrong with the engine? I have had a brake lever draw out of the break shoe.

5112.

Mr. A. Page. 11 May, 1892.

5112. Have you ever driven any of the passenger Baldwin engines? Three times. One of the engines was 447, that I have just referred to.
5113. Is the 447 a passenger engine? Yes.
5114. *Mr. Brown.*] Is that the one that had the broken spokes? Yes; that is the one that had the broken spokes.
5115. *Mr. Hoyle.*] Did the spokes appear to be broken or only cracked? Well, so far as I could judge by looking at it, the spokes appeared to be broken.
5116. Would you be likely to notice it more when the wheel is hot through the application of the brake—I mean, would the apparent fracture open out then at all? Do you mean the broken spokes?
5117. Yes? Well, I cannot say with this engine whether they would or not, because I had very little braking to do with her. I only ran her once, so that I cannot say.
5118. Did you report that? I did.
5119. And is she still running? Yes; I believe she is still running.
5120. Have you ever had, in hauling your loads, any breaking of the draw-gear? No.
5121. I do not mean breaking of draw-gear on the trucks;—I only refer to the breaking of draw-gear on the engine? I have never had any broken draw-gear on either the trucks or the engine.
5122. Do you run your engine carefully? Yes; to the best of my ability.
5123. You say of No. 447 that there are what appear to you to be broken spokes in the wheel, and that there is a loose tire on engine No. 496? Yes.
5124. *Mr. Fehon.*] You speak about a loose tire;—might not that be after a considerable amount of breaking down the incline? Yes.
5125. Does not that occur in most engines? Yes.
5126. *Mr. Hoyle.*] What, loose tires? I have often seen indications of loose tires on almost all classes of engines that I have driven.
5127. *Mr. Fehon.*] You have mentioned several small breakages that have occurred in these engines;—have you ever driven any new engines before? No.
5128. Are you aware, from your own experience, that these things occur more or less to all new engines during the first month or two of their running? I have seen new engines running hot often before.
5129. *Mr. Brown.*] To whom have you reported these broken spokes? I reported them in the fitters' repair book.
5130. Were they badly broken, or only apparently broken? I would not be certain—they appeared to be broken.
5131. How many of them? Twelve out of fourteen.
5132. Where they fractured right across? Some of them appeared to be fractured right across.
5133. Was this on the driving wheel or the back wheel? The left leading wheel, I think.
5134. *Mr. Fehon.*] Did you sound them? No; I did not.
5135. Would not that have been a better test than looking at them? It probably would; but I reported them for the purpose of being examined.
5136. What did your fitter say;—did not he say that they were broken? I did not hear him pass any remark upon them, but he must have been satisfied that they were all right, because the engine was sent out again.
5137. What is the name of the fitter to whom you reported the matter? Richard Heathcote.
5138. Where is he? In Bathurst.
5139. Has there been any accident to that engine of any kind? Not that I am aware of.
5140. *Professor Warren.*] You say you have been troubled with slipping? Yes.
5141. Very often? Yes; frequently.
5142. But when you have a fine day, with a good road, have you been troubled with slipping? I have had to use sand on a dry road.
5143. *Mr. Fehon.*] That is the engine that you saw at Redfern? Yes.
5144. *Professor Warren.*] Oh, then, we know all about that.
5145. *President.*] Do you mean the engine that we knocked with a hammer, and from whose wheels we took the putty?
5146. *Mr. Fehon.*] Yes.
5147. *Professor Warren* (to Witness).] When you said that one of the engines slipped, did you mean the passenger or the goods engine? I mean that the goods engine slipped.

William Young, being sworn, said:—

Mr. W. Young. 11 May, 1892.

5148. I am an engine-driver on the New South Wales Government Railways.
5149. *President.*] How long have you been driving? For nearly nine years.
5150. How long have you been in the service altogether? About eleven years.
5151. Were you firing before you were driving? Yes.
5152. Where are you driving;—what part of the road are you driving on now? Between Bathurst, Wellington, Dubbo, and Cowra.
5153. *Mr. Hoyle.*] Do you drive any of the Baldwin engines, Mr. Young? Yes, I drive a Baldwin engine.
5154. What is the number of the engine that you drive? No. 489.
5155. Is that a Consolidation goods engine? Yes.
5156. Have you ever had any failures with that engine? Yes.
5157. What have they been? Well, I had leaking tubes.
5158. Did they leak badly? Well, on one occasion they were leaking so badly that I had to leave the engine and send for another.
5159. Had you ever any other breakages—failures of the reversing gear, for instance? No.
5160. Or of the brake-gear? Well, no. I had a five-eighths bolt on the end of a stay broke, but it was of no vital consequence.
5161. Do you know whether there is an engine in the Bathurst shop with a valve-buckle broken? Well, I have not been in the shop since Friday, and of my own personal knowledge I cannot say whether there is or is not.

Mr. W. Young. 11 May, 1892.

5162. Do you know whether the axle of an engine was bent at Orange? Well, I have heard it said. I never examined it. I saw the engine standing on the pit, and was told that it was in consequence of a bad axle, but I did not get down from my own engine to see it.
5163. *Mr. Fehon.*] The man only says that the axle was bent from hearsay. He says that he did not examine it, and still he is asked how it got bent.
5164. *Mr. Hoyle.*] I asked the witness if he had heard as to how it got bent.
5165. *President.*] Then you can call the man who told him.
5166. *Mr. Hoyle.*] Well, my only object in asking the question was to save the Department the trouble of calling an extra witness. (To witness): What other defects did you find in your own engine? I found in the left leading wheel what appeared to be a crack in one of the spokes, and also in the end of the balance weight. That is the spoke on which the end of the balance rests.
5167. Of what material are these wheels made? Well, whether they are malleable cast-iron or by what system they are cast, I cannot tell.
5168. Are the tyres of your engine all right? Yes, so far as I have seen.
5169. Have you had any draw-gear break? On the engine, do you mean?
5170. Yes? No, I have not.
5171. In connection with any of the vehicles? Oh, on the train on one occasion the centre-chain broke.
5172. If the road is in good condition or bad condition can you distinguish it on your engine;—is there any indication of the condition in which the road is by the motion of the engine? Oh, yes; the engine will roll about more on a rough road than she will on a smooth road.
5173. You have had experience of engines before these Baldwin engines arrived—did you find the road in any part rougher whilst you have been using a Baldwin engine than you did before the Baldwin engine began to run? No; I cannot say that I noticed it.
5174. And you say you run from Bathurst to Wellington and Dubbo, and sometimes on the southern road to Cowra? Yes.
5175. Do you run these engines to Cowra? Yes.
5176. And how do you find the Cowra? It is equal to any other road that I run on.
5177. Of course, you have no knowledge of the permanent way? Well, any opinion that I might express about the permanent way would be of no value.
5178. Do you know the weight of these engines? Well, from what I have heard stated here only.
5179. Did you report all the details of the defects in the engine to your officer-in-charge? Well, we make our reports in a book which comes under his supervision.
5180. You have a book then? Oh, yes. There is a book for the purpose, in which all repairs which the drivers consider necessary for the engines are entered by him after he has performed his trip.
5181. Whose supervision is this book immediately under? It is under the immediate supervision of the shed inspector. The leading fitter comes to it and takes from it the repairs that are required by the engine. I believe it will also be under the observation of the District Inspector.
5182. *President.*] It is a book kept in the shed? Yes; a book in which all the repairs which the drivers consider necessary are entered.
5183. Is there a casualty book as well? Yes; the breakages are also reported, but that is more for the purpose of reporting delay to the train—the time the train has been delayed; and, as a rule, the nature of the breakage by which the delay has been caused, is also reported.
5184. And is that entered in your book as well? The casualty book is a different book from the fitters' book. They are two separate books.
5185. At any rate it is not very material. The Commissioners are going to produce all these books, are they not?
5186. *Mr. Hoyle.*] Well I have a little doubt about it. (To Witness): Every casualty is reported in that book, is it not? It ought to be.
5187. At all events you report the matter if there is anything wrong with your engines? Yes.
5188. Do you find that your engine rolls very much? Yes, it does roll a little.
5189. More than other engines? Well, yes it does roll more than other engines, but the lightness of the springs accounts for that. The engine is less rigid than an English engine would be, and consequently in running round a curve a movement is given to it that is more of a swing than I have noticed on any other engine that I have driven. That is a characteristic of the American engine—that is to say, that it rides lighter, and on the whole it has an easier movement.
5190. Have you had any failures at all with the brake-gear? No.
5191. No failure with the brake-gear? No.
5192. Could you keep time with this engine? Yes, everything considered. I may say this, that the engine that I have been running mostly I have had some trouble with in keeping time, in consequence of the difficulty in steaming. That is not a radical defect in the engine, but it is a radical defect in the way in which the repairs have been carried out.
5193. Then have not the repairs that you have reported necessary been made? Well, there have been two attempts to do it, but they have not yet succeeded in making her steam as well as I think she ought to do.
5194. *Professor Warren.*] Those engines do not steam very well then? Well, some do steam very well, but this engine requires a great deal of trouble to make it steam, and I think she burns more coal than she would otherwise use.
5195. *Mr. Hoyle.*] You use the Eskbank coal, I suppose? Yes.
5196. Have you got any slow-down notices in your run anywhere? You refer to bridges and bad places in the road?
5197. Yes; have you either? No.
5198. You have no slow-down notices at all in your road—neither bridges or bad places? No.
5199. *Professor Warren.*] Which is your district? From Dubbo to Bathurst and from Bathurst to Cowra.
5200. *Mr. Hoyle.*] Do you find your engine burns a great deal of coal? Well, I consider that she consumes more coal than she ought to.
5201. That is owing to some defect or other is it not? Yes, it is a defect in my opinion, but you cannot call it a defect in construction. I should not call it a defect for which the builders were responsible.
5202. Is it a defect in design? No; I should not call it a defect in design.
5203. At all events there is nothing wrong that you have been able to discover? Oh, I can find it out, but I can not get it done.

5204.

Mr. W. Young. 11 May, 1892.

5204. *Mr. Brown.*] Perhaps it is cheaper to burn more coal at 2s. 6d. a ton than to get the repairs done? No; I do not know what the reason is at all. The cause of the engine not steaming is because the steam strikes the funnel after leaving the blast or exhaust pipe, and does not dislodge a sufficient quantity of atmospheric air from the smoke box, the result being that the current of air through the fire is insufficient to produce sufficient heat to keep up the required pressure.
5205. *Professor Warren.*] That could be easily remedied? Yes; it could be.
5206. *Mr. Hoyle.*] You say that you have never run any engine but your own? Well, I had one trip with No. 486.
5207. And there was no defect in it? The Crown stays were leaking slightly on that particular occasion.
5208. Have you driven any new engines before? No; I cannot say that I have ever driven engines new out of the shop.
5209. And therefore, you are not in a position to compare the repairs necessary to these engines with the repairs that have been necessary to other new engines? No; I could not venture an opinion.
5210. Do you find any of the bogie axles run hot? No; the bogie axles run very well.
5211. The bogies run well right through? Well, I have had my right trailing engine-box hot, but that was done running from Dubbo tender first. I think that was the reason. I have never had any difficulty with the engine previously.
5212. *Mr. Brown.*] As a driver, what do you think of these Baldwin engines generally? Well, I may say that personally I favour the American type of engine all round.
5213. Yes, but what do you think of this particular type of engine? Well, yes, these particular engines and all other engines built by the Baldwin Company I like, because they are, in my opinion, a great deal easier to ride, and I think a man would live ten to fifteen years longer in driving them.
5214. Well, that is a consideration? I do not know that it is. The English engines, as a rule, are too rigid in the springs, and, therefore, the shaking about that a man's frame is subjected to when he is riding on them is very considerable.
5215. *Professor Warren.*] Do you find these engines hot? Very hot.
5216. Are they hotter than the English engines? Well, they are more confined, but the heat is greatest when still, for when running you can open the front of the cab and get a current of air right through.
5217. At all events they are quite comfortable? Yes.
5218. Still you say you like to drive them? Yes, because they ride easier, and are, consequently, easier on the frame of the driver; at least they are on mine.
5219. But you would not say they are unhealthy? Well, I would not like to say anything about that, because of the heat that a driver is subject to in the summer time from them, but in the winter time, of course, he gets the advantage of it.
5220. *Mr. Fehon.*] You say that these engines are easier to ride? Yes.
5221. Then if they are easier to ride they must be easier on the permanent way than an English engine? Well, that is just what I have been thinking. Of course they are of greater weight than an English engine, but it would take a greater expert than I to pretend to say whether they would be injurious to the permanent way.
5222. Your centre driving wheel is not flanged, is it? No.
5223. Does that make the engine much easier? It ought to prevent grinding on the rails.
5224. Did you take full loads with your engine? I did; more than what is allotted for her sometimes.
5225. So that the defects did not prevent you taking full loads? No, they did not, unless, perhaps, on one occasion.

Patrick Hayes, being sworn, said:—

Mr. P. Hayes. 11 May, 1892.

5226. I am a ganger.
5227. *President.*] On what part of the line? Between Tarana and Loxton.
5228. How long have you been in the railway service? About fifteen years.
5229. Always in the same position? No, sir; I have been about ten years ganging.
5230. And what before that? Before that I was fettler.
5231. *Mr. Hoyle.*] You are ganging between Loxley and Tarana? Yes.
5232. What rails are on your length, do you know? I have iron rails and steel rails.
5233. How long have you been ganger on that particular length? About five months.
5234. You have been on that length since the Baldwin engines were running? Yes.
5235. Where were you before they began to run? At Brewangle.
5236. They have iron rails there, have they not? Yes.
5237. Since the Baldwin engines began to run, have you had any broken rails? Yes; and I had them before.
5238. But I am not asking you that now. Since they began to run, have you had any broken rails? Yes.
5239. How many? About two.
5240. And before they began to run? Three or four.
5241. Then the lighter engines broke more rails than the heavier ones? The heavier engines have not been on the road so long.
5242. How long were you on the Loxley length? Very nearly two years.
5243. How many rails broke in two years, can you tell us that;—about how many? I expect it would be about thirteen or fourteen broken and cracked.
5244. I do not mean how many rails have you taken out before they were bad rails. I am speaking of rails that have been actually cracked or broken? Yes.
5245. And how many have you taken out of the Loxley length since the engines began to run? Two broken rails.
5246. And how many cracked? Four or five.
5247. That would be seven altogether? Yes.
5248. And you got fourteen in two years with the lighter engines? Yes; that is all I can remember.
5249. Just so. How many broken rails have you had on the length that you are on now since the Baldwin engines began to run, either cracked or broken? Four or five.
5250. That is between Tarana and Locksley? Yes.
5251. Those are iron rails, are they not? Yes.

5252.

Mr. P. Hayes. 11 May, 1892.

5252. Have you had any steel rails break? No; no steel rails have broken.
5253. What are the steel rails that have been recently put upon your line;—are they not 80-lb. rails? I do not know the weight.
5254. They are T rails, are they not? Yes.
5255. Since the Baldwin engines have been running have you had much trouble with your length of the road? No; not much more trouble than before, except in soft places, where it used to go.
5256. Are there any slow-down notices on your length? No; not that I know of. It is a level road.
5257. Have you had many broken chairs since the Baldwin engines commenced to run? No more than I had before.
5258. That is on the Loxley length,—but you had broken chairs and broken rails at both places? Yes.
5259. And have you not found that the road was knocked about more since the Baldwin engines commenced to run than when the lighter engines were running? No; I have not.
5260. Do you know the weight of these engines? Well, I have been told that they are about 100 tons.
5261. You do not know, only what you have been told;—have you noticed since the Baldwin engines commenced to run that the rails have been bent in the joints? Yes; some of them have gone down a little.
5262. Was that a common occurrence before the Baldwin engines came? Yes; it has always been that the joints have gone down a little.
5263. Have you not broken any plates? Yes.
5264. Since the Baldwin engines came? Yes; and before.
5265. Then you do not think that the Baldwin engines are doing the road any more harm than the lighter engines did? No.
5266. Have you had many rails taken out of your length since the Baldwin engines began to run? No more than I had before.
5267. Were these rails taken out before they were very bad? Well, they were badly worn.
5268. Then you have never complained at any time to your officers about the state of the road? Only about these bad soft places.
5269. Have you ever applied to your officers for more assistance to keep these places in order? No.
5270. You never made such a report—never such a request? No; only I have complained to my inspector, but I did not make any report on it.
5271. Do you keep a record of all the rails you take out? Yes; every month.
5272. And that report goes to your superior officer? Yes.
5273. The inspector or the sub-inspector, as the case may be? Yes.
5274. Have you taken out many rails since the Tarana accident? I have taken out rails and turned rails.
5275. *President.*] Since the Tarana accident? Yes.
5276. *Mr. Hoyle.*] Has your inspector travelled over your length since the Tarana accident and marked any rails that ought to be taken out? Yes, sir; he has.
5277. But in the taking of the rails out before the accident you might take a rail out without the inspector's instructions, might you not? I always have been taking them out where they were bad.
5278. Before the accident did the inspector go round and mark them with chalk to show you what to take out; Yes; he marked the rails, and chairs, and fish-plates, and bolts before the accident.
5279. Do you know how many rails you have taken out since the accident? No.
5280. *Professor Warren.*] How many do you think you have turned out since the accident? Well, I expect I have turned and taken out about twenty. I am always doing that.
5281. *Mr. Hoyle.*] Have you taken many rails out on the curve since the accident? Yes, sir.
5282. How often do you take rails out on the curve? When they are required.
5283. But you have just said that you often do it? When they require it I do.
5284. But how often have they required it? It is according to whether they are in good or in bad condition.
5285. And how long ought a rail to be in a curve before it gets bad? Some last longer than others.
5286. Well, with your experience as a ganger, how long ought a rail to be in a curve before it is removed? Well, there are some of the rails that have been there since the first.
5287. *Mr. Brown.*] I think that you are asking him a question that an expert could not answer.
5288. *Mr. Hoyle.*] Well, he says he has taken many rails out; and we know how long a rail ought to last.
5289. *Mr. Brown.*] I have not been able to ascertain it from the time this inquiry began up to the present, Mr. Hoyle.
5290. *President.*] How far are the sleepers apart on your part of the line near Tarana? Well, some of them that I have been measuring are about 2 feet 9 inches apart.
5291. Is that from chair to chair? No; from centre to centre.
5292. *Professor Warren.*] Have you not some as wide apart as 3 feet 1 inch? No.
5293. Have you measured them? I have.
5294. *President.*] Do you know the place where the accident happened—the place where the broken rail was taken up? No; I have not seen it.
5295. Have you not been as far down as there? No; I have not.
5296. *Mr. Hoyle.*] Have you noticed the heads of the rails crushing any more since the Baldwin engines began to run than they used to crush before? No.

John Sloan, being sworn, said:—

Mr. J. Sloan. 11 May, 1892.

5297. I am a ganger employed on the New South Wales railways.
5298. *Mr. Hoyle.*] On what length? At Nyngan.
5299. Where were you employed before you went to Nyngan? On the Brewonglo length.
5300. Was your length laid with iron or steel rails? With iron rails.
5301. Whilst you were ganger there were the Baldwin engines running on that length? Yes.
5302. Did you find any broken rails? One.
5303. Since the Baldwin engines commenced to run? They were always running whilst I was there.
5304. But I understand you to say that you found one rail broken since the Baldwin engines were running? Yes; I was only there four months.

5305.

Mr. J. Sloan. 11 May, 1892.

5305. Whilst the Baldwin engines were running, did you have much trouble with the rails? No; not more than ordinary.
5306. Did the road not give you any trouble at all? Not more than any other road.
5307. You say not more than any other road. Is the comparison between the other roads and this one a comparison between iron and steel. Is the other road you were on, laid with steel rail? Yes.
5308. *Mr. Fehon.*] And yet he says that he has not had any more trouble with the iron road upon which he is now working and upon the Baldwin engines are running, than he had with a steel rail before they began to run.
5309. *Mr. Hoyle.*] Yes; I know that. (To Witness): As the roads were of different materials, however, you cannot draw comparisons. Have you ever been on an iron road before? No.
5310. It is a steel road at Nyngan, is it not? Yes.
5311. And you say you only had one broken rail whilst these Baldwin engines were running? That is all; and that was only fractured, it was not broken right across.
5312. Had you many broken chairs? A good few.
5313. On the steel road, there were no chairs, I suppose? No.
5314. It was a T steel road, was it not? Yes.
5315. So you cannot draw any comparison there? No.
5316. Did you have many broken fish-plates? No.
5317. Have you much trouble with your curves? No.
5318. Were your curves strutted? No.
5319. *President.*] Did you have more trouble with the iron road than you had with the steel road, that you were on before? No more trouble; I only had eight and a half hours work there.
5320. I do not mean that. I mean have you found more damage done to the rails? I have only found one broken rail.
5321. In all your time, have you only had one broken rail? One broken iron rail, and one broken steel rail before that.
5322. Do you find more trouble with the iron road than you had with the steel road? Well, I only had one rail broken in this case.

James Walsh, being sworn, said:—

Mr. J. Walsh. 11 May, 1892.

5323. I am a ganger on the Government railway.
5324. *Mr. Hoyle.*] On what length? The Tarana length.
5325. From Tarana to where? From 115 miles to 121 miles 40 chains.
5326. How long have you been a ganger? About four years.
5327. I suppose you have been a ganger on other lengths than that? Yes.
5328. How long have you been on this particular length? Since the 24th of December, 1890.
5329. Can you tell me whether you have not had more trouble with your road during the last six months than you had during the previous six months? No, sir.
5330. You have been a ganger on that road since the Baldwin engines began to run? Yes.
5331. Do you find the road in as good a condition now as you did before the Baldwin engines began to run? I find it 70 per cent. better than it was before it was lifted and ballasted.
5332. That is not my question. I want to know whether you find the road as good or better than before the Baldwin engines began to run? It was lifted twelve months ago and reballasted recently.
5333. Do you find the Baldwin engines have any undue wear upon the road. Do you find they draw it out of gauge in any more than any other engine? No, I do not.
5334. Have you got any rails in your road worn to about two and one-eighth on the top? Well, in an iron road some rails will spread a little more than others.
5335. Yes, but I mean away absolutely to the extent of two and one-eighth on the top of the rail where it ought to be 2⅛ inches? I never put my rule on a rail to measure it.
5336. Is it a fact that you are laying a number of new rails since the accident? I have had no new rails.
5337. Do you say that there are no new rails going into your length? There are no more than usual coming in.
5338. Have you not put any new rails in since the accident? Yes, where the accident occurred.
5339. Have you not put in a number of new rails in other places. Be careful, because I have been there myself and seen the road? They might be new on one side, but they were worn on the other.
5340. Oh, I mean absolutely new rails? There might have been one or two, but I cannot say.
5341. Was there a broken rail in your road last Saturday—a rail with a piece broken off it? Not that I know of.
5342. Well, I know of it because I saw it—a piece broken off like there is there *(tearing a piece out of a piece of paper)*? I have no recollection of seeing it.
5343. Well, I saw it, and it was marked with a piece of chalk. Has the Inspector been along your road and marked the rails with a piece of chalk? No Inspector has been along.
5344. A Sub-inspector perhaps? No, not that I know of.
5345. Who has done it since the accident occurred? I have done some of it myself.
5346. Has there not been a gang of men along this part of the road since the accident occurred? Yes, I was one of the men.
5347. Was there no officer with the gang? Do you mean an officer of the Permanent way Department?
5348. I suppose so. I suppose the Permanent way Department would send an officer with the gang under the circumstances? I do not think so. I did not see any Inspector there.
5349. Well, at whose order was it done? I do not know at whose order, but it was done to get the brands of the rails.
5350. Was there anyone there but yourself? Yes; I was not alone there. There was Mr. Seeman, there along with me.
5351. Was he from Bathurst? Yes.
5352. The foreman blacksmith, you mean? Yes; I think so.
5353. Did he mark any rails with chalk? I do not think so.
5354. Have you had any broken rails taken out since the accident? I am constantly taking out rails when I see them bad.
5355–6. But I mean cracked rails? No; I have not taken any cracked rails out since the accident.

5357. Have you had any broken rails taken out during the last few months? There were no broken rails. Mr. J. Walsh.
5358. But I mean fractured ones? Yes; there might have been a few. 11 May, 1892.
5359. How many? Not more than three.
5360. Do you not call a fractured rail a broken rail? No; not if it is only fractured.
5361. Would there be no danger in a fractured rail if a train came over it? No doubt there would.
5362. *Mr. Brown.*] And that is why he takes them up, I suppose? Yes.
5363. *Mr Hoyle.*] Have you had any trouble with the curves on your road since the Baldwin engines began to run? No.
5364. Have your curves any struts between the cuttings and the end of the sleepers—that is a piece of wood going from the side of the cutting to the sleepers to keep it in position? No; not in my length.
5365. Have you marked many rails in your length to come out? I have marked several rails. I generally do mark them.
5366. Was not your gang working last Saturday afternoon till after 4 o'clock taking out rails? Yes; but not for the purpose of renewing them.
5367. But were they not taking out rails? Yes; but not rails that were marked to be renewed.
5368. Well, were they turned? No; we were taking out the different brand of rails to see whether they would stand the test, and putting good ones in their place.
5369. And was that the only thing you were taking them out for on Saturday afternoon? Yes.
5370. *Mr. Brown.*] Supposing they were taking them out because they were inferior rails, would not that be a very proper thing for the Commissioners to do? Yes, no doubt.
5371. Is there any part of your road in which the rails are bent? Well, they may nip a little bit.
5372. Have you noticed it since the Baldwin engines began to run more than before? No; I had to work hard before they came, as I do now.
5373. Do you think that you had more work before the Baldwin engines began to run than you have now? Yes; I was begining to think I was going to have an easy time of it. The road was being ballasted and lifted, and there was plenty of help, so we thought it was going to be made easier for ourselves.
5374. What do you mean by plenty of help? The contractor's men were helping us.
5375. Was the road in a very bad state before it was lifted? Yes, it was.
5376. And you find that since the Baldwin engines came there it has been better? Yes.
5377. It is a good road now? Well, it is passable.
5378. Have you had many bad rails on your length? There might be an odd one spread here and there but we are always taking them out in the usual way.
5379. Have you many rails that have been turned? There may be some—yes.
5380. And when you were putting in these new rails you put in iron rails not steel rails I believe? Certainly not.
5381. *Professor Warren.*] They are the Eskbank re-rolled rails that you are putting in then? Yes, in the case of rails that are defective.
5382. *President.*] Can you tell me just where the late accident happened what the distance is between the sleepers? The sleepers on that rail?
5383. Yes? On the rail that broke do you mean?
5384. Yes? Well there are eight sleepers on that rail. Some of them are 2 feet 5 inches apart, some 2 feet 7 inches apart, some 2 feet 6 inches apart, and the widest apart are 2 feet 10 inches.
5385. From centre to centre? Yes, on that rail.
5386. What is the length of the rail? Twenty-one feet. Some of them have nine sleepers, going round a curve there are nine sleepers.
5387. *Mr. Fehon.*] With your permission, I was going to ask Mr. Hoyle what time he will finish his evidence, for this reason:—One of our witnesses is an officer of the Baldwin company. We have brought him from New Zealand, and he wishes to get away by the American mail on Monday, otherwise he will be detained another month.
5388. *Mr. Hoyle.*] I will finish to-morrow evening if I possibly can. I am as desirous as anybody else of finishing the inquiry.
5389. *Mr. Brown.*] Then, under these circumstances, can you sit on Friday?
5390. *Mr. Hoyle.*] Yes, I can sit on Friday on this occasion.
5391. *President.*] We will try to sit on Friday.
5392. *Mr. Fehon.*] He is a very important witness, because he can give from his own knowledge an amount of information that nobody else in the country can give.
5393. *President.*] So I understand. We will see to-morrow evening what we can do.
5394. *Mr. Fehon.*] Well we will ask him to be present so that if Mr. Hoyle finishes in time you might be able to take his evidence then.

THURSDAY, 12 MAY, 1892.

[*The Commission met in the Board-room, Colonial Secretary's Office, at 2 o'clock p.m.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

5395. *Professor Warren.*] I desire to state that I have read through the programme submitted to me by the Railway Commissioners for the trial trips of the Baldwin engines to take place on Sunday next. I am perfectly satisfied with the suggested trials. The programme consists first of all in taking a train up the Picton incline with a maximum load of 144 tons, up the 1 in 30 grade, and after that there will be another trial with a lighter load, up the same grade, and then up the 1 in 40 grade a load of 176 tons will be taken, and subsequently a lighter load. Indicator diagrams will be taken all through these trials, so that we shall obtain the actual measurements of the horse-power, and the speed of the engines indicated with stop-watches. It is proposed to obtain the coal and water consumption by taking the precise amount of coal used from Sydney to Picton and throughout the trials and back to Sydney. I do not regard the coal and water test with the same degree of importance as I do the power developed and the load hauled at a certain speed. Mr. Kidd and Mr. Pollock are appointed to take diagrams.
5396. *Mr. Fehon.*] Yes.

5397. *Professor Warren.*] On the trial trip with 144 tons, and also with 176 tons, I wish to have half the indicator cards, and from them I will work out the results, and the Department will have an opportunity of working out the results on their half of the cards. We ought to agree as to the results, and thus put them beyond all dispute. Regarding the engines, I think it will be well to have as few persons upon them as possible, one representative of the Commission and myself and one other person, an assistant who will help me with the gauges; and I shall have to look after the diagrams, and to look after the speed. I do not know whether Mr. Hoyle would like to travel on the engine or not.
5398. *Mr. Hoyle.*] Yes, I should like to go.
5399. *Mr Fehon.*] There will be a carriage put on, so that Mr. Hoyle can accompany the engine if he wishes.
5400. *Mr. Hoyle.*] Which are you going to try?
5401. *Professor Warren.*] We are going to try the Baldwin passenger engine only at present, and I take it that the trial of the Baldwin consolidation engine will still remain open. The gentleman who will accompany me is a graduate in engineering of our University.
5402. *Mr. Hoyle.*] I have a number of witnesses this afternoon, and the suggestion I would make is this, that without any desire to interfere with the Commissioners at all, as Mr. Rhodes, a representative of the Baldwin Company, and is, I understand, to return to San Francisco on Tuesday next, he might be called this afternoon, as my witnesses will take all the whole afternoon, and perhaps longer; so that if it will meet the convenience of the Commissioners Mr. Rhodes' evidence might be taken now. I am quite agreeable to that course, being aware that that gentleman has been in attendance here for a very considerable time.
5403. *President.*] We could do that if you wish, Mr. Fehon.
5404. *Mr. Fehon.*] I think it would be better not, for I understand that the Commission will sit for a short time to take evidence to-morrow.
5405. *President.*] Mr. Hoyle does not know if he can get through his evidence this afternoon.
5406. *Mr. Hoyle.*] If I must complete the examination of the whole of my witnesses, I may have to continue for some time; but if you say that I shall be allowed to call one witness as a rebutting witness, I may finish to-night.
5407. *President.*] I do not know what there is to rebut. You have given evidence in support of certain charges, and the other side will then proceed to answer these charges. I cannot say at present that there will be anything you can give in reply until I hear what the other side say, but I cannot say anything in anticipation of that.
5408. *Mr. Brown* (to Mr. Hoyle).] Can you sit to-morrow?
5409. *Mr. Hoyle.*] Yes.
5410. *President.*] You do not think you can finish to-day, Mr. Hoyle?
5411. *Mr. Hoyle.*] I do not think so.
5412. *Mr. Brown.*] Well, I suppose we cannot help it—we cannot hurry it.
5413. *Professor Warren.*] I look upon it, if I may say so, in this light: this is a Royal Commission, and you can call Mr. Rhodes at any time you desire; and as it seems unlikely that Mr. Hoyle can complete his evidence, and Mr. Rhodes has to leave early next week, it seems very undesirable that he should go away without giving evidence. He is the representative of the Baldwin Company, and this inquiry concerns the Baldwin engines, and we should like to hear what he has to say.
5414. *Mr. Hoyle.*] I have one important witness to call who is too ill to come to-day. That is the reason I made this suggestion.
5415. *President.*] Very well, we shall see presently what can be done.

Mr. S. S. Pollitzer, sworn, said:—

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5416. I am a consulting engineer, and have practised for nine years in Sydney, before that I was resident engineer on the railways and waterworks of the South Australian Government, and I was Engineer-in-Chief for the Bulgarian Government for a considerable period. I have been on four or five different lines of railway and have practised as engineer in Hungary. I have taken my degree as a civil engineer at Vienna.
5417. *Mr. Hoyle.*] Are you a member of the Institute of Civil Engineers? Of what country?
5418. Of England? No.
5419. Are you a member of the Institute of Civil Engineers in any other country? Yes; in Hungary.
5420. *Professor Warren.*] What body does that correspond with in England? It is the Institute of Civil Engineers and Architects.
5421. *Mr. Hoyle.*] Have you had much experience in connection with railways? Yes; my experience was about twenty-three years as a railway engineer.
5422. Was it a varied experience? Yes; it was mixed. I have had under my charge, constructed, and surveyed, at least 2,000 miles of railroad.
5423. Then you have a knowledge of the placing of sleeper? Exactly.
5424. And the position of curves? Exactly.
5425. You have a knowledge of these things? I think I have.
5426. *Mr. Hoyle.*] I wish to ask you some questions about the Baldwin engines, Mr. Pollitzer?
5427. *Witness.*] I wish to state to you, Mr. President, that I have had no conversation whatever with Mr. Hoyle, and it was not agreed between us as to what way he should place the matter before me. I think with your permission, that I shall place the case as I think before you, and then you may put what question you like to me.
5428. *President.*] Do I understand that you wish to place your views before the Commission before Mr. Hoyle asks you any questions?
5429. *Mr. Hoyle.*] I am quite willing for the witness to take that course.
5430. *Witness.*] After I have made my statement, any person can ask me what question he likes.
5431. *President.*] Very well, Mr. Pollitzer, you may take the course you suggest.
5432. *Witness.*] I came here with the object of ascertaining whether the Baldwin engines are suitable for the roads of this Colony or no, and stating my views thereon so far as I am acquainted with the subject. This is a most important and serious question that I come forward to prove.
5433. *President.*] What do you mean by coming here with the object of proving anything?
5434. *Mr. Brown.*] I presume that he means he has been called to give evidence. 5435.

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5435. *President.*] I understand Mr. Hoyle has called you to state what you think, and not to advance any particular view? Yes. To answer this question I should have to look at it from three points of view; first, *prima facie*, are the Baldwin engines suitable or not for the road. My authority is Professor Rankin, one of the greatest engineers of the day. He says that the weight of a yard of rail should be 12 pounds for every ton the driving-wheel brings to bear on the rail. In this case you have 15½ tons pressure on the driving-wheel, multiplying it by 12½, that gives 195 lb. of rail section, I mean of rail weight per yard. Now, Rankin is a great authority, but I cannot agree with him on that point, because no man would think of making a rail of 195 lb. per yard, and even making a concession of half the amount, is exaggerated; therefore if you have one-half of what Rankin allows, you will have 97½ lb. per rail—that is even taking half. Hence, on the face of it you cannot come to any other conclusion than that the rail is perfectly inapplicable to the engine, or in other words, that the engine is not suitable to this rail. This is only a practical observation, it is not conclusive. Conclusive proof means that I must take a careful cross-section of the rail, and with the utmost precision and accuracy, ascertain the strain on that section for the length of its support between sleepers, and with the maximum weight of the driving-wheel on it. Well, I cannot pass an opinion upon that matter, because no section has been submitted to me, and I have not had a chance of doing it, therefore I am not in a position to pass any opinion with regard to the stability of the rail, or the weight of the engines in connection with it. I should not care to say that it is too heavy or too light, although my professional view is, on the whole, inclined against it, that is to say, I believe, and am under the impression, that if such a calculation were made, it would turn out to be against the Baldwin engine—that is the second point. The third point is to consider the engine in proportion, or rather in connection with the whole roadway. According to my experience, I think this road is absolutely unfit to carry the engine, or what comes to the same thing, the engine ought not travel on that road, and this is to be explained simply by the construction of the permanent way;—how is it constructed? It cannot be otherwise, in consequence of the double-headed rail. These rails are not in any way fastened to the sleepers or properly secured to the permanent way. They are only secured by wooden keys. Now certainly the gang men have their duty to perform, and it is to watch over these keys in their allotted portion of the line; but a key may drop out after the man has passed, perhaps a shower may fall and the wood swells, the sun may come out, and it follows that the wood will then contract, and the key comes out, the rail, which is supported by sleepers 3 feet apart, the rail which is calculated to bear a certain weight in proportion to the distance of the sleepers from each other, ceases to have that support. The condition upon which the weight it could bear was based no longer exists. In the first place it is not fastened, because the key perhaps has fallen out, or the chair may be cracked, and instead of the distance between the points of support being 3 feet it becomes 6 feet, or double the length between the sleepers. That cannot be a proper construction. What I maintain is that in straight lines they are objectionable, these double-head rails with key fastenings.

5436. Do you mean chairs? Yes; they are objectionable in straight lines, and I should not allow any double-headed rail to go into any curve. I might put them in because the curvature of the road was not affected much by the shock of the passing engine. In my opinion these roads should be made capable of carrying these engines. The whole system of the double-headed rails will have to be amended.

5437. *Professor Warren.*] You mean that they should have the ordinary Vignole section, that is the T rail with a flat bottom, and fastened with ordinary dog spikes?

5438. *President.*] Is the rail fastened directly to the sleepers with a spike.

5439. *Professor Warren.*] Yes without any chair.

5440. *Witness.*] Chairs are employed in very sharp curves so as to keep the rail more secure and permanent. The chairs keep the rails in a fixed and permanent position. Now I come to my final statement, which is derived from a great many years of experience. I have been seventeen years in these colonies, and I have carried out railways to a very large extent. Mainly in South Australia, and here I have only had a little to do in that way, such as a person in private practice can have where the railways are in the hands of the Government. Before I came here, seventeen years ago, I never saw a double-headed rail on a permanent way in any main line of railway in Europe. There are no instances in Europe where they have double-headed rails on the main lines, they have cast them out and use them up on the sideways and stations. Where there is a heavy passenger and goods traffic, no one would think of putting in double-headed rails. The reason is that on account of the keys dropping out, they are unreliable. I have only known double-headed rails to be used in exceptional cases before I came here, as for example at station yards and sidings. When I went to South Australia I saw them for the first time, and when I saw them here I was startled to see that with the advance of science and the safety of passengers in view these rails should still be used. That is in the main what I desire to convey to you with regard to the permanent way of the railways of New South Wales and the Baldwin engines.

5441. *President.*] Are there many double-headed rails made now? Not very many I think.

5442. Why should people make them at all, if they are no longer used? Well I suppose they make them for any Colony that wants them.

5443. I suppose when the Government originally got them they must have been in considerable use and favour.

5444. *Witness.*] They generally think the double-headed rails are the better, because when they are worn on one side you can turn them round, but that is very wrong. People who do not understand exactly the strains acting upon rails recommend them for this sole purpose, but this is perfectly erroneous.

5445. *Mr. Brown.*] Is it not a matter of commercial concern to the people using double-headed rails;—double-headed rails cost more than the T rails, and a portion of the rail lying underground before it is turned over may be subjected to certain chemical action and so on;—has not that had something to do with the change in demand from the double-headed to the T rail? Not quite.

5446. As a matter of economy, is it not much less expensive to lay down a T rail than a double-headed rail with a chair? Yes.

5447. Is not the T rail much less expensive in the construction of the road? Yes, it is less expensive, and it makes a more permanent way.

5448. Well, is not that a reason why the double-headed rail is becoming in less favour than the T rail? Yes, it would be a good reason; but the principal reason is the strain acting on the rail.

5449. *Professor Warren.*] You have quoted Professor Rankin? Yes; he is a very eminent engineer.

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5450. Do you think you have quoted him correctly. You said that if you took 16 tons on the wheel, and multiplied it by 12, you got 12 × 16=192, or about that, I think you said? Yes; so it would be.
5451. Well, you are taking double the weight—Rankin's rule is with regard to the weight on one wheel? Yes; that is so.
5452. But you have taken it for two wheels? Well, you gave me 15 tons on the driving-wheel.
5453. *President.*] That is on the driving axle, the whole axle.
5454. *Professor Warren.*] Surely you know that a weight of 15½ tons on one axle would be impossible? I certainly drew my presumptions from the weight given in the Press. It said 15½ tons on the driving-wheel.
5455. And you base your evidence on that assumption, and if you presume that one of the Baldwin engines has 15 tons 9 cwt. on one wheel, the whole of your evidence falls to the ground? It does not.
5456. How do you mean? I admit in my evidence that I only gave the half of it.
5457. But you certainly did presume that one wheel of the Baldwin engine had 15½ tons weight on it? Yes.
5458. Well, I can understand you drawing very strong conclusions from it, and I think we should all do so if it were a fact, and say that such engines would be unsafe for the permanent-way? I said distinctly that I took only half of it.
5459. Why did you take half the weight? Because Rankin's rule is a rule only; it is empyrical; it is not a mathematical formula, and you agree or disagree with it just as you like.
5460. Rankin's rule on your assumption would be to take 8 times 16, or more correctly, 8 times 15½? Yes.
5461. And that would be about 96 or 97 tons? Yes; about that.
5462. You probably know that Mr. Haycroft gave evidence here? Yes.
5463. You attach some importance to the strength of the rail;—do you consider that it should be treated as a beam? Yes; exactly.
5464. What kind of a beam? A beam fixed at both ends.
5465. Fixed by the two chairs? Yes.
5466. Will you tell me the condition that must be complied with in order to get a fixed beam? Stability. The moment is a factor of the distance of the two supports from the fixed points multiplied into the weight on the beam sitting on it, and divided by a coefficient.
5467. What is the bending moment for the point? W.L. 4 would be the bending moment over the pier for the fixed beam—that is, for a beam actually supported at both ends.
5468. And loaded how? In the centre.
5469. Yes; that is right.
5470. Now, why do you take this as a fixed beam? Well, you have a beam and two chairs, and these two chairs are fastened by two heavy bolts to the sleepers, and thus the rail is made tight.
5471. Very well; I do not say it is a fixed beam, but I wanted to have your reasons? I am here, and subject to examination. You have these rails with the chairs into which they are wedged, thus the rail is made immovable.
5472. That is, supposing the chairs are rigid, and the keys are driven in tight?
5473. Then you think it would be just the same as a beam driven into a wall and with a heavy weight on it? Quite so.
5474. If that is your assumption you are right upon it. But the question is the value of the assumption. (*Witness*): If you raise any objection or question to the assumption, then how can you say the rail is over the whole. A rail over the whole of the sleepers is a continuous girder. The rail represents nothing else than a fixed girder over so many piers.
5475. On what theory do you base your statement that it is a continuous girder; what conditions must be complied with to make it so? It must be one piece over all the sleepers.
5476. What about the supports? If the girder is one long stretch, and all the piers which are between the ends are to prevent the bending of the rail, those points are where the continuous girder is supported.
5477. And that is all. What conditions must be complied with in order that you may treat a girder as continuous? Will you kindly explain to me what you want me to answer.
5478. Supposing that the sleeper is depressed, and that the supports are not of the same length, what becomes of your theory? It still holds good.
5479. Without modification? Yes, without modification it still holds good.
5480. I am surprised to hear it? The pier must disappear if it has settled a little, the elasticity of the girder will come down.
5481. It would not interfere with the point of contraflecture, and the bending moments all through? It would alter.
5482. The evidence is remarkable up to the present time. Continuous girders are well understood, and I can call the Engineer for Bridges and Mr. Deane on this matter. Supposing then that in the case of a rail on several supports, one of the supports should be depressed, would that alter the positions of the points of contraflecture? Yes; but it will still remain a continuous girder, and the points of contraflecture will be different from what they were before.
5483. You admit then that if the points of support are altered there will be a difference between the points of contraflecture? Yes; but it is still a continuous girder.
5484. Then it would be a very dangerous affair. If one pier happened to be depressed, what do you say would then happen? Oh, it dips down with sleepers, you must keep the sleepers up to the permanent level.
5485. I daresay we shall have evidence that will show the value of treating the rail as a girder or a continuous or fixed beam. Do you know what a bull-headed rail is? I do not know any rail by that name.
5486. It has a larger head than other rails, and it is fastened with keys the same way as a double-headed rail? Perhaps you will draw me a rough section? [*A rough diagram is shown to witness.*] I have seen these rails very little used.
5487. It is fastened exactly in the same way as double-headed rails;—would you apply the same remark to it as you have the double-headed rail? With regard to the permanent-way?
5488. That is what I mean? Yes, I would.

5489.

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5489. You would say that a rail that is fastened by keys and chairs in the same way as a double-headed rail would be equally bad? Yes.
5490. Your experience is mainly Continental? Yes, and Colonial.
5491. You say that on the Continent the Vignole rail is almost universally adopted, and that I think is so as far as I can learn, and you look upon a rail supported by chairs and sleepers as exploded? Yes.
5492. Would you be surprised to know the double-headed rail is almost in universal use in England, and that the Vignole section is not used to any such extent? It may be so.
5493. And you still say that it is an exploded idea? Yes.
5494. You admit, I suppose, that there are some engineers in England, such for example, as Baker and Fowler? Oh yes.
5495. And you admit they would know something about it? Yes.
5496. On the London and North-Western they have nearly all bull-headed rails, and they have chairs and sleepers? Oh yes, that may be.
5497. Still you come here and give evidence saying that the double-headed rail with a chair and keys is an exploded idea? Yes.
5498. And yet nearly the whole of the English lines are laid with it? Professor Weber says that a double-headed rail, no matter what shape or construction it may be, is not by far to be compared in resisting a strain, or in durability with the Vignole.
5499. I think it ought not to go through the Press that the system of rails adopted in the Colony is an exploded idea, without it being known at the same time that that system is universal in England? It is impracticable and dangerous to every curve. I cannot disassociate myself from that idea.
5500. And yet the English engineers are competent men? Oh yes, I have personal friends among them, and they are as clever as any engineers in Germany or Austria.
5501. Well, we will let it stand as a matter of opinion.
5502. *Mr. Brown.*] Continental as against English engineers?
5503. *Witness.*] On the Continent you will not find any double-headed rails.
5504. *Professor Warren.*] You approve of the Vignole section simply because it has no keys? Yes; the main objection to the double-headed rail is because it is not a permanent fixture to the sleeper.
5505. You said no man would venture to put in double-headed rails, because the keys would fall out; you surely made that statement without a knowledge of the English practice? I have not much knowledge of the English practice, and if I make a statement of any kind before the Commission it is in connection with my experience on the Continent and in the colonies.
5506. I do not think you would find your fellow countrymen so enthusiastic about the merits of the Vignole rail? Well, Professor Weber admits it.
5507. Admitting that you have double the weight on the wheels, you still hold that the Baldwin engines are unsuitable for the permanent-ways of this Colony? Yes. I simply go by the empyrical rule of Rankin.
5508. Then, because Rankin's rule gives 96 lb. per yard, you say these are unsafe? Yes.
5509. In applying the rule did you merely look at the strength of the rail? I looked at the strength and the durability and the cheapness.
5510. In order to satisfy the durability what did you require in the rail beyond what is necessary for the strain; did you require better materials? Yes; either that they should put better material or more material into it.
5511. Do you allow a margin for wearing down so that the strength of the rail should be calculated for when it is worn down? It should be calculated for the maximum strain that is to go on it.
5512. Is it not a fact that rails are often made heavier than necessary to allow for wear? Yes.
5513. Heavy rails are made where lighter would do, simply for economy—that is, lighter rails would carry the load but would wear out sooner than the large ones? Yes.
5514. How do you make the strain calculation of a rail? The strain calculation of a rail is obtained by its weight; then you must add a certain percentage for wear and tear, that is, for the use of it.
5515. *Mr. Hoyle.*] Have you had any experience of the New South Wales rail? Very little.
5516. Do you know the weight of the rail here—the iron rail? No.
5517. It is 75 lb. to the yard. I want to ask you whether, taking into consideration the way the sleepers are placed from centre to centre, and that they are from 2 feet 4 inches to 2 feet 9 inches apart on the curves, and from 3 feet to 3 feet 4 inches on the straight, do you consider it safe for a Baldwin engine with a weight on the driving-wheel of 15 tons 6 cwt. to travel over a straight road at 40 miles an hour and round the curves at 25 miles an hour? Well, I do not care to answer that question. It comes to the same thing as I said before. It can only be answered definitely by calculation. My superficial impression is that it would not, but to give you a definite answer I should require to make my calculations. To give you merely an impression would be to place me in this position, that I might just as likely be wrong as right.
5518. You have not made such a calculation? I have not made it; I have not had the opportunity of doing so.
5519. From your experience of rails, where you have found fracturing or breaking, did you find it more in the case of lateral than perpendicular fractures or breaks? The centrifugal force you mean. I think it will be the perpendicular pressure on it.
5520. And not the lateral strain. It will assist it perhaps, on the curves? Well, it is only a question as to the curves, because the centrifugal force can only occur on the curves.
5521–2. You say you have had very little experience of double-headed rails? Well, I have had nothing to do with them. I am frequently employed at work on the Blue Mountains, and I have seen on the curves there long logs driven in against the sleepers on the side of the cutting.
5523. You mean struts? Yes; that shows the action of the engines on the rail. The action of the engines shoves the rails out. You have to keep them in by these logs of wood. On a well made road that would not be needful.
5524. With a T rail of the same weight these struts would be necessary also? [Not quite; it might be necessary, but the shocks and bearing out of the rails occur from the loosening of the keys, and then the tangental force has more power to force the rail outside. On the other hand, if the rail is fixed, it would tend to greatly reduce it.

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5525. You think that the effect of the keys coming out of the chairs causes a liability of the road spreading? Exactly.
5526. And that would be a dangerous thing in itself? Oh, yes.
5527. *Witness.*] I want to refer to the two photographs hanging in this room. Yesterday I had an opportunity of carefully examining them. If you look you will find that these engines are photographed on Vignole rails, and the Baldwin engine people themselves would, I think, admit that they would prefer to run their engines on the Vignole rail instead of the double-headed rail.
5528. *Professor Warren.*] There is a difference between saying one thing is better than another from saying that it no use whatever;—you say the double-headed rail is an exploded idea? Yes.
5529. You said no man would venture to put in double-headed rails because the keys drop out, and that applies to the bull-headed rails? Yes.
5530. It is not a question then of their comparative merits, but whether one is any good at all or not? It is a question of fastening the rails to the structure.
5531. *Mr. Fehon.*] You have had a lot of experience of iron rails, I understand;—will you look at that one? [*Witness here examined the rails from the scene of the Tarana accident.*] Is that a good rail or a bad one? I should not care to express an opinion. The break is pretty old—there is a black spot upon it.
5532. I mean the rail as a whole? On one side it looks first-class, and on the other I should say it was very bad.
5533. What drop test should that stand, dropping from the height of a foot, before breaking the rail? I should think about 18 tons.
5534. You should think it would stand 18 tons dropping 1 foot? Yes.
5535. With a long experience of rails? Yes.
5536. You say you have been in the colonies seventeen years;—what have you been doing all that time? I have been conducting business when I could get it to do.
5537. You have not been in any regular employment? No; I am consulting engineer.
5538. You were employed by the South Australian Government? Yes.
5539. For how long? For seven years.
5540. What have you been doing since that time? I was employed on all kinds of engineering works.
5541. What are you doing now? Nothing; because there is nothing to do. I am not so fortunate as to have a billet like some men.
5542. You were speaking of your French experience? Yes.
5543. What weight of rail do they use there? The outside is 75-lb. rails.
5544. Would you be surprised to hear that they are now using 67-lb. rails, and that they run a 98-ton engine over these rails? It does not surprise me; it depends upon how far you put your sleepers apart.
5545. You have given us a lecture as to how our permanent-way should be built? I have not given any lecture; I was asked to give my opinion, and I have given it.
5546. There was another gentleman here who had had ten months' experience, and he gave us his opinion as to how we should construct our permanent-way? Well, with ten months' experience, no doubt he was a far superior man to me.
5547. You spoke of the road spreading;—have you known any accident to happen in New South Wales from the road spreading? That has not been my business; I am not reporting the accidents on the railways of your country.
5548. Have you heard of an accident occurring through the spreading of the road? No.
5549. Well, this is only theory on your part? It is practice.
5550. Did you give evidence at the Cootamundra accident against the railway? Yes.
5551. That was the last time you appeared at any of these investigations? Yes; I think it was.
5552. *Mr. Hoyle.*] There was no Baldwin engine there.
5553. *Mr. Fehon.*] Do you not think a trip to the old country would do you good to freshen up your knowledge? I daresay; but I think I should recommend it to you as more appropriate than to myself.

David Dunbar being sworn, said:—

Mr. D. Dunbar. 12 May, 1892.

5554. I am manager of the railway works from Bathurst to Bourke; I was employed by Mr. Proudfoot on the 13th November, 1890, to undertake the relaying and reballasting the line from Bathurst to Bourke.
5555. *Mr. Hoyle.*] You say you were manager for Mr. Proudfoot? Yes.
5556. How long have you been in his employment? Since the 13th November, 1890.
5557. Did you have much experience before that? Yes; I had about thirteen years experience altogether. I first started work near Blayney, and I worked right through on the construction of the permanent-way to Nyngan; from there I came down to Strathfield, and was employed by Amos Bros. as foreman on the line—laying the Hawkesbury and Newcastle ends; then I was employed to lay the permanent-way for 13 miles between those sections,—the whole length of the sections was about 100 miles; before that I was employed by Messrs. Halliday and Owen from Narrendera to Jerilderie.
5558. Then you have a general experience of the rails of this Colony;—have you any experience where iron rails have been in existence? My only experience was from Bathurst on to Orange.
5559. That was with T rails? Yes; they were iron T rails.
5560. Are they all there now? No; they were all relaid with steel 70 or 71 lb. to the yard.
5561. Have you been on the road since the Baldwin engines have been running? Yes.
5562. Can you tell us whether, in your opinion as a plate-layer, these engines are having any injurious effects on the roads? They do not show it any more than the heaviest of the other engines. On my section the joints are down a bit. They are the only places which show a weakness, and that is because the sleepers are placed too far apart at the joints.
5563. If the sleepers were placed sufficiently close together would a 71-lb. steel rail be sufficiently strong to carry these engines? Yes.
5564. In consequence of the oscillation of these engines is the road thrown out of gauge? It may be if there are bad spots in the road, but if the road is well ballasted I do not see that that would throw it out.
5565. Do you think if we had bad weather and long rains on your length that the Baldwin engines would be perfectly safe? It all depends on the foundation under a road. If there were plenty of good ballast under the road it would be all right. No doubt it would go down more in wet than in dry weather.

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5566. Is there plenty of good ballast there? Yes, in parts. They are only ballasted to 6 inches under the sleeper from Bathurst on.
5567. Are there any places where that does not exist? Well, as the rolling stock comes over it of course it comes down, but I do not suppose there would be that now.
5568. Is the road in your district wavey? Yes, on account of the joints. I suppose there are 50 per cent. of the joints that are down more or less, and that makes it look wavey.
5569. Do you think that the joints coming down is caused by the great weight of the engines—I mean the Baldwin engines? Yes, it is caused by the heaviest of the engines; the Baldwins and others.
5570. It is the Baldwin engines that are under consideration;—do you consider that the weight of these engines, taking into account that they are considerably heavier, about 8 tons, I think, in the passenger, and about 18 tons in the Consolidation, have an injurious effect upon the road?
5571. *Mr. Fehon.*] I ask if that is a fair question. Mr. Hoyle put a question whether any injury was caused to the road by the weight of the engine, and the witnesses answered the heaviest of the engines—Baldwin and others. I submit that it is not the weight of the engine that has to be taken into account, but the weight on the driving-wheel.
5572. *Mr. Brown.*] I thought the term a scarcely fair way of putting it, and I thought some objection would be taken.
5573. *Mr. Hoyle.*] I only want to get at the truth;—if the truth is elicited I am perfectly satisfied;—as the weight of the driving-wheels of these engines is 15 tons 6 cwt. on the one driving-wheel, and 15 tons 9 cwt. on the driving-wheel of the other, do you think that weight would have a greater effect upon the joints of the rails placed as the sleepers are than a lighter weight would have? The more weight there is upon any one pair of wheels would put the joints down—the heaviest weight would put it down.
5574. And you say the ends of the rails are down at the joints?
5575. *Mr. Brown.*] Is it not fair to say that there are other engines with heavier weight on the driving-wheels on the line?
5576. *Mr. Hoyle.*] Not on that road.
5577. *Mr. Fehon.*] There are engines within 3 cwt.
5578. *Mr. Brown.*] That is a fair way to put it to him. The Commissioners say that there are some engines on the same line within 3 cwt. of their weight, you should ask him if these engines—the Baldwin engines—are heavier on the road than other engines of a similar character.
5579. *Mr. Hoyle.*] No doubt Mr. Fehon is in possession of information that I have not got, in fact there are no papers before me, although it has been stated several times that these weights would be furnished to me.
5580. *Mr. Brown.*] That, I think, is not the fault of the Railway Commissioners.
5581. *Mr. Hoyle.*] The Commission, so far as I am concerned, will to-day be over, and I have not had the opportunity of seeing these papers before me, and if it were not for the courtesy of Mr. Fehon once or twice, I would not have known the weights at all.
5582. *Mr. Fehon.*] The diagrams have been on the table all through the inquiry.
5583. *Mr. Brown* (to witness).] Presuming that there are similar engines, or within about 3 cwt. of the same weight as on the driving wheels of the Baldwin engines,——
5584. *Mr. Fehon.*] The exact weights are, I think, 15 tons 1 cwt. on the Mogul and 15 tons 6 cwt. on the Baldwin.
5585. *Professor Warren.*] Do you say that the Mogul weighs that?
5586. *Mr. Fehon.*] Yes; the Scotch Yankee.
5587. *Professor Warren.*] I think you mean Beyer and Peacock's Mogul?
5588. *Mr. Fehon.*] I think it is the Dubs engine.
5589. *Secretary to the Railway Commission.*] Yes; they are called the Scotch Yankees—426 class. They were obtained about 1889.
5590. *Mr. Brown.*] Well, considering that the Baldwin engines are only about 4 cwt. more than the others, do you think that they would be more injurious to the road? Yes, they are of course the heavier weight, and a heavier weight upon one pair of wheels must be more injurious to the road
5591. Do you think the Baldwin engines are perfectly safe on your section? Yes, they are.
5592. Has your road been reballasted lately? Part of it.
5593–4. And is now in what state of repair? It is in splendid condition, or rather that portion which has been reslecpered and reballasted.
5595. What is the width of the sleeper from centre to centre on what you have done? The width is 10 inches at the joints, the next sleeper is 2 feet 6 inches, and the remainder are 2 feet 7 inches.
5596. Then 2 feet 7 inches is the greatest width? Yes.
5597. *Professor Warren.*] What weight of rail is that, is that a 71 vignole section? Yes.
5598. Have you any experience where an iron road has been laid and sleepers placed further apart? Very little.
5599. *Mr. Hoyle.*] Do you think it perfectly safe for that road—I mean the iron rails? I do not know how far the sleepers are apart, and so I could not say.
5600. Say that the sleepers are 3 feet apart on the straight, and 2 feet 8 inches to 2 feet 9 inches on the curve, with an iron rail 75 lb. to the yard? I consider that the joints, where they are coupled with the fish-plates, are the weakest part of the road. The sleepers are 2 feet 8 inches and 2 feet 9 inches apart on the curve, but that is not at the joints; they are nothing more than 10 inches at the joints.
5601. *Mr. Fehon.*] Do you know the engine called the Vulcan? No; I do not know it by that name.
5602. Some engines are harder on the road than others;—is not that so. Would an engine with a rigid wheel base knock the road about more than a pliable engine? An engine with good wheels and springs could not knock the road about.
5603. And suppose an engine has one of the driving-wheels without a flange, and there is no lateral pressure at all;—would not that be easier on the road compared to an engine that has a flange on all the wheels? That—I mean the engine with flanges on all the wheels—would be harder on a curve than the other.
5604. Instead of three flanges gripping the rail, you would have only two? Yes; two flanges should be easier than three.
5605. Have you noted that the Baldwin engines have only two? Yes; I have noticed

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5606. And do you not think they would be more easy? Yes.
5607. *Mr. Brown.*] So far as you know, are these Baldwin engines suitable to the permanent way of New South Wales? Yes.
5608. And in your section, with the exception of the joints, you find nothing wrong with the road? No; except in the case of the joints—they are a little weak.

Frederick Elliott, being sworn, said:—

Mr. F. Elliott. 12 May, 1892.

5609. I am a driver at Penrith, and drive between Penrith and Bathurst. I have been driving for about twelve years, but I cannot be sure to a month or two of the time.
5610. *Mr. Hoyle.*] Have you driven a Baldwin engine? Yes.
5611. What class of engine have you driven? Both passenger and goods, but the goods the most.
5612. What are the number of the passenger engines you have driven? Nos. 452 and 457, passenger engines.
5613. Was the number 457, the engine that was in the accident at Tarana? Yes; I believe it was.
5614. Did you drive 452? Yes; I have driven eight different American engines altogether up to the present time.
5615. Can you tell us whether, whilst you have been driving these engines, you have had any trouble with them? No; not with regard to breaking down, except for brake handles for the tender.
5616. Have you never had any failures of the reversing gear? No.
5617. Or the brake-gear or tubes? No; only the screw that takes the brake up, that was bent with me, but there has been no accident with the brake itself.
5618. What caused that to bend, was it through weakness? I think it is on account of not being counter sunk, some have been counter sunk, and they have never bent since.
5619. Would it bend through the result of want of care on your part in handling your brake? No; I think not.
5620. Did you handle it with all the care you ought to? Yes; it was through it not being counter sunk.
5621. To take the end of the screw, you say? Yes.
5622. Have you had any leaking tubes? No.
5623. Then, so far as you are concerned, your engine has been perfect? Yes; with the exception of some of the ferrules coming out of the tubes, but they never leaked.
5624. You mean they came out when you have been cleaning the tubes? Yes.
5625. Have you ever minutely examined the wheels of these engines? Yes; I always examined them on coming home from trips.
5626. Have you seen anything the matter with them? No.
5627. No defects in the wheels of No. 457? Well, there are holes in them from the casting when they were made.
5628. Do you say there is nothing in 457? I have seen what appeared to be cracks in them, but I would not like to swear that they are cracks.
5629. Did you scrape the paint off? No.
5630. You had only a look at them? Yes.
5631. They might be marks of welds? Yes; they looked like cracks, but I could not say that they were. I cannot say throughout, anyhow.
5632. How did you find these engines take the curve? So long as you go cautiously they take the curves very well.
5633. What do you mean by cautiously—about what rate of speed do you go when taking curves? On a passenger engine, I went about 20 miles, or a little over. Around a curve I should go comfortably.
5634. You would not attempt to go beyond 20 miles an hour? No; not round an 8-chain curve.
5635. Would you go 20 miles an hour round an 8-chain curve? Yes.
5636. And you find that the engine takes it perfectly? Yes.
5637. Easy? Yes; that is going into it.
5638. You have been driving other engines before these Baldwin goods engines? Yes.
5639. Have you driven the Scotch Yankee? No; she is passenger.
5640. Have you driven the Consolidation, which is nearly equal in weight—what is called the old Consolidation, the old American engine—have you driven those? Yes; a good many times over the mountains.
5641. Having driven the American engines and now the Baldwins, do you find that the road, and particularly where iron rails have been laid, any worse than before? I do not think so.
5642. You found no extra motion with your engine indicating that there are bad places? I do not think so any more than before, some places is better.
5643. Have you any places where you would slow down on the road? Yes.
5644. I do not mean on the bridges, but where else are there places on the roads where you have orders to slow down? It is only on the bridges, and where they are relaying.
5645. When you were driving the passenger engines did you use Helensburgh coal? That is only for the mail.
5646. Then you used ordinary coal? Yes.
5647. Do they steam well? Yes, now very well, they have been altered, and now they steam very well, at least they did so when I was last on them.
5648. Did you find when driving the American engines that they were rough on the curves? The old ones.
5649. Yes? Well, I should sooner drive the old ones than the new ones, I should consider myself much safer.
5650. Do you consider them easier on the road than the new ones? Yes, that is my opinion.
5651. Have you ever used the Vulcan? No, I do not remember.
5652. In comparison with the larger American engine, did you find the coal consumed by the Baldwin very much greater? Well, we used more coal on the new than on the old ones.
5653. Much? Well, about 10 to 15 cwt. on the trip, perhaps about a ton—that is, from Penrith to Bathurst and back; I think that would be about it.
5654. And now about the loads you haul; what loads do you take up the Lapstone? I never took a passenger train direct from Penrith; I have taken it from Katoomba. 5655.

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5655. Do you run in then with the mail? Yes, I only went two trips.
5656. Well, in the case of the trips you have driven; in taking your goods train from Penrith to Katoomba, are you always assisted? Yes.
5657. By a push-up engine? Yes.
5658. And they come back light from Katoomba often? I am not in a position to say whether trains come back light from there very often, but I have shoved up myself and I have come back light.
5659. In your case, where you have had to shove up behind, have you oftener come back light than with a load? I do not think so.
5660. Have you any doubt about it? Well, I have not shoved up much for nearly two years, I have generally been in front, but I have come back light.
5661. As often as with a load? Yes; I think about equal.
5662. *President.*] Why is that so.
5663. *Mr. Brown.*] Because he had not anything to carry I suppose.
5664. *President.*] But what bearing has that upon this inquiry whether you have come back light or not.
5665. *Mr. Hoyle.*] It is a question of economy, the contention is that having larger engines such as these they can take larger loads, and I ask whether if they have to come back light it is any economy at all.
5666. *Mr. Fehon.*] It is a question upon a matter which is scarcely in issue, what this inquiry has to determine is whether the Baldwin engines are fit for the road and the road fit for the Baldwin engines.
5667. *President.*] I see what you mean now, Mr. Hoyle, but at first I did not see how coming back light was material, and as it affects only a matter of economy, I do not see still how it is material with regard to what we have to inquire into. But of course the pushing up is material.
5668. *Mr. Hoyle.*] Do you know the weight on your engine or the weight on your driving-wheel? It is 15 tons. 9 cwt., I think.
5669. What load did you haul up from Penrith unassisted? The greatest was twenty waggons loaded.
5670. That is 10 tons a waggon? Yes.
5671. So that it was equal to 200 tons? Yes; I think it was made up of seventeen waggons and one large brake-van and a small brake-van.
5672. *Professor Warren.*] Well, that is equivalent to twenty vehicles? Yes.
5673. Have you had any draw-gear break? Yes, the draw-hooks and centre chains on the trucks.
5674. But on the engine? No.
5675. And when you take a load of that kind up unassisted you take up an extra brake-van for the purpose of protection, and when you take a shove-up engine you do it for the purpose of assistance? Yes.
5676. *Mr. Fehon.*] The push-up is really a brake, having regard to the power required to assist the trains.
5677. *President.*] In case anything should give way, I suppose.
5678. *Mr. Brown.*] It is quite evident you never had a conversation with this witness, Mr. Hoyle.
5679. *Mr. Hoyle.*] I have never had any conversation with any of these witnesses.
5680. *Witness.*] I have not had any conversation with Mr. Hoyle about this matter.

Patrick Dwyer, being sworn, said:—

Mr. P. Dwyer. 12 May, 1892.

5681. I am a ganger in the employment of Mr. Proudfoot, working on the section between the 105 miles and the 128 miles on the Western Line.
5682. *President.*] Is Mr. Proudfoot working on this line?
5683. *Mr. Fehon.*] He had a contract under the Commission for relaying and putting the line in a better order.
5684. *Mr. Hoyle.*] Where is the 105 miles and 128 miles? Between Wallerawang and Bathurst.
5685. Have you had in your capacity of ganger a practical knowledge of the line, have you walked the lengths where your works are carried on? Yes.
5686. Were you ganger when the road was reballasted between Sodwalls and Tarana? The old road?
5687. Yes, I mean the old road? Yes.
5688. Do you consider that that part of the road near Sodwalls, where there are iron rails now is perfectly safe for the heavy traffic going over it? No, I do not think it is.
5689. *Mr. Fehon.*] The witness asked if the old road or the new road is meant, I think you should define a little more clearly that it is the old road you mean, as for the new road it could not be better.
5690. *Mr. Hoyle.*] Did you have a knowledge of the road before it was lifted? Are you speaking of the old road?
5691. Yes, that portion which was not lifted beween Sodwalls and Tarana? No, I had not.
5692. Were you on the work when it was lifted? Yes.
5693. Since it has been relifted and reballasted, is it your opinion that taking into consideration the lifting and reballasting the road is perfectly safe for this heavy traffic to go over it? I do not think so.
5694. Why? Because the joint sleepers are too far apart in the first place.
5695. Does that apply on the curves only or on the straight? Both on the straight and on the curve.
5696. Whilst you were relaying by the instructions of the Commissioners, will you tell me what spacing between the sleepers was carried out in that new work;—what was the spacing? Ten inches the joint sleepers from the centre, that is, first from the joint; then 2 feet 6½ inches the second sleeper, and 2 feet 7 inches right through the length and on the curve.
5697. *Professor Warren.*] That is what you are doing on your contract? Yes, on the new works.
5698. What is the spacing on the road you are now reballasting; on the old road that you lifted;—what is the spacing there? I never lifted any old road.
5699. Well, that portion of the road which is being reballasted;—how are the sleepers placed there? The joint sleepers are 10 inches, or, perhaps, 11 inches, on one side, and 18 inches, perhaps, on the other side.
5700. At the joint—that is 28 inches between the centres and the sleepers? Yes.
5701. With the joint between? Yes.
5702. *Mr. Hoyle.*] And you think it should only be 20 inches? Yes.
5703. *Professor Warren.*] You think that 10 inches joint and 2 feet 6½ inches and 2 feet 7 inches are all right and would carry the Baldwin engines? Yes, I think so, in safety.

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5704. *Mr Hoyle.*] Do you know whether the engines which were running over the road previous to this were too heavy for it. It appears there had been engines running over these roads with only 4 cwt. less than the present Baldwin engines;—do you consider that these Baldwin engines, which are heavier than the previous ones, knock the road about more than the others did? I cannot say. I might give an opinion if I had travelled on them, but I have not.
5705. Then you have not travelled on the Baldwin engines at all? No.
5706. Do you know anything about the bridges? No.
5707. Have you found in your experience that the sleepers placed in the old road had a tendency to spread? Yes; I think they would.
5708. When you were reballasting these lines did you find many chairs and keys broken? Yes.
5709. How many chairs? Sixty per cent.
5710. Sixty per cent? Yes; sixty out of 100 of the chairs, that is on parts of it, were broken.
5711. Would those parts be on the bad road—that is, on the road that was relifted twelve months ago, when you reballasted the road. I understand you to say that you found this number of broken chairs? Yes; when I was relaying.
5712. You are now referring to the relaying at Sodwalls? Yes.
5713. And you say that you found as a rule about sixty out of 100 chairs broken? Yes.
5714. Did the Baldwin engines run over that portion before the relaying took place;—Are you speaking of the section from the 113 miles 30 chains to the 114 miles 60 chains? Yes.
5715. When you were reballasting the other portion of the line did you find many chairs broken there? Yes, I did.
5716. Did you find in picking out your line any broken rails? No; I did not.
5717. You did not find any cracked rails? No; but I have seen men from the gangs take broken rails out.
5718. That was before? Before I came to the part of the road that I had to relay.
5719. But was it on that portion of the road before you relaid it that you took these rails out? Yes.
5720. When you were taking out the old rails, and putting in the new ones, did you find any of the old ones broken? No.
5721. Where did you get the two broken rails from? About one-half mile ahead of where I was relaying. The flagman came back and told the inspector that there was a rail broken, and that there was no repairer to put it right, so that I had to send a couple of men back to relay it.
5722. Have you taken iron rails out anywhere else, and relaid the line with steel rails? No; I have not.
5723. So that you cannot say, from your experience, whether you found broken rails anywhere else? No.
5724. Now, can you tell me what is the condition of the rails generally between Sodwalls and Tarana—that place that you ballasted, but did not relay? They are in very bad order.
5725. Have you been on the job recently? Yes.
5726. When were you there last? I was there nine weeks ago.
5727. And you say that the rails then were in very bad order? Yes.
5728. Did you find that many of the rails, when you were re-ballasting, were turned rails? Yes.
5729. What is your experience, as a fettler; do you find that a rail that has been turned is more easy to fracture than a rail that has not been turned? Well, it all depends on where it is put in. If the sleepers are the same distance apart, and they do not the rail, it might make no difference; but if they are put on at different distances, it would make a difference. Generally, where the rail rests on the chair, it is worn away, and if it were shifted 9 or 10 inches away it might not come in the same place, and it would make the rail weaker.
5730. Did you find many instances where the chair has worked into the sleepers? Yes.
5731. Would that cause the road to become unsteady, and easily to get out of gauge? Yes.
5732. When you were relaying this portion of the road before did you find the road pretty well to gauge? No.
5733. Not to gauge? No.
5734. How would you account for it getting out of gauge;—would you account for it by the heavy rolling stock running over it? Well, it might or might not be owing to that.
5735. You do not care to express an opinion upon it? There is a different tempering in the rails. Some rails might be more easily worn than others, and the more the rails were worn, the narrower the gauge would be.
5736. That is the result of the process of flattening? Yes; on the top.
5737. But what I thought you meant was the sheering on the side of the rails? No.
5738. Do you find many of the rails on this part bulged much? Yes; that is what I am speaking about. That is what makes them tight.
5739. *Professor Warren.*] Flattened on the head, you mean? Yes.
5740. *Mr. Fehon.*] What was your experience before you went with Mr. Proudfoot? About fifteen years.
5741. Or the permanent-way? No; not on the permanent-way.
5742. What on? On contractor's job. New construction.
5743. You have never been with contractors on the permanent-way? Not on the permanent-way; but I have been on with contractors on new construction work.
5744. How long an experience have you had with the permanent-way? Fifteen months.
5745. Did you work on this section fifteen months ago? Yes.
5746. And when did you relay the section. When did you do the lifting and relaying that you speak about. Is that twelve months ago;—how many? It might be.
5747. Just think of what you are saying, because we know? About five months ago.
5748. When did you commence? I cannot say to a certain day.
5749. But you finished it five months ago? I was on the job five months ago.
5750. I ask when you commenced relaying;—did you commence relaying as soon as you went on the job? No.
5751. How long afterwards? About a week afterwards.
5752. And you continued until the last five months, and it was then complete? No.
5753. That is what you said just now? No; I did not continue relaying.
5754. Never mind whether you were relaying or not. You finished relaying about five months ago? Yes.
5755. And the road was in very good order then? Yes.

5756.

Mr. P. Dwyer. 12 May, 1892.

5756. Do you know when the Baldwin engines commenced to run? No, I cannot say.
5757. Well, they commenced running when you got the road in good order. You were speaking about sleepering curves. Suppose a curve is under 15 chains how many additional sleepers do you put in to the length of the rail as compared with the straight? On the new road?
5758. On any road whether new or old? It all depends upon what the inspector tells me to put in.
5759. There is no choice at all. There is a standard for it? Well, what is the standard.
5760. That is what I am asking you. You do not know? Yes, I do know.
5761. Supposing it is a 15-chain curve, how many sleepers do you put in? Twelve sleepers.
5762. And if it is over 15 chains? Twelve sleepers.
5763. Then there is no difference in the number of sleepers whether it is under or over 12 chains? No.
5764. Then you have not followed instructions? There ought to be a difference.
5765. You say the engines are too heavy for the road. But at the same time you say that you have never travelled on one of them? I did not say that the engines were too heavy for the road.
5766. Well, I took down your evidence and I have it here? I cannot say anything at all about the engines. I never travelled on one.
5767. You cannot say whether they are injurious to the road or not? I cannot say.
5768. What is your opinion on the matter. Do they do more damage to the road than any other engines? My opinion is—
5769. We do not want your opinion, we want actual information as to what you have seen, because you are not here as an expert? Well, I am sure I cannot say. I cannot answer that question.
5770. Alright. You say you have 60 per cent. of broken chairs. Was it after you had taken the road up that you found you had only forty good chairs out of the 100? No; they were broken after the old road was taken out.
5771. *Mr. Brown.*] That is not what you said just now. You said that when you went to take the old road up you found 60 per cent. of chairs broken? Yes.
5772. That is not the question Mr. Fehon is putting to you now. He asks whether it was after you had taken the road up that you had 40 per cent. of good chairs. He wants to know whether you broke the chairs yourself in taking the old road up and had to get new ones to replace them with? We did not use any chairs in relaying the road.
5773. But no matter, pay attention to Mr. Fehon's question. Remember where you are. You say that when you pulled the road up you found only 40 per cent. of the chairs good and that the rest had been broken. Do you mean that that per centage was broken before you touched the road at all? Yes; there were only forty good chairs out of every 100.
5774. *Mr. Fehon.*] And how long ago was that? About four or five months ago.
5775. But you said you had finished it five months ago? About five months ago I said I was relaying.
5776. You said you were relaying from eighteen months ago to five months ago, and now I ask you when it was that these chairs were taken out? It was between four and five months ago.
5777. That is enough.
5778. *President.*] You say you worked on the length from 105 to 128? Yes.
5779. What work have you done on that length. Have you relaid it? Yes; parts of it.
5780. Do you know where the accident occured lately? Yes.
5781. Have you relaid that length? No, but it was relifted twelve months ago.
5782. Did that part seem all right? Yes; to my idea it did.
5783. Nothing wrong with it as to the sleepers or anything else? No; I cannot say that there was.
5784. They were sufficiently close together were they? Yes.
5785. *Mr. Hoyle.*] What I want to know is this—were the broken chairs that you have referred to broken by your people in taking them out or did you find them broken when you got to the road. Were they broken by you in taking them out? No; they were not.
5786. They were broken before you touched the road? Yes.

George Frederick Evans, being sworn, said:—

Mr. G. F. Evans. 12 May, 1892.

5787. I am a fireman on the New South Wales Government Railways.
5788. *President.*] How long have you been on the railways? Nine years.
5789. What have you done during that time;—how long have you been a fireman? Seven years.
5790. And before that? Well, I have been driving, too.
5791. What part of the line do you do duty on? Well, I am stationed at Bathurst.
5792. From Bathurst to where? Penrith at the present time.
5793. *Mr. Hoyle.*] Were you firing on the express train on the night of the accident? Yes.
5794. You were firing the engine that drew the train that met with that accident? Yes.
5795. Can you tell me whether that train was stuck up before you got to the place where the accident happened? Yes. We took charge of the train at Katoomba, and going up Dargin's Bank—that is entering Clarence Siding station—she slipped, and stopped, though only for a second; she lifted again as soon as she got sand. It was a nasty greasy night, and the sand-pipe was choked. We had a very heavy load on too.
5796. What load had you on? Twenty-two and a half.
5797. Twenty-two and a half carriages? Yes; twenty-two and a half was the load.
5798. And you had no assistance? No.
5799. Were you stuck up more than once? Twice. Though it was only for a second each time. We lifted her again as soon as she got sand.
5800. *President.*] What do you mean by "lifted" her again;—do you mean that you went on again? Yes, sir.
5801. *Mr. Hoyle.*] Have you fired on any other engine besides this one? Yes.
5802. What is your experience as regards the engine? As a fireman?
5803. Yes? Well, I like the engines. They are good steamers, and pull well.
5804. Have you had any breaks with any of them since you have been here? No; not firing.
5805. Had you when you were driving? Yes; though it was not the engine's fault. It was the result of a collision. She broke a buffer-plate.

Mr. G. F. Evans. 12 May, 1892.

5806. And do you know of any failures, except this particular collision? No; it has not occurred with us.
5807. Then, in your opinion, these engines are good for steam, and good engines generally. They will haul the loads, and do everything that is required of them? They are master of their loads.
5808. Can you tell me whether on any other occasion—on a wet night—you have had any slipping to put up with;—though, as a matter of fact, you have not had many wet nights up there lately? It is always wet and greasy there.
5809. Well, did you have any other failures of the kind;—I mean have you been stuck up on wet nights on any but those two occasions to which you have referred? No, sir.
5810. Do you have to use sand frequently? No; at least I cannot say whether the engine-driver has his hand on the sand cock or not, but you would have to use sand with a light engine if you were starting in a fog on the mountains.
5811. At all events, you consider the load you are speaking of was a heavy load, and that it is owing to that that you were stuck up twice on the night of the accident? No. It was owing to the greasy night, I think. She walked the load off on other occasions.
5812. *President.*] You know where the accident happened near Tarana? Yes, I was there.
5813. Before that sad accident happened were you stuck near there, or did anything else happen? No.
5814. Everything was going alright? Yes, there was something about two years ago, but I was not on the train then.
5815. But I am talking about this particular night. The engine had not stopped just previously had it? No, she merely came to a dead stand when the accident happened, just as if the air pipe had burst. We did not hear any crash at all.
5816. There was nothing wrong with the engine? No.
5817. How far had you got on the curve when the accident happened? From what I heard, from what my mate said he thought it was about 98 yards.
5818. At all events you had taken the curve right enough, and were going round it? Yes, the engine was round the curve.
5819. *Professor Warren.*] Of course the uncoupling of the hose-pipe puts on the Westinghouse brake at once? Yes.
5820. So that pulled you up? Yes. That and the back portion of the train being against the rock cutting. I have been in a train when a hose-pipe has burst before, and the sudden stopping of the train threw us off our seats. We did not know anything of the accident until we went back. We thought it was a broken hose-pipe and went back to look for it.
5821. Of course the hose-pipe had been broken as a matter of fact.
5822. *President.*] Where was the broken rail? Well into the curve.
5823. And is that where you say you measured 98 yards?
5824. *Mr. Hoyle.*] It was not on the curve that the rail broke was it? No, not in the centre of the curve. It was just at the commencement of it. We were 98 yards in when we stopped.
5825. *President.*] What I want to know is, how far the broken rail was from the beginning of the curve? I think it is about the second rail in the curve. But at the time I was too much excited at seeing so many wounded people lying about to notice very particularly.
5826. *Mr. Fehon.*] If you had not had a Baldwin engine on your train, you would have had two ordinary engines? Yes, with that load.
5827. And would you have been able to pull up so quickly with two engines worked by two sets of men as you did with this Baldwin engine? No, the leading engine would not have had the brake on at all.
5828. And if you had run another 6 or 8 yards the chances are that the people in the sleeping car might have been killed? Yes, all killed.
5829. So that the safety of the passengers on that train depended as a matter of fact on the Baldwin engine? Yes.
5830. *Mr. Fehon.*] That is a fact.
5831. *Professor Warren.*] That is to say from the fact that the Westinghouse brake could not have been applied by both engines? Well, the pilot engine would not have touched the brake.
5832. Quite so. The pilot engine would have been running independently of the other engine as far as brake power is concerned. It would have had brake power but it would not have applied it, and as a consequence that if you had had two engines on the train you would have had the extra momentum caused by the pilot engine running on after the accident had happened.
5833. *President.*] Then, if that deduction is correct, the fact that a Baldwin engine was on the train when the rail was broken resulted in saving the lives of a great many persons.
5834. *Professor Warren.*] Yes; but then as a set-off against that it must be remembered that the Westinghouse brake could not be applied to both engines at once.
5835. *Mr. Hoyle.*] It is the Westinghouse that saved the train.
5836. *Professor Warren.*] That is perhaps a matter of opinion.
5837. *Mr. Fehon* (to Witness).] I will ask you a question or two, not in the way of eliciting evidence, but to show how matters are being managed with regard to these inquiries;—have you been in communication with Mr. Schey since this accident? No.
5838. Did you not write to him on the 2nd of May? No.
5839. Had you a letter from him? Yes; I received a letter on the 29th.
5840. *Mr. Hoyle.*] I must object to this, Mr. President. What has it to do with the Baldwin Engine Inquiry. I must object to such matter being imported into the proceedings.
5841. *Mr. Fehon.*] Well, I am only referring to a letter that has come into our hands in a perfectly legitimate manner. I may say at the outset, as was said at the beginning of the inquiry, that so far as the facts to be inquired into are concerned, we face them with the full knowledge that what we have done is right, and if we had to deal with the same case again we should repeat to-day what we did then, but we do object to the way in which our servants are undermined by persons who are not in the service now. Here is a letter addressed by Mr. Schey to a locomotive driver at Bathurst—"G. Evans, Esq.," and in this letter he says that Mr. Hoyle has gone to Bathurst to make inquiries ——
5842. *Mr. Hoyle.*] I object to all this. It is entirely irrelevant to the matter that we have in hand.
5843. *President* (to Mr. Fehon).] I do not think you can read the letter, because it has nothing to do with

with this inquiry. No matter how wrong or how monstrous it may be we have still nothing to do with it. How can what Mr. Schey may have done affect Mr. Hoyle in regard to this Inquiry. Mr. G. F. Evans. 12 May, 1892.

5844. *Mr. Fehon.*] They are coupled.

5845. *President.*] I do not think so.

5846. *Mr. Fehon.*] I mean in this letter.

5847. *Mr. Brown.*] They are not coupled, and I do not think it is fair to say so.

5848. *President.*] Without in any way expressing an opinion upon Mr. Schey's conduct, I will say that I draw a very marked distinction between Mr. Hoyle and Mr. Schey.

5849. *Mr. Fehon.*] So do I.

5850. *Mr. Hoyle.*] If there is anything that I pride myself upon as a man, it is doing things in a manly way, and I wish it to be understood that I have not written to a person in the department in connection with the Inquiry. I have not instructed Mr. Schey to make any inquiries on my behalf, nor has Mr. Schey given me any information. All that I have done I have done upon my own responsibility, and in many cases I do not know where I have got my information from. Some of it has come to me by means of anonymous letters, and all of it has been brought to me unsolicited. I based my charges in the first instance upon public documents furnished by the Commissioners themselves. Something in those documents alarmed me, and I decided to take my present course of action, and I have done it fairly and honestly, and I deny absolutely that I have had any communication with a railway employee. I would scorn to ask any man to give me information behind the backs of his officers, because if I was an officer in the department to-morrow, the man who gave information behind my back I should deal very severely with him.

5851. *Mr. Fehon.*] I have no wish to impute anything dishonorable to Mr. Hoyle. Although Mr. Hoyle has left the service of the Commissioners, when there we always esteemed him as an honorable straightforward man, but I say it is a rascally shame the way this service is being undermined by some who are bringing discredit upon honest men, and using our employees for the purpose. It is too bad also the way in which men are brought to the inquiries to give evidence on matters that they know nothing about.

5852. *President.*] I cannot deal with that, but if Mr. Schey were here, and it was proved that this letter was written by him, then I should make such remarks as I thought were necessary. I want Mr. Hoyle to understand, however, and I want you to understand that he and Mr. Schey are not in any way associated by the members of this Commission. I do not know that they are associated, except in so far as being Members of Parliament, and that does not necessarily make much association between them. Mr. Hoyle says that as far as he is concerned he has never consulted a single person in the department in regard to the matter that he has brought before this Commission, and I believe him. Indeed one can see that it is so from the fact that he often puts witnesses in the box who clearly do not help his case, and assuming as you may be allowed to assume that he is mistaken, you must admit that he is doing everything in a fair and manly way.

5853. *Mr. Fehon.*] We quite admit that.

5854. *Mr. Brown.*] We all re-echo those sentiments.

5855. *Professor Warren.*] Yes, I certainly think that Mr. Hoyle has been exceedingly fair in the way in which he has conducted the case.

5856. *Mr. Hoyle.*] I am exceedingly glad to hear these remarks from the members of the Commission. It is especially gratifying to me to know that I am not misunderstood by them, because I have suffered a good deal in that direction. The last witness that I have to call, until Tuesday, is George Yates.

5857. *Mr. Brown* (to Mr. Fehon).] Do I understand that you will put Mr. Rhodes in the box then?

George Yates, being sworn, said:—

5858. I am shed foreman at Dubbo. Mr. G. Yates. 12 May, 1892.

5859. *President.*] How long have you been there? A little over eight months.

5860. And where were you before that? In the Eveleigh shop.

5861. *Mr. Hoyle.*] Are you the locomotive officer at Dubbo? Yes.

5862. I suppose there are some of the Baldwin engines there? We have four of the Baldwin engines there.

5863. Consolidation goods engines? No, we have no goods engines there; they are all passenger engines.

5864. Have you had any engines breaking down in your district? One.

5865. What was the cause of the break down? A valve-buckle broke.

5866. Was that on the occasion of a trial of this engine? Oh, that would make two failures. But that was hardly in my district.

5867. Well, as I do not intend to call any other witnesses, you might tell me about it, if Mr. Fehon does not object? Yes; an engine, No. 453, was sent to Bourke to bring down a load of fifty trucks of stock and it failed on the road. But Mr. Bough is in charge of the Nyngan district, and as the engine failed near Byrock it was not in my part of the road. You could not call that a break down however.

5868. *Professor Warren.*] What was the failure in the case of the engine that was doing the trial? The valve-buckle broke. It broke near Byrock, and since a valve-buckle has broken on the road.

5869. And is that the only accident you have had in your district? That is the only accident.

5870. Since they have been with you have you closely examined the wheels of the passenger engines? Yes.

5871. Do you find any defects in them? No, not real defects.

5872. Well, what you imagine to be defects? Well there are one or two that you might call welding flaws.

5873. *President.*] Do you mean in the spokes? Yes, in one or two of them. Nothing further.

5874. *Mr. Hoyle.*] There appeared to be cracks in the wheels? Well, I would not call them cracks.

5875. What is the number of the engines? 453, 446, and 447, though that is down here for repairs.

5876. It is down here doing a trial now, I believe? Yes, 449 and 455.

5877. Have you examined the wheels of the whole of them? I think 447 has most of the defects, if we can call them defects, in the spokes.

5878. Do you find these engines do their work well? Yes.

5879. And the only failure has been breaking a valve-buckle? Yes. When I say that 453 broke down in Byrock she was not stationed in our district, she was sent up to the particular work over which she broke down. We have had one failure whilst the engines have been with us. 5880.

Mr. G. Yates. 12 May, 1892.

5880. No failures with the brake-gear? No.
5881. No leaking in the tubes of the boilers? Well, we have had a tube weeping now and then, but that is all.
5882. Have you done more repairs to these engines than you would to new engines generally? Well, when I was called away to come down here I was compiling a return, and I believe the Scotch Yankees will be heavier in repairs than the Baldwins.
5883. I suppose you know nothing about the permanent-way? No.
5884. What I mean to say is that it has been no part of your duty to look after the permanent-way? No; but I may say that I believe the Baldwin engines may be lighter than some of the engines we have been running from Dubbo.
5885. Have you got the Scotch Yankee there now? No.
5886. Then your experience is that the Baldwin engines, with their greater weight on the driving wheel, would be lighter upon the permanent-way than some of the engines that you have? Yes; lighter than the Vulcans, for instance.

William Rhodes, being sworn, said:—

Mr. W. Rhodes. 12 May, 1892.

5887. I am an engineer of the Baldwin Locomotive Works.
5888. *Mr. Fehon.*] How long have you been with the Baldwin Company, Mr. Rhodes? Twelve years.
5889. Had you any previous experience? I was ten and a half years on the Pennsylvania Railroad.
5890. What number of locomotives do the Baldwin Company turn out each year? Over 900.
5891. Do you know the total number of locomotives that the company has built? They have built over 12,000 up to the present time.
5892. I simply ask you this question to prove the importance of the works with which you are associated;—have you seen any of the recent Board returns? Yes, I have.
5893. What is given as a total number of engines in Great Britain? Sixteen thousand—a little over.
5894. Then your company have made three-quarters as many engines as there are being used on the railways of Great Britain? Yes.
5895. Is it usual for a company to send an officer to see that the engines are properly fitted up? Yes, sir.
5896. Is it customary for the firm to receive independent specifications of the engines to be built for the persons ordering the engines;—for instance, when a railway company is ordering an engine from the Baldwin Company, do they send a specification describing the minute parts of the engine, or simply do they give you the leading points? They simply give us the leading points; we furnish specifications for their perusal.
5897. Of course the breaking of axles has come under your observation since you have been here? Yes.
5898. What is your opinion with regard to iron axles? Iron axles are used very extensively. It is a matter of opinion amongst railway experts whether they prefer iron or steel axles. It is a very open question.
5899. What is the custom in America;—is it the custom to use iron or steel? Iron.
5900. What is your opinion with regard to axles;—do you make them yourself or do you order them from other firms? We generally purchase them from manufacturers of axles.
5901. Are you aware what class of material was specified for the axles for the engines? Iron or steel.
5902. We left it to the judgment of the Baldwin Company to use which they thought best? Yes.
5903. What was specified with regard to the testing of the axles on that occasion? Nothing that I know of.
5904. What is your custom with regard to testing? We depend upon the manufacturers for their axles when we purchase them.
5905. As a rule, you do not test these axles? No; not scrap axles.
5906. Would a test be any guarantee that if one axle is good the others are good also? Hardly; the drop test is not the result with regard to a scrap axle.
5907. What is the weight usually adopted in the United States? It has been from 67 lb. to 70 lb. per yard. I understand they are going into heavier rails.
5908. How long is it since they began to go into heavier rails? About two and a half years.
5909. And that would be on railroads where there is an immense traffic? Yes; a heavy traffic.
5910. Do you consider that the additional weight of the rail is for the purpose of getting a longer life out of the rail or for additional strength in order to carry the weight of the engines? Well, in both cases. Where they adopt a very heavy weight on the axle, on the rails between New York and Philadelphia, they have adopted a heavier rail also. But the lighter rails are almost universal throughout the United States.
5911. What is the weight of the locomotives;—I am speaking of the heaviest of the locomotives running on the principal roads of the United States at the present time. Take, for example, the Baltimore and Ohio road. It is a road that has been mentioned very often during this inquiry, and we are supposed to have adopted the Baltimore and Ohio style of engine. What is the weight of rail there? The main line from Baltimore West is a 67-lb. rail. The new line between Baltimore and New York is built of a heavier rail.
5912. And are these heavier rails running on the 67-lb. rail? Engines a little heavier than those you have imported.
5913. That would be a steel road, I presume? Yes; a steel road.
5914. And what is the weight on the driving-wheel on those engines? They run nearly 15 tons, on an average.
5915. That is, there are some a little heavier and some a little lighter, but the average is 15 tons? Fourteen and three-quarters tons, I think.
5916. What is the weight on our axles? Fourteen tons 8½ cwt., on an average, I think, as the weight was taken here. When they were weighed in Philadelphia they weighed rather lighter.
5917. What were our instructions to the company about weight on axles? That the weight on the axles was to average 14 tons 10 cwt.
5918. And have you complied with that? Yes, sir.
5919. That is, you have averaged that? Yes.
5920. But your driving-wheel is heavier? Yes.

Mr. W. Rhodes. 12 May, 1892.

5921. Will you explain why it could be allowed to be heavier than the other wheels? We always make the driving-wheel heavier; it has no flange, and has nothing to do with the guiding of the engine. In fact, it is simply a weight rolling over the road in going into a curve, and has no effect on the rails at all.
5922. You are aware of the weight of the rails on the New South Wales line? Yes.
5923. The lightest rail here is heavier than the average rail used in America? Yes.
5924. *President.*] But, as a matter of fact, our rails are of iron and they are not.
5925. *Mr. Fehon.*] Our rails are of steel and iron.
5926. *President.*] The 75-lb. rails are of iron, are they not?
5927. *Mr. Fehon.*] Yes; and the 71-lb. rails are steel. There may be a few lengths of 71-lb. rails on the road, but they are very few. The rule is that the 75-lb. rails are iron and the 71-lb. rails are steel.
5928. (To Witness.) What plan has been followed in the construction of these locomotives? The regular system in the shops and the system of inspection that has always existed there.
5929. What is your system of inspection? As the parts pass from department to department they are inspected by the leading hand of each place, and also by the foreman; and then there is a general inspector, whose duty it is to pass from department to department and inspect everything, and also make the final inspection before the engine leaves the works.
5930. What defects have developed themselves in these engines, taking first the truck axles? The truck axles ran hot, and we used every endeavour to get them to run cool, with partial success, and finally some of them broke.
5931. You were fitting up other engines at the time these axles broke, so they were under your observation daily? Yes.
5932. *President.*] Did Mr. Rhodes come here to set these engines going?
5933. *Mr. Fehon.*] I am speaking of the bogie axles that have been replaced.
5934. *President.*] Yes, I know; but did Mr. Rhodes come out here to set the engines going?
5935. *Mr. Fehon.*] Yes.
5936. (To Witness.) There have been some remarks about the reversing-gear;—will you say what you consider are its defects? The screw of the reversing-gear is something that we do not use in America. The space was very confined in which it was placed, and after the engine had been running for a time the fulcrum-pin was broken. We replaced all the fulcrum-pins at the expense of the Baldwin Company.
5937. Your roads are more level that these, are they not, and so the reversing gear would not be so essential as on the steeper gradients on the new South Wales Railways? We never use screw reversing gear. We always use a lever.
5938. Who manufactured the break gear? The break gear was manufactured by the United Sates Brake Manufacturing Company. That company is considered by the Westinghouse Company as one of the best houses in the States, and we have never had any complaint about their work before. I may say that the Westinghouse brake is on the goods engines, and most of these failures have occurred with the engines that have been coupled to goods trains on which we know the breakage was very very severe, because the engine has to haul the whole train, without the assistance of a brake-van; but on the passengers they have a continuous brake throughout the train, and the strain is not so much on the engine.
5939. There has been a great deal said throughout this inquiry about the driving-wheels; it is said there are flaws in the wheels, or what are called flaws; can you tell the Commission the process of manufacture, whether it is a new or an old system of making wheels? This system of making wheels was introduced by the superintendent of the works some years ago, and we have made a great many of them. They are considered a strong wheel. There are little places where the film of iron near the hub presses over the spoke of the wheel, which would apparently look like a crack, but it is not a crack. It is just a film of iron that had been pressed round the wheel. The committee of the Franklin Institute sent to examine the process of making the wheels, and reported in favour of them. We have the same wheels running in the United States, in Mexico, and in the Argentine Republic, and so far we have had no failures with them.
5940. And did not all scientists who saw the process award a medal for it? Yes; they recommended that the inventor should receive a gold medal.
5941. *Professor Warren.*] A Franklin gold medal? Yes. I have the book here if you care to see it.
5942. *Mr. Fehon.*] What engines are the Baldwin Company at present making? They are making the very heavy engines now. They have 19½ tons on the axle.
5943. And what would be the weight of the engine? It is given in one of these papers.
5944. You say that some of them are 19½ tons; do you mean British tons or American tons? British tons—2,240 lb. to the ton. American short tons contain 2,000 lb.
5945. *Professor Warren.*] What number of the *Railroad Gazette* is it that you have? 12th February, 1892. The total weight of the engine is 123,000 lb.
5946. *Mr. Fehon.*] What weight of rail is that engine running on? It is running over the Brown Buck road, between Pensylvaunia and New York. That has a heavier rail. It is a rail weighing about 76 lb. to the yard.
5947. A steel rail, about 76 lb. to the yard.
5948. Is not that the weight of the engine itself, without the tender? Yes; we never include the tender.
5949. Are you aware that your company raised any objection to the weight we were adopting on the wheels? They considered it was unnecessary to reduce the weight. They pointed out that they thought it unnecessary.
5950. *Professor Warren.*] That is stated in the correspondence as follows:—"The proposed reduction of weight per axle will, we fear, cause disappointment in the performance of the engines. We judge the same work is expected of them as that stated in the *Railroad Gazette*, as being performed by the Baltimore and Ohio engines. It should be fully understood that their deficiency will be correspondingly reduced. As we understand that the permanent way of New South Wales Railways is of a much more substantial character than the Baltimore and Ohio Railroad, we see no reason why the engines built for the latter could not be adopted entire. We should be gratified if on further consideration this is decided upon."
5551. *Mr. Fehon.*] Did not you build these Baltimore and Ohio engines yourself? Yes; I was in the shop when they were being built.
5951½. You were superintending their construction, were you not? I was assistant-superintendent at the shop.

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5952. And you were out in this Colony some few years ago to superintend the erection of the other engines which have been bought from the Baldwin Company? Yes.
5953. And knowing the state of the railways in New South Wales, you consider that we would have been perfectly justified in adopting a heavier engine than the one we had? I consider that the Baltimore and Ohio engines would have been very suitable for the road.
5954. *President.*] You refer to the modifications about which the Company make some complaints in their letter? Yes. I think the New South Wales roads are better than the Baltimore and Ohio road—more secure.
5955. *Mr. Fehon.*] It has been stated that there were defects in the draw-gear of the engine. Can you explain that? The draw-gear was made rather light, owing to an error made in our office, and when it was pointed out to the Baldwin people they authorised us to replace them.
5956. The Railway Commissioners of New South Wales gave you instructions to make a heavier hook for the engines? Yes.
5957. With regard to the modifications made in the Colony, did they affect the stability of the engines? No, not at all. We changed the boiler from a waggon top to a straight boiler in order to reduce the weight.
5958. You have seen a great deal of the engines since they were erected. What is your opinion regarding them, as to their efficiency and stability for the work for which they were obtained? I consider them a very suitable engine, and a good working engine.
5959. Are these engines quite up to the average of the engine that you have supplied the other countries, and those that you use at home? Quite up to the average.
5960. In fact, I presume they are better in some respects, inasmuch as we have them fitted with copper fire-boxes and brass tubes? Yes; I consider that our people made more of an effort over these engines than they usually do.
5961. It has been stated that the wheels are considered light. What is your opinion, as a mechanical engineer as to the weight of these wheels, taking into consideration the general weight of the locomotives and the work they have to do? I think they are quite heavy enough.
5962. And it has been stated that the boss of the wheel is lighter than it should be? I cannot see that it is.
5963. Is that the ordinary size boss—the size which you usually put in engines of that character? For that class of wheel.
5964. But if you were making a cast wheel? I may make a bigger box then.
5965. The Company wished the engines to be heavier, but we wish to have them lighter, and how did they do it? By putting on a straight boiler instead of a waggon top boiler rising over the fire-box.
5966. And anything else. Was the engine shortened up in any other respect? No; those were the principal changes.
5967. Well, the wheels were made 2 inches lower, I think? Yes; the Baltimore and Ohio engines were 5 feet 4 inches.
5968. It was said that there was a danger of the axles working loose. Is there anything exceptional in the fixing of the axle on those engines from your usual practice? No; the axle is fixed on with pressure in the usual way. I do not think they would work loose.
5969. Of course, you know as a fact that one or two of the axles have worked loose. Is it a usual thing for engines from your works for the axles to work loose? No, we do not often get axles working loose, though occasionally an axle will work loose.
5970. I suppose you cannot account for it with regard to these engines? No, I cannot.
5971. It has been said that the rim of the wheel is defective. Are you aware of any defects in it? No.
5972. What is the general opinion of drivers in the United States as to these large engines. Do they favour them, or do they dislike them? Oh, they like a good sized engine. I never heard anything unfavourable with regard to them.
5973. Do you think they prefer them to the smaller engines? Well, a larger engine means more work for the driver; that is all there is about it.
5974. I do not think there is anything else I want to ask you.
5975. *Mr. Hoyle.*] Can you tell me how long ago it is since the first of this class of engines was made. I refer to the heavy engines—the Baltimore and Ohio engines? Somewhere about 1889 or 1890; I am not sure which.
5976. The first of them were made in 1889 or 1890? Yes.
5977. How long ago is it since you were in America? I left in June, 1890.
5978. Were you in America, in the Baltimore and Ohio shops, when these engines were being constructed? Do you mean the first Baltimore and Ohio engines?
5979. These engines for the colonial Government? No.
5980. Were you in the shops in America when these engines first began to run? Which engines?
5981. The Baltimore and Ohio engines? The engines running on the Baltimore and Ohio railways?
5982. These large Baldwin engines. Were you in America when they were first made for the Baltimore and Ohio Company? Yes; the New York, Lake Erie, and Western engines were the first heavy engines made.
5983. You say that the first heavy engine was made in 1889 or 1890? Yes.
5984. Do you know that the Baltimore and Ohio Company selected a new standard rail—a steel rail 85 lb. to the yard—in 1891? I had left the United States at that time.
5985. Is the *Engineering News* a good and reliable paper? Yes.
5986. I have it here. Let me quote from it. Here is a paragraph headed:—"Standard 85-lb. rail and joint, Baltimore and Ohio R.R., 1891. The Baltimore and Ohio Railroad has approved and adopted under date of May, 1891, a new form of standard rail section and joint, which are shown in the accompanying cuts, prepared from blue prints, furnished by Mr. H. T. Douglas (M. Am. Soc. C.E.), chief engineer. This track is to be laid on the division between Baltimore, Md., and Philadelphia, Pa., which is now laid with rails weighing 67-lb. per yard." Well, that is a different division altogether, Mr. Hoyle.
5987. But does the Baltimore and Ohio engine run there? Not on that division.
5988. They run between Baltimore and Ohio? They run from Baltimore West. Philadelphia is west of Baltimore.
5989. Well, would that description apply to these rails? It does not refer to the road on which engines similar to these run, but it does refer to the engines running between New York and Washington.
5990. Is it not a fact that where these engines are running they are laying a heavier rail? Now, no doubt they are adopting a heavier rail all over America.

5991.

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5991. *Professor Warren.*] That is the tendency of American practice, is it not? Yes.
5992. *Mr. Hoyle.*] Well, would that not be as much to meet the additional weight of the engines as for the purpose of economy? No, doubt it is more economical.
5993. *President.*] Do you understand the question;—would it be as much to meet the weight of the engine as for the purpose of economy—that is what Mr. Hoyle asks you, and you say, "No doubt it is more economical"—I want you to answer the question as he puts it? Well, I do not know what they had in their mind at the time the railroads began to adopt the heavier rail.
5994. *Mr. Hoyle.*] Is it not your experience that where you get a heavier rolling you get a heavier rail practically with regard to rolling stock of this description; or I might put it this way, do you think that the Baltimore and Ohio Company has been influenced by the great weight of these engines by putting down a heavier track? They are putting down a heavier track where they are running these engines.
5995. Well what is the difference in the weight of the driving-wheel of the engine running through the St. Clare tunnel and these engines? Well, I think they are about 20 tons on the driving-wheel.
5996. They have 19½ tons on their driving-wheel have they not? The St. Clare tunnel is a very short road.
5997. Is it not a fact that they have laid down a heavier rail there? It may be so; the line is only a mile and a half long.
5998. What is the difference between the weight of the engine as it is used in America, and the weight of the engine we have got out here? From the *Railway Gazette* of 8th June, 1891, page 421, I find that one of the drivers on the American engines is 1,002 lbs.
5999. With regard to these axles, does not your company provide for any tests from the persons from whom they get them? Not as a rule.
6000. Then you take the most reputable firms, and you take the axles that they make for you in the belief that they will be all right? Yes.
6001. Can you tell us whether the axles turned out very bad? Well, they run hot, and why they run hot it is difficult to say, but whilst they were hot they finally broke.
6002. Do you think that the axles you supplied here are the usual class of iron you supplied for axles in America? It may have been a little inferior iron, but it was impossible to test it.
6003. *President.*] You mean that the axles which broke were a little inferior iron? Yes.
6004. *Mr. Hoyle.*] We spoke about the loose wheels. When you are putting on the wheels, is there not some standard pressure that is used? Yes.
6005. If a wheel goes on at less than that pressure, ought it not be convincing that the wheel is too loose? Yes.
6006. And do you think that the wheel ought to be put on if it is too loose? No.
6007. And would that not imply neglect on the part of the man who was putting it on? Certainly.
6008. But when you are doing anything so important as putting on wheels is there not some officer whose duty it is to stand by and see that the work is done properly? There is a leading hand standing by.
6009. Do you consider, as in the case of engine No. 456, in which the wheel has worked loose from the axle that there has been some neglect on the part of your officers? It depends upon what pressure it took to press that wheel off.
6010. What is the pressure adopted for an 8-inch axle in America? About 70 or 80 tons.
6011. Then, as a matter of fact, you were not in America when these engines ordered by the Colonial Government were made? No.
6012. Therefore you cannot say whether the wheels put on to these engines were specially made for these engines, or whether they were in stock. Do you always make them specially, or do you keep them in stock? We never keep them in stock; they are always made specially for the different engines.
6013. If your company had been left to themselves, do you consider that they would have sent these engines here as they are? They would have come out rather heavier.
6014. But do you think that they would have sent these engines out if they had been left to themselves? They would have had a waggon top boiler, and probably a steel fire-box.
6015. You say that you were not in America in 1890? No.
6016. Therefore your experience as to what has been done to the roads, there is the result of reading? Yes.
6017. Do you consider it safe to run these heavy engines on a 75-lb. iron rail with the sleepers placed 3 feet apart? Yes; I thing it is quite safe.
6018. Is there any road in America laid with 75-lb. iron rails—any road over which these heavy engines are running every day? I do not know.
6019. This screw reversing-gear was put on specially at the instructions of the Commissioners? Yes.
6020. And would not have been put on but for them? No.
6021. And the brake-gear—was the brake-gear used in America? Yes.
6022. Can you give us the difference in the weight between the Baltimore and Ohio engine, and the engines that we have? I only know the weight of these engines from what I have heard here, and I have given you the weight of the Baltimore and Ohio engines, as published in the *Railroad Gazette*.
6023. *Mr. Fehon.*] Speaking about the weight of engines, Mr. Rhodes, I will ask you have you seen the process of weighing in the Eveleigh yard? Yes.
6024. And do you consider that you can get the most perfect weight by that means, or by adopting a weighbridge? I think the weighbridge is the more correct of the two. I have known engines weighed on the steel yards to weigh one weight in one portion of the road, and another weight another portion of the road.
6025. Then you consider that we cannot place exact reliance upon the weights we have taken, and the results we have published? No; not until they have been tested on a weighbridge.
6026. I ask that question, because the Commissioners contemplate getting a weigh-bridge, in order to be able to obtain accurate weights. You were asked about the weight of rail in the St. Clare tunnel. Let me ask you this—are you aware of the weight of engines running on the Victorian railways? No.
6027. Have you seen them? I have seen them.
6028. They are all light engines, comparatively speaking.
6029. Are you aware that they have 100-lb. steel rails on the viaduct between the Spencer-street and Flinders-street railway stations for these light engines to run on? I have heard something of the sort.

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6030. There I suppose it would simply be in order to do away with the difficulty of much fettling on the viaduct; in other words, to get the longest life out of the rails, and it would have nothing at all to do with the weight of the engine? No.
6031. And that, I presume, would be the reason for the heavy rails in the St. Clare tunnel? Very likely.
6032. *President.*] You say it is a question of the weight of the engine, but that it is a question of the durability of the rails? Yes.
6033. *Mr. Fehon.*] What is the weight of the rails on the elevated railway in New York? The Manahattan has a very heavy rail, but I do not know what is the weight of the others.
6034. What is the weight of the engines upon those roads? They are very light, not much heavier than the motors.
6035. And what is the weight of the rail? I do not know exactly, but it is between 80 and 100 lb.
6036. At all events, is it a very heavy rail for a very light engine? Yes.
6037. Dr. Williams was out here for a long period some years ago. Are you aware whether he made himself familiar with the railways of Australia, their construction, and their requirements? Yes; he went into that matter very fully.
6038. And you think that Dr. Williams' opinion would be very valuable with regard to the suitability of a particular engine for a particular road? Very reliable, indeed.
6039. Are you aware that the railway Commissioners of New South Wales have adopted an 80-lb. steel rail as their standard rail? Yes; I have heard so.
6040. You have been erecting engines, I believe, the whole time you have been away from America? Yes.
6041. Where have you been since you left San Francisco? I left Vancouver for Japan, and erected engines in different parts of that country. Then I came to Australia to put up some motors in Victoria, and then I went over to New Zealand and Tasmania, and put up some engines there.
6042. At all events, that is your particular business—going about the different countries erecting engines for the Baldwin Company? Yes.
6043. *Professor Warren.*] I was going to suggest that we adjourn until Saturday afternoon. I find Mr. Brown cannot come to-morrow afternoon. Saturday, however, will suit me very well, and Mr. Rhodes is too important a witness to take up the tail end of a sitting in this way. I want to ask him several questions, and I do not see how I can possibly do so to-night. Will Saturday afternoon suit you, Mr. Fehon?
6044. *Mr. Fehon.*] Well, I am quite in your hands.
6045. *President.*] Would it not be possible to continue to-morrow?
6046. *Mr. Brown.*] Yes; that would be better, and I will try to be present.

Frank Dwyer re-called:—

Mr. P. Dwyer. 12 May, 1892.

6047. *President.*] You have just handed a letter in, I believe you want to correct something that you said in your evidence. You stated in your evidence that you had only had fifteen months of permanent-way work. I believe you wish to correct that statement now by saying that what you meant was that you had only had fifteen months' experience of contracts for the Commissioners, but that you have had fifteen years' experience of permanent way work as a ganger? Yes; I meant to say that I had had fifteen years' experience of permanent way work instead of fifteen months.

FRIDAY, 13 *MAY*, 1892.

[*The Commission met at 2 o'clock in the Board-room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E., | ALEXANDER BROWN, Esq., J.P.

William Rhodes, recalled:—

Mr. W. Rhodes. 13 May, 1892.

6048. *Professor Warren.*] I wish to ask you some questions, Mr. Rhodes, in the first place with regard to the matter of axles. The Baldwin Company, I understand, had the axles for the engines imported to this Colony made by some other firm; is that the usual course adopted? Yes; as a general rule.
6049. However, in this case they did do so? Yes; so far as I know.
6050. It is usual then, in America, for locomotive builders not to make their own axles? It is optional with the builders, but as a general rule they buy them from the manufacturer who makes the supply of axles a speciality.
6051. Is that why you do not specify any tests for these axles? Well, no; I do not think the question ever came up.
6052. Is it usual in America to specify tests for axles? No.
6053. Yesterday you said that you did not consider that the test of one axle was necessarily an indication of what the others might be? I referred more particularly to the drop test.
6054. Well, taking the drop test, the tension test, and ductility test, why should not they be an indication of what the others would be like if manufactured in the same manner? Well, you often get one good or bad axle among the lot.
6055. Would that remark apply equally to steel as well as iron axles? Perhaps not.
6056. Do you consider, then, that in the case of steel axles you would be more likely to get uniformity? Yes; I think there would, more probably, be uniformity.
6057. It is a moot point, then; you state in your specifications pretty thoroughly the tests to be applied for boiler plates. Well, with regard to the tests for boiler plates, would you say that what would apply with regard to them would apply pretty much to axles? Yes; but it is not the custom in America to test axles. In testing boiler plates they are sent with a test piece in each case which you cut off. There are a certain number for each boiler, and these pieces, when tested, are taken to indicate the condition of the remainder.

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6058. Then I understand that you trusted the axle manufacturers to supply good axles, and this, you believed, they did? We have admitted that the axles are not as sound as they ought to be.
6059. And you have replaced them with steel axles? Yes.
6060. Did it not occur to you that by supplying bad axles you subjected the travelling public to some amount of risk and danger? Yes; that would be so; but these things will occur even with steel axles.
6061. *Professor Warren.*] Of course, we know that it has been unintentional? I have known steel axles to break in the same way.
6062. Have you ever known four axles to break as quickly as these, so soon after the engines have commenced to be run? I have known three steel driving axles to break out of a number of engines that had been supplied.
6063. What number? Out of perhaps twenty-five new engines four, before they had been running for three months.
6064. Well, here we have four driving axles breaking in about the same time? Three I think were truck axles.
6065. Yes, they were bogie truck axles, and one was a tender axle? Yes, it twisted off the tender.
6066. The Commissioners, it appears, trusted to the Baldwin Company to supply good axles, and the Baldwin Company trusted to the manufacturers who supplied them with axles which had been satisfactory in the past, and the result was that they were delivered here in a defective condition, that is to say the locomotives were defective with regard to their axles?
6067. Scrap axles can only be inspected from the surface, and we made those inspections both at the works and here before the engines went into service.
6068. They looked clean? Yes, they looked clean and there was nothing to indicate that the axles would give trouble.
6069. But surely great carelessness must have been shown to cause such defects as were shown by these axles breaking? The great trouble was their running hot.
6070. But do you not think that the reason they broke was the bad material of which they were made? I believe the direct cause was the over heating.
6071. Well then what have you to say about the result of the drop test? The drop test with scrap iron is not thought to be very conclusive.
6072. Well what about the tension test? That is more conclusive certainly.
6073. You have seen the tension test? I believe I have, but I do not remember what it was, something about 20 tons, as far as I can remember.
6074. The tensile strength I mean, I will read them to you—

	Strain in tons, per square inch.	Contraction of area, p.c.	Elongation p.c.
A	22·07	12·9	11
B	19·36	2·5	4
C	21·04	31·6	13

So that you will see from this that the ductility is exceedingly low, and the tensile strength is also low. Looking down a list of subsequent tests I see that there is one where the strain is marked 16·6 per square inch, and the elongation 4 p.c. Surely you would not think that was iron fit to be put even into a bridge or the commonest girder work—you were disappointed in these axles I suppose?
6075. *Mr. Fehon.*] The proof is, that now they have steel axles they are not giving any trouble at all.
6076. *Professor Warren.*] That is not all Mr. Fehon, the question arises whether these engines were supplied in a defective condition, and were allowed to run on the railways until the axles broke, and not till then was it discovered that the axles were unsuitable;—the Baldwin firm, are I take it, responsible for that—do you admit, Mr. Rhodes, that the engines as delivered to the Commissioners were defective? Well, the axles were not of as good a quality as we should have liked, otherwise the engines have been all right.
6077. What about the reversing-gear? Yes; there was a fulcrum-pin broken on the reversing-gear, but that is not of very much importance.
6078. What do you say? I say that it does not amount to much.
6079. I do not think I need say anything more about the axles except this—do you consider steel axles better than iron? Yes; if you make the best quality of steel from makers of known repute.
6080. They are a very good axle, and you think probably better than iron? Yes; but if you get a poor quality of steel they are worse than iron.
6081. Should not an axle, whether made of iron or steel, be of the very best material that can be procured? Yes; and the people who make these axles try to procure the best material, but they do not always succeed.
6082. So you substituted steel for iron axles in the Baldwin engines after their arrival here, and supplied Otis steel, I believe? Yes.
6083. And Otis steel corresponds in America with Vickers' steel in England? Yes.
6084. So that now no danger may be anticipated with regard to the axles? No.
6085. An axle might break, in the same sense as a Vickers' steel axle might break, but that would be a rare occurrence? Everything has been done that we could do to make the engines reliable.
6086. With regard to the weight of rails, I am not clear upon what you said yesterday;—could you tell the Commission where the Baltimore and Ohio engines run to; I should like to be quite certain upon what sections of the line they travel? They run on the Piedmont section.
6087. Do they go from Philadelphia? No; on the Piedmont section, over the mountains. They are working on that section of the line on account of the heavy grades that are in it, in a similar way to the engines on the Blue Mountains.
6088. Are they not used anywhere else on the Baltimore and Ohio lines? They were built for that particular section.
6089. But would they be used for other sections of the lines on heavy grades? Yes.
6090. Do you know how far these engines—I mean the Baltimore and Ohio type—are used in America? They are used for that section; they were built for it and are used for it.

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6091. The ten-wheel New York, Lake Erie, and Western Railroad Company have similar engines, have they not? Yes; that is a heavy engine.
6092. It is nearly as heavy as the Baltimore and Ohio engine? Yes.
6093. What weight of rail would the New York, Lake Erie, and Western Railroad engine run upon—for it is practically the same as the Baltimore and Ohio engine—it has 100,000 lb. on the driving wheel? Yes, I know the engine perfectly well, but I can only give you the information from Phor's Manual. In Phor's Manual for 1891 it is stated:—"New York, Lake Erie, and Western Railroad steel 56 to 65 lb. rail." Here is also a paper from the American Society of Civil Engineers, 1888, in which they give the weight of the rails on many of the roads in America, and the weight per axle. New York, Lake Erie, and Western Railway 63, 67, and 74 lb. rails, eight-wheeled engine, 115,000 lb.; total weight, 78,000 lb. on the four drivers, that is equal to 17 tons on the axle.
6094. *Professor Warren.*] I suppose you would call that an express engine;—if you were describing it would you call it a ten-wheel engine? Yes.
6095. You would count both sides? Yes, in America we generally talk of that number.
6096. So that you would have 17 tons on the axle, and that would run over a 63 lb.-rail? Yes; we give the weight of the rails 63, 67, and 74 lb.—then there is the New York, New Haven and Hartford Railway, they have rails up to 74 lb.
6097. Now I will read you an extract from a paper included in the "Transactions of the American Society of Civil Engineers," dated December, 1891. It is on longitudinals *versus* cross-ties for railway tracks, and is by E. E. Russel-Tratman. In this paper it is stated that—

> The single track of the St. Clair Tunnel at Port Huron, Mich., connecting the Grand Trunk Railway and the Chicago and Grand Trunk Railway, is laid with rails of the Sandberg pattern, weighing 100 lb. per yard; the Boston and Albany Railroad has adopted a 95 lb. rail. The Manhatten Railroad (New York) and the Chicago and South Side Rapid Transit Railroad (both elevated railways) are using 90 lb. rails. Now we are coming to something interesting.—The Baltimore and Ohio Railroad is laying 85-lb. rail upon its Philadelphia and Baltimore Division, the Great Northern Railway has laid 80 lb. rails on the heavy grades of the Pacific extension of the St. Paul, Minneapolis, and Manitoba Railway, and the New York, Lake Erie, and Western Railroad, and the Lehigh Valley Railroad have adopted 80 lb. rail sections. It may be noted also that the Government of South Australia has adopted an 80 lb. flange or the rail for use on the main lines of its railways.

6098. *Witness.*] You should understand that the Philadelphia and Baltimore Division is similar to the line running from here to Newcastle, and the main road is similar to the line running from here to Bathurst—so that you will see they are both distinct lines.
6099. *Professor Warren.*] They say that they are laying an 85-lb. rail—they do not say it is the only line.
6100. *Mr. Brown.*] I understood the witness to say that at a time he quotes from this manual there were engines of a similar character to these running over this line.
6101. *Professor Warren.*] But the practice is altering, and they are now taking the heavier lines.
6102. *Witness.*] The speeds have been increased immensely, and all the lines which put in the heavy rails have greatly increased their speed. On the Baltimore and Ohio line—between Baltimore and Philadelphia—they run an engine with 17 tons on the driving-axle at a rate of 60 miles an hour.
6103. *Professor Warren.*] And that is why they put in an 85-lb. rail, is it not? Yes; that would be a high consideration, taking into account the great speed of the train.
6104. We have the New York, Lake Erie, and Western Line and the New Haven and Hartford Line—they have adopted an 80-lb. rail and I understand from you that the engine on the former line is almost similar to the Baltimore and Ohio engine? Yes; that has been running since the year 1889.
6105. Well, they, at least, think that an 80-lb. rail is necessary, because they have adopted that as a standard section? They approve of a heavier rail, but, at the same time, they may have heavier engines for them; they have heavier engines.
6106. What is the heaviest engine that runs on the 80-lb. rail on the N.Y.L.E.W. line? Well, they had engines in 1888 with 17 tons on the axle.
6107. So that you consider that this rail was put down in order to accommodate heavier engines and not for the Baldwin engine? Also on account of the speed. That must not be lost sight of.
6108. And not for the engine that we are dealing with? No, sir; and it was also to meet the necessity of an increased rate of speed. The N.Y.L.E.W. Railway is a road which runs into Jersey City, and carries a very quick traffic, and speed is of great importance to it.
6109. Here is the paper referred to yesterday; I think it should be made clear that the Baltimore and Philadelphia section is not the one on which this engine travelled, and that that company have engines on their line with 17 tons on the driving-axle running at 60 miles an hour? Yes.
6110. Well, I have nothing more to say about that matter beyond this;—are you thoroughly satisfied, from your experience as an engineer, which has been considerable—ten and a half years on the Pennsylvanian Railway and twelve years with the Baldwin Company, that with a 71-lb. steel rail or a 75-lb. iron rail, and with sleepers 2 ft. 8 in. apart, centre to centre, and 20 in. in the joints—that is, 10 in. on either side—which is the standard practice in New South Wales, the permanent way is safe for these engines? That has always been my opinion since I was here last time—1885 or 1886. I wrote a letter to the then Commissioner proposing the purchase of an engine with 15 or 16 tons on the driving-wheel.
6111. We have had evidence and calculations placed before us to determine what is a safe load on the driving-wheel for a given section of the rail;—now what is your opinion and your experience in these matters of the value of such investigations as applied to a rail? You must understand that I am not in the Permanent Way Department, and never have been.
6112. But you know about rails and their capacities? I know what we carry on rails.
6113. You know what a rail has to do, and you know exactly the conditions which have to be complied with? Well, we do not hesitate to carry 16 tons on the driving-wheel on a 65 or 70 lb. rail.
6114. You do not know I suppose whether it is usual in America to decide these matters by methods such as we have had explained to us? Well, I have never heard of it.
6115. The Americans calculate a great deal more than the English engineers do with regard to bridges, but I should like to know would they think it necessary to calculate a rail out in the way we have been told? Well, I have never heard of such a thing being done.
6116. *President.*] You mean as a fixed beam?
6117. *Professor Warren.*] Yes, as a continuous girder. (To Witness): You say you have never heard of it being done? No, I have not.

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6118. You have had some experience with regard to the weight of rails? Yes, on the Philadelphia and Reading line they have a 68 to 70 lb. rail. Their road runs past our doors, and we have built their engines, carrying 16 tons on the driving-axle.
6119. And knowing that fact you consider our permanent-way safe? Yes.
6120. What distance are the sleepers apart on the American line? Well, the best practice in America is to have them 2 feet apart from centre to centre.
6121. Our sleepers are rather more apart than that, they are sometimes as much as 3 feet apart? You have a better class of wood here for sleepers than we have.
6122. Yes; that is so, perhaps—but we do not get the support, that is to say, there is 50 per cent. more stress on the bearings on our lines. Well, I understand you are satisfied with our permanent-way as being strong enough? Yes.
6123. And it is for that reason you think your company was quite right in recommending the Baltimore and Ohio engine to the Railway Commissioners of this Colony, in preference to the modified engine they now have? Yes; I do.
6124. With regard to the defects in the wheels, you noticed them in the spokes, I suppose, do you say that they are not cracks? No, sir.
6125. But there are cracks that you could get a knife into? Yes, just on the edge; it is a small film of iron squeezed out in the die over the spoke.
6126. Do you consider that in these engines as supplied by your company to the Commissioners, there is a right proportion between the cylinder power and the adhesion? Yes.
6127. That the weight on the driving-wheels is proportionate to the cylinder power? Yes.
6128. You say that it has been proportioned correctly? Yes.
6129. The engines have not been over-cylindered? No; that has been pointed out in the letter of October, 1890.
6130. And you believe that these engines will do all that has been expected of them? Yes.
6131. In the *Railway Gazette* for 1890, pages 420 and 421, it says:—

> Not long since the Baldwin Locomotive Works built for the Baltimore and Ohio railroad a 10-wheeled express locomotive having 21 x 26 in. cylinders under a guarantee to haul seven passenger cars up a 117-ft. grade, 17 miles long, at 25 miles an hour. This engine has been put in service and has more than met the guarantee, it hauls readily eight cars up the grade mentioned. At that speed and up that grade the engine is performing over 1,300 H.P. of work considering the total train load to be 400 tons. The weight on drivers is 102,000 lb. The total weight is 133,000 lb.

That is a Baltimore and Ohio engine, and this is what it is said to have done on this very long grade? Yes, there is also a written report contained in the letters from the Baldwin Co. which explains what they expect from these engines.
6132. These engines it is said in this report are guaranteed to haul a load of 440 tons at a rate of 25 miles an hour up a grade 17 miles long, with a grade of a 117-ft. to the mile—this is a tremendous performance? Well, I do not suppose you can expect as much from the engines with the rolling stock you have here.
6133. Why do you think our rolling stock will offer a greater resistance to haulage than the American stock? Yes, a great many of the trucks are four-wheeled trucks.
6134. Do you mean here? Yes.
6135. But that is better is it not? No; ours are all on double bogies.
6136. You mean you have a bogie at both ends? Yes.
6137. But so we have here have we not? On a great many, but on a great many others you have not.
6138. *(To Mr. Fehon).*] Has the test train for Sunday bogie rolling stock?
6139. *Mr. Fehon.*] It will have lavatory carriages, and they are all bogie rolling stock?
6140. *Professor Warren* (to Witness.)] I am going to test this engine on Sunday with bogie rolling stock, why should there be a greater resistance here if we have all bogie rolling stock, it should be about the same? Well, there are side buffers which form resistance on the curve.
6141. Will that apply also on the straight? Not so much.
6142. But there is not much in that? On a short curve there is considerable in it.
6143. The test train is to be taken on a fairly straight gradient. Is not the load on the driving wheel of an engine the measure of its hauling power if the cylinder is adjusted to it? Yes.
6144. You say that the engines you have provided were properly adjusted in this way? We reduced the cylinder.
6145. Yes, and you reduce the weight of the driving-wheel, so that the New South Wales engines should haul proportionately as much as the B. and O. engines according to the weight on the driving-wheel? Yes.
6146. So that the B. and O. engines developed 1,100-horse power—these would develop 1,242—that is, 45 on a B. and O. driving-wheel multiplied by the smaller and divided by the larger, and you get 1,242 so that in our test on Sunday we should get that and indicate it in our cylinders? It is a large horse-power.
6147. Then do you think the horse-power is over or under-stated in what I have read in this number of the *Gazette*. It says the load hauled was 440 tons, up a 117-ft. grade, 17 miles long, driven at 25 miles an hour. I noticed that the actual resistance of the engine other than that due to grade is omitted; they have simply divided it out. Instead of 1,300-horse power it would be 1,936-horse power, so that if your engine was treated in the same way as brings the result in that case to 1,936-horse power, would you say we were treating it fairly. If you take Searle's formula you get the resistance on the straight at 25 miles an hour, it will be 16·35 lb. per ton;—is that what you would expect on the level—you know Searle's formula for train resistance? Yes.
6148. We are dealing with an American engine, and therefore I will use the American system adopted in such a case. This is the formula:—Average resistance of entire train in lb. per ton of 2,240 lb. for all weights in gross tons—$R. = 5{\cdot}4 + {\cdot}006V^2 + \frac{{\cdot}0006V^2 \text{ (wt. eng. and tender)}^2}{\text{gross wt. of train.}}$
6149. I suppose the writer in the *Gazette* is responsible for under estimating the power, he puts it at 1,300, whereas if you use the formula you get 1,936, he simply takes it on the grade resitance, so that it must be something more than that? In indicating an engine is more for scientific purposes.
6150. But it is the measurement of the horse-power developed in the cylinder? The tractive force of the engine is what we test it for practically.

6151.

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6151. If the engine develops the necessary horse-power or if it should fail to do so—and the load hauled indicated a certain horse-power we should take it in making our test? The test of an engine is the load hauled on a certain grade and at a certain speed.

6152. In a letter to the Railway Commissioners from Messrs. Towns & Co., dated the 15th December, '90, it states that the load is about 214 tons on the 17-mile grade, here is what it says.—"Have never had maximum load weight taken up 17-mile grade by 1,300 class engine." This 1,300 refers to the horse-power. "It is about 240 net tons at schedule speed of 22 miles per hour, exclusive of weight of engine and tender. The 240 tons of 200 lb. are equal to 214 tons of 2,240 lb. There is much curvature on the 117-foot grade, and we are informed that in some places the actual grade considerably exceeds 117 feet per mile. The latter is the theoretical grade as shown by the profiles. The B. and O. locomotives have a total heating surface of 1,945 square feet, whilst the heating surface of the proposed locomotives, as per specification No. 5,231, is 1,937 square feet. From these data you can readily judge as to the power and speed of the new engines." Now this clearly implies that the engines can do more than the 214 tons up the 117-ft. grade at 22 miles per hour, because it says that there are sometimes more than that, that the actual grade in some places considerably exceeds the 117, and that there are some sharp curves on it, so that merely taking that would be making the horse-power a little smaller than it is? I do not follow you exactly.

6153. What I say is this we have 214 tons hauled up a 117-ft. grade at 22 miles an hour and that grade is 17 miles long so that there is no doubt about the horse-power that would have to be developed? It would be a heavy pull.

6154. So that taking these facts into consideration we can scarcely go wrong in assuming that the B. and O. engine did this work? I suppose they did it.

6155. And we could express this work in horse-power? Yes.

6156. We have so many tons hauled up a long grade and we cannot be put off by rushing it—so that this is a really good basis for the calculation of horse-power? Yes.

6157. I do not see how there could be any mistake in that, that is what we propose to do, and it is just as well that you should understand this before going back to America so that you may be satisfied that we have tried to get our results as accurately as possible. You have already stated that the engines supplied to the Government are less powerful engines than the B. and O. engines by the weight of the driving-wheels, so that I must reduce this horse-power by the weight on the driver; taking the B. and O. engine as actually working on the grade and using the figures sent to the Railway Commissioners by the Baldwin Co. and applying Searle's formula for a speed of 22 miles an hour the horse-power I get is 1,192 and not 1,300, that is what I make out to be the horse-power of the Baldwin engines in accordance with the correspondence of the company, so that the weight on the B. and O. engines being 45·5 tons and on the New South Wales Baldwin engine 43·5 tons the work performed by the latter engine will be reduced on account of the decreased weight on the driving-wheel, and will therefore be 1,139 as against 1,192, there is, I believe, some question as to whether the engine is as heavy as it is represented to be by the Baldwin Company, the weight here taken on the steelyards varied from that on the weighbridge taken in America? Yes, we make the engines lighter than you do.

6158. *Mr. Fehon.*] We find steelyards very unreliable.

6159. *Witness.*] Yes, I have known steelyards to give a wrong weight.

6160. *Professor Warren.*] But what is the weight you make it in America. I want to make your engines do exactly what has been represented, and I understand it to be a weight of 43½ tons with regard to the New South Wales engines, and 45 tons with regard to B. and O. engines. Could you give me now the corresponding weight for our engines? There is a total weight on the coupled wheel, but I have not got it with me.

6161. *Mr. Fehon.*] We have cabled to America to get the weight from the Baldwin Company of the engine, they always take the weight before they send out the engines.

6162. *Professor Warren.*] I make it 97,900 lb. on the New South Wales engine, I have taken it as 2 tons less than the B. and O., and if it is less than that we shall reduce the horse-power correspondingly. I want now to refer you to the letters sent by the Railway Commissioners by your firm, showing that they must have considered the matter pretty much in the way I have done. The first letter was sent by the Secretary for Railways, Mr. M'Laughlan. It is said that it is proposed to haul, with this engine, trains weighing 152 gross tons (340,500 lb.) up long grades of 130 feet per mile. That this would be the usual train, and it was expected to be hauled up this grade at about 22 miles per hour. Those were the usual gradients. Occasionally the train would have an occasional car, making the load, without engine and tender, 178 tons, or 394,240 lb. These loads include a full complement of passengers, mail, and baggage. The cars are all on trucks or bogies. "The regular load up the 176 feet grades would be 120 gross tons (269,000 lb.) without engine or tender. These grades are free from very sharp curves, and, therefore, in practice a greater proportionate load can be hauled than on the 130 feet grades. It is therefore expected that occasionally an extra car could be hauled, making the total weight of the train 144 gross tons (322,500 lb.) without engine or tender." You would consider that the engines would do this work? I do not know whether they will or not.

6163. Well, we shall know on Sunday. These are the actual loads and gradients the engine will be tested with.

6164. *Mr. Fehon.*] Was not that modified afterwards?

6165. *Professor Warren.*] No; it is emphasised, if it does not do this work then the Baldwin Company is, I take it, responsible.

6166. *Mr. Fehon.*] Do they not say that they do not guarantee the speed?

6167. *Professor Warren.*] They say that they could do a great deal more. These are the words: "We have carefully considered the conditions of service for which these locomotives are intended, viz., to haul 150 to 176 gross tons of cars and load at a speed of 22 miles per hour up long grades of 130 feet per mile, combined with severe curvature, and to haul up grades of 176 feet per mile, with easier curvature, loads of 120 to 144 gross tons. We note that the sharpest curves are of 528 feet radius, but it is not stated that this is the radius of the curves in combination with the 130-foot grade. Our calculations indicate that the engines will have sufficient tractive force to haul these loads, but we prefer not to make a definite guarantee of the speed, as it is more or less dependent upon conditions of which we are not fully informed, such as the quality of the coal, the wheel have of the rolling-stock, condition of track, &c."

Following

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Following on that it says:—"In order to compare the stipulated performance with what the B. and O. engines are actually performing in daily service, we telegraphed to the General Superintendent of Motive Power of that Company, inquiring as to the latter. The telegram in reply then goes on to say that the B. and O. engine had hauled a load of 214 tons on a 117-foot grade, at a speed of 22 miles an hour; so that they clearly implied that these engines could also do that; they infer that there is a good prospect of the engines doing this work, so I presume, Mr. Rhodes, that if good coal is supplied you would expect them to do that? Well, they would come close to it, but I should not consider that a guarantee.

6168. Not in the sense in which you would use the term, but you would regard it as a moral obligation.

6169. It is a fair anticipation. You would anticipate that they would do that. I will now read what the Commissioners say. They wrote the following letter, which, I think, is the most important letter in the correspondence, showing that they clearly understood the matter.

With reference to the twelve express passenger engines, ordered in September last, kindly note these should be numbered from 446 to 457 in plain block letters, 7 inches high, in gold, on the sides of the cab, on the front buffer beam, and the back of the tender tank.

I think it well to inform you that our 12° curves on which these engines will work are on 160-foot grades, and that the worst curves on the 130-foot grades are about 7°. All our passenger rolling stock is carried on trucks, chiefly four-wheel, with about 5' 6" wheel base. All the axle-boxes are made for oil; all the wheels under the rolling stock are 36" diameter, on tread and steel tyres.

We calculate that to take a train up the 130-foot grades at 22 miles an hour will require about 50 indicated horse-power less than is wanted by the Baltimore and Ohio engine.

That is, I presume, because the weight on the cylinders is less? I have calculated it, and I make just that difference.

During its maximum work, and, as in our weight for the train (176 tons gross, exclusive of engine and tender) we include an ample allowance for the weight of passenger and baggage, we anticipate that the engine will be fully equal to this performance.

From this it will be seen that the Commissioners anticipate that the engine will draw 176 tons at a speed of 22 miles an hour up a grade of 130 feet per mile. I wish you to see that they were justified in doing so from what was said in your letter of the previous date, (15 December, 1890)? Yes, I see what you mean.

6170. Do you not think that the engines clearly ought to do that work? There are several other letters which all show that the Commissioners follow you, except that one; that is the only one in which a slight doubt is thrown on the speed. You have a long account of the performance of your engines on this grade, and you are morally responsible, I think, for the consequences, if it is not found practicable with them? It is a desirable thing to accomplish that, I think both parties consider that to be so.

6171. Now, I will ask you if in using Searle's Formula, I should make the resistance either too big or too small, and suppose I should calculate the performance of the B. and O. engine from the same formula and in the same way, the mistake I may make, which would apply in both cases, would not influence the ratio of the results? Yes, I think that would be so.

6172. If for example, I should say 20 tons instead of 15, I should have all high throughout? Yes.

6173. We shall make out these calculations using Searle's Formula, and take out the areas on the indicator diagram, and record the whole thing in the report, and thus see whether the engines actually do the work they were expected to do, and now that we have told you exactly what we intend to do, I should like to know if there is anything you would like to have done in addition to what I have indicated or whether there is anything you would like to criticise, as I am anxious your firm should be satisfied with the way we propose to carry out these tests? All these tests depend on the quality of the coal—how the engine is steaming and on the practical working of the engine, if any of these things go wrong, the consequence will be a disappointing result.

6174. (To Mr. Fehon).] I suppose you have got the best coal you can.

6175. *Mr. Fehon.*] They are going to take a little Newcastle coal.

6176. *Professor Warren.*] I do not care what kind you get, but I wish it to be good. Whatever results we get in this trial you will not get as good under ordinary circumstances, of course.

6177. *Witness.*] They stipulate in the correspondence that it should be good coal.

6178. *Professor Warren.*] If we use the best coal we shall be testing them fairly.

6179. *Mr. Fehon.*] We shall get Newcastle coal.

6180. *Professor Warren.*] If we take the best coal we can Newcastle coal, do you consider that will be fair? Yes, if the steam-pressure is kept up.

6181. We shall record the pressure every few minutes? Anything may affect your boiler-pressure. If the steam-pressure were not kept up I should think it unsatisfactory.

6182. I suppose you will accompany us on the trip yourself? I am afraid I cannot.

6183. I wish you could; I desire to treat the matter as fairly as possible, and it is a matter of accuracy no matter how things go? I do not think that I could be of any assistance at all.

6184. I should like to see you there just to be sure that you are satisfied. I have nothing more to say, Mr. Rhodes, thank you.

6185. *Mr. Brown.*] I have only one question to ask you, certain alteration, and amendments were made in the specifications supplied by the Baldwin Company—These amendments were made by a committee of gentlemen who were connected with the Government Railways; now I want to know did these alterations and amendments interfere with the efficiency and speed of the engines you proposed to supply, according to the pattern of the engines used by the B. & O. Company? It reduced the power of the engine somewhat.

6186. As a matter of fact, these amendments did then interfere with the speed and power and tractive force; from your standpoint, I understand you would have recommended the Government to take a B. and O. engine rather than these. Were the Railway Commissioners or their officers doing right in making these alterations to suit the B. and O. engines to our lines? Quite right, if they were satisfied with obtaining a little less work from them.

6187. Supposing that they did a little less work, are you quite sure that these changes did not interfere with the character and efficiency of the engines, may they not on the other hand have made them, so far as you are concerned, more suitable for the railways here? Yes.

6188. Then inasmuch, as they did not decide on taking a B. and O. engine, your people refused to guarantee them,—was that the reason? Yes; very much. 6189.

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6189. That is the Baldwin Company did not know what would be the effect of the changes in the specifications they supplied, and therefore would not guarantee the speed of the engines? Yes.
6190. You do not think that these alterations made any material difference, but in fact made them more suitable and lighter for the work? Yes.
6191. And you consider that these engines are suitable in every respect for the work of our railways? I think they are entirely suitable in every respect for the railways of New South Wales.
6192. *Mr. Hoyle.*] Is it not a fact that on nearly all the railways in America they are increasing the weight of their rails? On the Eastern roads they are increasing them considerably.
6193. I see in the *Engineering News*, of 1st October, 1891, it is said, "That in all new works not less than sixteen ties must be placed in each 30 feet, 67-lb. rails placed evenly"—now what would that be? I suppose it would be about 1 ft. 11 in. apart. Referring to this matter again on February 20th, 1892, the same paper says, "An interesting and highly important fact is readily discernable in other tables yet to come. In the Northern United States, New York, Great Britain, and Germany, derailments are becoming of trivial importance as compared with collisions. In the south, with its few trains and most poor track, it is the other way. The west is betwixt and between. The moral deserves to be written in letters of gold over every operating officer's desk 'when track is once brought up to the east of Chicago, British, and German standards, derailments of serious moment tend to become evanescent.'" So that you see there is a statement that where in America they have not brought their rails to the English, German, and Chicago standard these derailments have been frequent, and this shows that the rails are too light for the work they have been doing. There is another reference in another copy of the *Engineering News*, of February 22nd, 1892, it says, "From Jersey City to Bound Brook the central railroad of New Jersey has four tracks, ballasted with broken stone, the two middle tracks have heavy rails spliced by angle-bars 30 inches long with six bolts," and again, "The new standard tracks and the standard track signs of the Baltimore and Ohio railroad have been described and illustrated in *Engineering News*, July 18th, October 31st, and November 7th, 1891. The cuts and fills are of a loose gravelly character, and are in places badly washed and worn by the rain, necessitating frequent work in repairs"—now this it the very thing that I mentioned yesterday; it shows that the newer and heavier road is being adopted throughout America, and we find that the American railways are increasing their rails to the highest standard. Can you give us any reason, Mr. Rhodes, for this being so, excepting for the great power they are running on the line at the present time;—is there any reason beyond the one that the original rolling stock is too heavy? That is the Philadelphian section of the Baltimore and Ohio line. As I have stated before, they run their trains at the rate of 60 miles an hour with a weight of over 17 tons on the driving-axle, or, in other words, 6 tons 16 cwt. on the driving-wheel.
6194. On the Jersey City and Bound Brook line the paper says;—is that the same place? That is another section, between Philadelphia and New York. They run 19½ tons on their driving-axles there.
6195. Taking into consideration the fact that they use 67-lb. rails, and also that the sleepers are only 1 ft. 11¼ in. apart, do you think that our lines, with the sleepers 3 ft. apart and 75-lb. iron rails, are safe? You must also look at the engines. The engine that runs over the lines in question are 19 tons 14 cwt. on the driving-wheel, and they travel at the rate of 60 miles an hour on a 76-lb. rail.
6196. Steel rail? Yes.
6197. What do you say is the weight on the driver? 19 tons 14 dwt.
6198. *Mr. Brown.*] Between the 71-lb. steel rail and the 75-lb. iron rail there is not much practical difference; for practical purposes they are much the same.
6199. *Mr. Fehon.*] Both being sound you consider they are equally strong.
6200. *Mr. Brown.*] You say that steel is as cheap as iron.
6201. *Mr. Fehon.*] You can get steel rails as cheap as you can get iron rails.
6202. *Mr. Brown.*] They will last much longer.
6203. *President.*] And there is no difference except in durability?
6204. *Mr. Fehon.*] We should give a preference of steel over iron.
6205. *President.*] Because it is stronger?
6206. *Mr. Fehon.*] Yes; but considering that iron rails are perfectly sound, we believe that it is the equivalent of a lighter steel rail.
6207. *Professor Warren.*] Iron rails may be destroyed in detail, but steel is more homogeneous.
6208. *Mr. Fehon.*] Steel is subject to the same process of destruction, but perhaps to a less extent than iron.
6209. *Professor Warren.*] Yes; but experiments show that it has a greater vibrating strength—that is, a greater strength against repetitions of load. In other words, fatigue.
6210. *Mr. Fehon.*] I have seen some specimens of steel rails in Bessemer steel which have gone very similar to iron after being a little worn.
6211. (To Witness).] Do you consider that the Railway Commissioners of New South Wales in having adopted an 80-lb. steel rail as their standard rail are at all behind the rest of the world? No.
6212. *Mr. Hoyle.*] Certainly not. They have done quite right.
6213. *Mr. Fehon* (to Witness).] Speaking of American ties, can you tell us the size of the American tie as compared with the sleepers used in this country? The cross ties that are used in America are from the woods found in the immediate neighbourhood. In the West they use redwood, and in the East they use oak.
6214. And that is a comparatively soft wood compared to the wood we use in this country? Yes.
6215. And the size of the ties are rather smaller than ours, are they not? They are about the same.
6216. Well, I remember in my days they were smaller.
6217. *President.*] If they are only 2 feet apart, and our sleepers are 3 feet apart, surely, considering that the rail has to be borne by them, those 2 feet apart must be better than those 3 feet apart, no matter what kind of wood the sleepers are made of? Yes; but a good deal depends on the sleepers. Supposing that the wood should rot by reason of its inferiority in the 2-foot sleepers, that will give a bearing area of 4 feet.
6218. I quite agree with you there. Of course it must be so; but if the wood remains good, sleepers 2 feet apart must be better than sleepers 3 feet apart.
6219. *Mr. Fehon.*] Yes; some lines are laid with longitudinal sleepers. The Great Western, in England for example, is laid with longitudinal sleepers, and there, of course, they have a bearing the whole length of the road, and in consequence can use a much lighter rail. 6220.

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6220. *Mr. Brown.*] The practice in America is to tie them much closer than here. I remember that in the case of the Hawkesbury bridge, where they sent in their own specifications, they put the sleepers 14 inches apart.
6221. *President.*] But I understand there is another reason for that. As I understand it, in case of a tunnel, or a bridge, or a viaduct, or in any place where you cannot relay them without inconvenience, it is customary to make the work very much stronger than in other places in the first instance.
6222. *Mr. Fehon.*] Yes; you usually put a heavier head on the rails; and consequently, instead of a line lasting for three years it will probably last for nine.
6223. *President* (to Witness).] Have you been on the Western Line? Yes, sir.
6224. Do you know the Solitary Creek Bridge? No.
6225. Do you know a creek that you cross in going to Tarana—just a little time before you get there? I have crossed it.
6226. Have you noticed the permanent way over it? Yes.
6227. Do you think that the engines are too heavy for the permanent way there? They rode very steadily over that, and I was on the engine at the time.
6228. *Mr. Fehon.*] I understand from Mr. Hoyle that he has only one more witness, and that that witness will speak on the question of the strength of the road, and that his evidence will not affect what has been given by Mr. Rhodes. I have asked him that question in order to make everything clear for Mr. Rhodes to get away on Monday. As I stated before, he is leaving for San Francisco on that day, and it will be extremely unfortunate if evidence is called subsequently by Mr. Hoyle in refutation of anything he has said.
6229. *President.*] Very well, then you will start your evidence on Tuesday, Mr. Hoyle. Is it the wish of both of you that we should adjourn from to-day over till Tuesday?
6230. *Mr. Hoyle.*] Yes; for my part I desire it, Mr. President.
6231. *President.*] You are sure you do not want Mr. Rhodes again, Mr. Hoyle?
6232. *Mr. Hoyle.*] Quite sure.
6233. *Mr. Brown.*] You have one more witness, and he is summoned for Tuesday next?
6234. *Mr. Hoyle.*] Yes; that is so.
6234½. *Mr. Brown.*] And after that the Railway Commissioners will go on with their case? Yes.

TUESDAY, 17 MAY, 1892.

[*The Commission met in the Board-room, Colonial Secretary's Office, at 2·30 p.m.*]

Present:—

ALEXANDER BROWN, Esq., M.L.C., J.P. (Presiding).
PROFESSOR WARREN, M.I.C.E.

6235. *Mr. Hoyle.*] Previous to calling the evidence of my final witness, I wish to state that at the last sitting of the Commission I asked to be supplied with a report of certain tests that had been made in connection with the Glen Lee Bridge. That report was promised, but up to the present time it has not been produced; and as I wish to ask several questions relative to it, I feel that I am placed at a disadvantage by not having it before me at present. Mr. Pollitzer states to me that he wishes to correct some evidence which he gave at the previous meeting of the Commission.
6236. *Mr. Brown.*] I understand that you want something to be produced which you say the department promised to produce, but has not.
6237. *Mr. Hoyle.*] Yes, it is a report of certain tests which were made by Mr. Foxlee, Mr. Hickson, and Mr. Deane on the Glen Lee Bridge. Mr. Fehon promised to let me have it, but up to the present time it has not been produced.
6238. *Mr. Brown.*] What have you to say, Mr. Fehon, about it?
6239. *Mr. Fehon.*] It is a question how far the production of anything in connection with the Glen Lee Bridge affects the matters before the Commission.
6240. *Mr. Brown.*] I think we have got past that stage. I understand that you promised to produce it.
6241. *Mr. Fehon.*] I may have done so inadvertently. I do not see how this inquiry will be affected by the report. I may state that an article appeared in a certain Sunday paper reflecting upon the stability of the Glen Lee Bridge, and one of the gentlemen now in the room came before a Committee of the Department, and there made certain statements.
6242. *Mr. Brown.*] Would it not be better, Mr. Fehon, to give this as evidence. It goes down in the shorthand notes, but has not the same weight as evidence given upon oath. You understand the difference there is between a mere statement made in this way and a statement made upon oath, so far as this Commission is concerned?
6243. *Mr. Fehon.*] We see no necessity for giving information which is not pertinent to this inquiry merely for the benefit of private persons sitting at this table.
6244. *Mr. Brown.*] Then, I understand that the objection of the Commission is that this information would be given to parties other than those who are parties to this inquiry.
6245. *Mr. Hoyle.*] I believe a report of these tests will show that this bridge is not capable of carrying a Baldwin engine, and, therefore, this report will, I think, disclose something material to the inquiry before the Commission.
6246. *Mr. Brown.*] Part of your allegation is that these engines are unsuitable for our permanent way, and you think that the report upon these tests will support that allegation?
6247. *Mr. Hoyle.*] Yes.
6248. *Mr. Fehon.*] Mr. Foxlee will be put in the witness-box and he will give all the evidence that may be required about that particular bridge to the Commissioners.
6249. *Mr. Brown.*] Or Mr. Hoyle.
6250. *Mr. Fehon.*] Yes, or Mr. Hoyle, he will be present.
6251. *Mr. Brown.*] Will that satisfy you, Mr. Hoyle. If Mr. Foxlee made a report you can call for its production when he gives his evidence.
6252. *Mr Hoyle.*] I think it would have been better if it had been produced before. To take me on the hop like this is unfair. It gives me no time to look over the report, and I cannot ask the questions I would probably

probably otherwise have put to my witness if I had that report in my possession. The reason why I asked for its production was that I might have it in my possession to-day. Even if it were produced now it would be useless to me as I would not have an opportunity of looking at its contents and framing my questions from them.

6253. *Mr. Brown.*] Well, will you be content with the situation as it has now developed.

6254. *Mr. Hoyle.*] I suppose I must be.

6255. *Mr. Brown.*] It is for you to say in forwarding the interests of this Commission whether it is desirable to have it produced now, or whether it would not be prudent for you to wait until Mr. Foxlee is put in the box.

6256. *Mr. Hoyle.*] I think it would be useless to produce it now, as I should have no time in which to digest its contents.

6257. *Mr. Brown.*] We shall give you an opportunity during Mr. Foxlee's examination of dealing with the matter.

6258. *Mr. Hoyle.*] Very well. Mr. Pollitzer wishes to make certain corrections in the evidence he has given.

6259. *Mr. Brown.*] We have no objection whatever to that, so long as no new evidence is introduced.

Samuel Joseph Pollitzer, recalled, said :—

Mr. S. J. Pollitzer. 17 May, 1892.

6260. I am desirous of making a correction in regard to some remarks made by Mr. Fehon.

6261. *Mr. Brown.*] You cannot correct any remarks made by Mr. Fehon. You can only correct your own evidence.

6262. *Witness.*] It is with regard to a question put to me by Mr. Fehon. He asked me to tell him what weight would be required to fracture the rail broken at Tarana under the drop test. I answered his question, but I had no right to do so. It was an absurd question, and should not have been answered, and therefore the answer I have given I do not wish to be considered as given in my evidence. That is the main point I wish to give as a correction. I have shown great industry in compiling my opinions, and I now desire to submit the last number of *The Engineer*, from which I would like to quote a certain passage.

6263. *Mr. Brown.*] What is that for. Fresh evidence?

6264. *Witness.*] It is simply in explanation and support of my character as an engineer, which has been questioned by Mr. Fehon.

6265. *Mr. Brown.*] I really do not think that is a matter at all in question.

6266. *Witness.*] I wish to read it on account of what Mr. Fehon said.

6267. *Mr. Brown.*] Well, there is no objection to your doing so for the information of the Commission, but it must not be considered as part of its proceedings. (*To the shorthand writer*): Do not take this as part of the proceedings. (*The witness then read an extract from a scientific journal.*)

6268. *Mr. Brown.*] I do not think what you have been reading concerns the Commission, excepting in estimating your value as an engineer.

6269. *Witness.*] I simply came here with that object to vindicate my position as an engineer, on account of what had been said by Mr. Fehon.

Albert Leahy, being sworn, said :—

Mr. A. Leahy. 17 May, 1892.

6270. I am a civil engineer, and have been resident in the Colony between seven and eight years. I am not connected with the Railway Department, but hold a position in the Roads and Bridges Department. My position there is that of draughtsman. I am supposed to be what is called "an extra temporary hand." The chief of my department is Mr. McDonald.

6271. *Mr. Hoyle.*] Are you a member of the Institute of Civil Engineers? I am not a member. Perhaps I may explain why I am not. At the time of my apprenticeship, or on its completion, some gentlemen who were connected with the institute proposed that I should become a member. I gathered from gentlemen who were seeking employment as engineers that they believed that membership in the institute was in the nature of a diploma, upon which they could trade. I thought at the time that it was not worth while becoming a member, and for the last twenty years I have continued to think so. I found that it was a very good introduction for quacks. Of course I do not mean that is so in every case. There are engineers and engineers.

6272. Have you had any experience in connection with railway matters? I served my time with Mr. Charles de Bergue, who was at that time one of the leading authorities in connection with permanent ways. He has carried out work in all parts of the world, paying special attention to permanent ways. He had patents which nearly all the Government representatives in various parts of the world have made close inquiry into, and I believe that at that time his system of permanent way was considered to be one of the best that could be laid down. My association with him afforded me such facilities in the way of introductions, that I was enabled to obtain entrance to and go round nearly all the works in England and some of those on the Continent, for the purpose of studying questions in connection with permanent way.

6273. And did you make such a study? I did. So much so, that at the time when the Russian and Indian Governments were considering whether a 4 feet 8½ inch gauge, or one smaller would be the better, I remember that Colonel Scratchley, Captain Tyler, Mr. Bender, and many other gentlemen, including the Prince of Wales and the Duke of Sutherland, who interested themselves in this question, when I was afforded an opportunity of seeing with them a number of experiments then being carried on about London. My experience also extended to association with Mr. George England, who I believe was one of the fathers of railway works in the old country.

6274.

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6274. *Mr. Hoyle.*] What practical experience you had of railways was, I understand, during the period you were serving your time? Yes.
6275. What position did you hold then? I was studying as a civil engineer, up to 23 years of age.
6276. *Mr. Brown.*] What bearing have the Prince of Wales and Sir John Fowler on your experience? Well, sir, it was in this way. It was in connection with "The Little Wonder," when Mr. Fairlie was bringing forward his narrow gauge engines in England, and these gentlemen from Russia and India were looking into this matter, and I was assisting Mr. John England in hunting up information.
6277. You were his assistant? Yes; we were carrying out experiments at New Cross.
6278. *Mr. Hoyle.*] Have you had much experience in connection with bridges? Yes; both on railway and road bridges.
6279. In connection with their construction? Yes; and in superintending their erection.
6280. Have you had also experience in the manufacture of rails, and do you know the strains to which they are subject? Yes.
6281. Both iron and steel rails? Not so much in steel rails but in iron. Steel has only come to the front in recent years, but in the manufacture of iron rails I have had a lot of experience, and I have been engaged for more than three years investigating into questions affecting iron and steel making for the purpose of rails. I was at Bolckow Vaughan's, and the Walker Ironworks, and Rosedale and Ferry Hill, at Durham, among the largest works of this kind, turning out about 600 tons of iron. I was engaged in making tests of iron and steel and also coal and fluxes and other things necessary for that particular kind of work.
6282. *Mr. Brown.*] I understand that you have had an opportunity of visiting all these places? Yes; before I came out here I had an opportunity of going through the whole of the works in Belgium, and also, if I had wanted to do so, through those of France and Germany. They would have shown me what I desired.
6283. *Mr. Hoyle.*] Your father was well known in connection with ironworks in England, was he not? Well, he has been dead some fifteen or sixteen years now.
6284. Will you kindly explain to the Commission the circumstances connected with your discovery of the weak points in the Glenlee bridge? On one occasion I was going down to Picton with a view to looking for land for selection, and in passing the structure, which was near completion, it occurred to me that it looked rather weak, and I thought that on my return journey I would pay it a visit and inspect it carefully. I was not, however, able to do so; but looking at it from the train I formed an opinion which did not please me, and I determined to pay a visit to it. I did not do so for some days, but when I did I took a few dimensions, and then discovered that the bridge had not what I thought sufficient base enough to support it in accordance with the rules adopted by engineers.
6285. Did you make any comments about the bridge to any one? None whatever.
6286. Did you make any representations whatever about the bridge? No; I only spoke to a friend. In talking over the bridges on the southern line I said to him in a casual way that I had noticed the Glenlee viaduct, and that it seemed to be a little weak, but that I was not sure of it, and that I had not made any calculations, except a few figures which were altogether incomplete.
6287. Since then some tests have been made? Yes, I believe the Government have made some tests.
6288. Can you quote any authorities for the strength and tests of bridges? I do not quite understand you.
6289. Could you quote any authorities who would take the same view as you do about the Glenlee bridge? I have made some calculations, but it would be difficult to tell you how I have dealt with them, without pointing out the common laws and regulations and foundation upon which I base them.
6290. *Mr. Brown.* (To Mr. Hoyle)]. Cannot you get generally from him his views with regard to the bridge, whether it is suitable for carrying the Baldwin engines or not.
6291. *Professor Warren.*] I will go through these calculations with him afterwards.
6292. *Mr. Brown.*] He has made certain calculations, and the result of these calculations shows him something. What is it. Do they show you that the result of your calculations is that the Glenlee bridge is weak? I will give you the calculations.
6293. *Mr. Hoyle.*] Do you know the weight of the Baldwin engines? I think it is about 90 tons.
6294. One class weighs between 91 and 92 tons, with a weight on the driving-wheel of 15 tons 6 cwt., that is the passenger engine; the goods engine is 97 tons, with a weight of 15 tons 9 cwt. on the driving-wheel. Now, having made your calculations with regard to the Glenlee bridge, do you consider that bridge strong enough to carry such an engine as the former travelling at the rate of 40 miles an hour? The estimate I make my calculation upon is Class 1, No. 483. I have made my calculations upon the basis of this engine.
6295. *Mr. Brown.*] What is the weight on the driving-wheel? The total weight on the driving-wheel would be equivalent to 63·6 distributed throughout, that is the weight resting the locomotive over one span of the structure.
6296. Had you not better ask him generally, Mr. Hoyle, if he can give you any evidence about the Baldwin engines and their suitability to our permanent-way. Ask him whether, assuming the weight to be what he states, his observations warrant him in saying that this bridge is safe for the Baldwin engine to pass over.
6297. *Mr. Hoyle.*] With your experience as an engineer, do you consider the weights I have mentioned as being those of the Baldwin engines would be too great for the Glenlee bridge to carry with safety? Yes, I do, most decidedly.
6298. Now can you give us any scientific reasons why these weights are too heavy? Yes, I can. I have asked myself two questions upon the strength of the girders to carry these locomotives, they are as follows:—"Are the beams designed and constructed so as to carry singly the greatest loads that can come upon them, and in accordance with engineering principles. 2. "Are the necessary factors of safety provided, in accordance with the Board of Trade regulations and recommendations, which regulations and recommendations the engineering profession has rigidly conformed to when designing structures of the class in question?" With regard to the factor of safety, I claim that these engines should have a factor of safety, say, of ten for a live load, and five for a dead load; that is upon the authority of the Board of Trade at home. In America the factor of safety is higher, but what it may be here I cannot say. I have made several calculations about the bridge, and I have found them anything but what they ought to be; and this might be said also with regard to other bridges in the Colony Reference to the Bridges Commission

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mission would show that there is a great variation in these things. We have also to ask ourselves whether, if this structure is capable of carrying the factor of safety of five for the dead load, at the present time, would it be capable of carrying it three years hence, for this is a permanent structure—not a temporary one.
6299. *Professor Warren.*] Is it constructed of timber? Yes; but it would stand for a considerable time, in fact until the timber is worn out.
6300. *Mr. Brown.*] Is the bridge suitable for the Baldwin engines, not three years hence, but now? That bridge has been erected to carry traffic for the next two or three years.
6301. I do not say that they have not been built for five, ten, or fifteen years, but we have nothing to do with that. All that we can inquire about now is whether the Baldwin engines are suitable for the permanent-way, as it is at present, and not as it may be years hence.
6302. *Witness.*] My answer to that is, that it is not. The factor of safety that I have calculated to have been provided for this bridge is 2·18 instead of 5 in accordance with the Board of Trade regulations.
6303. *Professor Warren.*] Is that for a dead load? Yes; if for a live load it would by double that namely ten.
6304. *Witness.*] An important question in erecting bridges is the co-efficient of rupture, which I have taken to be 18 cwt. which gives the modulus of rupture as 12·096 lb.
6305. *Professor Warren.*] What is the timber? The timber I have estimated to be ironbark. The two beams are secured together, one on top of the other, and I cannot regard them as a compound beam.
6306. Are the beams constructed in the same manner as in the Wango Viaduct? No.
6307. What size of bolt have they? I think about an inch. I saw that they were not more than an inch and there was not a sufficient number of keys.
6308. You know what was the span of the bridge? Twenty-one feet.
6309. *Mr. Hoyle.*] You said you have had some experience of tests of iron and steel, I think it is understood that these engines are not now run on the southern line, and the reason why I ask you about the Glenlee Bridge is because the exigencies of the Department may make it necessary to run these engines over that line at some future time. I wish to point out that we have had evidence to show that there are a number of turned rails over which these engines are repeatedly passing, and evidence has been produced to show that there has been a loss of weight of about 1½ lb. per yard, due to the continuous traffic upon them. The iron rails when new were 75 lb. per yard, and the sleepers are spaced at the curves from 2 ft. to 2 ft. 7 in. or 8 in., and on the straight from 2 ft. 8 in. to 3 ft. 3 in. Now, taking the weight of the engines that I have already indicated to you into consideration——
6310. *Mr. Fehon.*] I do not think there is any evidence about the sleepers being 3 ft. 3 in. apart on the straight.
6311. *Mr. Hoyle.*] I have measured them myself.
6312. *Mr. Fehon.*] Well, go into the box and give evidence about it.
6313. *Mr. Brown.*] I do not think any evidence has been given that the rails are 3 ft. 3 in. apart.
6314. *Mr. Hoyle.*] Well, 3 ft. 1 in. has been sworn to; but taking into consideration these facts, and that the material has been worn on one side and the rail turned over, do you consider it right and safe to take engines of such a weight over them? I should certainly say not. I say it is not safe.
6315. Will you kindly examine that rail; it is the one that was broken in the recent accident? [*Here witness examined the rail.*]
6316. I would like to ask you whether, having seen the fracture in it, you consider that rail to be of good iron? Yes; I think it is ordinarily good iron.
6317. Do you consider that that rail has been broken by a perpendicular or a lateral strain? I would like to know where the rail was broken?
6318. It was broken just at the commencement of or a short distance beyond the commencement of a curve. Now having seen the rail and having been informed of its position at the time of the accident, do you think it was broken by a lateral or perpendicular strain? To answer that question I would require to make a systematic examination of the rail, and that would be a matter of three or four hours. I should want to know where the curve commenced and where it ended, and where the breakages were, and I should also want to thoroughly examine the iron with regard to its quality. I could not form an accurate opinion by merely looking at the rail, that would be simply working in the dark, but I should be able to tell you something about it in an hour or an hour and a half. There are many matters in connection with locomotives going over a rail that should be taken into consideration, specially when the engine is running into a curve. It may be that this was part of an S curve, and there is nothing to prevent the engine being thrown from the one rail sharply against the other.
6319. It was not on a reverse curve I think, in fact I am sure it was not? However, I could not answer that question unless there was a drawing of the curve before me. I should want to get the exact radius of the curve, &c., and with so little information before me it would be impossible for me to say exactly what caused the fracture.
6320. It has been sworn that the curve was taken at the rate of 25 miles an hour, if not a greater speed. Now taking again into consideration the weight of the engine and the weight on the driving-wheel, do you think it would be safe to take an engine of such a weight into a curve of 10 or 12 or 8 chains at a rate of 25 miles an hour? No, not with an iron rail of 75 lb. weight and sleepers placed as you say from 2 feet 8 inches to 3 feet 2 inches apart. The sleepers at a curve should not be more than 20 inches apart from centre to centre, and here I understand they were about 3 feet apart.
6321. I wish to ask you another question, and it is relevant to the axle. Do you consider, having had some experience in the manufacture of iron, that when axles are being ordered tests should be provided for them, irrespective of the repute of the firm providing them. When ordering axles, which are so vital a part of an engine, do you as an engineer, consider that tests should be specified for them without respect to the repute of the firm supplying them? Most certainly. If I were ordering engines I should, irrespective of the reputation of the firm, provide for tests; and I should also see that the men who inspected the engines during their construction were trustworthy. My reasons for doing so are these—that I find that, as a rule, foremen in large works consider it their business to get out the work as cheaply and as quickly as possible, and will pass over little defects which do not appear to be of much account to outsiders, but which, if an expert were called in to thoroughly examine the work, he would, probably, consider to be of very great importance. Take, for example, the accident which you referred to just now. It may be that the fibres of the metal were strained, and in the case of an axle whose fibres had

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had been strained, it would probably be unsafe, so that it is no use to imagine that the best firm in England or America may be trusted without having some check placed upon it. Such firms are certainly not trusted by the railway companies in England. There every railway company has a man whose duty it is to inspect the making of the engines. He watches over every job, and his position is held by the faithful performance of his duty to his employers. The best men they have are selected for this duty of inspection during the making of the locomotives in the shops of the contractors. Of course in places where the railway companies carry out their own work it is a different thing altogether. I must decidedly say that I would not order any locomotives, or axle, or any part whatever without having tests provided, and I should most decidedly specify those tests.

6322. Supposing that whilst running these engines you discovered that any of their axles broke, would you order the removal of the whole of the same class of axles from all the engines furnished with it, or would you allow the engines to run any longer? Do you mean if any one of them broke?

6323. Yes, if you discovered that any of these axles broke. You must understand that when the axles of the bogies broke they were all removed, but afterwards a tender axle broke, and the other tender axles were permitted to remain. Now would you have allowed these tenders to run any longer without having the whole of the axles removed? I might take that axle and test it; but in the meantime I should look after the others.

6324. *Mr. Brown.*] If some of these axles have shown sufficient defects to warrant the removal of a portion of them, would you as an engineer, knowing of these defects remove the whole of them? Certainly.

6325. *Mr. Hoyle.*] Then you would stop these engines at once, until all these axles had been removed? Certainly.

6326. You are aware, I presume, that sometimes when tests are made, one of a number only is tested. Thirty or forty may be brought in and one taken out indiscriminately and tested. Would you consider that to be a satisfactory test of the material contained in the rest; that is taking one indiscriminately would you take the rest as up to the balance of that one? Are you supposing that certain tests must be made to the axles you are going to use?

6327. Yes? It would be impracticable for a man to test every axle.

6328. But we are supposing that there are thirty or forty in a heap together, and the person who comes to test them takes one indiscriminately out that heap and tries it. Would you take that to be a sufficient guarantee for the rest; if the one were found good, would you take it for granted that the rest were equally good? I cannot quite follow for this reason—if these axles were made of steel and were submitted to specified tests, well and good if one axle stood it, but the day's work constitutes perhaps twenty axles. The way the work is done in manufacturing these axles is as follows:—First of all the material is selected, and every ingot is marked after being turned out of the crucible, and every process is closely watched until the metal is finally turned into an axle. If after this has been done upon testing it is found to be wanting, the whole of the axles which have been made of the same heat may have to be put aside, and a fresh lot made, but supposing the whole of that process has been satisfactorily passed through, you have the completed axle. I cannot see, why then, if you tested one by chance selection and it was not satisfactory, you could not take a second and test that, and so on.

6329. *Mr. Brown.*] Supposing there are fifty axles all ready for testing, and you take one and it answers the test, would you accept that one as a sample of the rest? I would take one per cent., assuming that all the previous tests and inspections had been satisfactory. It places an engineer in a queer position when he finds one axle in fifty to be wrong.

6330. *Professor Warren.*] You mean you would take 1 per cent. of the day's work? I would take one in fifty.

6331. You would object to take a batch of axles unless produced in a certain time, and then you would take 1 per cent.? Yes.

6332. If the first axle selected passed the test you say that you would risk the rest? Yes.

6333. The same test you would apply to boiler-plates and material in general, I suppose? Yes.

6334. *Mr. Hoyle.*] You have had no experience of our other bridges on the western line? No; except in the construction of the bridges here I have had no experience of them.

6335. With the 71-lb. steel T rail and the sleepers spaced as I have indicated do you consider that it would be safe, taking into consideration the bearing of the rail on the sleeper itself, and not on the chair, would you consider it to be safe to run these locomotives? It all depends upon the speed.

6336. Taking the speed of the goods train to be 18 miles, and that of the passenger train not more than 40 miles an hour? If the sleepers were placed 2 ft. 7 in. apart, at the most, I should say it would be fairly safe, but I would like a heavier rail, especially at the curves.

6337. *Mr. Brown.*] Mr. Hoyle wants to know if it is safe.

6338. *Professor Warren.*] It is not on the question of economy.

6339. *Mr. Hoyle.*] Do you think, taking into consideration all the other things I have indicated, that it would be safe to run these engines over a 71-lb. T rail? I think it would be safe on the straight, but I am doubtful about the curves. I could tell if I had all the data before me. I think it would be perfectly safe on the straight if the sleepers were not more than 2 ft. 7 in. or 2 ft. 8 in. apart.

6340. Have you had any experience of the testing or the straining of rails? Yes, I have seen thousands and thousands of rails tested.

6341. Well, what do you think of the rail you have seen in this room, it has been turned twice or run on both faces, what do you think should be the test drop of a rail such as that, with a monkey of a ton weight, what do you think it should stand.

6342. *Professor Warren.*] In foot tons.

6343. *Witness.*] The test would be about 4 ft. with one ton.

6344. Do you mean the steel rail? No, that is the 75-lb. rail. It would be about 4 ft. without fracture.

6345. Not repeated? No, just one blow.

6346. What would it take to fracture it? About double that. A little more than about 9.

6347. Nine-foot tons? Yes; I am speaking now from memory. I have not done any testing for seven or eight years.

6348. *Mr. Hoyle.*] Have you ever tested rails such as these? Yes.

6349. And from your experience that is the test they should stand? Yes.

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6350. What should be the test then that a T rail should stand, the ordinary T rail? Well, that depends upon what we are testing for in the first place. Are you testing simply for breaking.
6351. What should be the breaking drop test of a T rail 71 lb. steel? Well, I could hardly give you that from memory.
6352. Can you give us any rough idea? To break the rail?
6353. Yes? I should say about 30 tons; but I would not bind myself in these figures. I am speaking from memory, but I have no data to go upon.
6354. I wish to ask you a question. Have you ever tendered for the manufacture of rails here? Yes; to re-roll the old rails of the Colony, about some six years ago.
6355. *Professor Warren.*] But the Eskbank Company got it? Yes; another company and the Eskbank Company. I believe I was by 6d. per ton the lowest tenderer.
6356. *Mr. Brown.*] We do not want to go into what the tender was.
6357. *Mr. Hoyle.*] Did you ever tender for the manufacture of steel rails here? It was my intention in laying down the plant for relaying the road, had I got the tender, to lay down a plant for steel rails.
6358. *Mr. Fekon.*] How long have you been in this country? About seven or eight years.
6359. I think you said in your evidence that you had not been in the employment of a railway company? Yes; but I have been constructing railways all the same.
6360. What railways have you been in? I have studied on the London, Chatham, and Dover Line.
6361. I did not ask you what companies you have studied with, but in what companies you had been employed? I have been employed on the London, Chatham, and Dover.
6362. What did you do there? I was employed in laying down about a quarter of a mile of patent permanent-way.
6363. Anywhere else? I was engaged in Central America, on the Laguira and Carracas Railway.
6364. What were you doing there? I was acting as assistant engineer, and had the inspection of the works.
6365. Have you had any railway experience in this country? No; not beyond constructing railway bridges.
6366. What railway bridges have you constructed in this country? I referred to the iron bridges. I mean that I made them.
6367. Well, which of them have you made? Well, I think the Black Creek Bridge was the last one I made. That is somewhere near Newcastle. Then, besides that, we built some two or three bridges for the Railway Department.
6368. Whom were you with? I was with Osterneyer, Dewez, & Company (Limited). I was their engineer.
6369. But they imported all their bridges? No; only one or two. That was just as I landed here. After that I took care that they did not import any others.
6370. You say you are a draftsman in the Roads and Bridges Department? Yes; an "extra temporary" hand.
6371. You say that with regard to the Glenlee Bridge you were unsettled in your mind as to what to do, and you consulted a friend. Who was this friend, if you do not mind telling us. Who was he? I do not think I should name my friend unless I received his permission to do so. He is sitting at this table, and I am not afraid of mentioning his name, if he has no objection. May I ask him the question?
6372. Is it Mr. Foote, of the *Sunday Times?* I never instructed him or anyone else to mention the matter in the Press.
6373. Did you mention it to anyone else. Did you not speak to the Colonial Treasurer about it? Yes.
6374. Well, what was the result? I simply called upon Mr. See.
6375. Well, tell us as briefly as possible what took place? I told him that I desired to speak to him on the subject of the railways, with reference to a railway bridge on the Southern Line. He replied, "Had you not better go to the Commissioners." I said, "I have a reason for not going to them, and my reason is that I should not place my charges before them as a Civil Servant, and if you will allow me I shall make the charges to you, I only want you to see fair play, because I have, as a member of the public, to travel over that viaduct in order to reach my land on the other side." Mr. John See said to me sharply, "Have there ever been any charges brought against you in the department? I said "no, Sir, never in that department or any other." The result of that interview was that between twenty-four hours I was asked to meet the Commissioners and the engineer, Mr. Darley, Mr. Hickson, Mr. Deane, and I believe Mr. McLachlan were there.
6376. *Mr. Brown.*] At all events you met a big crowd of these gentlemen.
6377. *Mr. Fekon.*] Do not you think you are the greatest engineer in the Colony? No; but I do think I have had a very fair training.
6378. Did you not consider these gentlemen the leading engineers of the Colony? Certainly.
6379. And did they not tell you that you were altogether wrong in your idea of the Glen Lee Bridge? No, they did not. I wish they had, then I would have had something to say about it.
6380. Suppose Sir John Fowler had said that the Glen Lee Bridge was quite safe? I presume that I could produce evidence or state facts that might show him to be in the wrong.
6381. *Mr. Brown.*] What is your opinion, you know you came here as an expert? I did not come here on my own account.
6382. But you are here as an expert? I am not aware of that. I do not know who called me. I have never seen Mr. Hoyle to speak to until I was called here.
6383. Well, will you set your opinion against Sir John Fowler, if he said this bridge was safe? Yes.
6384. *Mr. Fekon.*] And Mr. Deane, and Mr. Hickson, and Mr. Foxlee, and Mr. Darley, you would set your opinion against theirs? I would want to have their figures. There is no use in taking a man's word. Let us have the facts and the figures upon which he bases his opinion.
6385. Why did you not send your figures to these gentlemen? You sent for me at 11 o'clock, stating that you wished me to call at 12 o'clock the same day. I was on duty at the time, and my private house is at Fairfield. When present I said that I was prepared to give you a copy of my calculations. I asked you to produce the drawings of the bridge, and you would not produce them.
6386. How long were you with C. de Berque? Two years, I served my time there. I was under the greatest engineer of the day.
6387. *Mr. Brown.*] Where were you employed? I did not say I was employed there.

Mr. A. Leahy. 17 May, 1893.

6388. *Mr. Fehon.*] What is the highest position you ever held? The highest I held is that of engineer, at £1,000 a year, and more than that, I could get it again if I returned to England.
6389. Would not that be better for you to do than remaining here as a draftsman? I have family reasons for not returning home.
6390. Did you ever tender to supply a locomotive in this Colony? Yes; that was in the year 1887.
6391. You were the lowest tenderer? I do not think I was; but I think I was very near it.
6392. Yes, the lowest? You do not know why your tender was not accepted? No.
6393. Have you ever had anything to do with locomotives here? No.
6394. Or permanent-way? No.
6395. Then your experience must be a very old one, yet you come here as an expert, and give your opinion about the rails and permanent-way when you know nothing about them? *Witness*:—Mr. Chairman, I appeal to you.
6396. *Mr. Brown.*] That is not fair, Mr. Fehon. He comes here to give his evidence before the Commission for whatever it is worth, and you have no right to comment upon it now.
6397. *Mr. Fehon.*] Very well. You have looked at that rail, and you have given your opinion as to the drop test it could stand? I am only speaking from memory.
6398. What weight dropping 12 inches should break that rail? I should say possibly from 20 to 22 or 23 tons.
6399. *Mr. Fehon.*] You think it ought to stand that before breaking? No; I think that should nearly break it.
6400. *Professor Warren.*] Will you tell me the span of the Glenlee bridge? I think there are 19 spans; but I would not swear to that. They have 21-foot centres. Three beams in the centre. The beams in the span are composed of six 12 x 12 ironbark timber, and corbels. These beams are not compound but only laid on top of the other.
6401. Then they must be considered as two single beams? I will leave that to you to settle.
6402. According to that they would not be strong enough? If they were compound beams they would be about a third more than my estimate which is 49·35 tons as the ultimate breaking strength of each of the beams, and the ultimate breaking strength of the whole of the beams in one span would, I estimate, be 296·1 tons.
6403. Supposing that they are two single beams, would they not be twice as strong if you put in the necessary shearing and bolts? Yes, I agree with you; but they are not compound beams because they do not contain the necessary amount of keys to secure them together.
6404. The proper amount of shearing you mean? Yes.
6405. You have assumed in making your calculations that the modulus of rupture is 12·096 lb.? Yes.
6406. Well, what weight would the bridge carry per foot, assuming the modulus of rupture to be right? 136·24 tons would be the maximum load which could be brought upon the beams, but the ultimate breaking strength of each of the beams provided is equal to 49·35 tons, and the ultimate breaking strength of the whole of the beams in one span equals 298·1 tons, therefore the safe breaking strength of a complete span of the structure with a factor of safety of 5 equals 59·5 tons. The breaking strength of each of the beams provided, I have given as 49·35 tons.
6407. That is the distributed load? Yes.
6408. I think I saw certain wheels drawn upon your diagram. I suppose you have taken the bending moments of these? I have taken the centre of gravity of the whole and put it in the worst position for loading.
6409. Then the total load which should come upon the structure or that portion of it would be about 9 tons? Yes, I think so.
6410. You say that each of these beams will take 49·35 tons, and that is distributed, and six times that would be the strength of the bridge, let us call it 50 tons, then roughly we will have 300 tons as the carrying strength of the bridge? Yes; I make it 296·1 tons.
6411. What is the weight of the superstructure itself? Nine tons, each span, in fact a little over, but I have taken everything in favour of the Commissioners. The only difference would be the modulus of rupture, and that I would not take in practice at too much.
6412. Nine tons is the weight of the beams then, and what kind of deck is there? The planks are about 14 inches apart, I think, and they are about 8 x 8 or 10, and the rails are laid on this longitudinally; there are rail bearers underneath the rails, about 13 x 8 or 9 each.
6413. Well, you make out that this bridge will carry about 300 tons, that is 63·62 tons is the distributed load at the centre of the beam, and the distributed dead load due to the locomotive you estimate at 127·24 tons, and the load due to superstructure at 9 tons? Yes. That gives a total load of 136·24 tons. The live load of the engine is equal to 63 tons and twice the live load is equal to the dead load.
6414. 15 tons 9 cwt. is the weight on the driving-wheel, do you know what is the equivalent bending moment to that? Yes, the maximum moment is 167 tons at the centre of the beam.
6415. Taking the 63·62 tons distributed load and dividing it into 300 that leaves you about 4 tons? Yes.
6416. I do not say that is the correct way in which to treat the matter;—what do you make out your factor of safety to be in these calculations—never mind about doubling the live load? My factor of safety, drawn from these calculations, is 2·18 and by doubling the live load it would be slightly more than that; that is to say, if I took the dead weight. These calculations are made on the basis of Professor Ranken's rules, the only ones by which I know these calculations can be made.
6417. 2·18 is not a large factor of safety? No, I think not.
6418. I shall be glad to look at that bridge. At present the calculations show that it is weak. In the calculations the witness may not have taken into consideration all the elements he should have done.
6419. *Mr. Fehon.*] The question of this bridge scarcely comes in the scope of the inquiry; but as the question has been raised as to its strength, we shall put Mr. Foxlee in the box, and he will clear up anything that requires explanation.
6420. *Mr. Brown.*] This is Mr. Hoyle's last witness, and we look upon this matter as an important one, as it is possible that the Baldwin engines may have to be carried over this bridge.
6421. *Mr. Fehon.*] You went over it on Sunday on a Baldwin engine.
6422. *Witness.*] I did not say that the bridge would not carry the Baldwin engine, but I raised the question whether there is not a doubt with regard to the public safety. Would, for example, an insurance company take the risk?

Mr. A. Leaby. 17 May, 1892.

6423. *Mr. Brown.*] They would take it if you gave them the premium they wanted; that is the only question.

6424. *Professor Warren.*] I understand that your factor of safety, 2·18, is arrived at by adding the live load to the dead load? That factor of safety is the dead load. The Board of Trade regulation gives 5 as the factor of safety, but my calculations with regard to this bridge show it only to have a factor of 2·18.

6425. Never mind the Board of Trade regulations, I think they are generally recognised to be a little out of date.

6426. You consider that an iron rail is unsafe with the sleepers at their present distance apart, but that steel rails would be safe with sleepers about 2 ft. 7 in. in the centre? Yes.

6427. You were asked some questions about axles—could you tell me, without referring to your notes, what tests you would specify for ascertaining their quality? I have made no notes. I did not know that I was to be called here till last Thursday; this is my first day out since I have been ill—indeed, during the whole morning I did not know whether I should be able to reach here. I have had no opportunity of making preparations for examination, and the calculations which I have made with reference to this bridge had nothing to do with this Commission at all. I have therefore made no notes, but I shall answer any questions put to me, as far as I am able, with pleasure.

6428. Mr. Hoyle asked you some questions with regard to testing of axles—now, what tests would you prescribe, first of all with regard to steel? For steel I should expect the axle to double up whole without a sign of fracture, and in the event of a railway accident occurring through the breaking of an axle, I should want it to do exactly the same thing; no matter whether the axle was of steel or iron, the same test should apply to both. In steel it would be very important that it should contain a certain amount of carbon, perhaps a little more than is usual for some other kinds of steel. Steel axles should have ·5 of carbon.

6429. Would you subject them to tensile tests? Yes; I should apply a test of 23 to 28 tons with a contraction of area of about 20 per cent. With regard to iron, the tensile test would be about the same, perhaps a little less—say from 23 to 26 tons.

6430. And the ductility would be the same? Yes; I would require a test equal to that for Bowling or Low Moor iron.

6431. Looking at the rail taken from the railway accident, could you say whether it is good or bad material? No; it would take me several hours before I could answer all the questions necessary to be answered. The fact of a rail being turned is a very good guide to what may follow.

6432. *Mr. Hoyle.*] About the strain on an iron and a steel rail—what difference do you consider there is between the strength of steel and iron;—for instance, that rail is 75 lb. of iron to the yard. Now, would the strength of a 71-lb. steel rail be equal to that, or greater? It would be equal in strength, but it would not be equal in section, and it would not do to make a smaller section of it. In the case of a steel rail it would have to be a smaller section than in the case of an iron rail.

6433. *Professor Warren.*] Taking the ordinary steel used for rails and the ordinary iron, what is the difference of strength? There is not very much difference. I have known some good iron rails to be better than a great many common steel rails. Take, for example, the little ferrules for stopping the tubes of boilers. You can take some of our steel rails and make the finest ferrules by cutting off the flanges. You can get steel of almost any quality—some of it will break off like glass, and some twist off like putty.

6434. *Mr. Hoyle.*] Do you consider the continual strain on iron reduces its power of resistance. For instance, if you put a T rail on the sleepers and make the space 3 feet apart, as is at present the case, with our iron rails laid on the straight, what would be the resistance of steel compared with that of iron;—would the resistance of the steel be greater than that of the iron? Yes, in the proportion of about 3 to 1, that is to say, that if in the one case you require 10, in the other you would require 30.

6435. *Professor Warren.*] If the tensile strength of the iron rail would be 20, then the tensile strength of the steel rails would be 60;—is that what you say? No; I made a mistake—the tensile strength should be about 32 tons. I thought you were talking about the drop test.

[*This closed Mr. Hoyle's case.*]

6436. *Mr. Brown.*] I think the Commission should tell you, Mr. Hoyle, that, generally speaking you have produced no evidence with regard to the last part of your allegations—namely, that those engines are not rendering the services which they were expected to perform. There has been indirect and inferential evidence given touching upon this point, but no specific evidence has been called with regard to it.

6437. *Mr. Hoyle.*] I understand that.

6438. *Mr. Brown.*] I thought that, under the circumstances, I should call your attention to it.

6439. *Mr. Fehon.*] The Railway Commissioners ask for an adjournment until to-morrow. The Chief Commissioner is engaged on another Commission, and he expected to be there to-day, but, unfortunately, Mr. Schey was sick, and, contrary to his expectations, Mr. Eddy is relieved from attendance there to-day. Anticipating that he would be at the other Commission, however, he was prepared to go on with our case before you to-morrow, when the other Commission will not be sitting. He will address some remarks to this Commission on the general question of the inquiry, and then we shall proceed to call evidence in support of our statements, but I would ask you now, inasmuch as the strength and construction of the Glenlee bridge has been brought into question, whether I may not in the interim call Mr. Foxlee, who will lay before you, so that it may be made public, a statement, supported by the very best evidence that can be obtained in this world, in regard to the strength of the bridge, so that whatever may have been said on the subject may be put right. With your permission, I will ask Mr. Foxlee to come forward and lay certain facts before the Commission.

6440. *Mr. Brown.*] I do not think there can be the slightest objection to either course. The adjournment, of course, we shall grant at once, and we shall be glad in the mean time to hear Mr. Foxlee's evidence with regard to the Glenlee bridge.

Mr. Foxlee recalled:—

Mr. Foxlee. 17 May, 1892.

6441. *Mr. Fehon.*] You are responsible for the designs of all bridges constructed under instructions by the Railway Commissioners? Yes.

6442. You prepared designs for the bridge at 37 miles 75 chains near Glenlee? Yes.

6443. Have you any doubt as to the suitability of that structure? None whatever.

Mr Foxlee. 17 May, 1892.

6444. You have seen certain Press strictures in regard to the construction of that bridge? Yes; I saw some in a Sunday paper some time ago.
6445. *Mr. Brown.*] You may also add that you have heard the evidence that has been given in regard to it this afternoon? Yes.
6446. *Mr. Fehon.*] And as a result of the Press strictures was not a Board appointed to inquire into the construction of that bridge? Yes, a Board was appointed for that purpose.
6447. Who were the members of that Board? Mr. Deane, the Engineer-in-Chief for Railway Construction, Mr. Darley, Engineer-in-Chief for Harbours and Rivers, Mr. Hickson, Engineer-in-Chief for Roads and Bridges, and myself.
6448. Have you that report? Yes, I have it here.
6449. Would you kindly read it? Certainly:—"At the request of the Railway Commissioners we have carefully investigated this matter, making all necessary calculations with that view, and have no doubt of the complete stability of the bridge in question in every respect.—C. W. DARLEY, R. T. HICKSON, H. DEANE, W. T. FOXLEE."
6450. *Mr. Brown.*] You put that in as evidence, do you not, Mr. Foxlee? Yes.
6451. *Mr. Fehon.*] Was it not stated by the newspapers in question that designs would be forwarded to the engineering journals in England? Yes.
6452. And, as a result, were not plans and particulars of the bridge sent to Sir John Fowler for his information? Yes, sir.
6453. Have you got Sir John Fowler's report? I have a copy of Sir John Fowler's report here. It is a short report only—only a few lines; it is as follows:—"Sir John Fowler to Agent-General. Sir,—I have to acknowledge your letter of the 22nd instant, enclosing letter from the Secretary of the Railway Commissioners, dated 15th February. I have examined the drawings of the bridge referred to in the letter of the Commissioners, and assuming the workmanship to be good, I am able to say that the design is satisfactory and sufficient, including the provision against wind pressure.—I am, &c., JOHN FOWLER."
6454. So that Sir John Fowler, Mr. Deane, Mr. Hickson, Mr. Darley, and yourself all report that the structure is perfectly safe? Yes.
6455. Were you present at the test of the bridge? No; I was not present.
6456. Have you reported the test? Yes; may I read it.
6457. *Mr. Brown.*] Certainly; who made the test? Two of my assistants tested the bridge, and this is the report they sent to the Secretary:—"We beg to report that yesterday, the 3rd instant, the traffic was diverted over what will be the up-road between 37 miles 37 chains and 40 miles 3 chains, and all was satisfactory. Owing to the comments that have been made regarding the strength and stability of the timber viaduct at 37 miles 75 chains, special attention was paid to this, and very careful tests were made laterally, transversely, and longitudinally, with a train consisting of a new Baldwin Consolidation engine, No. 495, and two suburban American carriages. These tests give highly satisfactory results, and we are satisfied that the viaduct is capable of carrying, with the utmost safety, the heaviest load possible to be brought upon it. Diagram of tests being attached, signed: James Fraser, Robert Kendall, David Simpson." I may mention that the maximum deflection of one span was a little over a third of an inch. They also tested the bridge by rushing down the incline, and putting on the brake, thus stopping the train suddenly on the bridge, and the longitudinal movement was nil. That is the result of the test.
6458. And that was one of the heaviest engines on the New South Wales Railways? Yes; it was a Consolidation goods engine.
6459. *Secretary to the Railway Commissioners.*] It was the heaviest engine on the railways.
6460. *Mr. Fehon* (to Witness).] And you consider that a highly satisfactory result? Thoroughly so.
6461. *Mr. Brown.*] You heard the evidence given by Mr. Leahy? Yes.
6462. Was it correct from a scientific point of view? No, it was not, in my opinion.
6463. *Mr. Hoyle.*] Have you had any independent tests of these bridges from gentlemen outside the department, Mr. Foxlee? No.
6464. The gentlemen whose names are here on these reports are departmental officers? Yes.
6465. You said that this matter was submitted to Sir John Fowler;—was the plan of the bridge submitted to him? Full details of the structure, as carried out, were submitted to him. We would not content ourselves by sending to him merely a tracing of the drawing of the bridge; we had the fullest details worked out for his information. Indeed, for that purpose I sent some of my best assistants over the ground to take very careful measurements, and then to plot them, and from that drawing tracings were sent to Sir John Fowler.
6466. The remarks that I am going to make, gentlemen, I wish to explain, do not carry with them—at least, it is not my intention that they should carry with them any reflection, but I should like to ask you, Mr. Foxlee, whether you consider Sir John Fowler the best authority in England to whom this question could have been submitted? Yes, I certainly do; I consider him one of the best bridge engineers in the world, and seeing that he is the designer of the Forth Bridge, amongst numerous other structures, I think I am perfectly safe in making that statement.
6467. Would you now have any objection to supply me with a copy of the tests you have had made? That is a matter for the Commissioners.
6468. *Mr. Brown.*] Have not the tests just been handed in.
6469. *Mr. Hoyle.*] Yes; but those copies belong to the Commissioners.
6470. *Mr. Brown.*] Yes; but you will have a copy of them procured for to-morrow.
6471. *Mr. Fehon.*] The reports are perfectly public now, only I have an objection to the way in which the matter was first brought on.
6472. *Professor Warren* (to Witness).] Is not the design of this bridge somewhat similar to the viaduct that Mr. Deane has got out—I mean to say that it consists of three beams? They are very similar.
6473. I take it that these wedges are 3 by 1½, and that they bear the shearing stress? Yes, they are always carefully wedged and tightened up.
6474. That is 3 by 1½ and 12 deep. What is a safe shearing stress per square inch? I have not my calculations with me.
6475. I am not asking for the actual shearing stress, but here is a wedge which will obviously shear at a certain place. I take it that it is the best iron bark you can get.
6476. But you have to resist the horizontal shear with these wedges? Not altogether so; you see they are bolted right through, and then there is the friction of the timber beams and the shearing of the bolts.

Mr. Foxlee. 17 May, 1892.

6477. And to resist the vertical sheer, you have the iron bolts? Yes; every transome is bolted through.
6478. But what do you allow per square inch sheering resistance on ironbark? I have not my calculations with me now, and do not remember them.
6479. This bridge may be safe, but those wedges are not safe, I am certain. They are nothing like large enough? But there are the bolts.
6480. Well, even so the wedges are too small beyond a doubt. I should not put them in. Your wedges are 3 by 1½, and I should certainly think that 10 by 3 would be nearer the mark. This is a question that I put to Mr. Whitton before he left, and he agreed with what I am saying now? Yes; but you weaken your beams enormously by putting in such large wedges.
6481. I do not for one moment mean to say that the bridge is not strong enough. I have not gone into the subject sufficiently to enable me to form an opinion on it? I say you weaken your beams enormously by making your wedges so large.
6482. Yes; but you weakened your power there as it is? Yes; but you treat the beam as a continuous girder.
6483. But how can you treat it as a continuous girder, when it is joined here? Under each beam.
6484. But most of them, I take it, would be joined over the piers? Yes; they are joined alternately under and over.
6485. Of course you cannot treat a timber girder as continuous, unless it is actually continuous throughout;—you cannot make joints unless you put iron plates on? We have treated it as a single span.
6486. Of course I do not for a moment dispute the result that you have arrived at;—you say that your assistants were very well satisfied with the bridge on account of the deflection? Yes.
6487. What does the deflection tell beyond the stiffness of the bridge? It tells you the stiffness undoubtedly.
6488. A beam 12 inches deep might deflect a certain amount, and a beam 6 inches deep might deflect more with the same load;—how did your assistants connect the stiffness with the strain;—of course it can be done, but they speak so strongly in reference to the deflection that one cannot help pointing out that after all it only shows the stiffness of the bridge. A gentleman the other day giving expert evidence, made very strong remarks about the stiffness of a bridge, and he did not know what load was on the bridge at the time? But if he had been there himself and taken deflections, he might at once have said that the bridge was not stiff enough.
6489. Well, there is no other question that I can ask Mr. Foxlee in relation to the bridge at present, because he has not got his calculations here.
6490. *Mr. Brown* (to Witness).] You heard the evidence that Mr. Leahy gave just now, and you heard him say that he had an interview with you and some other gentlemen with regard to this particular bridge? Yes.
6491. Did you give him an opportunity of putting before you his complaints with regard to the want of stability in the bridge? Yes.
6492. When questioned upon the subject he seemed to complain that he was hurried into the question without being armed with the necessary papers, which he said he had left at home;—he seemed to complain that when he came before you gentlemen he did not get the attention to which he was entitled? He received every attention. This drawing was placed before him, and he was asked to say where the bridge was weak, but apparently he could not do it. He would only reply in very general terms. He could only say that it would break, that it would tumble down, and so on; but when we asked him why he could not tell us.
6493. *Mr. Brown.*] Did you give him any other opportunity of proving his case—of bringing before you any papers of which he was possessed, or did you then set to work to decide the matter for yourselves? We gave him every opportunity, and he said that he had not his calculations with him.
6494. Did you offer to delay your judgment at all in order to enable him to obtain the papers? I think I am right in saying that the Commissioners asked him to send in his calculations.
6495. They invited him to send in any information of which he was possessed? Oh, yes; I am sure of that.
6496. And on this information you set yourselves to decide whether the bridge was safe or not? Not that we had the slightest doubt about it.
6497. No; but at all events you did make inquiry? Yes; it was after some articles appeared in the Sunday paper to which I have previously referred, I believe.
6498. After the articles appeared in the Sunday paper you sent these gentlemen out to inspect the bridge, and also the details of the structure home to Sir John Fowler? We made our own report, but as the comments to which I have referred continued, and as the paper threatened to send reports of the matter to the various engineering journals in England, we thought it just as well to anticipate anything they might do by sending the fullest possible details to Sir John Fowler, who, being on the spot, would of course know what was the best course to to take if comments upon the matter were made in the home papers.
6499. And the result was satisfactory? Eminently satisfactory.
6500. *Professor Warren.*] Do you not think it would have been more satisfactory if you had sent the drawings home to Sir Benjamin Baker to examine;—of course I do not wish to infer that Sir John Fowler's authority was insufficient, but we all know how much work he has, and the possibility of his handing the matter over to an assistant? As Sir John Fowler is the Consulting Engineer to the New South Wales Government, and is in such intimate relationship with the Agent-General, we thought that the best thing we could do was to send the details to him.
6501. I should like to say when this question of bridges crops up again that I shall not ask any general question with regard to them; I will either ask no questions at all or else I shall go into the matter thoroughly; it is not sufficient to come here and say this bridge is good because so-and-so says it is; no one doubts that Sir John Fowler is one of the first engineers of the world, but if any evidence is given it ought to be given in such a way that we can publish it so that the world at large can see that the bridge in question is all that it should be, and in order to know that I should require to be told the factor of safety that you have adopted? I think I am right in saying seven.
6502. That applies to all bridges, I suppose;—I am very sorry to have to go into the matter at all, but it seems to me that we cannot escape from it, inasmuch as the Baldwin engines have to pass over these bridges? We shall be glad to put these drawings in for your information. 6503.

Mr. Foxlee. 17 May, 1892.

6503. *Mr. Hoyle.*] As you had no doubt about the safety of this bridge, would you tell us why you submitted it to Sir John Fowler?
6504. *Mr. Fehon.*] I think I can answer that question better than Mr. Foxlee.
6505. *Mr. Brown.*] Yes, Mr. Fehon; but it was Mr. Foxlee's answer that Mr. Hoyle wanted.
6506. *Mr. Hoyle.*] Yes. (To Witness:) As you had no doubt about the safety of this bridge, will you tell us why you submitted it to Sir John Fowler? I have already answered that question; because the journal that I have referred to stated that it was going to invite opinions from the engineering journals of Europe, and the Commissioners thought it a desirable thing that somebody at home should be in a position to state facts. It was not that we had the slightest doubt about the stability of the bridge.
6507. Then what is the factor of safety that you allow in bridges here under your control? A factor of safety, as I told Professor Warren, of about seven. I think that is so, though I am speaking from memory.
6508. Is that for a live or a dead load? If you do not mind me telling you, as you are a layman, the factor of safety means how many times stronger the bridge is than it need be to resist the greatest weight than can ever be placed upon it.
6509. *Professor Warren.*] But you would not allow the same factor for a live load as a dead load? No; but seven is what we take as the factor of safety for both.
6510. That is to say that you adopt seven as your mean factor for both live and dead loads? Yes.
6511. *Mr. Brown* (to Mr. Hoyle).] Do you want to have the drawings of this bridge included amongst the papers of the Commission, because, unless you think it necessary that they should be included, I would not increase the volume of evidence and appendices with them, we do not wish to produce a more bulky volume than necessary.
6512. *Mr. Hoyle.*] No; I have no wish for the publication of the design of that bridge.

WEDNESDAY, 18 *MAY*, 1892.

[*The Commission met at 2 o'clock, in the Board-room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., J.P.

6513. *Professor Warren.*] Previous to commencing the business of this sitting, I would like to make a statement with regard to the strength of certain bridges. A great number of bridges have been built recently, and since the sitting of the Royal Commission upon the bridges of the Colony in 1886, of which I was a member. I wish it to be understood that I cannot be expected, in this inquiry, to go into the measurements, stresses, and so on, of every bridge on our railway line. It would be absurd to imagine that I could devote so much time to those questions without prolonging the inquiry to a very great length. Therefore, unless a bridge is called into question, and becomes one of those matters into which we have to inquire, I shall not go into it. I have considered the Glen Lee Bridge, and I shall refer to that in the course of our report, but unless some particular bridge is called into question in a similar way I shall not go into matters concerning it, and I wish it to be distinctly understood here that I do not accept any responsibility with regard to any bridge that is not referred to in the course of our inquiry. There are plenty of these new bridges which I have not seen, and have no chance of seeing, perhaps, for some time.
6514. *Mr. Brown.*] Mr Eddy, I understand that you are practically in possession of the attention of the Commission at present, and I trust you are prepared to go on with your case. If you like we shall wait a few minutes until the full Commission is present, our President, Mr. Rogers, not having yet arrived, or if you prefer it we are prepared to go on now. Our Commission empowers any two of us to conduct the proceedings of this enquiry.
6515. *Mr. Eddy.*] I prefer, sir, to wait until the full Commission is present.
6516. *Mr. Brown.*] Very well, but we shall only wait a reasonable time, and should the President not then arrive we shall go on without him.

[*The President entered the room a few minutes later.*]

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6517. *Mr. Eddy.*] Shall I make my statement simply, or do you wish me to make it upon oath.
6518. *President.*] I think, Mr. Eddy, it would be better to make it upon oath, since we asked Mr. Hoyle to make his statement in that way. You have already been sworn.
6519. *Mr. Eddy.*] I think I must trespass upon the time of this Commission somewhat, so as to explain the policy which has prompted the Railway Commissioners in this new departure in obtaining the Baldwin engines; otherwise, perhaps it will be scarcely intelligible to the Commission or to the country. The Railway Commissioners hold that amongst other objects in view by Parliament when the Railway Act was passed, and when they were appointed, was that of working the railways according to the most modern ideas, so that the greatest possible result would be obtained by the country, and it was never expected, they consider, that they should be tied down to working the railways on the principles that were in operation before they took office, as, if so, their appointment would be of no effect to the country. The New South Wales railways are most exceptional in their character, having been constructed with an enormous proportion of steep gradients, the worst grades being on the trunk lines, and so situated that the whole volume of traffic has to pass over them. The only way (now that the traffic is increasing so rapidly), to stave off a great amount of duplication work, is to introduce more powerful engines, and so, by taking much longer trains, at a better uniform speed, to enable the bulk of the single lines to carry satisfactorily for some time to come the traffic which could not otherwise be carried with the old class of motive power and system of short trains, without grave delays and inconveniences.
6520. When the duplication works in hand are completed we shall only have 150 miles of double line in existence, of which 8½ miles are quadrupled, whereas, in the sister colony of Victoria, with its far easier grades, 297 miles of double line exist.

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6521. The difficulties surrounding the working of the New South Wales Railways, having more than 2,000 miles of single line and exceptionally sharp curves, the steepest grades being also on the main lines within a short distance of Sydney, will be readily understood when I state that there are 629 miles of grades varying from 1 in 30 to 1 in 75, in the following proportions:—

Gradient.	As originally constructed.	Total.	As improved by deviations since 1888.	Total.
	M. Ch.	M. Ch.	M. Ch.	M. Ch.
1 in 30 to 1 in 33	25 20	—	24 54	—
1 in 34 to 1 in 40	165 25	190 45	165 25	189 79
1 in 41 to 1 in 50	183 60	374 25	183 9	373 8
1 in 51 to 1 in 60	112 12	486 37	109 6	482 14
1 in 61 to 1 in 75	144 59	631 16	146 60	628 74
Totals	631 16		628 74	

I would also like to illustrate the difficulty of our working by a reference to the diagram [*Appendix A*], which shows clearly our maximum altitude and frequent loss of elevation in reaching that grade.

6522. The Western Line, for instance, is a more difficult line to work than any of the Alpine railways, the ruling grade, radius of curves, and frequent loss of elevation which has to be regained, being all against that line. The diagram and table (*Appendix* B 1 and B 2) which I place before you clearly demonstrates this. The Western Line attains an elevation of 3,248 feet, and has a maximum grade of 1–30, the length of incline being 29·5 miles. The Southern Line attains an elevation of 1,477 feet, has a maximum grade of 1–30, and the length of incline is 15·5 miles. The Northern Line attains an elevation of 2,105 feet, and has a maximum grade of 1–40, the length of incline being 30·0 miles. Now the Mont Cenis North attains a height of 2,637 feet, has a maximum grade of 1–33·3 feet, and a length of incline of 24·75 miles, and the Mont Cenis South attains an elevation of 2,793 feet, the maximum grade being 1–33·3 feet, and the length of incline 25·25 miles. The most difficult of the Alpine routes has a curve of from 14 to 15 chains, but on the Western Line of New South Wales we are burdened with frequent reverse curves of 8 chains.

6523. *Professor Warren.*] That is not a reverse curve?

6524. *Mr. Eddy.*] No; I take it they would not put that in; they are sure to have a transition between the two. The amount of traffic which has to be passed over the Blue Mountains on busy occasions will be seen from a diagram I have had prepared, showing the trains that passed over the single line with ruling gradients of 1 in 30 and 1 in 33, and the frequent 8-chain curves on that line, during a recent night, which came under my personal notice. [*The witness here put in a diagram* (*Appendix C*) *showing the running of trains between Penrith and Eskbank and* vice versa *between 5 p.m. on the 27th, and 8 a.m. on the 28th of April*, 1892.]

6525. It will, I think, from this, be seen how difficult it is to work traffic which has to pass over in order to reach Sydney, a single line of 500 miles. It shows how necessary it is not to be bound down to antiquated ways where better may be obtained, and progress made in conformity with modern ideas.

6526. Several of these trains were heavy trains drawn by the powerful engines, and had these engines not been in use additional trains would have been required to have conveyed the traffic.

6527. As many as 190 waggons of live-stock in addition to the ordinary goods and passenger traffic have been moved in one day from the Western Line to Sydney (Homebush). This additional traffic in short, trains of fifteen waggons over a length of 500 miles of single line with grades ruling the load of 1 in 40, 1 in 30 and 33, for nearly 250 miles of the journey, is a great disturbing and difficult element to deal with and any improved method for working the traffic in fewer trains is much to be desired. The live-stock traffic is also growing very largely. All this heavy traffic had to be worked by short trains until these powerful engines were brought here. With reference to the live-stock traffic, I may add, that it has so largely increased, that if my memory serves me it has improved by something like 40 per cent. since we came into office.

6528. As pointed out when the Commissioners took office, there was such an infinite variety of types of locomotives that they decided in, the interests of economy and facility of repair, to adopt as few classes as possible, and with this in view, determined that the new passenger engine should be sufficiently powerful to work a paying load of live-stock or goods, and the engines placed upon the lines (Baldwin and English) effect this object.

6529. The failure of the various negotiations for the supply of engines to be built in the Colony and consequent great loss of time, the rapid increase of traffic, the worn-out condition of many of the locomotives, and the prospect of an exceptionally heavy wool season, rendered the immediate addition of new stock absolutely necessary. English locomotive builders being very busily engaged and consequently unable to supply our wants promptly, the Baldwin Works were applied to and offered to deliver a large number of most powerful locomotives within an unprecedently short period.

6530. While English locomotives are distinguished for the careful design of their details, excellent workmanship and general durability, American engines, while possibly inferior in these respects, undoubtedly possess great hauling-power and flexibility, and are consequently adapted for heavy gradients and sharp curves, and for road-beds which which are not so well constructed as those found in England. The Baldwin Company is the largest firm of locomotive builders in the world, having built over 12,000 engines, and their output in 1890 was 946 engines, about four times as many as any English maker. Their enormous output is a proof that their work gives satisfaction. In fact, in America the Baldwin Works enjoy a special reputation for the improved design of their engines which are to be found running on nearly all of the principal railroads of the United States. The Baldwin Works also export more locomotives than any other locomotive builders in the States, and their engines are to be found in all parts of the world.

6531. It may be interesting to state that the number of engines built by the Baldwin Company is equal to three-fourths of the whole of the locomotives on the railways of Great Britain.

6532. The actual performances of the two classes of Baldwin engines have been satisfactory, and the only defects have been in the axles, and small details, which have been put right at the cost of the makers.

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The passenger and goods engines have already run over 450,000 miles, and the average failures are less than with other engines of somewhat similar type. We shall put evidence before the Commission to prove these facts. The returns which have been already supplied to the Commission show, I think, that the ordinary running repairs are very moderate when the heavy work the engines are doing is considered.

6533. Previously to giving the present order, the Government had very satisfactory proof of the class of work turned out by the Baldwin Company, that firm having supplied thirty-three locomotives for the New South Wales Railways, and ninety-one more for our tramways, it was, therefore, no new experiment or departure on our part to obtain supplies from that firm, and as one of the leading partners in the firm had some years ago spent a considerable time in the Colony, they were in an exceptional position to understand our requirements which were most urgent.

6534. Doubtless, the average amount of fuel burned per train mile, is less on English than on American lines, yet if the computation were per ton of train hauled per mile, it would be found that the consumption is less in America than it is on English lines, without taking into consideration the difference in the grades and curves.

6535. In my opinion there are many features in American locomotives which might, with advantage, be adopted by English engineers. With our heavy grades and curves, and growing traffic on single lines, a new departure in locomotive power was absolutely necessary, and the results which are beginning to be accomplished, clearly demonstrate the wisdom of the action of the Commissioners—the earnings per train mile for the quarter ending 31st March last, showing at the rate of 7s. 5¼d., as against 6s. 6d. for the same quarter of 1890, this is upon a total mileage of over 2,000,000 of miles in the quarter. That alone will carry conviction to anyone who thinks of railway management. The amount of assisting engine miles (*i.e.*, a second engine with trains) is also being largely reduced. In fact, I may mention that our mileage for last month has shown a reduction of about a million three-quarters miles per annum, which will be further decreased when we get the remainder of the more powerful engines now under order.

6536. I think it will be desirable for me to distinctly describe the weight, &c., of the Baldwin engine and tender. The total weight of the engine when empty is about 51 tons 5 cwt. 1 qr., when loaded to its fullest extent, with water in the boilers, &c., it weighs about 58 tons 7 cwt. This weight is distributed over ten wheels, four belonging to the bogie in front of the engine, and the other six are coupled driving wheels, the middle pair being without flange, so as to reduce the strain on the permanent-way in going round curves.

6537. The average weight on the three driving-axles is 14½ tons, but a weight of about 15 tons 6 cwt. is placed on the middle or flangeless pair of wheels, therefore a weight of about 7 tons 13 cwt. is the greatest weight on any one wheel in the engine when it is fully loaded. This is because there is really no strain upon the permanent-way except the bearing stress. The tender, which is mounted on two sets of four-wheeled bogies, weighs when empty 13 tons 12 cwt., and when loaded with its maximum quantity of coal and water about 32 tons. It will therefore be seen that the engine, as arranged, is exceedingly flexible, and far less destructive to the permanent-way, with so many curves of 8, 10, and 12 chains radius, as we have on our main lines, than engines which have been running here for years past. I now propose to submit to you a set of small diagrams of engines. [*The witness here put in diagrams of engines "class J" and "class O." Appendix D 1 and D 2.*]

6538. I would also like to show the Commission a photograph of an English engine. [*Photograph produced.*] From this you will see that there is a great difference between the stress on the permanent-way of the English and American engines. The whole of the frame of the English engine is rigid, and when going at full speed the engine necessarily pulls the road about. The American engine has, on the contrary, the leading four wheels flexible, and they play easily when going round the curves; also the middle pair of wheels is without flanges, and tread the rail without any lateral pressure upon it. The English engine shown in the photograph carries about 15 tons on the driving wheel, and would knock our road about dreadfully. [*Witness here pointed out on the diagrams the relative weight upon the wheels of locomotives.*]

6539. These engines (American) are now daily working trains which formerly required two engines to draw them, and are also doing the work in a much more satisfactory manner.

6540. Two engines were employed in working the western mail from Penrith to Wallerawang or Bathurst four out of every six nights in the week, and on the remaining nights as far as Katoomba. An assistant engine had also to be kept in readiness at Bathurst to assist the train if necessary as far as Dubbo, the throughout distance, Penrith to Dubbo, being 244 miles. The day train Sydney to Orange also had to be assisted three days out of four between Penrith and Katoomba. By the introduction of the Baldwin engines, one engine (excluding a few very exceptional cases) has a reserve power for dealing with ordinary traffic without entailing the necessity for attaching an additional engine. The 5·50 p.m. train by which regular passengers return from Sydney to the Mountains has been accelerated since the Baldwin engines have been put to work it by 15 minutes between Penrith and Wentworth Falls, and is now running punctually, whereas formerly, even when assisted by a second engine and with 15 minutes additional time, it was almost always late.

6541. The Saturday afternoon special train Sydney to the Mountains has also been accelerated in a similar manner, and is now worked by one engine, with the same result as regards time-keeping and assistance. That may appear a small matter, but it is telling upon our traffic in a most effectual way. The use of these engines is increasing the traffic to the Mountains, through the superior facilities we are enabled to offer to tourists. It has already increased very largely, and we hope, by getting these more powerful engines, to induce most of the people in Sydney, who can afford such a luxury to live as much as possible in the Mountains during the oppressive heat of the summer months.

6542. It should be self-evident that the one engine weighing with its tender, when fully loaded, about 90 tons will do less harm to the permanent-way than two coupled together, weighing in the aggregate 128 tons.

6543. There is, however, another and most important point gained, viz:—the greater safety secured by having the train controlled by one engine, and set of men, instead of two acting independently of each other. The more powerful engine is also able to maintain a better speed up the inclines, so avoiding the excessive speed in going down inclines, which is an element of risk, and is most destructive to the permanent-way.

6544. Since I wrote these words we have had a most melancholy illustration of the great advantage gained through adopting that course, and I shall read to you an extract from a report of a special board in which two gentlemen outside the Service were associated with our engineer to report upon the Tarana accident; from that report it will be seen that it is quite clear that a very considerable number of lives

were

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were saved by the Baldwin engine being attached to that train upon that night, instead as otherwise might have been the case with two coupled engines.

"From the exceptional amount brake-power on the train, and especially on the type of engine which was attached when the accident occurred, this power—so promptly applied by the driver—probably saved the train from being totally wrecked, and certainly minimised the loss of life. The weight of this train was such that it would have required two engines of the type previously used for this traffic to do the work, in which case the brake-power would have been materially decreased, while the unbraked weight would have been largely increased, consequently the train would have travelled much farther before it could be stopped. We deem it of great importance to point out that the whole of the brake-power and its application was under the control of one man; whereas, in the case of two engines, concerted action in the instantaneous application of the brakes is practically impossible, and the leading engine-driver would, in all probability, be entirely ignorant that anything had happened; consequently, the hauling power of that engine would be working against the brake-power of the train. The fact that this brake was powerful enough to bring such a heavy train to rest on a falling grade in less than 100 yards we consider a most important advantage, the value of which cannot be over-estimated."

That train was travelling on a falling grade of 1 in 50. On the Southern line in working the Melbourne express, the same system of working with two engines was in operation, as existed on the Western Line, the two engines with their tenders weighing 128 tons, whereas a single English 10-wheeled engine weighing about 88 tons, works the train with ease. [*Diagram of engine Class "P" put in. Appendix E.*]

6545. I think we have put before you already a diagram of that engine. You will find the figures in connection with that engine different from those which were previously placed before you. The reason for that is this. The paper has only recently come before me. I had asked for it to be prepared, but it was only placed before me a few days before the Commission sat.

6546. *Mr. Brown.*] Are you referring to the new English engine?

6547. *Mr. Eddy.*] Yes.

6548. *Mr. Brown.*] We have so far shut out evidence with regard to the English engine.

6549. *Mr. Eddy.*] Yes; but you now have the diagram before you, and the figures are quite different from any you have had.

6550. *Mr. Brown.*] Quite so, only we did shut it out, and therefore we thought it better in justice to the other side that you should not refer to it.

6551. *Professor Warren.*] Mr. Eddy, I understand is correcting the notes we have before us. We have gone a certain distance with this matter, and perhaps it would be better now to put it right.

6552. *Mr. Eddy.*] The figures given to you were altogether different from what had been pointed out to me at Beyer and Peacock's works when I was in England, and that was the reason I asked for the papers to be produced. Same papers, it transpired, were stolen from the Chief Engineer's Office, and as the figures were in the possession of someone outside the department, we thought it right to put forward an accurate copy. There is a grave difference between the figures which have been pointed out to you and these I now put in. At the time I challenged the figures, and asked for the original papers to be put in, in order to see how they differed. These figures are accurate. Mr. Thow has personally had charge of the weighing, and knows that these weights are as accurate as our scales can make them. The weight of the southern express and mail without engine and tender varies from 130 to 192 tons, and may be taken at an average of 156 tons.

Weight to pass over line:—

Train	156 tons	... ...	156 tons.
Two engines	128 "	10-wheeled engine ...	88 "
Total	284 "	Total	244 "

making a saving in weight to be hauled of 40 tons, and also relieving the permanent-way of the same amount of wear and tear.

6553. In working the southern express and mail trains between Sydney and Junee nine of the new engines will displace seventeen of the lighter machines.

Capital Outlay:—

17 old 4-wheeled coupled, at £2,870	£48,790
9 at £3,700	33,300
Reduced capital	£15,490

Mileage per annum of the two services, with assisting mileage:—

Under old system	563,760 per annum.
Under new system	345,000 "
Saving per annum	219,000 miles.

6554. The average cost of each engine mile for the whole line amounts to 12·35d. Therefore, if the saving of running one of the engines is placed at the low estimate of three-fourths of the average cost, viz.:—a saving of 9d. per mile in connection with the mileage saved, there will be an annual saving of £8,212, or £912 per annum each engine.

6555. The interest on capital outlay for the nine engines at 4 per cent. is £1,332 per annum, or £148 per engine. The investment in each new engine after paying interest on the same means a net saving of at least £764 per annum, and all the advantages described are also gained.

6556. There would be a good many companies who would be willing to thoroughly equip the New South Wales railways, and pay the Government half the profits they received from our lines.

6557. With regard to the American goods engines, from very carefully-prepared returns made by the Outdoor Superintendent and the Chief Traffic Manager, it would appear that during the months of February and March fifteen of these engines on the Western line saved 27,000 train miles, as against working the traffic in absolute full train-loads by the most powerful of our ordinary goods engines. I may explain that the difference between train miles and engine miles is thus:—Every mile an engine runs, for shunting, or assisting, or ballasting, or any purpose of that kind, is dealt with as an "engine mile." But we only put under the head of train miles the miles run by engines on trains which are either actually working the goods traffic or passenger traffic on the advertised service.

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6558. These are two light months of the year and it is estimated that on the whole year's working a saving of about 222 000 miles will be effected. That is with the Consolidation goods engine. Another great advantage gained is the reduction in risk of accident and the fewer delays that will be experienced in passing the traffic along the single lines, and through the trains passing each other on the journey. To illustrate this, it may be mentioned that in February, between Penrith and Dubbo, 15,219 waggons were moved by 551 trains worked by the American engines, whereas it would have required 796 trains worked by the ordinary engines to have moved this number of waggons. It may also be pointed out that, looking at the great power developed by these engines, the price paid for them is an exceedingly moderate one—indeed, it has not been suggested in the course of this inquiry that the expenditure incurred in their purchase has been in any way excessive or extravagant.

6559. I will now deal with the charges *seriatim*.

6560. The first charge is:—"That, in consequence of the extra width of the Baldwin engines or their great length, the platforms on various parts of our lines have had to be altered."

6561. This is entirely inaccurate. The facts of the case are that either various platforms had been erected since the lines were opened without proper attention having been paid to building them to the gauge laid down by the late Engineer-in-Chief—Mr. Whitton, or, in maintaining the roads, the rails had been moved towards the structures. The grave inconvenience and danger arising from this state of things was brought forward prominently years before the Commissioners took office, but the subject was not effectually dealt with until the present Board took over the control. The question, however, was dealt with and decided upon before the Baldwin engines were ordered.

6562. Had the works been kept to the gauge laid down by Mr. Whitton, not one penny would have been required to be spent to admit of the running of the engines. The diagram I now place before the Commission of the standard gauge for works and maximum size of rolling-stock in existence before the Baldwin engines were imported shows this clearly. [*Diagrams put in.*] The engines as ordered were within the extreme measurements of engines, &c., already upon the lines, but which had been restricted by the late administration to certain parts of the lines, because of the known defects in gauge. The total cost of making the necessary alterations to admit of the locomotives and rolling-stock of the maximum size passing over all the main lines has only amounted to about £3,200—a very small sum, when looking at the great advantages gained by its expenditure, and whether the Baldwin engines were imported or not the correction of the gauge was a matter of urgent necessity. Diagram of the profile of the Baldwin engines in connection with the existing structures throughout the whole system is submitted, also diagrams of stock provided by the late administration. [*Appendix F 1 and F 2.*]

6563. The witness then described upon a large diagram the relative dimensions of the double tunnel, single tunnel, over-bridge, passenger roofs, goods-shed roofs, and goods and passenger platforms with regard to the height and width of the Baldwin engines.

6564. The Baldwin engines were ordered to have 9 ft. 3 in. over their cylinders, but as a matter of fact they varied somewhat in width. We had a number of them measured when they were first put together, and they varied in all from 9 ft. 3½ in. to 9 ft. 4½ in., but that is the extreme width of the Baldwin engine over its cylinders, and there is therefore a clearance of 3⅝ in. if the rails had been kept to the proper distance from the platform according to the standard gauge. A diagram of class 132 engine was put in. [*Appendix G.*] It was mentioned that this engine is equally as wide, if not wider, than the Baldwin as specified for, being 9 ft. 3½ in. over the cylinders, and on account of the known defects in the fixed structures on a portion of the line, had been limited in working to certain sections.

6565. With regard to the charge,—"That the safety of the draw-gear will be in danger if the Baldwin passenger engines or the Baldwin consolidation goods engines draw the loads that is stated by the railway authorities they are intended to draw,"—

It has already been shown in evidence that the draw-gear in the engines is lighter than ordered in consequence of an error in the Baldwin works, and the draw-gear was at once changed at the expense of the Baldwin firm.

6566. It has also been shown that the draw-gear on the rolling stock is sufficiently strong for all purposes of safety, and that its strength was specially considered prior to the ordering of the engines in question. The recent unfortunate accident at Tarana also established the strength of the draw-gear as it did not break although subjected to the strain of vehicles being off the line. I may mention that two engines together were previously running both on the goods and passenger trains, and we have only taken off these two and put on one more powerful locomotive. The actual weight of the train behind the engine has not been increased.

6567. With regard to the charge,—"That there are engines already in use on our railway system that are as powerful as the Baldwin passenger engines, and, therefore, another type of engine has been added to our stock, thus increasing the already too many types of engines in existence."

6568. *Mr. Hoyle.*] I think the charge you are reading now was disallowed, Mr. Eddy.

6569. *Mr. Eddy.*] I do not understand that to be so.

6570. *President.*] What we disallowed was a question as to whether it was wise of the Commission to order these engines, because that involved the ordinary railway policy, which we held was a matter you could not go into. If you refer to the earlier part of the evidence the matter will soon be settled.

6571. *Mr. Brown.*] I think it was disallowed. But look at the evidence, and you will soon see.

6572. *President.*] I think it was disallowed because it went into the question of the right of the Government to order these engines.

6573. *Mr. Hoyle.*] If it would help the Railway Commissioners in their management I would rather consider it to be allowed. But certainly, throughout the conduct of my case, I took it that this charge had been disallowed by the Commission.

6574. *Mr. Eddy.*] What has been done in this matter has been done with no desire to help the management of the Railway Commissioners, but only to obstruct it.

6575. *President.*] The second charge was disallowed,—"That the Baldwin passenger-engines are not required, and should not have been imported, as orders had already been sent out of the Colony for sufficient engines to meet all the requirements of the Railway Department; that the money thus spent was, therefore, an unnecessary expenditure of public funds." The fourth charge was.—"That there are engines already in use in our railway system that are as powerful as the Baldwin passenger-engines, and therefore, another type of engine has been added to our stock, thus increasing the already too many types of engines in existence." [*The evidence was here produced and referred to.*]

6576. Upon referring to the evidence I see that you are right—a majority of the Commission decided that it should be gone into.

6577.

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6577. *Mr. Brown.*] You will find it at question 35, as follows :—

6578. *Mr. Hoyle.*] My fourth charge, Mr. President, is,—

"(4) That there are engines already in use in our railway system that are as powerful as the Baldwin passenger engines, and, therefore, another type of engine has been added to our stock, thus increasing the already too many types of engines in existence."

6579. *Mr. Eddy.*] I must again object. The charge (No. 3) opens up the whole question of railway management.

6580. *President.*] It has been decided, and I cannot hear you any more. It has been decided by a majority of the Commission to admit the charge (3).

6581. There was not in use on our railways a passenger engine as powerful as the Baldwin, and no one in the service could confirm the assertion made. With regard to the types of engines, as the restriction of type was one of the first things the Railway Commissioners on taking office announced their intention of dealing with, they can be safely left to carry out their own intentions. They, however, do not propose to put the Locomotive Department right by adopting as standard types engines they do not approve of, and so continue the wasteful expenditure caused by having so many types.

6582. *President.*] Mr. Hoyle calls my attention to another part of the evidence showing that this charge was disallowed. The following is the passage in the evidence referred to :—

38. *Mr. Hoyle.*] (Repeated the fourth charge.) It has been said, in inspired paragraphs in the Press, that we had no engines here powerful enough to do anything like what these engines can do. I say that we have engines quite powerful enough for that purpose.

39. *President.*] That is entirely outside the scope of this inquiry ;—I understand you to say that the Commissioners have ordered something that is clearly unnecessary ;—the question is whether they have received what they have ordered or not ; whether these engines were necessary or not does not matter ;—that can be no charge.

But, as you have got so far in your remarks, perhaps it does not matter.

6583. *Mr. Hoyle.*] I have no objection.

6584. *President.*] As a matter of fact, by having sold some of the exceptional types, broken up a few that were completely worn out, and having placed others on the duplicate list, to be worn out in performing ballasting and other unimportant work, the twenty-eight recognised types have been already reduced to eighteen, even if all the new American and English engines are included, and out of the total stock existing at present, of 481 engines standing on the books on capital account, 331 of them belong to four types.

6585. We often hear of forty-two different types, but, as a matter of fact, there are only twenty-eight actual distinct classes or types of engines in the service of the New South Wales Railway, and we have already reduced that twenty-eight to eighteen by taking the course I have indicated. That includes all the new English and American engines. I might explain, with regard to purchase of engines, that it is customary with all good undertakings to renew engines out of working expenses, and somewhat in advance of time, because there is always depreciation going on in connection with all rolling stock ; so that, unless you pass something then to what stands on your books, you will afterwards be on the wrong side of the ledger. All good companies renew their engines sometimes in advance of time, and place them on their books. The engines so replaced are allowed to work themselves out in such work as ballasting and shunting, and work of that kind, and here we are adopting the same principle. We have a number of engines, waggons, and carriages which the capital account is free of altogether.

6586. With regard to the charge,—

"That the Baldwin passenger engines and the Baldwin consolidation engines are faulty in design, and that certain parts—the axles of the bogies and tenders—were dangerous, and grave neglect was shown by allowing the engines to run before the parts in question were removed."

6587. I submit that not one iota of evidence of any weight has been produced to prove that the engines are faulty in design ; on the contrary, the witnesses called to testify against the engines have nearly all admitted that they are well-designed, and are performing the work expected of them. When the charges were promulgated in Parliament not a defect had shown itself in any of the engines, in fact, only a portion of the passenger engines were in steam, and not one of the goods engines had arrived in the Colony, the first one being put in steam on the 30th of September, whereas the charges were made on the 20th August. Although the attack was made in Parliament on the 20th August, the first failure that occurred was on 27th October—more than two months afterwards.

6588. With new engines small matters like axle-boxes running hot, and points of that kind, cannot be looked upon as failures, as all new machinery, whether in steamships, workshops, or locomotive engines, requires careful attention for a time. With regard to the failure of the bogie axles, &c., the Commission has had placed before it a letter from the Baldwin firm, which reads as follows :—

Baldwin Locomotive Works, Burnham, Williams, & Co., Philadelphia, 15th February, 1892.

Mr. H. McLachlan, Secretary Government Railways of New South Wales, Sydney, N.S.W.,—

Dear Sir,

Your two favours of 27th November and 7th December were duly received, but our reply has been unavoidably delayed. It is with the utmost regret that we have learned of the breakages of the engine and tender axles of the twelve 10-wheel passenger locomotives which were received last year, per "Henley." The several reports sent us have received careful consideration. In contracting for these locomotives, the Commissioners desired to obtain engines adapted to unusually heavy service. In order to secure the utmost efficiency, and to obtain the best results of American experience, they left many of the details of the specification to our judgment. The material for the driving-truck and tender-axles was left optional, and as, in our opinion, the most satisfactory results are usually obtained from axles carefully forged from selected scrap-iron, we ordered such axles from the manufacturer, whose product we had been largely using with good results, and whose reputation for excellent work is generally recognised. No test was prescribed by us, as it is is well known that no test of scrap-axles is conclusive. We relied upon their showing clean, uniform, well-worked material when turned up in the lathe. Steel axles, or axles forged from muck-bars, can be tested under a drop with reasonable probability of the uniformity of the axles not tested, but the fact that a hammered scrap-axle withstands such test is no guarantee that others of similar manufacture and appearance will stand. Not only have we been buying axles in this way for many years but, so far as we know, it is the general practice in buying hammered scrap-axles, both by railroads and manufacturers. These axle forgings did turn up clean, smooth, and free from flaws, and we supposed to be as good as the many hundreds which we have received from the same maker without one instance of failure coming to our knowledge. We go into the matter at this length to assure you that there was no conscious lack of diligence exercised by us to supply materials of the best quality, which your Government was entitled to receive from us.

We have already replaced the twenty-four engine truck-axles with others of steel. We offer to reimburse the Government the cost of replacing the forty-eight tender-axles. We also offer to pay the reasonable cost of the labour involved in effecting the replacement.

6589. *Witness.*] They have also paid for a number of other things, the cost of which we thought they ought to bear. Mr. E. M. G. Eddy. 18 May, 1892.

We are of opinion that the original dimensions of the truck and tender axles and journal bearings are ample for the fast speed for which the locomotives are suitable, provided the quality of the material is good, and the bearings for such engines have been widely adopted for similar service with good results. We should have much hesitation in increasing the diameter of the bearings with such small wheels, owing to the higher rotative friction. It should be borne in mind that the smaller truck-wheels necessary in engines of this type require closer attention to the lubrication than the larger wheels, usual in English locomotives.

If, however, large bearings are adopted, we urge the desirability of making them 5½ inches rather than 6 inches diameter. In view of the above, we think the cost of new boxes—whether of iron or solid gun-metal—should not be charged to us, as we are certain that the replacing of the axles will prove a sufficient remedy.

We remark that the driving-axles were not made by the same party as the truck and tender axles. We, therefore, trust they will, upon investigation, prove satisfactory.

There appears to have been a clerical error in transmitting to our shopmen the dimensions of drawing-hook shown by your drawings.

We authorise you to debit to our account the cost of replacing them with stronger hooks.

With these modifications we trust the engines will speedily show the special adaption (which we believe they possess) to the difficult service for which they were ordered. That similar engines are doing such work on our American railways is shown by the recent test of our 10-wheeled locomotive on the Baltimore and Ohio Railroad. Under separate cover we mail you three copies of the report of these tests. We trust these tests will in a measure justify the wisdom of the Commissioners in the purchase of these locomotives, and that after the defective axles are replaced the performance of the locomotives will be such as to merit their entire approval.

Yours, &c.,
BURNHAM, WILLIAMS, & CO.

6590. All the cost of failures due to faulty workmanship has already, and without demur, been paid by the Baldwin Company, and we still hold a considerable sum of money belonging to the Company in case any other weakness should develop.

6591. We deem it only right to say that we feel sure the Baldwin Company did not knowingly allow any defective material to be placed in the engines, and also acknowledge the readiness with which they and their representatives in Sydney did all in their power to rectify defects. Almost without a challenge they agreed to anything we proposed.

6592. With regard to the latter part of the charges it has been shown in evidence, even by witnesses called in to support the charges, that the usual precautions were taken in regard to inspection before the engines were put in work, and that no ordinary and usual mode of inspection could have detected the weaknesses which later on developed themselves. I think I may at this moment put in the result of some experiments with the Baldwin engines that we made some few weeks ago to test their hauling power. We had not before tested these engines as to what they really could do. We had not driven them up to the highest point of their capacity. We simply put them to their work, and they were only called upon to the extent of the reasonable requirements of our traffic. When first using an engine it is not usual to test it to the utmost of its power—it is allowed to work up to its maximum capacity gradually. But when this inquiry commenced we thought it desirable to see what they really could do, and we gave directions that both a passenger and goods engine should be tested, and they were tested upon the Western line, and hauled exceedingly heavy loads. The passenger engine was put to draw goods waggons, which is a heavier test than drawing passenger carriages. On the 1 in 33 grade the engine hauled 168 tons at the rate of 14½ miles an hour. On the 1 in 40 grade the engine did not do so well as we had anticipated, till ultimately we found there was a piece of grade there of 1 in 37. The passenger engine went up this bank at 12½ miles an hour, with 195 tons. On the 1 in 50 grade the engine hauled 254 tons at 14·3 miles per hour. The Consolidation goods engine, up the 1 in 33 grade, took 274 tons at 7½ miles an hour, and on the 1 in 40, part of which is 1 in 37, the engine hauled 341 tons at 4·7 miles per hour. On the 1 in 50 grade the engine hauled 433 tons at 0·7 miles per hour. These are very excellent results, and we question whether better have been ever obtained.

6593. *Professor Warren.*] I think we got better results on Sunday.

6594. *Mr. Eddy.*] Well, you had passenger stock then. These results were with goods engines. I will now put in this report. [*The witness here put in "a Joint Report by Messrs. H. Richardson, C. H. Stanger, and D. H. Neale, relating to tests of the New American Engine," together with a section showing the grades on the Marangaroo Bank.*] Another report, or, rather, I should say, interim report, was put into my hand as I entered the room by Mr. Hector Kidd and Mr. Robert Pollock, who took the indicator diagrams on Sunday last during the trial trip. I will read what these gentlemen say:—

INTERIM REPORT.

To the Commissioners of Railways, New South Wales.

Gentlemen,—In compliance with your request we have made a careful series of experiments with a 10-wheeled American engine, No. 447, in order to ascertain accurately the performance of the engine when hauling passenger engines up grades of 1-30 and 1-40.

In your letter to the Baldwin Works, 22nd September, 1890, you stated that you wished the engines to haul regularly a load of 120 tons, exclusive of engine and tender, up a gradient of 1-30 without sharp curvature, and that occasionally you expected that a load of 144 tons should be taken up. On a gradient of 1-40 you stated that the regular load of 152 tons should be taken at about 22 miles per hour, and that the engine should be capable of occasionally taking a load of 176 tons. Our tests were especially directed to ascertain if the engines were capable of performing the above work. The trains were made up of Pullman sleeping-cars and first-class lavatory carriages, and in all cases weighed somewhat more than the stipulated loads.

We succeeded in taking no less than 44 indicator diagrams, which will enable us in a few days to present you with a complete report as to the indicated horse-power of the engine, with a tractive-power and the resistance of the train.

Meanwhile the data so far obtained enable us to say that the load hauled and speeds obtained were as follows:—

No. of trip.	Gradient.	Mean speed on the whole length of gradient.	Weight of train exclusive of engine and tender.	Remarks.
		Miles per hour.	Tons. Cwt.	
1	1-40	18.50	179 5	Length of gradient 2¼ miles.
2	1-40	20.15	157 12	Several curves of 16 chains radius on first mile.
5	1-40	21.09	157 12	About 2 miles of 1-30 and ¾ mile of 1-33. Curvature moderate.
3	1-30	18·87	121 14	
4	1-30	15·17	144 2	

Mr. E. M. G. Eddy. 18 May, 1892.

We regard the results as extremely satisfactory and have little doubt that had the driver run such a train regularly, he would have been able to obtain even better results from the engine on the 1-40 gradients, which occurring immediately after he left Picton with a somewhat dead fire prevented the engine steaming as freely as she did in the 1-30 grades. The latter however were approached by several miles of easy rising gradients in running over which the action of the blast thoroughly ignited the fire, and consequently enabled the engine to steam freely and maintain its speed on the grade.

We have, &c.,
HECTOR KIDD,
ROB. POLLOCK.

Well, gentlemen, I think these performances are really magnificent performances.

6595. *Professor Warren.*] Undoubtedly.

6596. *Mr. Eddy.*] In running the traffic from London to Scotland I can assure you of enormous talk of—and—but there we were only dealing with gradients of 1-75, while here we are dealing with 1-3.

6597. *Professor Warren.*] I shall have to ask you one or two questions about the speed when you have finished your evidence.

6598. *Mr. Brown* (to Mr. Eddy).] Really, that ought not to form a part of your case at present. You should call the witnesses who can prove these facts, and I presume you will submit them for examination afterwards.

6599. *Mr. Eddy.*] I am simply making a statement on behalf of the Commissioners, and I shall call witnesses to prove all the documents that I have read.

6600. With regard to the charge, "That in consequence of the great weight of these engines (the Baldwin passenger and consolidation), the safety of the permanent-way is likely to be endangered, our standard rail being 71 lb. per yard, whereas the above-mentioned engines wer designed for an 80-lb. rail," I beg to state that the whole charge is erroneous. The standard rail for the New South Wales Railways is 80 lb. to the yard steel rail, and at the present time no less than 200 miles exist, and the sleepers are laid 2 ft. 7 in. centre to centre, each sleeper averaging in weight over 2 cwt. 1 qr. The lighest rails these engines work are 71-lb. steel rails, but much of the road is 75-lb. iron and steel and 80lb. steel. The question of the weight of the rail, however, is rather one of economy than of security, as the 71-lb. steel rail is sufficiently strong to carry an engine with a greater weight upon an axle than is the case with the engines under review. So far as the ordinary permanent-way is concerned, the actual weight of the engine is of far less importance than that of the distribution of the weight upon the wheels. In the case of the engines under consideration, the 58 tons which the engine weighs when fully loaded is distributed over five pairs of wheels and axles, and the weight upon any one axle and pair of wheels is less by 1 ton 2 cwt. than in the case of engines which have been running for years past, and at a time when the roads were not in so satisfactory a condition as they are to-day.

6601. I have had prepared, with a great amount of care, a statement showing the weight of rail in use in other parts of the world and the weight of engines run upon those rails, together with particulars of the weights borne by some of the driving-wheels, and this table will give a large amount of valuable and reliable evidence on the subject. (Appendix H). That table will show you that in America on iron rails weighing 56 lb. to 60 lb. per yard, and on steel from 62 lb. to 70 lb. per yard, an engine is running with 19 tons 14 cwt. on its driving-wheels, and is going at a speed of from 70 to 90 miles an hour very frequently. You have got references here for that statement, and I am prepared to put in, if necessary the whole of the documents, of which Poors' manual is the most important. [*A volume of Poors' Manual put in as evidence.*] The Baltimore and Ohio Company have an iron rail of from 60 lb. to 80 lb. weight per yard, and their steel rail is 67 lb. per yard. That is lighter than any steel rail than we have in this Colony. They are running engines with 15 tons 14 cwt. on their driving-wheels, and the total weight of the engine and tender they are running is 93 tons 6 cwt. On the New York Central Railroad their maximum weight on the driving-wheels is 17 tons 16 cwt. Their steel rails are from 65 lb. to 80 lb. per yard in weight, and on those rails they run regularly the Empire State express, which is the fastest train in the world; and on the Philadelphia and Reading Railroad, where the maximum weight on one axle amounts to 17 tons, they use steel rails, varying from 56 lb. to 90 lb. weight per yard. The London North-Western Railway Company, with which I was nearly associated for a quarter of a century, keep the weigt down very much. Here we look upon 1-30 as rather a troublesome grade, but but their worst grade is 1-75, and their object is not to run an engine adapted especially for that grade, but to employ a class of engines that will be useful for the average work of the road. The maximum driving weight on their engines is 15 tons 10 cwt, but those engines are not ballasted in the beautiful way in which the American engines are ballasted. The weight of the steel rails on the London and North-Western vary from 80 to 94 lb. per yard. Then the North-Eastern Railway Company, which is the great competitor. London and North-Western run engines with 17 tons 15 cwt. on their driving-wheel. I am not certain of the weight of the rails on that line, but we will query it at 90 lb. per yard. The Great Northern Railway Company has engines with 17 tons on their driving wheels, and steel rails of 82 lb. per yard. That company runs exceedingly fast trains—indeed, it is the great racing line of England. Our 10-wheeled Baldwin engines carry 15 tons 5½ cwt. on a flangeless pair of driving wheels. The average weight on our driving-wheels is 14 tons 10 cwt. Our lightest rail is 71 lb., and it is a steel rail. We have also steel rails weighing 75 lb. and 80 lb. per yard, whilst the iron on the Western Line is 75 lb. to the yard. We have, therefore, a greater weight of road to run upon than many of the lines to which I have referred, and I will show you presently how our road is far superior to any other roads in the world. The Eastern Railway Company of France employs engines carrying a load of 16 tons 2 cwt. on the driving wheels; there steel rails run from 69 to 89½ lb. to the yard.

6602. Referring to the French railways, the *Engineer* of 4th March says: "It might be thought that the engines would be somewhat heavy for the road, but the Chief Engineer of the permanent-way reports that 10 per cent. additional weight on the wheels is quite within its power to sustain. The rails are of steel, 69 lb. to the yard, but of later years, on different harder-worked sections, other of 89½ lb. to the yard, had been laid. These are 39 feet long, and cover sixteen sleepers. The rail is spiked direct to the sleeper in machine-sawn notches, that give a uniform inward cant to the rails. Under the flange, and on the sleeper, are laid pieces of felt soaked in tar to give a softer bedding, and prevent vibration."

6603. So you see this French engineers says that the rails 69 lb. to the yard can carry 10 per cent. to the yard more than 16 tons 2 cwt on a pair of drivers. I thought it was so striking that I ought to bring it before you. It is, of course, difficult to produce facts at this distance from England and America, to disprove statements made without justification, but fortunately I am in possession of some valuabe information on this particular subject. I deal with this matter very elaborately because I think it is a most

serious

serious one that has been brought under the notice of the Commission, and it is one that is likely to alarm the public to some extent unless it is once for all disposed of. It was stated at the opening of this inquiry, in support of this charge, that the rail in use on the Baltimore an Ohio line was a steel one, weighing 80 lb. to the yard. This was stated to be on the authority of Poor's Manual, and the Railway Gazette. Poor's Manual states that the rails in use are iron 60 to 80 lb. per yard, and steel 67 lb. per yard. I submit to the judgment of the Commissioners the fairness of such a distortion of what is given in Poor's Manual. In addition to this I append copies of cables that were sent in August last, to and from America, when the statement was first made in Parliament (as it was so contrary to what was understood by the Railway Commissioners), from which it will be seen that 67 lb. steel is the new standard rail. Our steel rails are 71 lb., 75 lb., and 80 lb. to the yard. This is the copy of the cable sent by Messrs. R. Towns & Co. to Messrs. R. W. Cameron & Co., New York, on the 24th August, 1891. Mr. E. M. G. Eddy. 18 May, 1892.

"Telegraph immediately for Government how many six-wheel coupled passengers, and eight-wheel consolidation goods, the same as "Henley," "Strathdon" (the names of the ships that brought our engides out) are running America. Is result satisfactory generally. Consult Forney. Advise weight rail Baltimore."

The following is a copy of the reply that was received to that cablegram:—"Eight-wheel goods in general use with favourable results, weight better distributed and less destructive to rails. Coupled six-wheel passenger, same result as to rails. Over four wheels with increasing demand for heavy trains especially on western roads, but not used on Pennsylvania or New York central. They prefer dividing train. Baltimore steel rails 67 lb. per yard."

Those two lines named have fairly easy grades as compared to our grades.

6604. The Commission has had evidence placed before it in support of the charge as to the importance of the society in America, styled the Master Mechanics Locomotive Superintendents Association. The body is undoubtedly a most important one, and much good has come out of its deliberations. It is well, therefore, to know what that body has decided upon this important question. At the annual convention of the association, in June, 1891, a committeed of the society reported that the limit of weight per driving axle should be 33,600 lb. (14½ English tons) for rails under 60 lb., and 36,000 lb. (16 tons 1 cwt.) for rails above that weight. My authority for making that statement is the official report of the proceedings of the association at its annual convention in 1891. So that on a 62-lb. rail they consider that you can run with safety an engine over 16 tons 1 cwt. on the driving wheels.

6605. Wellington's work "Railway Locatron" is one of the standard works on railways, and from the extracts given below it will be seen that in America 70 lb. per yard for steel rails was evidently the highest standard, but that, for reasons of economy, an 80-lb. rail was urged, and it was thought it would doubtless be adopted ultimately. "Light rails," he says "are sooner or later avoided as the plague by all railways." He states (Tables 195, 196, and 197, page 740) that, by substituting an 80-lb. rail for a rail of similar form but 70 lb. weight the gain in the three essential qualities of the rail is as follows:—Stiffness 30 per cent., strength 22 per cent., durability 43 per cent. As the increase in first cost is barely 14 per cent. the advantage is obvious. Then again on page 747, and table 198 he states that, even supposing a 70-lb. rail has a life of sixty years, it is more economical to buy 75-lb. rails, reckoning compound interest at 5 per cent.

6606. On page 748 he says, again, "of all directions for economy, cutting down the rail section is the most costly in the end." On page 761 he says "It is in every way probable that in a few years 80-lb. or 90-lb. rails will be the rule, and lighter rails the exception. The inertia from past precedents which have come down to us from the days when rails were several times more costly than now, will in time be overcome." Then again he says "We have reason enough, and to spare, why all roads should tend as they do tend to use a heavy rail." It is all a question of economy why all roads should use a heavy rail.

6607. I will illustrate that by two sections of rails we have here. The 71-lb. rail was the standard rail when we took office. The head weighed 32·64 lb. per yard. We designed the 80-lb. rail with a head weighing 38·59 lb. per yard., therefore by adding 8½ lb. to the total weight of the rail we got an additional 6 lb. in the head of the rail, and it is the head only that you can wear down with traffic. It was that reason, remember, which induced us to go into the stronger rail. The ordering of the engines in question and the weight to be borne by each axle received the most anxious consideration at the hands of the Commissioners and their officers before the order was given, but, as a further increase in weight might become advisable in future years, I took the opportunity when I was in the old country of disucssing the question with Sir Benjamin Baker and Sir John Fowler—two of the most eminent engineers in England. Sir Benjamin Baker unhesitatingly agreed that we could with safety carry 16 tons on one axle on a 70-lb. rail with ironbark sleepers, 9 ft. x 10 in. x 5 in., placed 3 ft. centre to centre. I put a far worse case than our own before him, and he unhesitatingly agreed to that. As Sir John Fowler, Bart., is our consulting engineer I asked him to place his views in writing, which he did in the following words:—

New South Wales Weight of Rails.

2, Queen's-square Place, Queen Anne's Mansions,
Westminster, South West, 22 October, 1891.

Dear Mr. Eddy,

The question you put to me yesterday with reference to the safety or otherwise of allowing locomotive engines with driving wheels having a weight of 16 tons on a pair to work on your 70-lb. rail was an important one, but I have no hesitation in answering it. Provided the sleepers are of ironbark, 9 ft. long by 10 in. wide and 5 in. thick, placed at a maximum distance of 3 ft. centre to centre, and the line, level, drainage, and ballast well maintained, there is no objection or danger in the use of such engines for either passenger or goods traffic. Of course I assume that the rails are renewed before they are worn and weakened according to usual good practice, which may be said to be applicable to rails of all weights; but at the same time I should like you to understand quite distinctly, as my opinion, that with your present and certain increase of traffic, and the power and weight of engines, you are practically compelled to use a rail of 80 lb. per yard, is more economical than one of less weight, from its higher percentage of wearing weight, and its greater length of life before renewal.

Your's, &c.
JOHN FOWLER.

To E. M. G. Eddy.

6608. The Lancashire and Yorkshire Company have running upon their line no less than 366 engines, with a weight upon a pair of driving-wheels of from 16 tons 10 cwt. 1 qr. to 17 tons 10 cwt. There is a diagram of all their engines with their weights. The Great Western Railway Company of England have engines carrying 15 tons 10 cwt., 15 tons 16 cwt., and 16 tons 10 cwt. on a pair of wheels. As I am referring to the Great Western Company's engines, and you had so-called expert evidence the other day upon the weights of rails used by the different English companies by a gentleman who said that he had given the matter a good deal of study, and who spoke from personal knowledge of the rails on the Great Western

Mr. E. M. G. Eddy. 18 May, 1892.

Western Railway seven years ago, his statements being to my knowledge absolutely wrong, I think I might give you a statement by Mr. Wolfe Barry, a very eminent engineer at home, published in the work entitled "Railway Appliances," a book of science, the 90th edition. The expert before you said nothing at all about the bearings, he simply gave facts about the weight of the rails.

6609. *Professor Warren.*] We knew as a matter of fact that they had longitudinal bearing.

6610. *Mr. Eddy.*] He did not say so. He said "The Great Western Railway Company has 86-lb. bull headed rails, with the sleepers 2 ft. 9 in. apart, the sleepers in that case being 12 ft. x 6 in," and this was seven years ago, but the universal practice for cross sleepers in England is to place them 3 ft. apart. It is a most unusual thing to have them less than 3 ft. apart. Mr. Wolfe Barry, speaking on longitudinal bearings, says:—"There is on the Great Western Railway a rail weighing 62 lb. per lineal yard, which has carried for many years and is now carrying the heaviest traffic, while other companies and the Great Western itself are using cross-sleepers for a rail weighing 75 lb. to 80 lb. per yard."

6611. Well, I do think it is wrong for witnesses to say they have been studying the matter to come here to give expert evidence, and then make a statement of that sort. But I will not be content with the contradiction that I have already supplied, I will give you information up to two days ago from Sir John Fowler, who is the Consulting Engineer of the Great Western Railway, because it is, I think, exceedingly wrong the reputation and the credit of the country, in connection with the Railway Commissioners, should be jeopardised by witnesses who absolutely speak without knowledge of facts. As perhaps Professor Warren may know the Great Western Railway is about to alter its gauge. The gauge was to have been altered last Sunday or this coming Sunday, from broad to narrow gauge, and therefore, it would have been an opportunity for the Great Western Company to put in a new rail, therefore, in cabling to Sir John Fowler, on the 11th instant we said, "Cable rail Great Western between Didcot and Bristol," which is a portion of the line upon which the heaviest of their traffic runs. In reply Sir John Fowler said, "A quantity of 86-lb. very small, nearly whole length is 68-lb. flat-bottomed bridge rails." That was on the 12th of this month, it was merely a repetition of the Baltimore and Ohio statement.

6612. *Professor Warren.*] Does the telegram say that they lay the road with cross sleepers?

6613. *Mr. Eddy.*] It does not say that, but you see the rails are flat-bottomed. I should rather fancy that the 68-lb. rail would be on longitudinal sleepers. Still it was only a question of the weight of the rail that was stated here, and I produce sufficient evidence before the Commission to show the weight of the rail and the carrying power. The Midland Railway Company carry 17 tons 10 cwt. on a driving-axle and express engine. The London North Western carry 15 tons 10 cwt. on each of two pairs of driving-wheels of Mr. Webb's new description of engine, "Greater Briton." The Eastern of France, for the purpose of avoiding running two engines with their passenger trains, has just put to work an engine carrying 32 tons on the two driving-axles, *i.e.*, 16 tons on each axle, their general rail being 69-lb. in weight. But I will not trouble the Commission longer with that as we will put an officer in the witness-box to show you anything you desire to know with regard to the carrying capacity of rails in America in running engines with as great a weight as 17 to 19 tons on one axle at exceedingly high speeds upon rails varying in weight from 56-lb. to 70-lb, and he will give you all the information you desire, but this question being of so much importance I must trespass a little longer upon your time.

6614. Some stress has been laid upon the spacing of the sleepers upon the New South Wales Railways, as compared with those upon English and American lines, and the question has been put in such a way as to lead the Commission to believe that it is the prevailing practice in England to place the sleepers close together, and the New South Wales 3 ft. to 3ft. 1 in. apart, whereas the reverse is really the case. In dealing with the sleeper question, however, it must be borne in mind that this is not determined solely by questions of strength, but by the facts that a sufficient bearing area must be obtained for the rail on the sleeper, and the sleeper on the ballast, and the class of wood used. With the soft woods in use in Europe and America, it is absolutely necessary that the bearing surface of the rail and the sleeper should be large enough to prevent the rail cutting into the sleepers. In England this is guarded against by using cast-iron chairs, and in America by placing the sleepers close together. Even then continual trouble is experienced in consequence of the rails and chairs cutting into soft woods, which involves constant attention to prevent the roads coming loose. On the London and North-western Railways, for years I remember an experiment of putting pieces of felt between the sleeper and the chair, to prevent the chairs cutting into them, and with that object too we made the base of the chair exceedingly wide. The class of wood, therefore, is a most important material to be taken into consideration in dealing with the permanent-way. The very exceptional ironbark sleepers we possess in this country are so hard and durable that the fastenings retain their hold exceedingly well, and the rail cuts but slightly into the timber. The question of durability is also very important. The uncertain quality of the timber used for sleepers in America renders it necessary for a larger number to be used as a matter of precaution.

6615. A most important point to be considered in connection with permanent-way is the weight of the road as compared with that of the rolling stock passing over it, as the weight of the road, as a whole, measures its resistance to the blows of the traffic. The following statement shows the weight of a mile of permanent-way of our three types of road as compared with the standard main line of a leading English Railway Company. I have had this worked out with the greatest care, and have also obtained from England the exact rate of their Baltic wood sleepers. In England they use Baltic wood sleepers which they creosote to make them last a little longer.

6616. The weight of 1 mile of the permanent-way of this Colony, laid with 75 lb. double-headed iron and steel rails, placed in 27 lb. C.I. chairs, upon ironbark sleepers 9 ft. long x 10 in. x 5 in., 3 feet apart centre, is 384 tons 7 cwt. 3 qrs. and 11 lb. The weight of a mile of our permanent-way, laid with 71½-lb. T steel rails, upon ironbark sleepers 8 ft. long 9 in. x 4½ in., 2 ft. 7½ in., and 2 ft. 8 in. centres, is 282 tons 2 cwt. 2 qr. 15 lb. The weight of 1 mile of permanent-way laid with 71½-lb. T steel rails, placed upon ironbark sleepers 9 ft. long x 10 in. x 5 in., 2 ft. 7½ in. and 2 ft. 8 in. centres, is 346 tons 8 cwt. 1 qr. and 11 lb. The weight of 1 mile of permanent-way of New South Wales, laid with 80-lb. T steel rails, placed upon ironbark sleepers 9 ft. long x 10 in. x 5 in.; 2 ft. 7 in. centres (Standard Road), is 371 tons 1 cwt. 3 qrs. and 1 lb. Now the weight of 1 mile of permanent-way in England, laid with 84-lb. bull-headed steel rails, laid in 45-lb. cast-iron chairs, upon creosoted Baltic sleepers, 9 ft. long, 10 in. x 5 in., 3 feet apart centres, is 344 tons 1 cwt. 1. qr. 4 lb., so that our 75-lb. rail on ironbark sleepers weighs 40 tons per mile more than the 84-lb. steel rail used in England with its 45-lb. cast-iron chairs, in consequence of their having a lighter timber, but then of course beyond the lightness they have not got the resisting power. Sleepers are smashed to pieces with their heavy traffic. There the renewal of sleepers is a very heavy item, but when we come to

the

Mr. E. M. G. Eddy. 18 May, 1892.

the 71-lb. steel rail used here, and laid upon the lightest sleepers in use on the Western Line, we find that it weighs 282 tons 2 cwt. 2 qrs. and 15 lb. per mile, and with the new class of sleepers it weighs 346 tons odd per mile, which is really more than 2 tons heavier than the road per mile in England, where they have an 84-lb. steel rail. That, I think, shows conclusively that we are, if anything, in advance of the world in regard to the weight of our road. The weight of the standard Baltic timber sleeper in general use on the best lines in England, is 9 ft. long x 10 in. x 5 in. creosoted is 160 lb., and that our ironbark sleepers of similar dimensions is 252 lb. As regards durability the life of the ironbark sleeper may be taken as fully double that of the former. I fancy it is a great deal more, but I wish to be quite within the mark.

6617. *Professor Warren.*] Yes; it is more than double.

6618. *Mr. Eddy.*] In the evidence brought in support of the charges, the rails on the New South Wales railways have been spoken of generally as being laid on sleepers 3 ft. to 3 ft. 1 in. centre to centre, whereas out of our total mileage of 2,180 miles, on no less than 1,650 miles of the road, the sleepers are placed from 2 ft. 7 in. to 2 ft. 8 in. centre to centre on the straight. On the old road where the sleepers were placed 3 feet centre to centre on the straight, the road on curves was strengthened by additional sleepers, the rule having been to place the sleepers as close as 2 ft. 4 in. centre to centre, in sharp curves, less than 15 chains radius, and 2 ft. 9 in. in curves of from 15 to 30 chains radius.

6619. It has also been represented that only a few miles of steel rails heavier than 71½-lb. to the yard exist on our lines, whereas since the Commissioners have been in office, no less than 215 miles of line have been laid with 75 and 80 lb. steel rails, and an additional 55 miles with 71½-lb. steel rails. In regard to improving the ballast of the lines no less than 700,000 tons of ballast have been used. Out of that quantity 600,000 tons have been blue metal, hard quartz, or slag.

6620. In regard to the ordinary repairs to the permanent-way it may be mentioned that for relaying alone there has been paid out of working expenses during the three and a half years the Commissioners have been in office, £230,000. During fifteen years preceding the Commissioners taking office, a sum of £195,000 was paid for the same purpose. This and other important work has been done, and the working expenses reduced by over 5 per cent. per annum.

6621. As practically the whole of the Baldwin engines are working on the Western Line, it will be well to detail the improvements made on the oldest section (Granville to Bathurst), a distance of 132 miles, of which 25 miles are double line. During the past three and a half years no less than 44 miles have been relaid, and more than 60 miles reballasted and lifted, while on the remaining portion a very large amount of lifting and slight reballasting has also been done. Before the close of the year we expect the whole of the rails on the western line from Sydney to Bourke, a distance of 503 miles, will be of steel, varying in weight to the yard 71½, 75, and 80 lb. Well, sir, the Commissioners proposed, with your concurrence, to call witnesses to prove the reverse of what these charges would indicate, and then we would ask you to be good enough, after these witnesses have been called, to allow us to make a few general remarks upon matters that have been placed before you.

6622. *President.*] As far as calling witnesses is concerned, yes, certainly, Mr. Eddy, but about allowing the remarks you speak of, if they are evidence well and good, but I do not think it is needful to have anything in the shape of advocacy. If the statement that you have just made is not even amply but fairly borne out, you have made out a very strong case, and one that requires no advocacy. I would rather you leave the question of making remarks until afterwards. This is practically your evidence. If you want to say anything else you shall have an opportunity of doing so, or you can call anybody else as a witness.

6623. *Mr. Eddy.*] Of course I am quite prepared now to answer any question in regard to the evidence that I have just given, if it is a question that cannot be answered by one of our officers as well as by myself. But anything that can be answered by one of our officers, I would rather leave to them to answer, as my time is very precious.

6624. *President.*] That is to say, you want to get away if you can do so.

6625. *Mr. Eddy.*] I do, my hands are very full.

6626. *President.*] If Mr. Hoyle wants to ask you anything he can do so afterwards, unless, indeed, he would like to ask you any question now, in which case I have no doubt you will be prepared to answer.

6627. *Mr. Hoyle.*] No, I have no question to ask Mr. Eddy at present. I would rather have a chance of digesting what he has already stated.

6628. *Professor Warren.*] I would like to have a chance of digesting that, too.

6629. *Mr. Brown.*] Yes, we will get it printed first.

6630. *President.*] We will call you again, Mr. Eddy, and give you ample opportunity of submitting yourself to cross-examination.

6631. *Mr. Eddy.*] I am in a position to answer any questions that Mr. Hoyle or any member of the Commission would like to put now.

6632. *Mr. Hoyle.*] Do I understand that these various documents and maps are put in evidence. I think it would be as well if they were for many reasons, apart from those directly connected with this inquiry.

6633. *Mr. Brown.*] Here are copies of them. (To Mr. Eddy): You don't want the big ones to be taken away, I suppose?

6634. *Mr. Eddy.*] The only one that has not been prepared in the small form is the one behind you, and I will have that done.

6635. *Professor Warren.*] So they are quite ready for binding up in the volume.

6636. *Mr. Eddy.*] Yes, I think it is rather an interesting thing. I was surprised, I must confess, to see that the gradients on our lines are worse than any on the Alpine lines; for although I have been over the Alpine lines, I did not imagine that it was so. It is the difference in curvature that makes them so much more difficult.

6637. *Professor Warren.*] And the rises.

6638. *President.*] Well, Mr. Eddy, it is useless for us to keep you any longer here, but what about your witnesses.

6639. *Mr. Eddy.*] Mr. Fehon is prepared to go on with our case, but, as a matter of fact, we thought my examination would last the whole day, and I don't think we are prepared with anything else.

6640. *Mr. Fehon.*] Would it meet the convenience of the Commission to take an adjournment now until to-morrow afternoon, when we shall be prepared to call our witnesses.

6641. *President.*] Yes, I see no objection to that, provided it will suit the convenience of Mr. Hoyle.

6642. *Mr. Hoyle.*] Yes, perfectly, Mr. President; in fact, I would rather that we adjourned now than continued the inquiry any longer this afternoon.

THURSDAY,

THURSDAY, 19 *MAY*, 1892.

[*The Commission met in the Board-room, Colonial Secretary's Office, at* 2·30 *p.m.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., M.L.C., J.P.

6643. *Mr. Hoyle.*] Mr. President: In view of the very important, very complete, and very long statement made by Mr. Eddy yesterday before this Commission, I rise to ask for an adjournment until Wednesday next. I would ask for the adjournment until Tuesday, but that is a holiday, and I therefore feel compelled to ask for an adjournment until Wednesday next. In doing so I wish my object to be clearly understood. In the statement made yesterday by Mr. Eddy reference was made to a large number of railways throughout the world. Mr. Eddy has the command of a large staff to work up information for his use—an advantage which I have not got—and as the statement contained such a large lot of important matter in connection with which it will be necessary for me to make considerable research, the time which has elapsed has not given me an opportunity of doing so, neither has the time at my disposal enabled me to place myself in an efficient position to cross-examine the witnesses—at least not such a position as I should like to be placed in. I think, therefore, that under all the circumstances my request is a reasonable and just one. At the same time I regret to have to make it, because I know that this Commission, as well as the Railway Commissioners, may be put to some inconvenience, but I think it will be admitted that I have in the past attempted, so far as possible, to meet the convenience of every one connected with this inquiry. At the same time I must be just to myself, and as new and very important evidence has been given which I have not had time to thoroughly make myself acquainted with, I trust that my request will be acceded to, and that the Commission will now adjourn until Wednesday next. Instead of sitting on Monday we might, I think, sit on Wednesday, Thursday, and Friday, so that no time will be lost except this one day. After all, taking into consideration the circumstances, perhaps a day's loss will not very much matter. I hope the Commission will grant the request I now make.

6644. *Mr. Fehon.*] I think this is a very unusual request to make at this stage of the inquiry. If the Commissioners had asked for an adjournment to prepare their case I think there might have been some reason in it, but once having opened our case by the statement of Mr. Eddy, which, of course, is evidence, I do not think an adjournment should be granted. It is true that the Chief Commissioner has given evidence of a voluminous character, but I do not see that that is any reason for granting Mr. Hoyle's request. It must be remembered that this is Mr. Hoyle's inquiry; he has brought his witnesses and examined them, and put his case before the Commission, and we submit now that upon the threshold of our case—when we have been put to the trouble and expense of bringing men from the country to support the statements made by Mr. Eddy—an adjournment should not be granted. It is not my intention to introduce any fresh matter into the inquiry, for we look upon Mr. Eddy's statement as a complete answer to the case submitted by Mr. Hoyle, but for the satisfaction of the Commission we intend to call a number of men of various grades in the service to substantiate the statement which has been made before you. I can, therefore, only ask you to consider the great inconvenience and expense which this department has been put to since the commencement of the inquiry, and ask you is it a reasonable thing to stop us now? Mr. Hoyle stated that he experienced some difficulty in dealing with the various matters Mr. Eddy has brought forward. I may call your attention to the fact that Mr. Eddy said that all the authorities for his quotations and statements will be put into the hands of this Commission, and that being so, I presume Mr. Hoyle would have the right to look at these authorities if he questioned any portion of the statement made by Mr. Eddy.

6645. *Mr. Hoyle.*] I would like the Commission to bear in mind, in coming to a decision about my request, that the Railway Department is in a very different position to myself. That department, as I have already said, have a large staff of gentlemen at their command who can go on compiling the case for the Railway Commissioners as the evidence is brought forward, but I, on the other hand, have got my private business to attend to, which gives me, so far as a day is concerned, very little time to consider the case as it is developed. The only time I have at my command for that purpose is after tea in the evening. My position is, therefore, very different from that of the Railway Commissioners. The matter is now in your hands, and if you determine to go on with the evidence, of course I must give way, but if you grant the adjournment I ask I shall be exceedingly pleased.

6646. *Mr. Fehon.*] The Railway Commissioners would not care to oppose anything in reason asked by Mr. Hoyle. He puts his case very fairly, and, perhaps, it may be admitted that we have more assistance at our command than he has, but we are not going to bring forward one item of evidence beyond what has been placed before you already. The evidence we shall bring will be simply in corroboration of what has been stated by Mr. Eddy. Mr. Hoyle will have the right, I presume, of saying something at the termination of the inquiry, and by that time he will have been able to consider the matter in the whole of its bearings, so as to lay his views completely before you.

6647. *President.*] Mr. Hoyle, are there any witnesses present who might be examined this afternoon without prejudice to you. I am only thinking when I say this of the inconvenience to which the Railway Department may be put to by our granting an adjournment. I presume it would be the scientific evidence more particularly that you would like to be prepared for, but if there are some men here belonging to the Railway service who would only depose to facts, would their examination place you in any difficulty with regard to the evidence?

6648. *Mr. Hoyle.*] I do not know who are here. Perhaps if Mr. Fehon would indicate the witnesses who are present I might be able to state whether their examination would interfere with me at all.

6649. *President.*] Is there anybody, Mr. Fehon, who might be examined without objection by Mr. Hoyle?

6650. *Mr. Fehon.*] I would be content if the inspectors and gangers from the country were examined to-day.

6651. *President.*] Would that put you in a difficulty, Mr. Hoyle?

6652. *Mr. Hoyle.*] Well, Mr. President, there is a great deal in the statement made yesterday that is altogether wide of this inquiry, and there are many things I would like to think out. I would press again for an adjournment. It would not be much inconvenience to the Commissioners—only a matter of saving a day—and it would be a great convenience to me to have the inquiry adjourned. 6653.

6653. *Mr. Brown.*] The department say they have two or three gangers here they would like to examine, so that they might then return to their work. Suppose the scientific evidence were set aside—the examination of Mr. Foxlee, for example, or other officers high in the service of the department. If that evidence were postponed, could we not take the testimony of two or three witnesses, such as gangers and others like that. Suppose the Commission grant your request so far as a postponement of the scientific evidence is concerned, would that meet your views?
6654. *Mr. Hoyle.*] Yes; I would be satisfied with that.
6655. *President.*] If there were anything you wanted to cross-examine these witnesses about which was not convenient now, your cross-examination might be postponed. Suppose we take only the men Mr. Fehon has mentioned.
6656. *Professor Warren.*] I suppose that if Mr. Hoyle wants to call a witness he can do so. I do not think any harm would be done to Mr. Hoyle by going on with the evidence of the gangers, but I think any expert evidence—such a high authority as Mr. Foxlee, for example—ought not to be put in the box without Mr. Hoyle having the opportunity he desires. I presume, Mr. Fehon, it is not your intention to put such a witness in the box this afternoon. Is that so, Mr. Fehon?
6657. *Mr. Fehon.*] No.
6658. *Mr. Brown.*] Then you will be content to call these witnesses only?
6659. *Mr. Fehon.*] What I propose to do is to call some gangers on the line over which the Baldwin engines have run, and two or three officers of the department.
6660. *Mr. Brown.*] Who are they?
6661. *Mr. Fehon.*] They are men a grade higher than the gangers.
6662. *Mr. Brown.*] Have you any objection, Mr. Hoyle?
6663. *Mr. Hoyle.*] Yes; I have. I believe one of these officers is an inspector of great ability.
6664. *Mr. Fehon.*] It is rather curious to object to him because he is a man of great ability.
6665. *President.*] So long as you are not excluded, Mr. Fehon, you need not mind, I think. Mr. Hoyle is in this difficulty. The able statement made by Mr. Eddy is likely to occasion him considerable ground for thought and consideration, and I think it is very natural that it would do so, and if, without having given that thought to this statement on account of the short time at his disposal, there are witnesses he thinks he will not be able to examine efficiently to-day, I think it would be fair to postpone their examination.
6666. *Mr. Fehon.*] I would like Mr. McLachlan to be called to put a document in evidence, so that it may form part of the evidence of this Commission.
6667. *President.*] Yes.
6668. *Mr. Hoyle.*] I may mention that I made a request for certain books from Newcastle to be produced by the Railway Commissioners, but up to the present time they have not produced them.
6669. *Mr. Fehon.*] I think they are upstairs.
6670. *The Secretary to the Railway Commissioners.*] I thought they had been sent in to the Commission.
6671. *Mr. Hoyle.*] The books will not go out of the possession of the officers of this Commission, and I do not intend to take anything out of this room, so that they will be quite secure.
6672. *Mr. Brown.*] You will let Mr. Hoyle inspect these books, Mr. Fehon?
6673. *Professor Warren.*] The Secretary will be in charge of them, so that it will be really quite satisfactory to all parties. They will be in the charge of the Secretary to the Commission.

Hugh McLachlan, being sworn, said:—

Mr. H. McLachlan, 19 May, 1892.

6674. I am Secretary to the Railway Commissioners of New South Wales.
6675. *Mr. Fehon.*] In connection with the speech made by Mr. Hoyle in Parliament on the 20th August, did the Railway Commissioners prepare, at the request of the Minister for Railways, a statement in regard thereto, dated the 7th October, 1891? Yes.
6676. Was not that document compiled by the Commissioners after discussing the matters thoroughly with their various officers? Yes.
6677. Have you a copy of that document with you? Yes.
6678. Will you hand to the Commission a copy of the same? Yes. [*Witness here handed a copy of the document in question to the Commissioners.*]
6679. *Witness.*] In the copies of *Hansard* containing the speech in question, certain extracts were marked for evidence. The extracts referred to are marked in the margin of this document.
6680. Were the replies to the various statements made in Parliament based on the reports of the various officers in the department? Yes; we quote the names of the officers in full in this document.
6681. Was a further paper prepared on the 18th November, regarding the various defects that had developed themselves in the engines, and sent to the Minister? Yes.
6682. Will you hand to the Commission a copy of the same? Yes. [*Witness here handed to the Commissioners a copy of the document referred to.*]
6683. You have heard most of the evidence given at this inquiry;—have not the failures referred to been simply a repetition to a great extent of what the Railway Commissioners themselves officially informed the Minister of in the papers referred to? Yes; I think the Commissioners will find this to be so by reading the documents I have handed in.

John Brady, being sworn, said:—

Mr. J. Brady, 19 May, 1892.

6684. My position in the Railway service is that of a ganger.
6685. *Mr. Fehon.*] What part of the road are you engaged on? On Springwood.
6686. What is the present state your length;—I may state to the Commissioners that I intend to ask all the witnesses the same questions? Very good.
6687. Has your length been lifted and ballasted? Yes; all but about 2 miles.
6688. And why has not that been lifted and ballasted;—does it not need it? Not so badly as the other parts.
6689. From your experience, which do you think, two engines coupled together or one Baldwin engine, would knock the road about the most? Two engines coupled together, from my experience.
6690. *Professor Warren.*] They would do more damage, you say? Yes.

Mr. J. Brady. 19 May, 1892.

6691. *Mr. Fehon.*] Have you had more trouble in keeping the road in order since the Baldwin engines have been running than before? Not a bit.
6692. Do these engines take the curves more easily than those of other types? Yes, so far as I am concerned they do.
6693. Is your road sleepered with ironbark? Yes.
6694. Did you find the fastenings hold well in those sleepers? Yes.
6695. Did you ever see an ironbark sleeper decay? Yes.
6696. You have seen them rot in the road? An odd one; a very odd one.
6697. Generally speaking, do you consider the Baldwin engines fit engines to run on that road? Yes, I do.
6698. *Mr. Hoyle.*] What length are you on? Springwood.
6699. What rails have you on that length? Double-headed steel rails.
6700. What weight? 75 lb. to the yard, and 42 chains of it is laid with steel T rails.
6701. What is the space of the sleepers in your length? On the curves it is 2 ft. 4½ in.
6702. Is that right through, or does it vary on the straights? It varies on the straights.
6703. Is that the uniform spacing both for the 80-lb. steel and the 75-lb. iron rail;—is the spacing the same for both rails? The spacing for the 80-lb rail is 2 ft 4½ in.
6704. The spacing then is the same? Yes.
6705. Are they all steel rails in your length? Yes; 80-lb. and 75-lb. steel rails.
6706. Have you any broken rails in you length? No.
6707. None whatever? I have seen them after they have been in the press where they have been cut. They might go out a little at the bottom flange, but nothing to hurt. It would be inside the fish-plates.
6708. The double-headed rails you speak of have they been turned? Yes, in two of the curves.
6709. But anywhere on the straight? No.
6710. Did you turn the rails on the curve? No; I did not turn them.
6711. Are there any turned? Yes, there are.
6712. Are your curves true? Yes; in the cuttings.
6713. Do you know the weight of these engines passing over the road? Well, according to what I see in the papers, they are 90 odd tons in weight.
6714. One of these engines weighed 90 odd tons, and there is one case in which the engine weighed 97 tons; there is alse another engine by the same company weighing about 87 tons. Do you consider that the engine which weighs 10 tons more than the other is not more injurious on the road than the ligdter one?
6715. *Mr. Fehon.*] That is scarcely a fair question.
Witness.] I am not an expert, and so I cannot say.
6716. *Mr. Fehon.*] That is scarcely a fair way of putting the question. Every well-informed man in these matters knows that the weight of the engine itself has nothing to do with the wear on the road. It is the weight on the driving-wheel that has to be considered. I suppose, as far as the ganger is concerned, he does not know anything about it?
6717. *Mr. Brown.*] So far as he is concerned, he has already given evidence that the engine is suitable to the road, and I think it is only fair that Mr. Hoyle should have an opportunity of getting from him by what means he arrives at that conclusion.
6718. *Professor Warren.*] Are you speaking of the old Consolidation engine—that is 75 tons, is it not?
6719. *Mr. Hoyle.*] Yes; but there is another, I think, which weighed 87 tons. (To Witness): You were asked just now by Mr. Fehon whether two engines coupled together would be more injurious upon a road than one. Now, remember that these two engines coupled together are each of them lighter than the Baldwin engine. Now, considering that, do you swear that these two coupled-engines, each of which is lighter on the driving-wheel than the Baldwin engine, would do more damage to the road? I believe that the Baldwin engine goes round the curve easier than the other two engines.
6720. *Professor Warren.*] That is not the question.
6721. *Mr. Hoyle.*] The question is, whether the engine with the lighter load on the driving-wheel, would do more harm than the engine with the heavier weight? I do not think it would make any difference to the road.
6722. *Mr. Brown.*] He cannot tell you; he only sees the road and the engines passing over it. It is in that general way you should ask him the question.
6723. *Mr. Hoyle.*] Your experience has been then, that the two engines coupled together are just as injurious to the road as one engine? Yes.
6724. Now, have the two engines coupled together been more injurious? I cannot say. So far as my experience goes, one is as safe as the other.
6725. How long has the 75-lb. steel rail been in your road? Since 1878.
6726. *Professor Warren.*] With regard to the effect of the Baldwin engine in knocking about the road; in answer to Mr. Fehon, you were saying what you actually saw every day. You do not base your opinion upon the weight itself, but from the work you have to do on the permanent way. Does the Baldwin engine knock the road about? I would as soon see it go over the road as any other.
6727. You have no more extra work to do on account of it? No more than I did before.
6728. The Baldwin engines do not tend to spread the road more? Not so far as I can see.
6729. Then, in the curves you mean to say that they do not tend to spread the road more than the ordinary engines? No; not so far as I can see.
6730. *Mr. Brown.*] Do you put strutting in at a curve? I did do so.
6731. When? Shortly after the road was lifted.
6732. How long ago was that? Over twelve months ago.
6733. *Professor Warren.*] You have not to do more work now than you had to do before;—I mean in consequence of the Baldwin engine being on your line? No.
6734. And your lines are in good order? First rate.
6735. *Mr. Fehon.*] Has it always been the custom to strut in the curve? Always.
6736. There is nothing new in it, is there? No.
6737. *Mr. Hoyle.*] How long has the 80-lb. rail been down on your line? Since the beginning of 1891.

John

John Berghoffer, being sworn, said:—

Mr. J. Berghoffer. 19 May, 1892.

6738. My position in the Railway Service is that of a ganger, and I have been in the service for eleven years.
6739. *Mr. Fehon.*] What part of the road are you now engaged on? From 65 miles to 70 miles 60 chains.
6740. Yes; but whereabouts is that? At Katoomba.
6741. What is the present state of your length? It is in very fair order.
6742. Has it been lifted and ballasted? Yes.
6743. From your experience, can you say whether two engines coupled together, or one Baldwin engine would knock the road about more? There is very little difference, I think.
6744. Have you had any more trouble in keeping the road in order since the Baldwin engines have been running on your line? No.
6745. You have seen the Baldwin engines running daily? Yes.
6746. Do you consider that they take a curve more easily than engines of other types? I cannot say that they do.
6747. What is their effect on the curve;—do they knock them about at all? No more than the other engines; they seem about equal.
6747½. What weight of rail have you on your length? We have two different weights—75-lb. steel rails, double-headed, and the 80-lb. T rail, also steel.
6748. Your road is all steel? Yes; that is on the main road.
6749. Have you iron-bark sleepers? Yes.
6750. Spaced how far apart on the straight? About 3 feet.
6751. We do not want to know "about," give it to us exactly what is your standard distance? About 3 feet seven-eighths, I think.
6752. Is it not a little less than that;—do you say that that is exactly how you lay them the straight? Yes.
6753. On the curves, the light curves and the sharp ones, how many sleepers do you put on the rail length. First of all how many on the sharp curves? On the 30-ft. rail we put twelve sleepers.
6754. How many on the straight? Twelve on the straight.
6755. And if a curve of a larger radius how many additional? On the 24-ft. we put ten sleepers.
6756. Do you ever find any of your sleepers decaying? Yes.
6757. Do you consider the Baldwin engine to be suitable for running on your length of road? Yes.
6758. And do they do any more damage than other engines? No.
6759. *Mr. Hoyle.*] How long have you been upon this length? Nine years.
6760. On this particular length? Yes.
6761. Will you tell me how many sleepers you put on a 30-ft. rail on the straight? Twelve sleepers at present.
6762. *Professor Warren.*] On the straight? Yes.
6763. *Mr. Hoyle.*] And on the curve? Do you mean the 30-ft. or the 24.
6764. How many sleepers do you put to the 24? Ten.
6765. Is that only in the case of the 75 and 80 lb. rails? Yes.
6766. You do that in both cases? Yes.
6767. That is ten sleepers to the 24? Yes.
6768. Since these Baldwin engines have been running have you had any broken rails on your length? None.
6769. None whatever? No.
6770. Do you find that the rails crush much at the chairs or ends? No.
6771. Is your road wavy? Have you indents in your road? Yes.
6772. Do the ends of your rails bend down? Yes.
6773. Do the joints bend down? Yes.
6774. Do you find that to be the case with the 80 lb. rail as well as the 75 lb. rail? No, not so much.
6775. Not so much with the 80 lb. rail? No.
6776. Does the bending at the joints cause you any extra trouble? That always has been the case. It is most of our work lifting joints when they go down.
6777. Are all the sleepers in your length perfectly firm? Yes.
6778. Do you find the sleepers loosening from time to time? No.
6779. You do not? In wet weather they sometimes get loose a little.
6780. Then you immediately pack them? Yes.
6781. Do you know the weight of the Baldwin engines? Only by what I have heard.
6782. They are 90 tons for the passenger and 97 for the goods? Yes.
6783. Do you consider that an engine of that weight has a worse effect upon the road than two engines coupled together? It has not.
6784. Have the two coupled together a worse effect than the one? I do not know.
6785. But do you think they have? I do not. I think they are very much alike.
6786. Is the bottom of your road rocky under the ballast? Only in the cuttings.
6787. What kind of ballast are your rails fixed with? There are different kinds, sandstone, hardstone, and some other ballast.
6788. Have you any blue rock ballast? No.
6789. Do you consider your road in first-rate order? Yes.
6790. And perfectly safe? Yes.
6791. *Professor Warren.*] When you say that the Baldwin engines do not knock about the road more than other engines, do you go simply by the work you have to do to keep it in order? Yes.
6792. You say you have no more work upon your length now than you used to have? No.
6793. You say that you have had a lot of work at the joints, do you find that the 80 lb. rails give you as much work at the joints as other rails? Yes, just about the same.
6794. You have the ordinary fish-plates I suppose? Yes.
6795. They are not angle fish-plates are they? No.
6796. They do not spread over the rails? No, they fit tight.
6797. *Mr. Fehon.*] We use no angle fish-plates at all.
6798. *Professor Warren.*] I am surprised to hear that. I rather like the angle fish-plates.

Charles Low, being sworn, said :—

Mr. C. Lowe, 1 9 May, 1892.

6799. I am a ganger employed on the New South Wales Government Railways.
6800. *Mr. Fehon.*] How long have you been in the service? Fourteen years, or thereabouts.
6801. Were you ever on any other railway work besides this? Yes.
6802. Who were you employed by before you entered the Government Service? By contractors.
6803. What part of the road are you engaged upon now? My length goes from 150 miles 40 chains to 156 miles 40 chains.
6804. Yes ; but what do you call your nearest station? The nearest station is George's Plains.
6805. What is the present state of your length? In very good order.
6806. Has it been lifted and reballasted? It has been lifted right through.
6807. What is your opinion about two engines coupled together as compared with one heavier engine, in their effect upon the road. What effect has it on the road ;—do you consider that two engines knock the road about more than one engine of a heavier type, or do you think that the one heavier engine would do more damage to the road? That is, two light engines to one big one.
6808. Yes; which do you think would do the greater amount of damage to the road? Well, in my opinion, it makes no difference. The road is very heavily ballasted. I do not think it makes any difference.
6809. Have you had any trouble in keeping your length in order since the Baldwin engines have been running? No.
6810. How do you find the Baldwin engines take the curves? They do not appear to hurt the curves. They do not appear to hurt the line any more than any ordinary engine.
6811. What weight of rail have you on your length? I have never seen them weighed, but I think they are about 73 lb. to the yard.
6812. Are they double-headed rails? No ; they are steel T rails.
6813. And you have got ironbark sleepers down there? Yes.
6814. Do you find the fastenings hold well? Do you mean in the new sleepers?
6815. Yes ; in the new sleepers? Yes ; I do.
6816. You consider the Baldwin engines are suitable for running on the length of road that you have charge of? They do not hurt the length of road that I have charge of in any way whatever.
6817. *Mr. Hoyle.*] Is all your length of road laid with T rails? Yes ; all T rails.
6818. Was it relaid with new rails when it was lifted? No ; not all of it.
6819. Have any portions been relaid with new rails? Yes.
6820. What was the weight of the rail? About 73 lb. to the yard. They are not the heaviest rails.
6821. *Mr. Fehon.*] They are 71-lb. steel rails.
6822. *Mr. Hoyle.*] What is the space of the sleepers in your length on the straight—how far apart, centre to centre? It all depends upon the length of the rail.
6823. Well, I hardly see how that can be, but at all events in your length there is nothing more than 24-foot rails. With a 24-foot rail there are ten sleepers.
6824. And the 21-foot rails—how many sleepers are there to them? There are nine sleepers on the 21-feet rails.
6825. You have no chairs on your road at all? No.
6826. And you have no double-headed rails? No.
6827. And your road has recently been lifted and re-ballasted? Yes.
6828. With what ballast? With blue metal.
6829. How long is it since your length was re-sleepered? Well, they did it in 1891—some time last year, but I have forgotten the exact date.
6830. Was it re-sleepered last year? Partly last year and partly the year before.
6831. Was it only re-sleepered where you put in new rails? No ; all through with the exception of a few chains on the other end.
6832. And there the sleepers were already good? Yes.
6833. Have you had any broken rails on that length? No.
6834. How long have you been on that length? Two years two months and two weeks.
6835. Where were you before you went there? Before I went there I was at Woodstock.
6836. What rails were there there? The rails there were similar to those at George's Plains.
6837. Were they T rails? Yes.
6838. And was the spacing of the sleepers the same? No; the sleepers were not placed as close.
6839. What is the spacing of the sleepers on the Cowra line? A 24-foot rail has nine sleepers under it.
6840. Since these Baldwin engines have been running, have you had any more work to do by way of keeping the line in repair? No.
6841. You have not had more work to keep your length in order? No.
6842. What speed do the engines travel over your length? I do not know which portion of the length you refer to.
6843. I refer to any portion of it. You have curves, and you have gradients on your length? Yes.
6844. About what speed do the engines travel up the hill—take a Baldwin passenger engine for example? About 20 miles an hour, as well as I can tell.
6845. At what speed do they come down the hill? They come down the hill at about 30 miles an hour.
6846. Have you had any trouble with your curves since the Baldwin engines have been running? Not since the road was fixed up.
6847. But have you had any trouble before it was fixed up? No more than we should have had with any ordinary engine.
6848. You were on the line before it was fixed up? Yes.
6849. The Baldwin engines were not running then, were they? No.
6850. Had you more trouble then than you have now? Yes ; I had a lot more trouble.
6851. Of course you would have, because then you had a bad road, and now you have a good one? Yes.
6852. *Professor Warren.*] Where did you say your section is? George's Plains.
6853. Where is that? The second station on the other side of Bathurst, the first staff station beyond Bathurst.
6854. *Mr. Fehon.*] You see we have taken men from various places along the Western road, where these engines

engines are running, in order that we might give the Commission a fair idea of the general condition of the road. Mr. C. Lowe. 19 May, 1892.

6855. *Professor Warren* (to Witness).] And you have 71½-lb. steel rails? I have never seen them weighed, but I suppose they are about that, I know they are the second size.

6856. Do the Baldwin engines give you more trouble to keep your road in order? Not the least.

6857. And you think that two smaller engines coupled together would knock about the road more than one large one? I do not think there would be much difference.

6858. Supposing you put two Baldwin engines together, would they not knock the road about more than one engine would? I believe they would knock the road about more than one would.

John McPeak, being sworn, said:—

Mr. J. McPeak. 19 May, 1892.

6859. I am a ganger on the New South Wales Railways.

6860. *Mr. Fehon.*] How long have you been in the service? I commenced in the service in January, 1877.

6861. Have you been in any railway employ before? No; I have been in the Government Railway employ all the time.

6862. What part of the road were you engaged upon? Two hundred and thirty-two miles ten chains to ——

6863. But what is your nearest station? It is a station called Mumbil, 233 miles west of Sydney, near Dubbo.

6864. What is the present state of your length? It is fair, there is a fair running top on it.

6865. Has it been lifted and ballasted? It has never been ballasted, only maintenance ballast.

6866. Has it been lifted? A part of it has.

6867. It is in good order, is it? Yes; it is in fair running order.

6868. What is your experience about two light engines coupled together, as against one heavy engine. Do you consider that either the one or the other does more damage to the road? The two engines coupled together will knock the tangents out on the curve, more than one engine would.

6869. Have you had more trouble in keeping your length in order since the Baldwin engine started running? No.

6870. You consider the Baldwin engines take the curves very easily? Yes; they take the curves easily—they keep the tangents better than the other engines.

6871. What is the weight of the rails on your length? They weigh 71 lb. the yard.

6872. They are steel rails, of course? Yes; they are steel T rails.

6873. What space apart are they? Two feet four inches at the joints, and 3 ft. 1 in. intermediate.

6874. How many sleepers do you put on a 30-foot rail on the straight? We do not use any 30-foot rails up there.

6875. Well, how many sleepers do you put under a 24-foot rail? We put nine under a 24-foot rail.

6876. Do you find that the fastenings hold well? Yes; the fastenings hold well in these ironbark sleepers.

6877. Have you ever had any broken rails on your length? Yes.

6878. How many? I have had three within the last two and half years.

6879. Have you had any lately? Yes; I had one on the 7th April.

6880. Do you consider that the Baldwin engines are fit for running on your length? Yes; they are fit to run on the length.

6881. And they do no more damage than any other engine? No.

6882. *Mr. Hoyle.*] How long have you been on this length? I have been on this length three years and four months.

6883. Where were you before that? On the Molong line—the branch line.

6884. You told us just now that you had a broken rail on the 7th of last month? Yes.

6885. Are there many of the Baldwin engines running on your length? Yes; there are a good few. There is one on the mail train, and there is one on the 38 mixed goods—the Limerick—and then there is an occasional goods.

6886. Can you tell us how long before the 7th of April it is since you had a broken rail? About ten months before that.

6887. From your experience, do you consider that the rail that broke was an inferior one—was it too hard? No; it had a flaw in the flange.

6888. I ask you whether it was too hard, because we want to be perfectly fair, and I have had a great deal of experience of rails myself. I have had a rail break with one blow of the hammer, because it has been too hard.

6889. Did you find that the rails which you took out were very hard? Well, it had an old flaw in the flange—the flaw was not visible for daily inspection, because it was covered with the ballast.

6890. Was it broken very far up? It was broken right across the flange.

6891. Did it appear to be an old break? Yes; it was rusty right across the bottom.

6892. You said just now that you considered that two lighter engines coupled together would do the road more harm than one heavy one; you said that they would do more damage to a curve than one engine of a heavier type;—how do you account for that? Well, the two coupled together oscillate to such an extent when they go on to a tangent.

6893. But do you draw your conclusion from the fact that with two engines you get two quick successive blows on the leading wheels of the first and second engines, from the fact that they follow so close one behind the other, two engines not being able to take a curve at the same moment? No.

6894. Well, do you consider that it is the two quick successive blows that do the damage? Yes.

6895. Do you know that it is not so much the four bogie-wheels as the driving-wheels that do the damage? It is the driving-wheel that does the injury.

6896. Well, do you contend that an engine with a light weight on the driving-wheel will do as much injury as an engine with a heavier weight on the driving-wheel? Yes; it will do as much damage as a heavier engine, in my opinion.

6897. Are your curves strutted in any way? No; they are not strutted.

6898. And you say that you have had no more trouble since the Baldwin engines began to run than you had before? No.

6899.

Mr. J. McPeak. 19 May, 1892

6899. And you have had only three broken rails in two and a half years? That is all.
6900. Have any part of your rails been relaid lately? There was a deviation relaid, but that was all.
6901. Have you had any new rails put in lately? No.
6902. How long have these rails been in? About twelve years.
6903. *Mr. Fehon.*] These gangers, whom we have called as witnesses, represent two from the Mountains and two from the level country beyond. We can bring gangers from each length if necessary, but we thought that in bringing the four men whose evidence you have heard, we should be giving you a good deal of the work along the road where the Baldwin engines are running. As I said before, we have some inspectors here waiting to give evidence, and I do not know whether Mr. Hoyle would object to our calling the two who have come from the west, Mr. King and Mr. Robins. It is Mr. Waring, I understand, that he does not wish to have called until next week.
6904. *Mr. Hoyle.*] No; if they have to go back, I will not object. I might point out here that up to the present I do not think I have had Inspector Gregory's report. We had to get two reports—one from Inspector Gregory and the other from Mr. Robinson. Mr. Robinson's report has been laid before the Commission, but up to the present we have not had Mr. Gregory's report. Both of these gentlemen took trains to gauge the width of the platforms, and so far they have only had the report of one of them. I should like to have Mr. Gregory's report before me before Mr. Waring comes to give evidence.
6905. *Mr. Brown.*] Mr. Fehon, this was promised a week ago.
6906. *Mr. Fehon.*] I believe there is a report from Mr. Gregory.
6907. *Mr. Brown.*] Will you see that Mr. Hoyle gets it?
6908. *Mr. Fehon.*] I will see that it is laid on the table.
6909. *Mr. Brown.*] Well, as long as you see that he gets it I do not care; but we do not want to have any more postponements.

Mr. King, being sworn, said:—

Mr. King. 19 May, 1892

6910. I am a sub-inspector of the permanent way on the New South Wales Government Railways.
6911. *Mr. Fehon.*] What is your district? One hundred and four miles twenty chains to 191 miles.
6912. You have nearly 90 miles on your road then? Yes; 87 miles.
6913. How long have you been in the Service? Twenty-three years.
6914. Have you had any experience in railway work before you joined the service? Only with contractors.
6915. The road that you have under your charge is a portion of the road over which these Baldwin engines are running now, is it not? Yes.
6916. What weight of rail have you on your length? Various weights.
6917. Will you tell us what weights? 80-lb. steel rails, 75-lb. steel rails, 71-lb. steel rails, and 75-lb. iron rails.
6918. And is your length all sleepered with ironbark sleepers? Well, yes; with ironbark sleepers, but not right through.
6919. That is to say, that some of the original road was not laid with ironbark sleepers, and yet those sleppers are so thoroughly sound that you do not need to take them out yet? Yes.
6920. Are all the fastenings good? Thoroughly.
6921. What is your experience of an ironbark sleeper, as to the quality of wood? It is far superior to a gum sleeper.
6922. Is there any wood that you know of that is better than an ironbark sleeper? Not for sleeper purposes.
6923. Do you know the weight of an ironbark sleeper? Well, it just depends on the length of it.
6924. Well, yours are 9 ft. long x 10 in. x 5 in.;—do you know what an ironbark sleeper that size would weigh? I do not know; I never weighed one.
6925. I suppose it is heavier than a sleeper the same size made of any other kind of wood, is it not? Yes.
6926. What is the spacing of your sleepers;—give us the old road and the road that you have been relaying? The straight portion of the old road was sleepered with sleepers 3 feet 1 inch apart, and the curves from 15 chains and upwards had one extra sleeper in every 24 feet, whilst curves 15 chains and under had two extra sleepers to every 24 feet; the system adopted with the new road with 80-lb. rails is 20-inch joints, centre to centre, and 2 feet 7 inches intermediate.
6927. But is 3 feet 1 inch the uniform thing;—how many sleepers would you have on a 24-ft. rail? Eight on a straight.
6928. *Professor Warren.*] Well, if you had eight sleepers, how do you make them 2 feet 7 inches apart? Oh, it is the 80-lb. rail that is 2 feet 7 inches apart between the sleepers.
6929. *Mr. Fehon.*] You have had considerable experience of the Baldwin engines passing over the lines, and from your personal knowledge, and from inquiry of the men of various grades under you, do you consider that they are in every way suitable for the piece of road that is under your care? Well, I have not found any difference in the amount of work necessary to keep the road in repair since they have been running.
6930. Do you find that they take the curves very easily? Very easily.
6931. They do not knock them out of line at all, do they? No.
6932. You have seen these engines, I suppose? Yes; and ridden on them several times.
6933. You know that the driving-wheel is flangeless? Yes.
6934. Do you not think that that should make it much easier on the road than an engine that has all the the wheels flanged? Well, I should say so.
6935. However, you have ridden on them, and you think that they ride smoothly and evenly, and are a suitable engine to the piece of road under your charge? Yes.
6936. *Mr. Hoyle.*] How do you account for the broken rail at Tarana? Well, how could we account for broken rails years ago?
6937. Well, I am asking you how you account for that rail being broken? I cannot account for it. I do not know any man who could account for it either. You cannot foresee these things.
6938. Do you consider that it was broken by the Baldwin engine attached to the mail train, or by the wheels of the carriages? It would be very hard indeed to say.

6939.

Mr. King. 19 May, 1892.

6939. But have you any opinion as to how it was broken? None whatever.
6940. You are the inspector on the length where the accident occurred? I am.
6941. Can you tell me how many new rails you have put in between Tarana and the scene of the accident? Not many.
6942. Well, I have seen you there on the job, you know, putting them in? Well, I saw you there myself.
6943. How many did you put in? Fourteen of the rails that you are alluding to.
6944. Fourteen new rails? No; they are good second-class rails.
6945. But I am speaking about absolutely new rails;—how many new rails did you put in? None.
6946. Do you swear there were no new rails put in on that part of the road? Yes; I do.
6947. Now, think again; remember you are on your oath, and that I have been on the job;—think again whether you have not put in any new rails since the accident? I have put in rails, but not new ones. The rails which I have had to put in are good second-hand rails, fit for main line use.
6948. They have been used before then? They have been run on slightly before.
6949. Have you discovered many broken chairs in your length lately? Not more than usual.
6950. But have you discovered many broken chairs there lately? Since when?
6951. All that sort of thing is reported to you, I suppose, is it not;—can you tell us about how many you have taken out within the last twelve months? Some thousands.
6952. Is that not a serious matter? Well, it all depends upon the way that the chair is broken.
6953. Have you not had more broken chairs since the Baldwin engines commenced to run than you had before any given time? No.
6954. Are you positive of that? Positive.
6955. You made an inspection of that line since the accident, did you not mark a number of rails in chalk to come out, because you considered them bad? I did.
6956. When you were making your inspection, did you not find a rail with the end broken off like that [*showing the witness a drawing of a broken rail*]? Yes; I did.
6957. Is not that a very dangerous thing to have in the road? Well, it is under the fish-plate.
6958. Yes, I am aware of that; but the end of the rail was off all the same;—did the ganger take it out? Yes.
6959. When did he take it out? I told him to renew it at once.
6960. Was it renewed the Saturday I was there? No.
6961. When did he take it out? On the Monday morning.
6962. Do you not think it was a dangerous thing to leave it in the road after you had discovered it; I measured the rail, and there was a crack 4 inches long in it, through the centre of the holds, down the flange of the rail; do you not consider it was a most dangerous thing to leave it there, and that it would have been better to replace it there and then, even although you had to work all night to do it? Well, it was taken out as soon as we could get another rail to the spot.
6963. That length of rail was lifted, was it not, Mr. King? Yes.
6964. Was it lifted on new or on old ballast? On the spot of the accident?
6965. Not on the spot of the accident merely, but the whole of the rail I am referring to? On old ballast.
6966. And the spot of the accident, what have you done to that;—have you lifted it at all? No.
6967. What have you done to it? We have put in new rails were they were broken.
6968. Have you not put in additional sleepers? No.
6969. Was that a new or old rail, the one that was broken? It was a second-class rail.
6970. *Professor Warren.*] I do not quite understand what he means by a second-class rail? It is a rail which has been slightly used, but has no defects in it whatever.
6971. *Mr. Hoyle.*] Have you any rails between the scene of the accident and the Tarana station that are very much bulged? There are a few.
6972. Were they not discovered by you since the accident—two rails, one that had been worn up to 2⅜ inches on the top, right through from end to end, and another varying from 2¾ inches to 2½ inches in thickness from end to end? Yes; but they have been taken out.
6973. Those rails must have been in the road for some time;—do you not consider that that rail was weakened by reason of the amount of wear that it had had? No; the bottom piece was sound—there was no bulge in it.
6974. But would it not weaken the rail very much to have so much taken off the top of it? Well, I have weighed rails something similar to that one, and they are only reduced in weight from 2 to 3 lb. per yard.
6975. But do you not think that a very big reduction? No.
6976. Supposing a rail was in the road, and was reduced to the extent of 1½ lb., and was then turned over and used on the other side, do you not think that would be weakened considerably? That has not been done since I have been in charge of that section. Rails that have been worn to that extent I take out altogether.
6977. But are there not a number of turned rails in the road? I have not put any of them down.
6978. At 118 miles 27 chains were there not several rails bent very much—lowered very much in the joints? Slightly down in the joints.
6979. Not slightly, but very much bent? As a rule, that is, all joints are likely to go.
6980. *Mr. Fehon.*] I would ask whether this is not degenerating into a question of railway management more than anything else. The Commission is inquiring whether the engines are suitable to the permanent-way, and the President has already ruled that the permanent-way means the road in an ordinary state of repair.
6981. *President.*] You mean to say, Mr. Fehon, that even if the rails were very much bent, it would be merely evidence of negligence, and would not come within the scope of our inquiry?
6982. *Mr. Hoyle.*] May I point out, sir, that we have had a witness in the box who has given very different evidence from that which the present witness is giving now, and my object in asking these questions was to show the value that was to be attached to the previous evidence. However, if you think I had better desist, of course I will do so.
6983. *President.*] Well, the other members of the Commission think that you may go on.

6984.

Mr. King. 19 May, 1892.

6984. *Mr. Hoyle* (to Witness).] Do you think that the Baldwin engines are perfectly safe, running at 40 miles an hour. I am speaking of the straight part of the road, between where the accident took place and Tarana? Yes; I do.
6985. Do you consider, also, that the Baldwin engines will do less damage to the road than would be done by two lighter engines coupled together? Yes.
6986. Why do you come to that conclusion? As a rule, two engines take a curve far worse than a heavier engine does. I experienced that with the first American engines which came out. I was a ganger at the time, and there was a great deal of complaint about them going to play the "Dickens" with the road, and, as a matter of fact, they make the road more solid.
6987. Do you think that making the road more solid was necessary? Yes.
6988. Then if you thought it was necessary in the case of the lighter American engine to make the road more solid, how is it that you say the heavy American engines do less injury to the road? They do not hurt the road in the slightest.
6989. You have just said that it was necessary to make the road more solid for the other American engines. You now say that these American engines, which are heavier and longer than they, are doing less damage to the road? It is all the better.
6990. *Mr. Brown.*] You are not answering the question. Mr. Hoyle wants you to explain your previous answer.
6991. *President.*] What Mr. Hoyle said is this, if he will allow me to put the question. You say that you had to consolidate your road for the other American engines which were lighter than these. Then, how is it that you make out that these engines do not hurt the road? When the former engines came out the complaint was that they would hurt the road; but after they had been running on the road we found that they had done the road good by consolidating it, and that they had not injured the road at all.
6992. *Mr. Brown.*] Then for the benefit of the road all the Commissioners want to do is to get heavier engines still?
6993. *President.*] I suppose they make it settle down better.

Edward Robins being sworn said:—

Mr. E. Robins. 19 May, 1892.

6994. I am an Inspector of the permanent-way on the New South Wales Railways.
6995. *Mr. Fehon.*] What is your district, Mr. Robins? Between Wallerawang and Bourke, and on the Molong branch.
6996. How long have you held the position of Inspector? Since September, 1880; but not all the time on this side. Previously I was on the southern side.
6997. But you were in the railway service? Yes.
6998. And have you had any experience prior to that? Yes; I was over twelve years a ganger, and altogether I have had over forty years experience in railway work.
6999. And you have always been on permanent-way work? Well, on construction and permanent-way work.
7000. What weight of rails have you on your length from Wallerawang to Bourke? 80-lb. steel rails, 71½-lb. steel rails, both of them T rails, and 75-lb. iron double headed, and 75-lb. steel double-headed rails.
7001. And ironbark sleepers? Yes, ironbark sleepers.
7002. What is your experience of ironbark sleepers? Oh, they are the best sleepers I ever saw.
7003. Do you know the weight of an ironbark sleeper? We used to call them eight to the ton when we were putting down the southern line. That was the coast ironbark.
7004. And you consider them more durable and fitter in every respect for their work than any other class of wood? Yes.
7005. What is the standard spacing of sleepers on the straight. What have the instructions been since the Commissioners have had charge of these lines regarding the placing of sleepers centre to centre? 1 ft. 8 in. joints, and 2 ft. 7 in. intermediate sleepers.
7006. And what was the spacing of the old sleepers? The old sleepers were placed 2 ft. 4 in. apart at the joints, and 3 ft. 1 in. intermediate for straights and light curves.
7007. Has your road generally been relifted and ballasted to a great extent? Yes.
7008. You consider it in good order? Yes; in very good running order.
7009. I suppose the Baldwin engines are running altogether on your length? Yes.
7010. What has been your experience of the permanent-way since the Baldwin engines have been running. Do you find the permanent-way has been injured more by them than by other engines? No, I do not.
7011. Have you ridden on the Baldwin engines yourself? Yes, many times.
7012. And you consider them easy to ride on? Yes.
7013. And they take the curves very well? Yes, easier than some of the other engines.
7014. On the whole, you consider that the Baldwin engines are suitable to the road from Wallerawang to Bourke? They are the best and easiest engines that I ever rode upon.
7015. And as to the load they take, of course there is no question that they do a great deal more work than any other engine? Oh, they take heavier loads.
7016. *Mr. Hoyle.*] Can you tell me, Mr. Robins, what distance you have ridden on these engines? That I cannot, because I have been so many years riding on them.
7017. Yes, but I mean on the Baldwin engines? I have ridden some hundreds of miles since they came out here.
7018. Yes, but I mean at one stretch? Yesterday, I rode from Orange to Bathurst on a goods engine, and last Monday I rode on a passenger engine.
7019. What speed were you going at? About 25 miles an hour.
7020. What other engines have you ridden on? On all classes of engines that the Government have got.
7021. In what respect are these engines easier than the other engines? They do not seem to jolt you; there is not a movement in them—probably because they are so well balanced, and are fitted with springs.
7022. But would that be any indication of the effect of them upon the road? Well, some engines are jolting up and down all the time, whilst these engines do not move you at all.
7023. You are the Chief Inspector from Wallerawang to Bourke? Yes. 7024.

Mr. E. Robins. 19 May. 1892.

7024. Can you tell me how many broken rails have been taken out of the length between Tarana and the scene of the recent railway accident? For how long?
7025. Say for the last twelve months? About two broken, I should think. At all events, that is all that I know of.
7026. Is it the duty of the men to report to you when they take broken rails out? Two broken rails were taken out in addition to the two that were taken out of the line upon which the accident occurred.
7027. Yes, but are these matters reported to you? No, not always. I may be away at Bourke, and then the boy in the office would send it on at once to the Engineer's office.
7028. There have been no more than two broken rails within the last twelve months, at all events excepting those broken by the Tarana accident? There might be, but I have heard of no more than two.
7029. Do you consider that the piece of the road between Tarana and the scene of the accident is quite safe for the Baldwin engines to run over? Yes, it is very fair.
7030. You have heard of no complaints from your gangers as to the knocking of the road about by these engines? No.
7031. Do you know whether slow-down notices have been posted on the bridges? Yes.
7032. Why is that? Because there is one bridge under repair, a bridge at 120 miles 3 chains.
7033. Is that the only place where they have slow-down notices on the bridges? No; they have slow-down notices generally to run over bridges at the rate of 15 miles an hour.
7034. Are there not slow-down notices on other bridges beside the one under repair? Yes; they have to run 15 miles an hour only on the bridges between Sodwalls and Tarana.
7035. Can you tell me why that is? No, I cannot say why it was.
7036. How long have you been an inspector? Three years on Western Division and 8¾ years Sub-Inspector on Southern Division.
7037. You were not there when the Royal Commission on bridges sat? No.
7038. What is the spacing of the sleepers on the road where it was not relaid, between Sodwalls and Tarana station? Not where it was relaid, but between those points, the sleepers are placed 3 ft. 1 in. on intermediate lengths, and 2 ft. 4 in. of the joints.
7039. Are there none more than 3 ft. 1 in. apart? Well, it is just possible that in repairing the road a fettler might knock a sleeper an inch one way or the other.
7040. Are there many broken chairs there? There are always a good many chairs breaking.
7040½. Can you tell us how many have been broken during the last twelve months? No, we do not keep any account of them.
7041. And you do not think these Baldwin engines are doing any more injury to the curves than any other engine? No, I do not think they do; they seem to take the curves much easier.
7042. You say they take the curves much easier, but considering they are heavier engines, and much heavier on the driving-wheels, also heavier on the bogies than the other engines, can you tell me why they ride so much easier on the curves? Because they are on such good springs.
7043. Do you know what is meant by the rigid wheel base? Yes; where the wheels are coupled together, I suppose.
7044. Yes; where the wheels are coupled together, and the connection-rods and the side valves are? Yes.
7045. Well, the Baldwin engines are much longer on the rigid wheel base than most English engines are? Yes, but there is no flange on the middle wheel.
7046. Well, even admitting that, how do you account for these engines riding easier on the curves? Well, they seem to ride easier, that is all. I am no engineer.
7047. Have you strutted your road on the curves? No; I do not believe in strutting the curves, I believe in curving the rails so that they will stand.
7048. Have you put in many new rails recently where the 75-lb. iron rails are? Well, we change them as they were. We take them out and put others in.
7049. Do you know whether any orders were given to relay the road some short time ago? How long since?
7050. I saw the iron rails as I passed along between Sodwalls and Tarana, were not those rails put there on purpose for relaying the road? No, the rails you are speaking of were put there by mistake. I ordered the men to put them out at 113 miles 40 chains to 114 miles 60 chains, and he laid down where you indicate, and had to shift them again.
7051. You say that they were put there by mistake? Yes; and they had to be moved.
7052. *Mr. Fehon.*] Are chairs ever broken by the gangers and fettlers in driving keys? Yes; and the breaks are sometimes hidden under the rails.
7053. Do you know a class of engine called the Vulcan? Yes.
7054. Are they pretty rough on the road? Yes.
7055. Much rougher than the Baldwins? Yes; they are 6-wheeled coupled engine, with flanges on all the wheels.
7056. *Mr. Hoyle.*] Do you say that the Vulcan engine is a 6-wheeled couple? Yes.
7057. You are wrong there, they are only 4-wheeled coupled engines? Well, I think the 6-wheeled coupled engines are the heaviest on the road.
7058. Then how is it that the Baldwin engines are easier than the Vulcans—because they are 6-wheeled coupled engines? Yes, but the middle wheel is flangeless.
7059. Do you consider that the Baldwin engines are very much easier on the road than the Scotch Yankees? Yes, they are.
7060. Well, as the Scotch Yankee has got a flangeless wheel, how do you account for that? All I know is that I have been on the Scotch Yankees and they ride rougher; the difference must be in the springs, I think.
7061. *Mr. Fehon.*] That exhausts all the country witnesses.
7062. *President.*] Well, we will adjourn until Wednesday, and sit on Wednesday and Thursday and Friday.
7063. *Mr. Hoyle.*] This question of the bridges has come up and Professor Warren has stated that he will not take any responsibility about any bridge to which his attention has not been specially directed. I would therefore direct his attention specially to the Glenlee Bridge and ask him to be good enough to see it for himself before the Commission sends in its final report.
7064. *Professor Warren.*] I will do that.

WEDNESDAY,

WEDNESDAY, 25 MAY, 1892.

[*The Commission met in the Board-room, Colonial Secretary's Office, at 3·30 p.m.*]

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., M.L.C., J.P.

Richard Waring, being sworn, said:—

Mr. R. Waring. 25 May, 1892.

7065. I am Chief Inspector of Railways in the employment of the Railway Service of New South Wales.
7066. *Mr. Fehon.*] How long have you been connected with the New South Wales Railways? Thirty-three years and five months.
7067. Have you any other experience besides that? Yes; I had five years' experience besides that.
7068. And your time has been altogether taken up in connection with works on the permanent-way? Yes.
7069. You are well acquainted with the material used in the formation of the permanent-way on the New South Wales Railways? Yes.
7070. Will you give us the weight of the rails used on our lines;—what is the standard rail now being used? There are 80-lb. steel T rails.
7071. And what other rails? Double-headed 75-lb. rails, also 71½-lb. steel T rails, iron rails 75-lb., double-headed iron and 71½-lb. T rails.
7072. And the road is laid throughout with very little exception with ironbark sleepers? Yes.
7073. There is no other wood in the country so fit for sleepers as ironbark? There is none equal to it.
7074. And it will compare with any other wood in the world? Yes.
7075. And that you have ever seen with regard to stability? Yes.
7076. Considering the weight that there is passing over these lines, do you consider that they are sufficiently heavy;—the question of weight is a very important one in passing trains along the line, is it not? It is.
7077. What is the present standard for the spacing of sleepers on all the new lines laid down? At the joints it is 1-ft. 8-in., in the intermediates there are 2-ft. 7-in. centres.
7078. And what was the old road laid at? On straights and curves of above 30 chains it was 2-ft. 4-in. at the joints, and the intermediates were 3-ft. 1-in.
7079. Is the road throughout well ballasted? Yes; thoroughly well, as a rule.
7080. Are not the New South Wales Railways in a better condition with regard to their permanent-way than any roads you have ever known in your experience? Yes.
7081. *Mr. Brown.*] I suppose he is speaking of the whole of the railways?
7082. *Mr. Fehon.*] Yes; the whole. (To Witness.) Have you noticed any particular effect upon the road through the running of the Baldwin engines on the line? I have observed no difference whatever.
7083. Either one way or the other? No; I have not noticed any difference.
7084. Do you consider the permanent-way of the New South Wales Railways well suited for carrying such engines as the Baldwin passenger and consolidation engines? I do.
7085. *Mr. Hoyle.*] Have you any iron rails weighing 70 lb. on any part of the permanent-way? We have 71½-lb. iron T rails.
7086. Iron T rails? Yes.
7087. Where are they? On various portions of the line.
7088. Any on the western portion? Yes.
7089. Can you tell us where? At least not exactly on the western line; there are 11 miles 52 chains on the Richmond line.
7090. I do not think these engines are running on the Richmond line, are they? No.
7091. Any outside of the Richmond and Windsor line? No.
7092. Are there any on the Northern line—any between Newcastle and Wallangara? Yes; there are some between Newcastle, Werris Creek, and Tamworth.
7093. Do you know the piece of road where the accident occurred recently? Yes.
7094. Have you examined that part of the road recently? I have.
7095. Did you examine it before the accident took place;—was that examination made at an early period before the accident happened? Not immediately.
7096. How long before? About nine months before.
7097. What state was it in then? Not in the best state.
7098. Has anything been done to it since? It has been lifted.
7099. Was it lifted within the last nine months? Yes.
7100. Was that done with old or new ballast? With old ballast. The old ballast is equal to the new, it is got from the same place.
7101. Do you know if the contractor made any objection to lifting it on the old ballast? Not to my knowledge.
7102. Do you remember some alterations being made to the coal-stage at Eveleigh yard? That was not carried out under my supervision, so that I cannot say anything about it.
7103. Well, I shall not ask you the question under those circumstances. Do you know the Scotch-Yankee engine? Yes.
7104. And the old Consolidation engine? Yes.
7105. Do you consider the old Consolidation engine or the Scotch-Yankee engine injure a road more than the present Baldwin engines? I have not seen any perceptible difference between the effect of them.
7106. I place a great deal of importance on your testimony, Mr. Waring, as I have known you for a very long time now. You say you did not find any perceptible difference between the effect of the two? I have not seen any perceptible difference.
7107. Do the present Baldwin engines have any more injurious effect upon the roads than the engines you had formerly? No; I do not see any difference.
7108. Do you consider that with the sleepers spaced 3 ft. 1½ in. the road is perfectly safe, considering the age of the rails upon it, and considering that a number of them have been turned over, for Baldwin engines to pass over, with the weight they have on their driving-wheel? Yes; I do.

Mr. R. Waring. 25 May, 1892.

109. At the speed of 40 miles an hour? They never travel at that rate there.
110. Do you mean to say they do not travel at that rate upon the straight? Where do you get the traight on that section of the road.
111. Well, there are straight portions on the line. At all events, do you consider the Baldwin engines o be perfectly safe on that line? I do.
7112. Are the broken rails taken out of the permanent way reported to you? No; the reports do not come to me.
7113. Do you remember the Vulcan, the 4-wheeled couple? Yes.
7114. Would that engine be more injurious on the permanent way than the old consolidation engine or the present Baldwin engine? The Vulcan is rougher than the Baldwin engine.
7115. Why? I cannot explain, I am not a mechanical engineer. But anyone riding upon them, as I have done, will experience a difference.
7116. Then, you say she is rougher on the road? Yes.
7117. While you were Inspector did you receive any complaints from your Sub-inspectors about the Vulcan engine doing more injury than the other engines? No.
7118. Not from your gangers or fettlers? No.
7119. *Professor Warren.*] You said that there were certain 71½-lb. iron T rails on the roads? Yes.
7120. Do the Baldwin engines run over them? No, not at the present time.

7121. *Mr. Brown.*] I think the Commission will have to recall Mr. Halligan with regard to question 2195 in the minutes of evidence. It is as follows:—

2195. Have you made any alteration to them (the platforms) since the Baldwin engines came here? We made some alterations to the buildings, but not to the platforms.
2196. You are quite sure? Yes.

Also:—

2200. Then you say positively that no alterations were made to the Murrurundi and Farleigh platforms since the engines came here? Yes, I say so.

Mr. Halligan wants to alter the word "here," to "Newcastle," in both of these questions, in order to make his answer correct. Mr. Hoyle points out that in one of the books, with regard to repairs produced by the Commission, and from the Newcastle line an entry is made as follows:—"Altering platforms to give clearances for the new locomotives." For the purpose of examination, so far as Mr. Hoyle was concerned, it was material Mr. Halligan should have made the statement he did, so that we think he should be recalled in order to give him an opportunity of correcting his evidence, if he wished to do so, and also of course of being cross-examined upon it.

James Fraser being sworn, said:—

Mr. J. Fraser. 25 May 1892.

7122. I am in the employment of the New South Wales Railway Department, and at present occupy the position of Assistant to the Engineer-in-Chief. I have been in the Department altogether 14 years.
7123. *Mr. Fehon.*] How long have you been altogether on the Construction and Existing Lines Department? Fourteen years.
7124. In your experience in connection with the railways, have you found the ironbark sleeper of exceptional quality? Yes, it is the finest that can be used.
7125. What are its principal advantages? They are its weight, great strength, and durability.
7126. Do these sleepers hold their fastenings well? Yes, exceedingly well.
7127. And exposure has very little effect upon the wood? Practically none.
7128. What is the spacing of sleepers on all roads at present renewed? Two feet seven inch centres.
7129. And the weight of the rail used? Eighty pounds to the yard.
7130. And the material is steel? Yes.
7131. Is not a great portion of the Railway now spaced with sleepers 2 ft. 7½ in. apart? Yes, about 1,650 miles
7132. The original spacing of a large portion of the road with 71½ steel rails was with sleepers 2 ft. 7½ in. apart? Yes.
7133. That is out of the total mileage of about 2,200 miles, 1,650 miles have sleepers spaced 2 ft. 7 in. to 2 ft. 8 in. apart? Yes, the total mileage is 2,179 miles, that is the exact number.
7134. Where the sleepers are 3 feet apart on the straight, are not special steps taken to strengthen the line at the curves.
7135. To what extent? From 30-chain to 15-chain curves the sleepers are placed at 2 ft. 9 in., and on curves less than 15-chain they are spaced 2 ft. 4 centres.
7136. Do you consider the lines to be well ballasted at the present time? Yes.
7137. Are not they in better order now than at any time previously you have known during your fourteen years experience? Yes; they are in very much better condition.
7138. You know the amount of ballast the Commissioners have put on during the time they have held office? About 700,000 tons.
7139. And the greater portion of that is of what class metal? About 600,000 tons of it is blue metal.
7140. It is ballast of a high quality? Yes; the finest quality.
7141. What is your experience with regard to the effect of the Baldwin engine on the permanent way? So far as I can judge by seeing the effect on the road, I do not think that they have any detrimental effect upon it.
7142. These engines are not detrimental to the road you say? No; certainly they are not.
7143. There has been evidence given here of alterations to platforms;—were not a large number of the platforms allowed to stand as they had been originally constructed? Yes; a very large number.
7144. And those which were altered were such as were not up to the standard gauge laid down by Mr. Whitton? No; they were within that gauge.
7145. *Professor Warren.*] They were narrow you mean? Yes; they were within the standard laid down by Mr. Whitton.
7146. *Mr. Fehon.*] If all the platforms had been built in Mr. Whitton's gauge, no alterations would have been necessary to enable the Baldwin engines to pass? No, sir; that was proved in one case. On the Blayney section, from Harden to Blayney, the Baldwin engine ran through without alteration being made to any of the platforms.

Mr. J. Fraser. 25 May, 1892.

7147. One of the charges made against the Railway Commissioners is that in consequence of the great weight of these engines—the Baldwin passenger and Consolidation—the safety of the permanent-way is likely to become endangered;—what is your opinion with regard to that charge? I do not think there is the slightest danger of the safety of the permanent-way being endangered.
7148. You consider that the Baldwin engines are well suited to the permanent-way of this Colony? Yes; the permanent-way is quite suitable to carry them safely.
7149. *Mr. Hoyle.*] I understand you to say that you are Assistant to Mr. Foxlee? Yes.
7150. Do you remember some alterations being made to the coal-stage at Eveleigh? That was before I was appointed Assistant to the Engineer-in-Chief.
7151. But you were in the Department at the time? Yes; as Divisional Engineer at Goulburn.
7152. You say you consider the permanent way to be suitable to carry the Baldwin engines—that, I suppose, is with the 80-lb. steel rail, which I myself consider perfectly safe for carrying these engines—but, taking a 75-lb. iron, and a 75-lb. and 71-lb. steel rails, do you consider that they are perfectly safe for carrying a Baldwin engine travelling at the rate of 40 miles an hour? Yes.
7153. Would it be equally safe with 75-lb. and 71-lb. iron rails with sleepers spaced 3 feet 1½ inches apart? There are none spaced so.
7154. I am speaking of the iron rail;—do you say there are none of them spaced at that distance? Yes, now I think of it, I believe there are—71½-lb. iron rails and part of them are supported by sleepers 3 ft. 1½ in. apart.
7155. Do you consider a Baldwin engine passing over that line perfectly safe? Yes.
7156. *Mr. Fehon.*] They are not running on that part of the road at all.
7157. *Mr. Brown.*] Unfortunately our Commission uses the words "Unsuitable for the permanent-way of the New South Wales Railways," and although they may not be running along the line in that locality, still they may be required to do so at some future time, and we have to take into consideration whether they are suitable for doing so or not.
7158. *Professor Warren.*] At the same time it is quite right for Mr. Fehon to point out that they are not running in that locality.
7159. *Mr. Hoyle.*] They were running on express duty at Newcastle.
7160. *Mr. Brown.*] But they are not running now.
7161. *Mr. Hoyle.*] But they might be used for that purpose.
7162. *Mr. Brown.*] Certainly, and therefore for that reason the Commission has not shut out this evidence.
7163. *Mr. Hoyle.*] Do you consider that they are perfectly safe, and that they do not knock the road about? They certainly do not knock the road about.
7164. *Professor Warren.*] You asked him if the 71½-lb. rails with sleepers 3 ft. 1½ in. apart were safe. I do not think he answered that.
7165. *Witness.*] Yes; I think they are perfectly safe.
7166. *Mr. Hoyle.*] Running at a speed of 40 miles an hour? They are not running at a speed of 40 miles an hour.
7167. *Mr. Brown.*] I should think the Commissioners, where the sleepers were spaced at that distance, would take the necessary precautions for the public safety by slowing down the speed.
7167½. *Mr. Hoyle.*] Well, this road that is perfectly safe, does it keep in good order? Yes; very good order.
7168. Is there any more trouble with it than with the road where the 80-lb. steel rail is used? No; no more where the road is well boxed up and ballasted.
7169. And why do you put in an 80-lb. rail? For economy.
7170. Do you consider, then, that a 71½-lb. iron rail that has been run upon, and which evidence has been brought to show was reduced by 1½ lb. by wear and tear, and then turned over, is safe for these engines to run upon? The 71½-lb. iron T rail is never turned.
7171. I am referring to the 75-lb. double-headed iron rail. This rail, it has been shown, has lost 1½ lb. through wear, and has then been turned over. Do you consider that rail would then be safe? Yes; I think so. I think it would still be safe.
7172. *Professor Warren.*] You say that a 71½-lb. iron T rail, supported by 3-ft. 1½-in. sleepers, would be safe for the Baldwin engine to run over? Yes.
7173. Would you tell us the minimum weight of rail that could be used for carrying a Baldwin engine—I mean a T rail, with the sleepers 3 feet 1½ inches apart. What should be the minimum weight of such a rail to carry a Baldwin engine with safety? I could not say. I think a rail of 69 lb. iron would carry it with safety.
7174. If you were making calculations, you would not make them on the basis of treating the rail as a fixed beam;—would you calculate the rail, considering it as a beam? Yes; I think you could calculate it that way.
7175. Would you place any reliance on such a calculation? Well, you would not get really good results.

Mr. W. T. Foxlee recalled:—

Mr. W. T. Foxlee. 25 May, 1892.

7176. *Mr. Fehon.*] Are you a member of the Institute of Civil Engineers? Yes.
7177. How many years have you been employed in connection with railway construction and working? About twenty-five years.
7178. Are you thoroughly acquainted with the mode of construction and maintenance adopted by the principal English railway companies? Yes.
7179. It has been stated that in consequence of the extra width of the Baldwin engines or their great length the platforms in various parts of our lines have had to be altered, is that correct? No; they have been altered to bring them back to the standard gauge, that is to say those which were out of gauge have been brought into gauge.
7180. Is it not a fact that as far back as 1879 reports were made that certain engines, then placed upon the lines, could not pass the structures then existing? Yes; that is a fact.
7181. *President.*] What is a fact?
7182. *Mr. Fehon.*] That as far back as 1879 objections were made to certain platforms being too near the rails. (To Witness.) Do you produce a paper in confirmation of this statement? I do. [*Paper produced and put in.*] 7183.

Mr. W. T. Foxlee. 25 May, 1892.

7183. To enable the engines referred to therein to run on the Western line, were not a number of structures altered and in many instances lines slewed to admit them to pass? Yes.
7184. Was not the width of those engines over the cyclinders slightly in excess of the width over the cyclinders which the Baldwin engines, now under discussion, were ordered to be? Yes; they were slightly over the width of the Baldwin engines—the new Baldwin engines.
7185. If the works and rails in connection with the permanent-way had been kept to the gauge adopted by Mr. Whitton, the late Engineer-in-Chief for Construction, would it have been necessary for the Railway Commissioners to have spent any money whatever to admit of the running of the Baldwin engines over the whole of the line? Not a penny.
7186. What is the total amount of money that has been expended to enable the engines to pass over all the main lines and many of the branches? A little over £3,000.
7187. Is this expenditure not a very small one, as compared with the great advantages gained by the change? Undoubtedly.
7188. Is it not a fact that the question of making these alterations had been prominently before the Railway Commissioners long before the Baldwin engines were ordered? Yes. When the Commissioners took office, the whole question was taken in hand, and instructions were given for the matter to be gone into, and measurements taken, in order to find out exactly which of the structures were out of gauge.
7189. So as to bring them all to a uniform gauge? Yes.
7190. *Mr. Brown.*] Whose fault was it, if there was a uniform standard gauge laid down by Mr. Whitton that this otherwise unnecessary work had to be done?
7190½. *Mr. Fehon.*] A great many of the platforms were taken over from the contractors before they were finished by them, the people being anxious to have the platforms so as to use them. They were taken over by the Construction Branch, and built by the Existing Lines Branch under Mr. Cowdery.
7191. *Mr. Brown.*] But still the uniform gauge was in existence, and some one should have seen to it that the platforms were made in conformity with it.
7192. *Mr. Fehon.*] Oh, undoubtedly. The platforms varied from 8 inches to 1½ inches out of gauge.
7193. *Mr. Foxlee.*] The return I have put in will show that the platforms varied and were at all sorts of distances from the rails.
7194. *Mr. Brown.*] Then it is plain someone blundered? Yes.
7195. *Mr. Fehon.*] It has been stated that in consequence of the great weight of these engines—the Baldwin passenger and Consolidation—the safety of the permanent-way is likely to become endangered, our standard rail being 71½-lb. per yard, whereas the Baldwin engines were designed for an 80-lb. rail. Did not the Commissioners immediately after taking office adopt as a standard rail for the New South Wales railways a steel rail weighing 80-lb. to the yard? Yes.
7196. So that 71½-lb. to the yard is not our standard of rail? No.
7197. And do you consider that the permanent-way is likely to be injured by these engines running over it? Not in the least.
7198. At the present time are there not more than 200 miles of road laid with the 80-lb. steel rails? Yes.
7199. That is since the Commissioners took office? Yes; there are over 200 miles laid with the 80-lb. steel rail, and some 70 miles with the 71½-lb. steel rail, making a total of 270 miles of steel rails.
7200. And that is since the present Commissioners took office? Yes.
7201. What is the standard spacing of the sleepers adopted by the present Commissioners? Two feet 7 inches from centre to centre on the straight.
7202. *President.*] And the same on the curves? Yes.
7203. *Mr. Fehon.*] So far as the spacing between the sleepers is concerned there is no difference made between the straight and the curves? No.
7204. What are the dimensions of the sleepers now used? Nine feet long, 10 inches wide, 5 inches thick.
7205. Are they not exceedingly heavy compared with the sleepers used in other parts of the world? Yes; we take them to average 252 lb., whereas the average weight of the Baltic timber creosoted sleeper of similar dimensions to our own used on the English railways is 160 lb.
7206. What is the lightest rail used on the western line? On the main western line?
7207. Yes? Seventy-one lb. iron and 71½ lb. steel.
7208. In regard to the weight of rail;—when a rail is about 70 lb. in weight per yard, is it not a question of economy rather than security to add to its weight? Yes; we take that as our practice now. Anything above 70 lb. we regard as being used for reasons of economy.
7209. That is to say, that you would consider a steel rail 70 lb. to the yard on ironbark sleepers, spaced as under the present standard, capable of bearing any weight that may be placed on the driving-wheels of the engines that are running upon the New South Wales railways? Oh, yes; thoroughly so.
7210. And even capable of carrying a greater weight? Yes.
7211. Although the Baldwin engines are much heavier than other engines in use upon the lines, does not the distribution of weight over a greater number of wheels do away with any disadvantages arising from extra weight? Yes; we do not find these engines, though they have a somewhat heavier weight on their axles, tell injuriously upon the road at all.
7212. And do you not consider them easy and flexible upon the road—are they not easy running engines? Yes; all the reports I get tend that way, and from my own observation I have no doubt that they are quite as easy, if not easier, than the heavy engines previously used on the lines.
7213. Does not this, therefore, even considering the extra weight, make them much more easy upon the lines when passing round curves. I refer more particularly to their flexibility? Yes; and the absence of a flange on the driving-wheels also helps to ease them when running round the curves.
7214. You have been over the lines recently? Yes.
7215. What is your opinion of the permanent-way of the New South Wales railways from end to end? Speaking generally, it is in very good order.
7216. Do you consider the permanent-way of the New South Wales railways equal to a large portion of the roads of the English railways? Quite, and a considerable portion is better.
7217. What is the prevailing practice in England with regard to spacing of sleepers? Three feet apart centres.
7218. What length of the railways of New South Wales at the present time have the sleepers spaced 2ft. 7in. and 2ft. 8 in. apart? About 1,650 miles.
7219. Is there not an enormous advantage gained upon our railways over the English by having our very hard ironbark sleepers? Certainly.

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7220. I think you stated the class of wood in use in England on the railways? Yes; it is soft Baltic timber.

7221. And because of the softness of the wood, and to ensure the rail being safely secured upon the sleepers, what course is taken by these Companies? To distribute the weight a broad cast-iron chair is used, with four fastenings. That is the usual practice.

7222. In consequence of the sleepers being soft, chairs are used more frequently in England to keep the rails in their place than where they have solid hardwood sleepers, such as ironbark? Yes.

7223. *President.*] Do they not have four fastenings to the chairs here? No; not in the case of the rails, but there is an extra spike put in in the case of sharp curves.

7224. I was only asking on account of something I saw on a suburban line; I arrived at my station too early this morning, and during the time I was waiting I looked at the chairs holding the rails on the line, and I certainly saw four holes for fastening them? Oh, yes; that is so in the case of the bull-headed rails which we have used on the suburban line where chairs are of course used. As a matter of fact, although there is provision made in the chairs for four fastenings, we only find two to be necessary on account of the hardness of our sleepers. They (the fastenings) are placed diagonally, so that when the holes become worn we can change them to the other pair.

7225. *Mr. Fehon.*] But in England, in consequence of the soft wood they use as sleepers there they have to utilise the four fastenings? Yes.

7226. Is not the security of the fastenings an exceedingly important element in the keeping of a safe road for the engines to pass over? Yes; undoubtedly.

7227. The Chief Commissioner stated that the total weight of permanent way employed to the mile of road was a most important element in showing the stability of the line; is that so in your opinion? Yes.

7228. That is, the heavier sleepers make the better road? Yes; and it is most important with regard to durability.

7229. Have you in your possession any facts bearing upon this point? Yes; I have the details of the weights of four different types of permanent way in use upon these railways per mile with me. Shall I quote the weights for each? They are as follows:—

75-lb. D.H. iron Sleepers, 3-ft. centres:—

	lb.	tons cwt. qr. lb.
Rails, 1,760 × 75 lb. × 2	= 264,000	
Fish-plates (average), 940 × 10½ lb.	= 9,870	
Fish-bolts, 1,880 × 20½ oz.	= 2,409	
Chairs and spikes, 3,520 × 29½ lb.	= 103,840	
Keys, 3,520 × 1 1/16 lb.	= 37,400	
Sleepers, 1,760 × 252 lb.	= 443,520	
	891,039	= 384 7 3 11

71½-lb. T steel; 8 ft. sleepers; 2 ft. 7½ in. and 2 ft. 8 in. centres:—

	lb.	tons cwt. qr. lb.
Rails, 1,760 × 71½ lb. × 2	= 251,680	
Fish-plates (average), 940 × 10½ lb.	= 9,870	
Fish-bolts, 1,880 × 20½ oz.	= 2,409	
Wood screws, 4,935 × 14¼ oz....	= 4,395	
Spikes, 3,996 × 14½ oz.	= 3,621	
Sleepers, 2,000 × 180 lb.	= 260,003	
	631,975	= 282 2 2 15

If laid with sleepers 9 ft. long, 10 in. x 5 in; 2 ft. 7½ in. and 2 ft. 8 in. centres:—

	lb.	tons cwt. qr. lb.
Rails, 1,760 × 71 lb. × 2	= 251,680	
Fish-plates, 940 × 10½ lb.	= 9,870	
Fish-bolts, 1,880 × 20½ oz.	= 2,409	
Wood screws, 4,935 × 14¼ oz....	= 4,395	
Spikes, 3,996 × 14½ oz.	=	
Sleepers, 2,000 × 252 lb.	= 504,000	
	775,975	= 346 8 1 11

80-lb. T steel. Sleepers, 2 ft. 7 in. centres.

		tons cwt. qr. lb.
Rails, 1,790 × 80 lb. × 2	= 281,600	
Fish-plates, 704 × 10½ lb.	= 7,392	
Fish-bolts, 1,408 × 20½ oz.	= 1,804	
Wood screws, 4,928 × 14¼ oz....	= 4,389	
Spikes, 4,224 × 14½ oz.	= 3,828	
Sleepers, 2,112 × 252	= 532,224	
	831,237	= 371 1 3 1

L. and N.W.R., 84-lb. bull-headed steel. Sleepers, 3 ft. centre.

		tons cwt. qr. lb.
Rails, 1,760 × 84 lb. × 2	= 295,680	
Fish-plates, 704 × 16½ lb.	= 11,616	
Fish-bolts, 1,408 × 23½ oz.	= 2,068	
Chairs, 3,520 × 45 lb.	= 158,400	
Spikes, 7,040 × 1¼ lb.	= 8,800	
Screws, 7,040 × 1¼ lb....	= 8,800	
Keys, 3,520 × 1⅛ lb.	= 3,740	
Sleepers, 1,760 × 160	= 281,600	
	770,704	= 344 1 1 4

These

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These weights have been gone into very carefully, and, I think, can be taken as accurate.
7230. On the old sections of the line where the sleepers were originally placed 3 ft. centre to centre on the straight, is it a fact that the road in the curves is strengthened? Yes, on curves of from 15 to 30 chains radius they were placed 2 ft. 9 in. apart, centre to centre, and on curves of 15 chains and under they were placed 2 ft. 4½ in. apart, centre to centre.
7231. What is the amount of steel road that the Commissioners have put into the lines since coming into office? About 270 miles laid with 80-lb. and 71½-lb. steel rails.
7232. Do you know the amount of ballast which has been used? Seven hundred thousand tons, I believe.
7233. What was the character of that ballast? Basalt, and diorite, and slag—the very best.
7234. Of an exceedingly hard nature, so that it would last for many years? Yes.
7235. What amount of improvement has been made on the line between Granville and Bathurst since the Commissioners came into office? About 45 miles of road have been relaid, and about 60 miles re-ballasted, and about 81 miles lifted and partially re-ballasted.
7236. Are there still some iron rails on the Western line? Yes, there are; but we hope to get them all out of the main road by the end of the year, and to replace them all by steel.
7237. In relaying, if any rail is taken out, and is still fit for further use, is it utilised? Yes; we use them for sidings mainly, instead of employing new material.
7238. What is the weight of rail in use on the Western line? The weights are 71½-lb. steel, 75-lb. iron and steel, and 80-lb. steel rails.
7239. With your knowledge of the railways of this Colony, are you of opinion that the permanent-way of New South Wales is suitable for the Baldwin engines to run on? Yes; I am.
7240. Certain bridges have been referred to in the course of this inquiry, namely, at Solitary Creek and Wollondilly River, have plans been under consideration for strengthening these bridges, and is the work about to be commenced? Yes; we have already prepared plans for strengthening these bridges, and I would like to show the plans to Professor Warren. [*Witness here produced the plans referred to, and pointed out to the Commissioners the proposed alterations.*] In the Report of the Royal Commission on the Railway Bridges of the Colony issued some years ago it was pointed out that certain of the structures, among them the bridges over Solitary Creek and the Wollondilly were weak, and in consequence of that we are taking steps to strengthen them. This is how we propose to do it: We purpose putting in a centre girder under the existing bridges, and by that means we shall not only strengthen the cross-girders, which are unduly strained, but we shall relieve the main girders, which are also strained above the standard limit. Arrangements are being made for this work to be carried out at once, and in the meantime every precaution is being taken to render these bridges perfectly secure for the traffic.
7241–2. *President.*] You mean, I suppose, by slackening the speed of the trains passing over them? Yes.
7243. *Professor Warren.*] You are not propping the bridge, I suppose? Oh, dear no, I should be very sorry to allow a bridge to fall into such a condition that it would require propping.
7244. *President.*] So I understand that until you have carried out these alterations you slacken speed in going over the bridges? Yes.
7245. And you are going to put the bridge in such a condition that ultimately you will not need to trouble about checking the speed of the trains passing over it? Yes. We do not say that there is any risk now, but we say that the iron is being unduly fatigued, and we think it desirable therefore to strengthen the bridges.
7246. *Professor Warren.*] But you do not mean that by slackening speed you relieve the bridge of stress? Yes, to some extent.
7247. You have taken deflections, I suppose? Yes.
7248. Well, do you find any difference in the deflection between full and slow speed? Yes, with full speed the deflection is rather more than at a low speed.
7249. How much, 10 per cent.? I do not remember exactly but I know that it was rather more in the case under consideration.
7250. Then you suppose that the stress would be proportionate to the strain, but that the slowing down would reduce it a little? Yes. We think it is perfectly safe, but at the same time we believe it desirable to adopt the recommendation of the Royal Commission that I have previously referred to.
7251. After the recommendation of the Royal Commission you say you determined to strengthen them in some way? Yes.
7252. *Mr. Fehon.*] Do you know how long it is since the project of strengthening these bridges was first in contemplation? It was under consideration before the introduction of the Baldwin engines. The matter was looked into, but on account of the pressure of work it was not found possible to carry out until now.
7253. *President.*] What did you say?
7254. *Mr. Fehon.*] I asked how long this work had been in contemplation, and Mr. Foxlee says long before the Baldwin engine was thought of instructions were given with regard to it. [*Plan of Solitary Creek Bridge produced, and the proposed alterations were pointed out by the witness.*]
7255. Pending the strengthening of these bridges being carried out, have proper steps been taken to ensure the safety of the traffic passing over them? Yes, as I have said before, the speed has been lowered and the bridges are carefully inspected.
7256. And although these matters are contemplated, do not you consider that at the present time the bridge has a very large margin indeed on the side of strength as compared with any possibility of risk? Yes; there is a good margin if you took the Board of Trade regulations—that is, 5 tons in tension and 4 compression—it would be quite safe.
7257. And is that your usual practice? Yes, generally.
7258. I am very sorry to hear it.
7259. *Mr. Fehon.*] In that reduced rate of speed would you consider this bridge to be perfectly safe to carry traffic? Yes.
7260. *President.*] What do you mean by factor of safety;—is it the point beyond which it would be unwise to go?
7261. *Witness.*] It is the ratio that the actual strain bears to the ultimate strength, it may be a fourth or a fifth of the ultimate strength, and that we call the factor of safety.

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7262. *Mr. Felton.*] What is the length of the span on the Solitary Creek Bridge? Sixty feet on the skew.
7263. With two engines coupled together, you would have two engines on together? No; we would only get one engine on and its tender at the same time.
7264. Do you consider that everything necessary has been done for the safe working of the lines, and that the Baldwin engines run with perfect safety on the roads throughout? I do.
7265. And that the road is suitable for the engines in every respect.
7266. *Mr. Hoyle.*] Could you tell me the total mileage of the railways in New South Wales? It is about 2,200 miles.
7267. So that we have about how many miles of rails with less weight of rail than 80 lb. to the yard? We have rather less than 2,000 miles.
7268. With a lighter rail than an 80-lb. rail? Yes.
7269. You have just stated that it is the intention of the department to take out all the iron rails? Yes.
7270. Why take them out if they are perfectly safe as you have stated, you say that the road is good and safe—why take them out until they are worn out? Because it is desirable to do so, inasmuch as they are getting to the end of their life, and inasmuch as we cannot remove all the iron rails by a stroke of the pen, it is necessary to commence before they are actually worn out, in order to have them all removed by the time that they are worn out; in addition to that where you have iron roads with rails wearing out it is necessary to get other rails for repairing purposes, and with that object we are taking out some of the rails that are not actually worn out.
7271-2. You say that you are using the 80-lb. steel rail for purposes of economy, how do you reconcile this with the fact that you are taking out a number of rails that are not worn out? Because there is a limit to the life of iron rails, and we cannot wait till they are all worn out before we replace them.
7273. Has that limit been reached? No, not yet, but by the time they are taken out it will have been reached, and there are rails which it is desirable to replace from time to time, and these we are taking out; but if you ask me if the whole of these rails should be taken out now, I say no. We do not, in relaying, use a new rail to replace an old one, but we relay a whole length, and in that way we recover a certain number of rails useful for repairs on portions of a road that we do not intend to relay.
7274. You say that the road is in good order, and perfectly safe, and now you say that you are going to remove all these iron rails; I ask you is it because the limit has been reached to which these iron rails go? There are certain iron rails which it is desirable for us to remove now, and in doing so we must also remove others which are not worn out, because it is not desirable to repair an old road with new rails.
7275. Well, when will the limit be reached? By the time the whole of these rails are taken out the bulk of them will have reached their limit.
7276. I think we must conclude from that that we have unsafe rails on the road? Not at all.
7277-8. *President.*] How do you tell when the rails have reached their limit of safety; is there a certain rule by which you are guided? There is no hard-and-fast rule laid down—we tell by inspection. Where they are sufficiently worn to warrant it we remove them.
7279. Then, are there a sufficient number worn to warrant the removal of these rails at once? I do not say that; we have made arrangements for relaying certain portions of the road, and by the time that relaying is completed it will probably be time to remove these rails.
7280. *Mr. Brown.*] We might ask him if the limit of safety will depend upon whether the Commissioners can get the money to take the rails out or not.
7281. *President.*] You say you are going to take out a lot of these rails; is your reason for doing so that the rails have reached their limit of safety; have they reached it, or will they have reached it by the time you mention? They will have.
7282-3. What do you mean by that? We are carrying out the change now, and by the time we get to certain sections it will be necessary to take these rails out—that is, calculating at the rate we are going now.
7284. *Mr. Brown.*] In the ordinary course of events, if you had money would you not take many of these rails out? Yes.
7285. *Professor Warren.*] You say it is economical to take them out, because you put in a larger rail? Yes; and because I want the old rails that I take out for use for repairs and sidings.
7286. *Mr. Hoyle.*] Relative to the bridges, you say that nothing has been done to Solitary Creek Bridge, which will answer for the lot, since the report of the Royal Commission was issued; will you give us your reason why this bridge was not strengthened in accordance with the recommendation of the Commission, I understood you to say that the reason was the great quantity of other work that had to be done had delayed this being put in hand, do you not think that work which is in such a condition as to require the slowing-down of an engine passing over it should be gone on with at once? Well, there were many important works to be done, and we took the most important ones first. I know bridges in England over which trains are slowed-down for the same reason that I have stated here.
7287. When was it that you decided to strengthen these bridges? I cannot tell you the exact date, but it was before the introduction of the Baldwin engines.
7288. You are now making arrangements speedily to have this work done? Yes; plans are being got out for the work.
7289. You said that the platforms were altered purely for the purpose of putting them in gauge? Yes.
7290. This [*producing a book*] is the cost-book from Newcastle, showing that the alterations made at certain platforms—I will read them to you:—June 25th, 1891, D.E. 91–1,048, E.E. 91, Hamilton to 51 North Coast—altering platform to give clearance for new locomotives:—Date of completion, 14th September, 1891; wages, £45 16s. 11d. And again—June 25th, 1891, D.E., 91–1,048, Newcastle to Warrangarra—altering platform to give clearance for new locomotives:—Completed, 14th September, 1891; wages, £1,092 9s. 2d.; stores, £378 3s. 8d. And again—June 25th, 1891, D.E. 91–1,048, Newcastle and Wallerawang—slewing roads to give clearance for new locomotives—Completed 14th September, 1891; wages, £47 9s. 2d.; stores, £2 8s. 7d. Can you explain these entries? I explain as I have before explained, that since the Commissioners took office, instructions were given to ascertain to what extent the platforms on the lines were out of gauge, and that being done, directions were issued to bring them to Mr. Whitton's standard gauge, and the platforms to which you have referred are portions of the structures which were so brought to gauge; the advent of the Baldwin engines undoubtedly accelerated these alterations; I have nothing to do with the way they were entered in the book.

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7291. *President.*] Who entered them? The Divisional Engineer would probably be the person.
7292. *Mr. Hoyle.*] I notice that in this book the Engineer-in-Chief's minute of 1891 is quoted, and I presume that would be done from your instructions from the Head office? No doubt it would be done from instructions received from the head office.
7293. Will you produce that minute? Yes; I will have it produced.
7294. Now, if this work was only done to bring the platforms into gauge, why did you charge it in the way I have stated;—why did you not charge it under the head of bringing the road to gauge, and not to the Baldwin engines? That is a matter that rests with the Divisional Engineer;—the object was to enable the Baldwin engines and other engines of similar dimensions to run over the line without let or hindrance.
7295. The Divisional Engineer stated that nothing had been done since January, 1891, and any alterations that had been made had nothing to do with the Baldwin engines, but here we see that the work was charged directly to those engines.
7296. *Mr. Brown.*] You can recall the witness, Mr. Hoyle, but you cannot connect Mr. Foxlee with that statement. I do not see how you can make this witness responsible for another person's statement.
7297. *Professor Warren.*] Have you got the minute referred to by Mr. Hoyle? No; I have not got it.
7298. *Mr. Hoyle.*] The number of the minute is 1,048, 1891.
7299. *Mr. Brown.*] You will produce that minute, Mr. Fehon?
7300. *Mr. Hoyle.*] Some considerable alterations were made at the Eveleigh coal-stage;—were those alterations made in order to give clearance to the cab of the Baldwin engines or not? Yes; the Baldwin engines and other engines of similar dimensions.
7301. Is it not a fact that the Baldwin engine could not have got to the coal stage if these alterations had not been made? Yes; nor could any other engine of similar dimensions have done so.
7302. Then how did you coal the other engines, which you say were wider? I cannot answer that question. You had better ask the Chief Mechanical Engineer.
7303. I would like to recall Mr. Robinson, of the Locomotive Department, for the same reason that I wish to recall Mr. Halligan, namely, that he has given very contradictory evidence—his report to the department is contrary to the evidence which he has given.
7304. *President.*] Very well, he will be recalled.
7305. *Mr. Hoyle.*] Will you tell us when the alterations to the coal stage at Eveleigh were made? I think some time last year; but I am not quite certain.
7306. Have you any experience of the spacing of sleepers in England? Yes.
7307. Can you tell us of any railway where the spacing of sleepers is greater than 3 feet—(say) 3 ft. 1 in.? Speaking generally, the spacing is about 3 feet, but I cannot say accurately. Speaking generally, what I have said represents the fact.
7308. You know the rail on the Great Western line, the 62 lb.—a bridge rail—is that on a longitudinal sleeper or not? A bridge rail is, of course, on longitudinal sleepers. The new rails they are putting down are double-headed.
7309. What is their weight? I am not quite sure; but I think it is less than 80 lb. per yard. However, I am not certain.
7310. But a 62-lb. bridge rail used on the Great Western line is, you say, carried on longitudinal sleepers? Yes.
7311. Would a bridge rail supported in that way be as strong, and carry as great a weight, and be as solid as an 80-lb. rail with sleepers spaced 3 feet apart? I do not think so.
7312. Why? Because a light rail is more flexible, and, despite your timber, it would have a tendency to bend with the weight passing over it. The heavier your rail the more rigid it is.
7313. I have the authority of Mr. Findlay, the manager of the Great Western, for saying that a longitudinal sleeper is about equal to 10 lb. on the rail.
7314. *Professor Warren.*] But Mr. Findlay is not an engineer.
7315. *Mr. Hoyle.*] I shall put in evidence to-morrow to show that English railways have their sleepers more closely spaced. (To Witness.) How was the Glenlee Bridge tested;—what was the weight on the bridge when the test was made? A Baldwin consolidation engine.
7316. Only one engine? Yes; and, I think, two cars.
7317. *Professor Warren.*] You put the heaviest load you could on, and I suppose that was a Baldwin engine? Yes.
7318. The 62-lb. rail was used by the Great Western Railway Company was carried on longitudinal sleepers, was it not? The bridge rail was.
7319. Would not the bridge rail, carried on longitudinal sleepers, be as strong and carry as great a weight as an 80-lb. rail with sleepers placed 3 feet apart? I do not think so.
7320. Can you say why? Because the lighter rail is more flexible than the heavier rail, and, in spite of your timber, the thing would bend with the weight passing over it. The heavier the rail the more rigid it is.
7321. I have not the authority with me, but I have it at home, and can bring it to-morrow; but Mr. Finlay, of the London and North-Western Railway Company, states that the longitudinal sleeper adds strength equal to about 10 per cent. of the rail.
7322. *Professor Warren.*] Mr. Findlay is not an engineer.
7323. *Mr. Hoyle.*] No; but he makes the statement upon the authority of Mr. Thornhill, who has calculated the thing out.
7324. *Professor Warren.*] Well, he is an engineer.
7325. *Mr. Hoyle* (to Witness).] Will you tell us how the Glenlee Bridge was tested;—what was the weight on the bridge when the tests were made? A Baldwin consolidation engine was run on to the bridge for the purpose of making the test.
7326. Only one engine? One engine and, I think, two cars.
7327. But is it not customary when testing bridges to put a greater weight upon them than the weight that they are likely to have to carry? Yes; but it is not intended to couple two Baldwin engines together in any portion of these roads, so that no bridge is likely to have to carry them, and in the case of the Glenlee Bridge only the engine could rest upon an opening at one time.
7328. Yes; but when you are taking a test of a bridge of that kind you would usually have more than two carriages, would you not;—is it not customary when testing a bridge to put a live and dead load upon it? It is customary to put the heaviest rolling load upon it.

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7329. Well, then, inasmuch as that was not done in this case, do you consider that the test was a fair one? We put the heaviest load upon the span that it could possibly have to carry, and that is a Baldwin consolidation engine.
7330. What is the length of the span? Twenty-one feet.
7331. What is the factor of safety allowed by you for the dead load on your bridges? We took the whole thing together in the Glenlee Bridge, and we made a factor of safety at about 7.
7332. And do you consider that a factor of safety of 7 for a live and a dead load is perfectly safe? Yes; I do.
7333. Is that the same for iron bridges? It is lower for iron bridges.
7334. What would be your factor of safety in the case of iron bridges? Four or 5.
7335. I see Professor Rankin states here that in timber bridges the dead load should be from 4 to 5, and the live load from 8 to 10;—do you consider that a factor of safety of from 8 to 10 for a live load is excessive? I told you what our usual practice is with timber such as we have in this country, and that I consider sufficient.
7336. Do you know what is the custom in the railroads of America—Mr. Eddy stated in his evidence the other day that some of the trains run from 50 to 70 miles an hour over a 67-lb. steel rail;—do you know what the spacing of the sleepers is in that case? I am not very well acquainted with the railways of America.
7337. *Mr. Fehon.*] It will, perhaps, be as well if Mr. Hoyle, in the first place, asks Mr. Foxlee if he has been in America.
7338. *Witness.*] No; I have not.
7339. *Mr. Hoyle.*] Well, Mr. Eddy in the course of his evidence stated a great many facts in regard to American railways, but I might as well have asked him if he had ever been in America.
7340. *Mr. Fehon.*] Oh, yes; he has been in America.
7341. *Mr. Hoyle.*] Well, he has never been on the line that I am alluding to.
7342. *Professor Warren.*] Mr. Eddy will probably give evidence again, and you will then have an opportunity of asking him these questions.
7343. *Mr. Hoyle* (to Witness).] Do you not consider, taking a 71-lb. rail for example, that sleepers placed at 2 feet 9 inches apart, would make the rail infinitely stronger than a rail of the same weight with sleepers placed 3 feet 1 inch apart would be? Oh, yes; I daresay it would.
7344. Can you tell us what is the difference in strength between iron and steel in rails? You may take 50 per cent. in the case of steel over iron.
7345. That is to say that steel is half as strong again as iron? I should say so, taking it roundly.
7346. *Professor Warren.*] You have spent considerable sums of money in relaying various parts of the road with 80-lb. rails? We have.
7347. Do you think that the spacing of 1 foot 8 inches in the joint will be sufficient to prevent the joints going down, as a result of the pressure of the driving-wheel? You have to take into consideration the length of the fish-plate.
7348. Yes, but your fish-plate is a common fish-plate? Yes.
7349. Well, if you look at this sketch you will see an angle fish-plate, which I daresay you are familiar with. Is it not customary on the English railways to use angle fish-plates? Speaking generally, English rails are double-headed rails.
7350. Yes; but even on a double-headed rail, is it not the custom to use angle fish-plates? Fish-plates, with a lip to them.
7351. We will take a T rail for example. Is it not customary in America to use angle fish-plates with T. rails? They have angle fish-plates on some of the roads there, I believe.
7352. Take the London and North-western Railway, in England, for example. You have a double-headed or a bull-headed rail there, but they are not content with the common fish-plate—they want something stronger? A large proportion of the roads in England are laid with a fish-plate which do not pass under the rails, but as the North Western Company are relaying their main road, they are, I believe, putting in fish-plates that have clips.
7353. Well, do you not think that you ought to have done so here? No; I do not think so. We find the spacing of our sleepers at the joints gives a sufficiently rigid road.
7354. You think that the joints, as the lines are laid at present, are as strong as the rest of the rails, do you? I think they are sufficiently strong. I may say that we have had the angle fish-plate before us, and are making experiments with it, and if we see that any advantage is to be gained by using them, I have no doubt that the Commissioners will take into consideration the advisability of adopting them generally.
7355. You think that the common fish-plate is good enough, however, with your present spacing of the sleepers? We think so.
7356. When you spoke of the spacing of the road, it was merely with regard to the assumption that the joints are well designed? We find that it is necessary to have a certain dead weight in the road to resist the shock of passing trains.
7357. What was the dead weight in this case? Three hundred and eighty-four tons 7 cwt. 3 qrs. and 11 lb. per mile, in the case of the 75 double-headed iron rails with sleepers 3 feet apart centres.
7358. In another case about 382 tons per mile, and in another 346 tons? Yes; we find that the heavier the road the easier it is to keep it in order, as far as line and level are concerned.
7359. But what do you think, yourself, about the angle fish-plate;—do you think that it would be a very desirable thing to put in? We are experimenting with it, but I certainly have not come across an angle fish-plate for a T rail that I should feel any confidence in asking the Commissioners to adopt at present.
7360. Do you drill holes in the flanges of the rails? It has been the practice to some extent.
7361. Do you consider it good practice? It has the effect of keeping the rails from creeping.
7362. Could you not arrange an angle fish-plate that would have the same effect? I have not seen it done satisfactorily with an angle fish-plate. All sorts of contrivances are adopted for the purpose of preventing the rails from creeping. I have seen an arrangement by which deep fish-plates are used, and which extend below the tops of the sleepers.
7363. Do you not think it is a bad thing to bore holes through the flange of a rail? Well, if you cut it out at the end where it rests upon the sleeper I do not think it would matter much. If it is near the end of the rail I do not think there is any great objection to it.

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7364. One more question upon rails, I merely want to take your opinion, do you consider that treating a rail as a fixed beam or a continuous beam is correct? In the evidence that I gave ——
7365. Yes, but since then we have had other evidence, and I want your opinion upon that point? I think that any calculations you make one way or another are of very little practical use.
7366. In fact you think that you cannot represent by calculation what actually takes place? No, because there are so many buts and ifs about it all.
7367. *Mr. Hoyle.*] Well, now bearing in mind the factor of safety recommended by Mr. Rankin, would you say that the same factor of safety should be maintained in ironbark as in Baltic timbers? Oh, no.
7368. Professor Rankin can hardly be including ironbark in his calculations, I should think? I do not think so.
7369. He certainly does not refer to it specifically. I do not see it included amongst the timbers given in the list, upon which he bases his calculations? And I do not think he can have had it in his mind when he recommended such a high factor of safety.
7370. In ironbark would you not consider a factor of safety of four would be sufficient, providing of course that the wood is in good condition? Yes; I should.
7371. I mean of course a real factor of safety of four, not a factor of safety of four at some distant period in the past? Yes.
7372. I will not say anything about the Glenlee Bridge, except to ask you about the tests you said you have made, were those tests made with a Baldwin engine and the driving-wheels in the centre of the bridge? Yes; the engine was placed in the very worst position in which it could be put.
7373. And you got how much deflection? Five-sixteenths of an inch I think.
7374. *Professor Warren.*] That is very small indeed. It is no use for me to say anything more about the matter, except this; Mr. Hoyle referred to the testing of the bridge with an engine and two carriages? That has nothing at all to do with it, we put the heaviest portion of the load on one span.
7375. I was going to say would it not affect the brake test? Of course, if you have a long train and after running it on to the bridge apply the Westinghouse brake, you produce longitudinal stress? Yes; that is precisely what is done, the train was taken on to the bridge at a high rate of speed and the brakes were then applied, the result being, I believe, that the longitudinal stress was nil.
7376. If you had had a longer train you would have tended to produce a greater stress, I take it, of course you had a small train with a heavy engine attached to it? Well, the effect was nil, possibly there might have been a greater effect with a longer train.
7377. You stated just now that you adopted the Board of Trade rules—5 tons in tension and 4 tons in compression for iron bridges. Are not the Board of Trade rules considered to be obsolete? Well, I have heard some people say that they are getting behind the age, but they are almost universally followed in England, in bridges of moderate dimensions.
7378. Yes, but take the deck of a bridge in England, would it not be much heavier than the deck of a bridge here? They are not heavier than the decks of bridges that we have been building recently. We have adopted the English practice.
7379. That would be in the quadruplication work I suppose? Yes; and in the duplication of the Southern line.
7380. But if you were building a bridge in the country you would not use brick arches, would you? Yes; if I could afford it I certainly would use brick or masonry arches.
7381. *Mr. Brown.*] Then after all the amount of money you have to spend determines the factor of safety? No; it is not so much a question of the factor of safety that I am thinking about as the desirability of avoiding frequent repairs.
7382. *Professor Warren.*] The Petersham viaduct is laid with what I believe you call an American deck? The old Petersham viaduct is, but not the new one.
7383. The deck of that bridge would weigh much heavier than an American deck? It would weigh much heavier no doubt.
7384. But take this bridge as you have designed it (referring to the new portion for the quadruplication) the ratio of the dead load to the live load that it carries is very small compared to your brick arches. Would you not allow a larger factor of safety in the case of a bridge like this than you would in the case of a bridge with a heavier deck? You can hardly compare an iron bridge like this with a brick bridge.
7385. No; but I want to get at is the factor of safety, and I want to hear what you would say about the factor of safety, if you have a smaller dead load to the same live load. There are some bridges between Parramatta and Penrith with lattice girders. The dead load is say one, and the live load nine, would you allow 4 or 5 tons there? Where the structure is proportionately so much lighter than the load that it has to carry, I should certainly be inclined to put a little more metal into the girders.
7386. But in certain parts of those bridges between Parramatta and Penrith, which are not so very new, what working stress would you allow? You could not bring those little light bridges down to the standard of four or five, or probably three. You could not reduce your metal sufficiently to bring them down to the theoretical strength.
7387. You would allow a smaller working stress? Yes; that is what it amounts to, and that applies generally to lattice girders of small dimensions.
7388. Can you give me the dead load per foot run on this bridge? I can supply you with the figures.
7389. At all events you have provided for the Baldwin engines on this bridge? Yes.
7390. Did you reduce it to so many tons per foot run? No; we never do that. We loaded it as badly as we could, shifting the engines about, so that they would produce the worst possible effect upon the bridge. I never take the rolling load at per foot run. I put the heaviest engines I can get in the worst possible position, and having done that, find the resulting stress and provide metal accordingly.
7391. Can you tell me whether that is the best American practice also? I am not sure; but I think it is a very proper one.
7392. Did you take more than one engine on the bridge? Yes; in this case we filled the spans with American engines. We put four or five on the bridge, and then got the resultant stress, not because they would ever run over the bridge four or five at a time, but because we determined to provide for the greatest possible stress.
7393. And you have done that on all the bridges that you have designed? Yes.
7394. Well, that simplifies that matter very much, and shows that you have taken due precautions? That is, I think, the proper thing to do.

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7395. If they had done that in the case of the Solitary Creek bridges, there would not have been so much trouble with them? No.
7396. You prepared a list of the bridges for the Commission, did you not? Yes.
7397. Will you tell me first of all, with regard to the Solitary Creek Bridge, what is your maximum stress? Do you mean what will be the maximum stress when the Baldwin engines are on the bridge and when it has been strengthened?
7398. No; as it is now. We see that you are going to strengthen the bridges, and we are very glad of it? The maximum stress is 5 tons in compression, and 7·24 per square inch in tension.
7399. Did you do that in exactly the same way as you took the stresses on the other bridges, by placing the Baldwin engines in the worst possible position? Yes. I have a diagram prepared specially, showing the stresses. I have had a second diagram prepared also. I am not sure whether it varies slightly from the first or not; but practically these are the stress [*pointing to the diagram*]. The working drawings have been prepared. I think the figures are the same as those I have given you.
7399½. The dead load on the bridge has not been altered since the Royal Commission on Bridges sent in their report, and it is given as 726 tons per foot run; the total load is given as 2,726 tons per foot run. The ratio of the dead load to the dead load plus the live load is ·27. Assuming that the stress may vary from ·27 to 1, what would be the breaking strength of the material—supposing you take a piece of iron in tension, what would be its breaking strength? I am afraid I do not quite follow you.
7400. I want to get the real factor of safety, and I want to find out what would be the breaking strength of the iron in the Solitary Creek bridges if they were loaded and relieved just as they are, in point of fact, by the trains running over them? I get a factor of safety of four. In strengthening the bridges I shall take care that the factor of safety is not below four.
7401. Well then, assuming that you put a girder in, that would be as strong as the two girders that are in at present, your factor of safety at the present time would be about two, would it not? What I say is that the range of stress is ·27. If the breaking strength is 21 tons, when the load is gradually applied, and you apply loads which vary from, say, 2 tons to 8 tons, and then again from 2 tons to 8 tons and so on, which you really do when you run a train over them, what would then be the breaking strength of the bridges it would be very much less than 20 would it not? Yes.
7402. Supposing it was 15 or 16 tons, and you gave 7·24 tons? I see what you are driving at.
7403. Yes; in that case where is your factor of safety? That would bring the factor of safety down to about two, assuming, of course, that your calculations are correct.
7404. Well, you can prove them for yourself; they are not mere calculations, they are facts proved by experiment. Do you consider that merely slowing down a train is good enough on a bridge that only has a factor of safety of two? I certainly think it is desirable to have a greater factor of safety.
7405. Yes, you would like to have a factor of safety of four? Oh, I certainly should in putting up a new bridge. I should never think of giving a smaller factor of safety.
7406. Do you think for a moment that putting the Baldwin engines quietly on the bridge would produce half the stress that would be produced by them if you were running them over it at the rate of 50 miles an hour? It would undoubtedly produce half the stress.
7407. It would produce more than half the stress, would it not? I am looking at the deflections actually taken in regard to the Wollondilly Bridge, and also upon some of the Solitary Creek bridges.
7408. Can you tell me what is the difference between your live load deflection and your dead load deflection? I have generally found that the effect of a train rushing over a bridge is greater than one standing upon the same bridge.
7409. I want to know how much greater? There is a difference, but I cannot give you any rule, because it varies in almost every case.
7410. All I want to know is what it would be in the case of the Solitary Creek Bridge? I do not know what it is; I only know that it varies, or that it did vary.
7411. Well, then, I must fall back on the report of the Royal Commission on railway bridges, in the case of Barber's Bridge, which is similar to the Solitary Creek Bridge in construction; the span is 60 feet, and a standing train produced a deflection of ·5, and the running train produced a deflection of ·56, so that the difference would only be about 12½ per cent., or say 15 per cent., between the train standing on the bridge and the train running over it? Yes.
7412. Well then, looking at the facts of the case, do you think that these bridges are safe, and that all precautions are being taken? Yes, considering that we are preparing to strengthen them.
7413. You believe then, or I should say do you believe, that these bridges are weak? They have not the same factor of safety that they would have if we were building new ones.
7414. That is to say, you feel rather nervous about them? No, I certainly do not feel nervous about them; but I say that if we were building new bridges, we should build them stronger.
7415. And you say that there is a factor of safety of two? Well, you tell me that there is. If your calculations are correct there is, and I do not want to dispute them.
7416. Well; you have taken your factor of safety on 21 tons, which is not the breaking strength of the iron in the Solitary Creek bridges, considering that the load varies from 0·76 tons to about 2·76 tons? You have stated there is a factor of safety of two, and now you are asking me to verify your figures. Probably you are right, but I would like to have an opportunity of looking over my figures again.
7417. But it would have been better if you had come here with your figures, Mr. Foxlee? I did not know that you were going to question me exactly on the lines that you have been questioning me upon. I have brought my diagram here, which shows that the iron is unduly strained. These are my calculations, and we are taking steps to remedy the defects in these old bridges.
7418. Well, I ask you then what factor of safety have you in the Solitary Creek bridges? A factor of safety of about three.
7419. How do you find that factor of safety? By taking the ultimate strength of the iron at 21 tons per square inch.
7420. Therefore, you make no allowance for the fact that there is a range of stress? I have made no allowance whatever.
7421. And that is your factor of safety? That is my factor of safety.
7422. Are you aware that experiments have been made in Germany and also by Sir Ben. Baker and others showing clearly that the strength varies entirely by the way in which the stress is applied—supposing that

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that the tensile strength is 21 tons per square inch, and you apply a tension of 8 tons per square inch, and that test varies from tension to an equal compression.
7423. I want to get at this factor of safety;—I want to see how you arrive at your conclusions—it is very important, because if one man takes it one way, and another man takes it another way, we shall have all sorts of standards with regard to the factor of safety, and the consequence will be that some engineers would give two as the factor of safety where you are giving three—each meaning quite a different thing—it is very important that we should know really what is meant? Yes.
7424. What I say is this: a piece of iron is put in the testing machine, and you pull it gradually, and it breaks with a pull of 21 tons pers quare inch; but suppose you supplied a stress and then relieve it entirely, and applied it again, and continued relieving it, and applying it say 5,000,000 times, what is the effect? The effect is to fatigue the metal of course.
7425. What will be the ultimate breaking strength, if the statical load is 21 tons? I take it that ultimately the iron will fail.
7426. With how much? I am not at this moment prepared to say.
7427. Would it not break at about 14 tons? Possibly.
7428. Well, then supposing you applied the stress in that way by compression, and an equal tension alternately, what would be its breaking strength? I am not prepared to answer that question, in a small bridge of this character, I do not consider that it makes a very material difference.
7429. But the stress varies considerably between a live and a dead load according to your own figures. This bridge carries its own weight, and if a Baldwin engine passes over it it carries the Baldwin engine as well. The ratio between the bridge loaded and unloaded is very considerable? Yes, undoubtedly.
7430. It would be about ·27 would it not? Yes; I think so.
7431. So there is great difference between the range of stress, and I want you to show what the difference is, taking it in conjunction with the experiments made? I have not gone into that beyond taking the stress resulting from the worst possible load that we could put upon the bridge. We put the worst possible load on the bridge, and we take the resultant in stress.
7432. And have you made these calculations? Yes.
7433. Can you give any idea what the strength would be after a certain number of applications of the test? I have not gone into that.
7434. It gets those applications, no doubt, when a train passes over it? Yes.
7435. It is a very important matter? We shall get these and other tests of the strength of the viaduct when we put the work in hand.
7436. I take it that you are going to do the same thing with the Wollondilly bridges? Yes; they are exactly similar.
7437. Have you noticed some difference in the joints? No; I have not had detailed drawings before me; but the main girders, and also the cross girders are precisely similar to those on the Solitary Creek bridges, and we propose to deal with them in the same way.
7438. That is to say, you will make each additional girder about as strong as the two present girders in each span? Theoretically, I think it takes about two thirds of the load, but we shall make it strong enough to carry the whole load.
7439. In the list of bridges supplied you give the spans and the actual working stresses; I take it that these working stresses are due to Baldwin engines passing over the bridges? Yes.
7440. You do not record the deflections, though they were asked for? I believe we have the results in the office.
7441. You say on your own paper here that they were asked for? If they are not here we shall let you have them. I asked that the deflections and the loads producing them should be recorded.
7442. So that I cannot ask you any questions upon these bridges? I am sorry that they have not been supplied, but I will take care that you have them.
7443. What span has the Petersham viaduct; I do not see it amongst these calculations? Yes; I think it is included in the calculations you have before you. Each span is 87 ft. 9½ in.
7444. Well, you have given me the working stress at 4 tons on the top, and 4·93 tons—practically 5 tons—at the bottom? Yes.
7445–6. That is a case in which I think there is some variation; you have not given me the load here? That is arrived at in the same way, by putting a Baldwin engine on the bridge.
7447. The weight of those bridges, referring to Rochester Creek and Duck Creek Bridges, would be very slight compared with the load they carry, would it not? Well, the floors are rather heavy. They are cross troughs; all iron, and consequently heavier that the other system of flooring.
7448. Well, the highest stress is only 5 tons? Yes.
7449. We have a series of plans of 21 feet.
7450. Are they designed in the same manner as on the Glenlee Bridge?
7451. Are they of iron? No; they are timber.
7452. Is that your standard bridge; that is what I want to get at? Yes.
7453. So that, whatever the Glenlee Bridge is in strength, these are as strong as this is? Yes.
7454. You have here a factor of safety of 7·5? Yes.
7455. There is a bridge at 37 miles 75 chains; is that stronger than the Glenlee Bridge? It is the Glenlee bridge.
7456. Well, these carry the Baldwin engines, I take it? Yes.
7457. So that, assuming your calculations to be right—assuming the Glenlee Bridge to be correctly worked out—these bridges must be weaker in proportion by 9·77 to 7·5? Yes.
7458. I suppose there is no doubt about the factor of safety. They show really what has been done? Yes.
7459. I suppose we can see these viaducts on our way up the line? Certainly.
7460. Are they new viaducts? They are old bridges widened.
7461. You have adopted the same system of construction, I take it, in the other bridges and in Glenlee Bridge? In some cases we put the longitudinal timber immediately over a pair of girders instead of on one side and that accounts for the variation in the factor of safety.
7462. Do you propose to do anything to the Penrith Bridge? There are two or three recommendations by the Royal Commission on Railway Bridges, one of them is that when the line is duplicated the weight should be distributed over the cross-girders, but we are not duplicating the line at the present time, so we are leaving it.

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7463. We ought to have a few of these bridges cleared up. The Glenlee Bridge we shall look to; the Solitary Creek Bridge you are going to strengthen, and the Wollondilly Bridge you are going to treat in the same way. And the Baldwin engines are not running over it?
7464. *President.*] Do the engines purchased from Beyer and Peacock run over it;—they are heavier than the Baldwin engines, are they not? No; they are rather lighter.
7465. *Mr. Brown.*] But you must remember that they have a rigid wheel base, and that makes a difference.
7466. *President.*] You say that you think the Solitary Creek Bridge is perfectly safe for the engines? Yes.
7467. I mean to say, going over it day after day as they do, is it perfectly safe for them? I think it is perfectly safe, but it is also desirable to strengthen it as soon as possible, because we are straining the iron beyond the limit to which it should be strained.
7468. *Professor Warren.*] You are not responsible for that bridge—not for the design of it, I mean? Oh, no.
7469. *President.*] But I am thinking of the public—as far as the public are concerned, need they feel at all anxious about it? Oh, no; the public have no occasion to feel alarmed about it.
7470. *Mr. Fehon.*] Are not rails always removed long before the limit of safety is reached? Undoubtedly.
7471. In fact, no works are left until the limit of safety has been reached? Oh, no, certainly not; we do not wait until they reach their breaking point before we renew them. We have to commence our work of renewal before the ultimate strength is reached.
7472. You are aware that the first Baldwin engine that arrived here—I mean those that arrived some years ago—are running on the western road? Yes.
7473. And the platforms were altered to meet their case? I understand that they were.
7474. And that when the new Baldwin engines were ordered it was thought necessary to push on the work of alteration to the platforms along the Northern line and also on the Southern lines? Yes.
7475. So that this work of making the platforms uniform should be completed, and the roads made available for the running of any engines—the new Baldwin engines and any others that might be required to run over the length and breadth of our railways? That is so.
7476. There has been a great deal of talk about the Glenlee Bridge? Yes.
7477. The Glenlee Bridge is a duplicate bridge, is it not? Yes.
7478. Is not the new bridge much stronger than the old one that has carried the traffic for so many years? It is one of the finest wooden bridges that we have on the line, in my opinion.
7479. *Professor Warren.*] You designed it, did you not? Yes.
7480. *Mr. Fehon.*] The strengthening of the Wollondilly and Solitary Creek Bridges was decided upon by the report of the Commission on Railway Bridges, was it not, and the Baldwin engines had nothing to do with it? I believe that is so.
7481. And the Scotch-Yankee engines, which are very nearly as heavy as the Baldwin engines, used to run over those bridges without any slowing-down business, did not they? Yes.
7482. That is a fact that is worth a good deal of theory.
7483. *Professor Warren.*] Yes; but there have been a good many bridge accidents in various parts of world, Mr. Fehon.
7484. *Mr. Hoyle* (to Witness).] Do you consider that two engines coupled together do the road more injury than one engine? From the reports that I have had from my inspectors and divisional engineers, I learn that it is so.
7485. Yes, but I am asking for information within your own personal knowledge. You are an engineer, Mr. Foxlee, and one who holds a very high position in this country, and has held high positions in England, I want your own opinion? It is my opinion that two engines coupled together would be more injurious than one engine.
7486. It has been stated that the Baldwin engine, because of its flangeless wheel, should be less destructive to the road than some lighter engines that had been previously employed, they having flanges on all their wheels, but, as a matter of fact, the Scotch-Yankee, which is a lighter engine than the Baldwin engine, have also a flangeless wheel? Speaking generally, two engines coupled together do more harm to the road than a single engine working over it.
7487. Yes, but will you explain why they do more harm to the road? I am hardly able to tell you; but, as a matter of fact, it is known that they do.
7488. Is it a matter of fact or a matter of theory? A matter of fact. If you talk to any platelayer on the road he will tell you that it is so.
7489. Yes, but we have had evidence on the question from platelayers themselves, only the other day we had four witnesses, all of whom were platelayers, called here to bear out this statement made by the Chief Commissioner, and each of them said that in his opinion two engines did not do more harm than one engine, so that is why I ask you whether it is not a matter of theory more than a question of actual practice? Well, if you get an individual witness here, he will give you his opinion, and it may vary from the statement that I have just made; but I am able to judge from the collective testimony of these men, and that leads me to believe that two engines coupled together do more harm than a single engine.
7490. Well, in the instance that I have referred to, six witnesses were called to prove that two engines when coupled together, did more harm to the road than one engine, although it might be a heavier engine, and when questioned by me on the matter, four out of the six gave the opinion that one engine was just as damaging to the road as the two engines coupled together; but, however, I accept your evidence on that matter. Now, relative to this Glenlee Bridge, Mr. Fehon has asked you about the old bridge, which, for many years, has been carrying heavy trains. Is it a fact that an engine of such great weight as a Baldwin engine has been running over the old bridge? I think it has had about the same load to carry as the new bridge.
7491. It is on the express road, and it is therefore a road over which the train travels very fast;—would not an engine weighing, say, 4 tons more, have a more damaging effect upon the bridges than a lighter engine? Of course the heavier the load the greater is the effect; but there would not be any appreciable difference in the effect produced by an engine weighing 4 tons more or less than another.
7492. Has any strengthening been done to the Glenlee Bridge since it was built? Do you refer to the new or to the old bridge?

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7493. To the new one. Has anything been done since it was originally built by you? Nothing whatever.
7494. Mr. Haycroft has written a letter to the Commission, and it has been placed in my hands since I came into the room this afternoon. He wishes to be recalled for the purpose of explaining something in his evidence, or rather, I think, to contradict something stated by Mr. Eddy. He says that the cutting on the margin of the letter is from the *Daily Telegraph*. The cutting to which he refers reads as follows :—

Incorrect "Expert" Evidence.

"As I am on the Great Western Railway, and as you have had so-called 'expert evidence' called to speak of the weight of the rails on the Great Western Railway seven years ago, and which I know of my own personal knowledge to be absolutely wrong, I think I might give you a statement made by Mr. Wolfe Barry, who is an eminent engineer at home. The expert before you said nothing about the bearings, but referred only to the weight of the rails. The universal practice with cross-sleepers in England is to have them 3 feet apart. It is a most exceptional thing to have them less. Mr. Wolfe Barry says, 1890 edition :—

'Thus, on the Great Western Railway, a rail weighing 62 lb. per lineal yard has carried for many years, and is now carrying the heaviest traffic, while other companies, and the Great Western Railway Company itself, is using cross-sleepers for a rail weighing from 75 lb. to 80 lb. per yard.'

"I do think that it is wrong for these witnesses who have been 'studying it,' as they say, to come here and make statements of that sort. I will give you information received from Sir John Fowler two days ago. He is consulting-engineer to the Great Western Railway. It is most wrong that the credit of the Commissioners should be attempted to be broken down without any knowledge of the facts. It is proposed to relay the Dideot to Bristol section of the Great Western Railway, with the narrow instead of the broad gauge. Sir John Fowler was asked to state by cable the weight of the rails proposed to be used. He says :—

"Quantity of 85-lb. rails very small. Nearly whole length is 68 lb. flat-bottom bridge rails."

In his letter Mr. Haycroft says :—"Trusting I am not committing a breach of etiquette, legal or otherwise, I have the honour to address you as follows :—The cutting on margin is from *Daily Telegraph*, May 19th, and purports to be copy of part of evidence given by Mr. Eddy before the Commission ; as Mr. Eddy's remarks refer to my evidence as an expert, I hope you will give me the opportunity of traversing his statements. Mr. Eddy, with the object of proving my statement, that 86-lb. steel rails were in use on the Great Western Railway seven years ago, to be correct, has stated, to his own knowledge, my evidence is absolutely wrong, and in support of his own evidence quotes from railway appliances, by John Wolfe Barry, whom he styles "an eminent engineer at home," the edition from which he quotes being, as he states, 1890. In reply thereto I have just to state that in the 3rd edition of Mr. Barry's book, dated 1881, or close on eleven years ago, exactly the same statement, as quoted by Mr. Eddy, appears, thus proving that Mr. Barry, eminent engineer though he undoubtedly is, has not kept his several editions up to date. In support of my statement, which was made from actual observation about seven years ago, I beg to refer you for corroborative evidence to Vol. 20, 9th Edition of the Encyclopædia Britannica, page 243, published in 1886, in which will be found a full description of the 86-lb. steel rail in use on the Great Western Railway at that time, also the peculiarities of the chair used in connection with said rail.

"The value of the information imparted by the E. B. on this subject is due to the fact that the statistics were compiled by, amongst others, such men as Daniel Kinnear Clarke, M.I.C.E., a well-known authority on railway matters, and Mr. A. M. Wellington, M.A.M. Soc. C.E., referred to by Mr. Eddy as having published a standard work on railways, and therefore a reliable authority.

"Weight of rails—strength and durability.

"Wellington's work, 'Railway Location,' is one of the standard works on railways, and from the extracts given below it will be seen that in America 70 lb. per yard for steel rails was evidently the highest standard, but that for reasons of economy an 80-lb. rail was urged, and it was thought would doubtless be adopted ultimately."

As I do not wish to lie under the stigma of having wilfully given evidence which Mr. Eddy calls absolutely wrong, I hope you will give me the opportunity of rebutting such a statement in as public a manner as the statement was made."

Well, I do not know when this is to end. I am quite willing that Mr. Haycroft, if he feels aggrieved, should have an opportunity of contradicting anything that has been said by Mr. Eddy, but this Commission cannot be eternal. At the end of this week my attendance at it I fancy will be very infrequent, whilst I have a duty to perform to the public as its President, I have also a duty to perform to myself, and I cannot allow it to interfere entirely with the course of my own work. At the same time, if Mr. Haycroft wishes to give any further evidence, he can be recalled.

7495. *Mr. Brown.*] As far as I am concerned, I do not see why he should be recalled, the thing will be interminable.

7496. *President.*] The matter upon which Mr. Haycroft desires to be recalled is not one that would suggest itself to my mind, or to the mind of my colleague, Mr. Brown, I think, as one of any importance, whatever Professor Warren may think about it. Nothing that Mr. Haycroft on the one hand, or Mr. Eddy on the other, have said with regard to the mere question of the weight of rails on the Great Western Railway seven years ago would operate upon our minds. The question we have to consider is whether the rails on the New South Wales Railways will bear the Baldwin engines. Supposing Mr. Eddy, in regard to the particular matter about which Mr. Haycroft has written, is wrong—I am not saying that he is wrong—but even supposing that he is wrong, what bearing has it upon the question at issue, and how can it justify the time of the Commission being taken up with what really concerns the personal vanity of any individual.

7497. *Mr. Fehon.*] Mr. Haycroft's evidence, with regard to the weight of rails, is seven years old, according to his own admission ; the evidence that Mr. Eddy gave is the result of information not seven days old.

7498. *Mr. Hoyle.*] In the cross-examination of Mr. Eddy, I will produce the work that Mr. Haycroft wishes to produce, and in that way I think I shall be able to prove that Mr. Haycroft is perfectly right, and that Mr. Eddy is wrong.

THURSDAY,

THURSDAY, 26 MAY, 1892.

[*The Commission met at 2 o'clock in the Board-room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., PRESIDENT.

PROFESSOR WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., M.L.C., J.P.

7499. *Professor Warren.*] I wish to know if the full report from Messrs. Kidd and Pollock with reference to the trial trip of the Baldwin passenger engine will be put in by the Railway Commissioners, or will these gentlemen be called?

7500. *Mr. Fehon.*] I do not think it will be necessary to call them.

7501. *Professor Warren.*] These tests are most important in connection with what the engines are doing.

7502. *Mr. Brown.*] I think, Mr. Fehon, there can be no question about calling these gentlemen. When Mr. Eddy made his statement before this Commission, he read an interim report from these gentlemen. The Chief Commissioner could not have given that evidence unless he intended to call these gentlemen in person.

7503. *Mr. Fehon.*] One of the two would do, I presume—say, Mr. Pollock.

7504. *Mr. Brown.*] Yes; the interim report is incorporated in Mr. Eddy's statement, and he could not give that as evidence himself for the reason that he knew nothing about it personally. I asked him at the time if he intended to call these gentlemen, and he said "Yes," and upon that understanding the report was admitted.

Mr. W. Thow recalled:—

Mr. W. Thow. 26 May, 1892.

7505. *Mr. Fehon.*] Are you a member of the Institute of Civil Engineers? Yes.

7506. And also of Mechanical Engineers? Yes.

7507. What has been your experience as a railway man, Mr. Thow? I have had about thirty-two years' experience in locomotive works, with regard to rolling-stock chiefly. I have been on the Lancaster and Carlisle, London, and North-western and Scottish Central Railways, and in their workshops, and have had experience under the leading officers of those companies.

7508. Before asking Mr. Thow any questions appertaining to this Inquiry I should like to put to him one or two questions with reference to the strength of the draw-gear on the goods rolling-stock, reference having been made to it, although this Commission thought that question did not come within the scope of its inquiry—still, for the purpose of acquainting you with the facts of the matter, and through the Press informing the general public as to what has been done, I should like to ask him one or two questions.

7509. *President.*] Yes.

7510. *Mr. Fehon.*] What strain would the old draw-gear used on trucks stand prior to the alteration made by the Commissioners? Twenty-seven or 28 tons would be the breaking strength, I think.

7511. Would it not be better, in order to make it more intelligible, to state it as compared with the hauling power of the engines? Yes, perhaps so.

7512. Well, what would the breaking strain be? For the engines that we employed at the time when we had the old draw-gear in service, we had a strength of three times the hauling power, so did not put a strain on the draw-gear of over one-third of its breaking strength, that is to say the draw-gear then in use was able to stand three times the hauling power of the engine; at no time can draw-gear be more severely strained than the power of the engine hauling it, it cannot at any time be greater than the tractive power of the engine. Perhaps I may illustrate that statement—take for instance the very heavy engines, which have been spoken of as throwing an undue strain upon the draw-gear, Consolidation engine for instance: its tractive power is about 21,000 lb., say 10 tons roughly—now the meaning of that is this—supposing a rope were fastened to the tender-hook or the hook at either end of the engine, and slung over a pully and allowed to drop into a well, then if a 10-ton weight were attached to the end of the rope the engine could not move. I use this illustration to show what the strain is that passes through the draw-gear. The power of this large 98-ton engine is not sufficient to draw a 10-ton weight out of a well if attached to it; that is the measure of the greatest strain that could be put on the draw-gear. With the smaller engines we had in use before the introduction of these large engines, the strain put on a draw-gear could not be more than 7 or 8 tons, and the factor of safety would therefore be from three to four in the old draw-gear; at the present time we have increased the strength of draw-gear until the strain is from 47 to 53 or 54 tons, so that we have now a factor of safety of from four and a half to five.

7513. *Professor Warren.*] Five-four according to our figures.

7514. *Mr. Fehon.*] The draw-gear is sufficiently strong under ordinary circumstances to stand four and a half to five times the strain that can be brought to bear upon it by a Baldwin engine? Yes; assuming that the engine is carefully handled.

7515. Is the whole of the old rolling-stock now fitted with this new draw-gear? Yes.

7516–7. Would not two engines coupled together be much more likely to break the draw-gear than one engine of greater power? Yes; certainly. We have a rule in the service that if two engines are worked together the load shall never be greater for the two engines than 50 per cent in addition to the load of the one engine, that is to say the power of the two engines being, say 200 tons, the load shall never be more than 150 tons. Even if two engines were attached to the train, to illustrate by the same means the strain they imposed, we should be able to raise 12 tons instead of ten; that is to say, the two engines would have the power to lift 12 tons, in a vertical direction, out of the well.

7518. *Professor Warren.*] That is 2 tons more than before? Yes; practically 20 per cent. more.

7519. Then if the strength of the present draw-gear is nearly five times that of the hauling power of the engine can anything more be done to ensure the safety of trains on inclines? I do not think anything more can be done, I think it is an ample provision.

7520. If a coupling breaks now, what do you attribute this breakage to? To one of two causes—it invariably shows that one of two causes has been at work, namely, that either the engine has been carelessly worked so as to bring an unusual strain upon the draw-gear through what is termed "snatching," or the coupling is defective through bad welding or some such cause.

7521.

Mr. W. Thow. 26 May, 1892.

7521. *President.*] What do you mean by "snatching"? Sudden jerks, thus bringing an undue strain upon it; and we also find that a large number of those which do break are defective through bad welding, careless workmanship, or other such causes.
7522. *Mr. Brown.*] There is a little due to careless driving, you say? Yes; that is the "snatching" I have referred to.
7523. *Professor Warren.*] But you may have a "snatch" with even a most careful man? Yes; it sometimes happens that the most careful man may be misled, and a snatch may result. Those "snatches,"—by careful men—however, rarely or never cause breakages of a coupling. They are very moderate, as a rule, and do not cause damage.
7524. Were there any engines on the New South Wales railways of equal power to the Baldwin passenger and consolidation prior to their arrival? No; none of them. You must, of course, compare goods engines with goods engines, and passenger engines with passenger engines. Then my answer would be correct. There are no engines so powerful by a considerable amount comparing class with class.
7525. Were there no engines, taking them as a whole, so powerful as the passenger or consolidation engines? Yes; we had goods engines more powerful than the Baldwin passenger engines.
7526. *Mr. Brown.*] As a matter of fact, you use these engines each for its own particular purpose? Yes; the high speed for passenger trains and the low speed for goods trains.
7527. *Mr. Fehon.*] The fourth charge made by Mr. Hoyle at this inquiry is that there are engines already in use on our railway system that are as powerful as the Baldwin passenger engines, and therefore another type of engine has been added to our stock, thus increasing the already too many types of engines already in use.
7528. *Mr. Hoyle.*] This charge has already been disallowed, and if it is now raised I shall have to traverse it.
7529. *President.*] Yes, I think Mr. Eddy objected to it on the ground that it affected the policy of the Railway Commissioners generally.
7530. *Mr. Fehon.*] I think the one disallowed was that the Baldwin passenger engines are not required, and should not have been imported, as orders had already been sent out of the Colony for sufficient engines to meet all requirements of the Railway Department, and that the money thus spent was therefore unnecessary expenditure of public funds.
7531. *President.*] Yes; that was disallowed, certainly.
7532. *Professor Warren.*] I have always been under the impression that we had nothing to do with the ordering of the engines.
7533. *Mr. Fehon.*] The fourth charge was that there were engines already in use in our Railway system that were as powerful as the Baldwin passenger engines, and therefore another type of engine had been added to our stock, thus increasing the already too many types of engines in existence.
7534. *Professor Warren.*] I am not quite sure about that.
7535. *President.*] I think that is part of the railway policy of the Commissioners, and ought not to have been allowed.
7536. *Mr. Hoyle.*] I am absolutely certain the charge was disallowed.
7537. *President.*] I am wrong; I wanted to disallow it. If you look at the fourth charge you will see how it stands.
36. *Mr. Eddy.*] I must again object. This charge (No. 3) opens up the whole question of a railway management.
37. *President.*] It has been decided, and I cannot hear you any more. It has been decided by a majority of the Commission to admit the charge (3.)
38. *Mr. Hoyle.*] (Repeated the fourth charge). It has been said, in inspired paragraphs to the Press, that we had no engines here powerful enough to do anything like what these engines can do. I say that we have engines quite powerful enough for that purpose.
39. *President.*] That is entirely outside the scope of this inquiry;—I understand you to say that the Commissioners have ordered something that is clearly unnecessary;—the question is whether they have received what they ordered or not; whether these engines were necessary or not does not matter;—that can be no charge? What I am doing is with a strong desire to help the Commission.
7538. No. 4 charge, it will be seen from this, was disallowed.
7539. *Mr. Fehon.*] No. 3 charge was disallowed.
7540. *Mr. Hoyle.*] No. 3 charge is allowed.
7541. *Mr. Fehon.*] Then the question of draw-gear, from your ruling, Mr. President, comes within the scope of the inquiry.
7542. *President.*] Not what you have been pointing out, Mr. Fehon.
7543. *Professor Warren.*] What you have been asking does, I think, come within the scope of this inquiry and has been allowed.
7544. *Mr. Fehon.*] I asked the witness about the draw-gear.
7545. *President.*] And you prefaced these questions with an apology that you do not consider that the matter comes within the scope of the inquiry, but for the purpose of clearing the minds of the Commission and the public as to the actual strength of the draw-gear you desire to ask these questions.
7546. *Mr. Hoyle.*] And for that reason I do not object to them.
7547. *President.*] I think the fourth charge was clearly disallowed.
7548. *Mr. Fehon.*] Do I understand that No. 2 was also disallowed?
7549. *President.*] Yes, and subsequently No. 3 was disallowed, except so far as the hooks on the engines supplied by the Baldwin Company.
7550. *Mr. Fehon.*] Then No. 2 was disallowed because it was a part of the policy of a Railway Commission to determine whether the engines were required or not.
7551. *President.*] This is how the matter stands:—

Charge No. 1 is allowed.
No. 2 is disallowed.
No. 3 is allowed in the sense I have mentioned (confined to the draw-gear of the engines).
No. 4 is disallowed.
No. 5 is allowed.
No. 6 is allowed.

So that there are four charges which this Commission has to inquire into.

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7552. *Mr. Fehon.*] More accurately, three and a half, sir.
7553. *Mr. Hoyle.*] Charge No. 3 is only disallowed when I commenced to speak about the draw-gear attached to the goods stock. The Commission allowed it, except as regarded the draw-gear attached to the trucks. It was allowed with regard to the draw-gear attached to the engine itself. However, if Mr. Fehon thinks that the evidence he wishes to give would allay public alarm I have no objection to its being given.
7554. How many additional vehicles would these engines draw as compared with the most powerful engines in existence on our lines previously. Say, roughly, how much per cent. more would they draw?
7555. *Witness.*] I should say 60 per cent. more.
7556. *Mr. Hoyle.*] That applies to both the goods and passenger engines? Yes; I gave an answer intending to show what the power of the previous engine was—namely 60 per cent. of the Baldwins.
7557. What percentage more do you think the passenger engine would do, compared with the most powerful passenger engine we had previously? Generally speaking, I should say 40 per cent. more load would be taken by the present passenger engines than by those prior to the arrival of the Baldwins.
7558. If it refers to all the sections on the line then the most powerful was also a Baldwin engine. It was the Baldwin Consolidation engine which was confined to the western section only.
7559. Was that used for passenger or goods? Goods.
7560. What was the most powerful passenger engine? The 304 class. There was another class, which was imported about the same time, known as the Vulcan. This was, theoretically, more powerful; but, as a matter of fact, it does not take the same load as the 304 class, because it has not sufficient weight on its driving-wheels to give it the necessary tractive power, although its cylinder power is greater.
7561. Were these more powerful engines used on the express train? No.
7562. Why? They did not seem to stand the speed of the express train. The 304 class would not do that work. I mean the Baldwin 304 class. There are two types of that number—one made in America, and one in Scotland. The American is the one I speak of—the original 304 class.
7563. Was not a mistake made by the Baldwin people in supplying a smaller size hook on the engine than was shown in the drawing sent by the Railway Commissioners? Yes, by ⅜ to ½ an inch in depth.
7564. Have they not acknowledged their mistake, and remedied it in accordance with the original design? Yes; they have put in new hooks at their own expense.
7565. Do you know when Mr. Hoyle made his speech in Parliament on the Baldwin engines? On 20th August, I think, last year.
7566. Yes, how many of the engines were then in steam? About seven of the passenger engines had been partly tried; but they had not been run very much.
7567. Were they doing regular work? No; not put to the express work—they were running their mileage at that time; they were employed on express goods and ballast trains only.
7568. They were not doing the regular express work at all at that time? No.
7569. Had any of the goods engines arrived then? No; they had not arrived in the Colony.
7570. Had any mishap occurred to any of the engines at that time? No; not of importance.
7571. What was the date of the first accident to the Baldwin passenger engine? The first axle broke on the 27th October.
7572. Then at the time Mr. Hoyle was making his speech, the engines were doing very good work, and you had no fault to find with them? Yes; I considered that they were doing good work then.
7573. When the defects of the bogie axles developed, were not the engines immediately taken from express traffic? Yes; as soon as we knew of it they were taken off the express trains, and as soon as we could do so, they were taken off all the passenger trains—but immediately off the express.
7574. Were not steel axles introduced instead of iron? Yes; as quickly as possible.
7575. Were not the Baldwin Company communicated with, with reference to the defects in the bogie axles? Yes; and we expedited the change by getting six axles from the Railway Department of Victoria—we made inquiries in all the colonies to obtain axles from them, but we only succeeded in getting the six from Victoria.
7576. And in the meantime you communicated with the Baldwin Company? Yes; immediately.
7577. And they sent out steel axles to take their places? Yes; they sent out twenty-four for the Baldwin passenger engines.
7578. Since these steel axles have been fitted, have you had any cause to complain, with regard to the running of these engines? No.
7579. Have not these engines run up to the present time, about half a million of miles? Yes; almost half a million of miles; very nearly so.
7580. *Mr. Fehon.*] You say these engines have run half a million of miles since they have been here, have they not done their work in a very satisfactory manner? Yes; I think so, with exception of defects already mentioned.
7581. Have not the introduction of these engines enabled you to exercise very considerable economy in the running branch of your department? Yes; the large engines are doing that very materially.
7582. From your knowledge of the gradients of the New South Wales railways, do you not consider it a very judicious step to import engines of much greater power than those previously used on the line? I think so.
7583. Were the engines inspected as they were being put together? Yes.
7584. Carefully inspected? Yes; I think so.
7585. It has been remarked by some of the witnesses at this inquiry that it was a mistake to put 6-inch steel instead of 5-inch iron into the bogie axles;—what has been the experience since the alteration was made? They are running very well, and they are not giving any trouble.
7586. Has it not been necessary with other classes of engines to insert a larger sized axle? Yes; it has been found necessary occasionally to put in a 6-inch instead of a 5-inch axle, for example in 304 class.
7587. What about the Scotch Yankees and the first Baldwin? Some of the Scotch Yankees, I think, had their bogie axles changed. Wherever we have changed the axles we have put in a 6-inch steel axle.
7588. A number of petty matters have been introduced, statements having been made that certain parts are showing excessive wear;—speaking generally, are any parts showing signs of excessive wear? No; not with Baldwin engines; not when the work done by the engines is considered. When you have heavy work done you must expect to have considerable wear and tear. That follows as a matter of course.

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7589. There are one or two questions I would like to ask you with reference to the speech made by Mr. Hoyle, as he stated in Parliament his political existence depended upon them; he said he would be snuffed out of political existence if he did not prove these charges up to the hilt, he stated, "There is an excessive weight on the driving-wheel, and whenever the full power of the cylinders is used, instead of the engine pulling the load the wheels skid round and do not draw the load at all;"—is that true? No; I do not think that is correct. It seems to me to be a contradiction in terms.
7590. Mr. Hoyle also stated, "That proved that twelve engines have been brought to this country to perform work for which they were unfitted, and the money expended on them has been wasted";—what do you think of that? I do not think that it is correct. If the engines are likely to do their work well I do not think that the money expended upon them can be said to be wasted.
7591. Do you think any man knowing anything about a locomotive would make such a statement? I do do not know what was in Mr. Hoyle's mind at that time, but I think that was rather a sweeping statement to make.
7592. *Mr. Hoyle.*] That refers to the compound engine.
7593. *Mr. Fehon.*] In the same speech Mr. Hoyle also stated that "According to the latest information from the cleverest men in the United States the Boards of Railway Management there, these engines cannot run with safety on a rail less heavy than 80 lb.";—do you not know that engines with heavier weights on their driving-wheel are running on lighter rails than ours? I should not think the weights too heavy for our rails. So far as the rails are concerned, the 75-lb. iron rail which we have upon portions of our road, if of good quality, it ought to carry that weight very well, in my opinion. I do know that on English railways very heavy weights on the driving-wheel are run upon some of the lines. Taking the Great Northern Railway as an illustration, I think the weight of their rail some years ago was 82 lb. or 84 lb. to the yard, and that company was then running engines which had 18 to 19 tons on the driving-axle, and they were running express trains from London to York with those engines. The weight of a rail is generally made heavy to provide for wear, tear, and endurance.
7594. *President.*] In short, for purposes of economy? Just so.
7595. You give additional weight to a rail for purposes of economy, and not for additional strength? Undoubtedly, the increase of weight during recent years has been for that reason; simply for purposes of economy.
7596. *Mr. Fehon.*] Mr. Hoyle, in another place, says, "I am willing to stake my existence on the fact that we have engines in the service that can do anything to be done by these engines from America."
7597. *President.*] I do not think you need trouble about that, Mr. Fehon. I do not think anything Mr. Hoyle may have said in Parliament will affect this Commission in any way.
7598. *Mr. Fehon.*] Mr. Hoyle further said, on the 18th November last, that, "They had to put new steel axles into the job (that is the engines), but the engines will be useless, for they are wrong in principle and bad in construction"; he said also at that time, "I will prove that, and stake my political existence on it"; as a matter of fact, are these engines wrong in principle or bad in construction? I think they are very well proportioned. They have large cylinder power, great area, and suitable load on the axle. All these are in excellent proportion, and I do not think you can improve them; and as to the defect of slipping, seen in the class of engine known as the Vulcan, slipping the wheels on account of the too high cylinder power for the weight on the axle, we do not find anything of that kind in these new engines. They do not slip to any greater extent than I would expect them to do. All engines ought to slip their wheels under certain circumstances; otherwise, it shows there is not a proper balance, but they will only do this when the rail is greasy, and not when it is dry.
7599. Were not the 304 class engines, which Mr. Midelton claims as his design, running in America years before any were imported into this country, with the alteration only of doing away with the dome and a few minor things which did not affect the construction of the engines in the slightest? So far as I know they seem to be of the ordinary construction of American engine. I do not know in what way they are unusual in design. That is a type of engine which has been used in America and also here for many years prior to the introduction of what has been called "the Midelton engine."
7600. *Professor Warren.*] Do you mean the 75 tons in steam.
7601. *Witness.*] That is the 304 class. [*Photograph produced and shown witness.*] No; that is not the engine. If you have any papers in which there is a report by Mr. Allison Smith and Mr. Roberts you will find an illustration of the engine there.
7602. *Mr. Fehon.*] How many old Baldwin engines were used on the line prior to the new ones being introduced? Thirty-three.
7603. There was no experiment in ordering Baldwin engines? I think we knew what they were.
7604. Are not nearly all the tramway motors running here purchased from the Baldwin Company? Yes; almost all of them.
7605. Did they not do their work sufficiently well to justify the Commissioners in going to the same manufacturers when they were in urgent need of engine-power? Yes; I think the circumstances under which these engines were ordered justified the Commissioners in going to those people, as they were the only ones who could deliver them to us in time.
7606. *President.*] I understand that some English syndicate had disappointed you with regard to certain engines that you had ordered; you could not get them in time from England; in time to provide for the then coming wool season, so you had to go to the Baldwin Company,
7607. *Mr. Fehon.*] First of all fifty engines were ordered to be manufactured in the colony—twenty-five were to be made by one firm, and twenty-five by another. Both these firms failed to make the engines, then the Commissioners thought that as an inducement to manufacturers in the Colony or any part of the world to come here and settle down, they would offer 100 locomotives to be made, but they found that this inducement was not effectual; then the Commissioners were in such a close corner for locomotive stock that they had to go where they could get the engines quickest.
7608. (To Witness.) How long is it since we ordered the first Baldwin engines? I think the first ones must have been in the Colony since 1882 or 1883.
7609. That is about ten years? Yes; about ten years I should say, perhaps longer than that.
7610–11. *Professor Warren.*] It is about ten years since the first Baldwin engine arrived here, you say? Yes. It is about that time, I know.
7612. *Mr. Fehon.*] You have had a good deal to do with testing rails? Yes; at one time I had.

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7613. This is the broken rail from Tarana; do you recognise it? Yes; I see the marks that were put upon it.
7614. Did you submit that rail to any test? Yes; we put portions of it to a test.
7615. Who were associated with you in making that test? There were Mr. Deane, Mr. Foxlee, Mr. Neale, and myself.
7616. What was the result of these tests? The rail broke with a strain of 23 tons by the hydraulic press, and portions of it broke under a drop test with very low drops—one, I think, of 6 inches only.
7617. *Professor Warren.*] Could you put in a copy of these tests? Yes; if I have them I will do so. This paper contains a report, but I see it is not the report I refer to, but one subsequently made. I forget exactly the drop test we used, but it was extremely low.
7618. Did these tests indicate the iron was bad?
7619–20. *Mr. Fehon.*] I did not know you were going to ask that question. I shall give the Commission a copy of the test report. The iron had to stand a test dropping a foot.
7621. *Witness.*] I think that is the test which broke it, but I have not a copy of the report with me, so I cannot say what it was exactly.
7622. *Mr. Fehon.*] I can get another witness to speak to that.
7623. *President.*] If it were only a ton dropping 1 foot, that showed it to be very rotten iron, did it not? Yes; it indicated that the iron was very bad indeed.
7624. *Mr. Fehon.*] Do you not think that any man looking at that rail and understanding iron would know it to be bad? Yes; the crystallisation shows it.
7625. *President.*] What does crystallisation show? It shows that the iron was very brittle.
7626. Would it show that it was bad originally? Not necessarily; but at the time the fracture occurred the iron had either deteriorated or had been bad originally.
7627. *Professor Warren.*] Would it not show that it was broken by a sudden blow rather than being drawn out suddenly? My experience is that good iron even when broken suddenly will show a different appearance from what this rail does.
7628. It will show a crystallised fracture? Yes; but not a fracture of that nature.
7629. *Mr. Fehon.*] It has been said in evidence, by experts, that that rail would stand a drop test of 22-foot tons; they professed to be acquainted with what it ought to stand.
7630. *President.*] How much did you say?
7631. *Mr. Fehon.*] From 15 to 22-foot tons, that was the statement made by different engineers and iron experts who have been called to give evidence.
7632. *Witness.*] It was broken with a very small fall.
7633. If it were good iron could it stand a test of more than 22-foot tons? I should think 8 or 12-foot tons would be sufficient for it.
7634. *Professor Warren.*] If it were a good iron rail? Yes.
7635. *Mr. Hoyle.*] I think you said with regard to the breaking of couplings that most of them had been broken through careless working and careless welding? I said that most of those which had broken showed signs of bad workmanship.
7636. Can we have any guarantee against such careless workmanship? It is one of the risks of railway working.
7637. Relative to the draw-gear on the trucks, what is the greatest load that can be hauled by the old Consolidation, Mr. Thow? That depended entirely on the section of the line you haul the load over.
7638. Taking the load from Penrith to Katoomba or Bathurst? In goods traffic sixteen waggons from Emu Plains to Katoomba, fourteen coal waggons and twenty empty stock trucks. These are the loads marked down for those engines.
7639. Could the engine haul more than that load? These are the legitimate loads, and they have often to be reduced if the weather is not good.
7640. If it is wet and greasy? Yes; these are the legitimate loads under good circumstances for the engines to draw.
7641. What would be the maximum load for the new Consolidation engine—sixteen goods trucks, fourteen coal waggons, twenty empty stock trucks? I have not got the new load table which would give you the full loads; it will be put in evidence.
7642. There was a doubt in my mind about the hauling powers of the engine—my contention has been that it was a danger to the draw-gear on the goods stock, however that charge has been knocked out? Before we had these large engines we employed two engines to draw these loads, and with two engines coupled together as I have already shown we found that the strain was greater from two than one—with the large Consolidation engine we never couple them together.
7643. But you have a push-up engine behind? Yes, in some places; but that is for a different purpose altogether.
7644. We have already had evidence from the officers at Penrith, who swear that they have frequently used push-up engines, and that this was done for the safety of the draw-gear, rather than with the object of pushing the trains up the bank? I do not think they could take that view of it; but even supposing that were so, when the engine pushes up behind the strain on the draw-gear is greatly relieved.
7645. I find that Mr. Neale, in making his report to the Railway Commissioners, gives the load as eighteen waggons for each old load, so that the old load would be eighteen waggons, and the new load twenty-five waggons.
7646. *Witness.*] Does he give the engine?
7647–48. What he says is this: "Our best available engines haul a load of only eighteen trucks up 1-40, which is practically the ruling grade on the most important parts of our main lines, the proposed engine would, I estimate, haul easily twenty-five loaded waggons. This would not only mean an increase of nearly 40 per cent. in the load, for 37½ per cent. increase in the first cost of the engine, but would give a greater increase in the earnings without any appreciable increase in the cost of working, as shown by the following figures of the estimated annual earnings and expenses of a main line engine on the basis of 25,000 trains per annum." *Witness.*] But I am speaking of a grade of 1 in 30 and 1 in 33.
7649. *Mr. Hoyle.*] I presume that he was stating the ruling grade throughout. He says that 1 in 40 is practically the ruling grade on the most important parts of our main lines.

7650.

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7650. *Mr. Fehon.*] The ruling grade is the steepest grade.
7651. *Witness.*] When coming over the big Zig-zag, where you have a grade of 1 in 42, there is a load of twenty-one waggons arranged for these particular engines when coming towards Sydney, twenty-one goods, nineteen coal, sixteen cattle, and seventeen sheep trucks—so you see the difference it makes in going from a grade of 1 in 30 to 1 in 42.
7652. You must drop some of your load, or take a push-up engine;—have you not a number of engines at Penrith now specially designed for push-up work—Saddle tank engines? These engines were got for two purposes, either for pushing up or for taking the heavy mineral traffic at Newcastle.
7653. But the object of sending them to Penrith is for pushing up? Yes; you must understand that these engines you speak of have the same power as the old 205 class; they are not new engines.
7654. They are at Penrith now, however, on account of their power for pushing-up purposes? They are handy engines, but they were not got specially for that purpose.
7655. It has been sworn to that these push-up engines were put on more for the purpose of protecting the coupling than of helping the Baldwin engines;—do you say that you do not take that view? I do not take that view.
7656. Inspector Duff said that these engines were used more for protection than for assisting the Baldwin engines. Mr. Fehon has asked you about certain things relative to the Baldwin engines;—I think you were out of the country when these engines were ordered? I was.
7657. You were never consulted about the importation of these engines? The necessity does not appear to have arisen for these engines before I left the country.
7658. So that you knew nothing about the necessity for them? No.
7659. Nor about the specifications? No.
7660. Only when you were in England you received the cablegram asking you to do certain things? I heard, somehow, when in England that the engines had been ordered.
7661. Did they reach here before or after your arrival? After my return.
7662. When these engines were put together did you personally make a close inspection of them? Yes, I saw a good deal of them—close inspection may mean a different thing to you to what it does to me, my works manager, Mr. Howe, made a close inspection of them, and if he saw anything he thought required my attention he called my attention to it, I also inspected them myself in going through the works, and I made a point of looking at them when the men were away, I frequently saw the engines in walking through the workshops.
7663. Did Mr. Howe report to you anything that he thought defective about these engines? He drew my attention to the wheels among other things, pointing out that there were various holes in them filled up with putty, he also drew attention to what he thought were flaws in the spokes of the wheels, we had wheels and spokes examined, and the putty taken out—and I came to the conclusion that they were a very rough job—a rough piece of forge work, we did not arrive at the conclusion that there was any want of strength about them.
7664. Were there any defects in other parts pointed out to you? I do not remember any particular parts at the present time. Not until the engines commenced to run.
7665. Then you had bad axles? Yes, and there were various parts which had to be attended to, for example, the draw-gear and the reversing-gear, and the wear and tear on the axle-boxes, these were pointed out to me after the engines had commenced to run.
7666. The wear and tear on the axle-boxes you refer to—do you consider then it was excessive, considering the time that those engines had been running, I am speaking of the boss of the axle-wheel working into the axle-boxes? Yes, I do, as compared with English engines; but you have to compare these engines, not with English engines, but with similar ones from America such as we had before, and there you will find that the wear and tear on the American engines, or I should rather say the Baldwin engines, (because I have not had experience with other American engines) has been greater than with English engines.
7667. Did you get greater work out of the American engines than out of the English? Yes, we got greater work out of them on account of their having greater power, when compared with small English engines.
7668. With regard to the previous Baldwins, did you get enough additional work out of them to compensate for the greater wearing away that you have spoken of? Yes, the old Baldwin was a more powerful engine than any English engine that we have had until the new Manchester engines arrived.
7669. Did you have more wear and tear in comparison with the old Baldwins when the new engines commenced to run? I think there was quite as much wear and tear on the old Baldwins as the new ones of the Consolidation type; but not if you compare them with the passenger type. When you are running trains at a high rate of speed you must expect greater wear and tear, that follows as a consequence.
7670. You were speaking just now about the weight of rails upon which some of these heavy engines run in America and England, you say that with a 67-lb. rail they run at a high speed? I spoke of very heavy weights upon the driving-wheels running in England on heavy rails. I did not refer to America. I am not acquainted with the American lines.
7671. Then these heavy weights are running in England on 80-lb. rails? Yes; 82 and 84-lb. rails.
7672. Do you know anything about the spacing in England and America? Yes. In England the universal custom at the time I am speaking of was to have rails 21 or 24 feet long, and in almost all cases the spacing was as follows,—21 ft., eight sleepers; 24 ft., nine sleepers, so that you would have about 2 ft. 9 in. centres. In America the sleepers are spaced much closer.
7673. The custom in England then would be to have the sleepers spaced about 2 ft. 9 in.? Yes, about that. And I should like to say that the sleepers in England are soft wood as compared with the hard wood we have here, which as you know makes a considerable difference.
7674. But in some cases they have cross ties on the English rails? There are no ties.
7675. But take the Great Western for example? Oh, that has longitudinal sleepers, that is quite a different thing.
7676. About the Scotch-Yankees—You know that their axles were taken out, and a comparative statement has been drawn up by your Department with regard to this matter. When you took these axles out of the Scotch Yankee engine, did you do so because they were defective? The reason was because they were running hot. They could not be kept cool. The engines were being constantly lifted,

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lifted, and I came to the conclusion that we should get better results by putting in larger axles, and this has been borne out by experience, for now they are giving no trouble.

7677. As to the Scotch Yankee, I take it that that was pretty well all that was the matter with them, namely, that they were running hot? We spent a great deal of money on them, and we had them a long time in the Colony before we ran them on passenger trains at all. They had no hand-brake on them.

7678. If they had no hand-brake that would come to the same thing as altering the light hooks of the Baldwin engines? I thought it was with reference to the cost the Department has been put to with regard to the engines that you referred. The Department paid for the hand-brakes.

7679. I notice with regard to the ten Dubs engines that there is a great difference in the class of repairs carried out upon them as compared with the Consolidation engine? Yes; there are a great number of the detailed parts of the Consolidation and passenger engines which have gone wrong, whereas the main troubles with the other engine were the altering of the axles and putting on the hand-brakes, which runs up the cost very considerably.

7680. I see that you charge the renewal of the axles and hand-brakes against the engine in the one case but you do not charge the renewal of the axles against the cost of the Baldwin engines? Well, it is not our work, the Baldwin Company have sustained the cost of it, and therefore we have not charged ourselves with the expense of putting these new axles in the Baldwin engines.

7681. But it was done in the Scotch-Yankee case on account of the defects in the axles, but the Baldwin engines with just the same defect, it is not shown against their cost?• It was admitted by the Company that it was a mistake, the Department did not pay in the Baldwin case.

7682. There are a great number of details in the running-sheds against the Consolidation and passenger engines, whereas with regard to the other engines the repairs made have been chiefly hand-brake, and axle repairs, so that I do not think this comparative statement is a very fair one? I think the object of the Department was to show the comparative cost of these engines to the country, and the charges which made up that cost.

7683. This statement is from the 11th February, to the 29th March, 1892, and the twelve passenger engines have a total sum against them of something like £400 or £500, and the other engines have been running a very much longer time?

7684. Will you read the dates given?

7685. There are no dates. This shows simply a return of one month—it shows that all these repairs have been made in one month, from the 11th February to the 29th March. We have wages, £306 14s. 1d; stores, £77 1s. 7d; charges, £71 11. 6d., making a total of £455 7s. 2d. For the twelve passenger engines the cost of repairs and alterations are given as follows:—

	Total.	Average per engine.
Alterations	£113 9 10	£9 9 2
Shop repairs (excluding cost of repairs through accident) £79 9s. 10d.	£375 17 4	£31 6 5
Running repairs	£481 2 7	£40 1 11

With regard to the other engines there are no dates given? May I look at that statement.

7686. *Mr. Fehon.*] This question has no reference to the subject under inquiry.

7687. *Mr. Hoyle.*] This return has been put in evidence.

7688. *Mr. Fehon.*] These questions are going into a great deal of irrelevant matter, not bearing on this inquiry.

7689. *Professor Warren.*] I think the questions do bear on the case very decidedly, the amount of money spent in repairs on the engines is very important. If Mr. Hoyle had not asked these questions I should have done so on this very return. (Witness) I can give you all the dates you require, and I assure you that the time taken in making the comparison was as similar as we could get. The statement with regard to the Baldwin engines is I think brought up to date.

7690. I think it would be fairer if we had a return showing the cost of these engines from the time they commenced to run up to the initiation of this Commission? The date of the issue of the shop order was the 30th August 1891, that is about the earliest, then the return is brought up to the 25th February, that is the latest, you will see that the dates are given there. My impression is that in dealing with the repairs for the Scotch Yankee we took a similar period after their arrival in the Colony. The expenditure is not brought up to the date, but up to a similar time after their arrival in the Colony to that during which the Baldwins have been here. I could give you the dates, I think.

7691. I think it has been given in evidence that these engines were lifted several times in the North, but I do not see anything in the return about that.

7692. *Mr. Fehon.*] Taking the charge that the Baldwin engines are faulty in design, the question of their design is a right matter to inquire into, but the question whether the engine had to be lifted or not is altogether different. All engines have to be lifted, and to compare them with other engines which have to undergo repairs would serve no purpose. All that appertains to this inquiry is to ascertain whether these engines were faulty in design, and if money had to be expended by the Railway Commissioners to put them right, which ought not to have been expended. That is a legitimate question, but to go into matters of shop repairs will carry on this Commission interminably.

7693. *Mr. Hoyle.*] The question of the axles of the Baldwin engines running hot has formed a great portion of the examination of witnesses. It is not easy to find out whether this is due to the design of the engines or not. Some of the witnesses would not say, some said it it due to laminations of the iron used, but at all events it is a charge that has been made against the engines.

7694. *Mr. Fehon.*] We admit everything in regard to the axles, there is no necessity to ask any questions about them at this stage of the inquiry.

7695. *Professor Warren.*] I do not think Mr. Hoyle has asked any questions so far that he should not have asked. His questions show that expense has been incurred in making repairs which should not have been incurred if the engines had been originally sound. If the cost is abnormal it shows that there is something more defective in these engines than is met by ordinary repair. If there is an unduly large number of breakages it might show that there was something faulty in design. It is hard to say whether these things are of faulty design or not. This return furnishes certain information with regard to the goods engines, and Mr. Hoyle is now asking questions as to the statements which compare one

engine

engine with another. The Commissioners have made this comparison in a return they have put in, and I see nothing wrong in Mr. Hoyle's question.

7696. *President.*] You may go on if you like, Mr. Hoyle.

7697. *Mr. Hoyle.*] I think I have examined sufficiently upon that point. Relative to the test of these rails, Mr. Thow, you say that they broke with a drop of about 6 inches, with a monkey weighing a ton? I said afterwards that I had not the figures with me.

7698. But it was about that, it was a very small drop? Yes, 6 inches to the foot or something of that kind.

7699. Have we any guarantee that there are not many other rails on the road of a similar kind? Well, I cannot say that, it does not come under my supervision in any way.

7700. *President.*] Can you tell us whether a rail can be ascertained to be defective by merely looking at it when it is on the road? I do not think there is any external sign which would show it to be bad on mere inspection.

7701–2. Could you tell it by sounding? No.

7703. Then it is one of the risks incidental to permanent way? Yes, that is so.

7704. *Mr. Hoyle.*] Did one of the tender axles break on the mountains last Saturday week, I mean of the tender attached to one of the Baldwin engines? Yes, an axle did break.

7705. There was a report of this tender axle breaking? Yes.

7706. Has that axle been tested? Yes, partially by the drop test.

7707. And have the Department determined to take out all the axles? Yes, we determined upon that some time ago, and the work has been going on.

7708. *Professor Warren.*] Is that to be done on the Consolidation engines? We have taken out a number of the axles in the Consolidation engines too.

7709. Was this a Consolidation engine? I think so. Yes; upon referring to my book I see it is.

7710. *Mr. Hoyle.*] What was the test it stood? We tested two pieces; the axle was broken on the road in the middle, at almost equal distances from the wheels. We tested both pieces under the drop test. The first piece received blows of 3, 4, 5, 6, 7, 8, 10 ft., and it broke at the seventh blow with a drop of 10 ft.—that is to say, 1 ton falling 10 ft.; the second half was tested with blows of 7, 8, and 9 ft., and it broke after the third blow, with a drop of 9 ft.

7711. Do you consider that a satisfactory test? No; I do not think that the iron was good. I think that had it been good iron it should have stood a much more severe test.

7712. Are there any more axles of that description in any of the tenders of the passenger engines? I am not quite sure; there may be a few, but most of them have been changed.

7713. In the tender wheels? Yes, in the tender wheels.

7714. They have not all been removed from the Consolidation engines, have they? No.

7715. It is one of the Consolidation engines, I believe, that runs the mail train;—do you think it wise, under these circumstances to allow one of these engines to run a passenger train? I do not think there is much risk; its speed is very slow—it does not exceed much more than 18 miles an hour, at least, that is the speed between Penrith and Katoomba; it has heavy climbing all the way, and therefore the speed is slow.

7716. This particular engine whose tender axle was broken was attached to a goods train? Yes.

7717. Since that there has also been a broken tire, has there not? Yes; a tender tire.

7718. Have you made any tests of the quality of that steel? No.

7719. Do you intend to do so? It might be well to do so, but tires often break—tires received from all makers—they sometimes break in the same way. The fact of this tire breaking did not attract much of my attention, because it is not very uncommon for a tire to break in that way.

7720. But it is a very dangerous thing though? It would be very dangerous if it came off. We have tires which break, but they do not necessarily come off.

7721. I have here a copy of the *Engineering News*, dated 21st March, 1891. It relates how a broken tire accident was averted, and it gives a section of the broken tire which was held by Mansell retaining rings. It says, "When the engine reached the engine-house after making this run (130 miles, without a stop, at the rate of about 40 miles an hour) the tire was found broken nearly square across, as shown [*in the diagram*]. As will be seen from the accompanying section the tire was still tolerably thick, ⅞ in., and only moderately warm in the tread, and the fracture was wholly without visible cause or excuse. Such fractures usually are. At what point in the run it occurred cannot now be known, but it is almost certain that except for the retaining ring the tire would have left the wheel, and it is quite possible that the result would have been as serious as at the St. George disaster, on the Grand Trunk Railway, about two years before, when a score or so of lives were lost as an effect of a similar breakage, since which date the Grand Trunk Railway has been using Mansell rings on the wheels of its passenger engines."

7722. *President.*] Would you not regard that as an advertisement for the Mansell ring manufacturers?

7723. *Mr. Hoyle.*] Would it not be a very dangerous thing for a tire to break? It might be if it came off, as I said before.

7724. Do you remember the Sunday we were engaged in making the trial trips? Yes.

7725. Was a rail broken on the line that day? Yes; but not by the engine we had.

7726. How do you know?

7727. *Mr. Fehon.*] Because we did not go over it until after it was found broken.

7728. Then it was discovered before the engine I refer to reached it?

7729. It was an 80-lb. steel rail, and it was broken by a man hammering it.

7730. *Witness.*] The Baldwin engine and the engine you had in front of your train passed over this rail after it was discovered, without the slightest risk or danger.

7731. *President.*] Did we go over it? Yes; but of course we knew all about it, and it was perfectly clear there was no danger; it was just like the ordinary joint, but without fish-plates.

7732. On Easter Saturday, was there not a break-down on the mountains in connection with a tourist's train with a Baldwin engine attached to it? There may have been, but I do not recollect it.

7733. Well, I think if you will make some inquiries you will find that it was so, because as a matter of fact a friend of mine happened to be in the train and told me of the circumstance. You do not know what part of the engine broke down do you? No; I do not.

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7734. As I say, a friend of mine was in the train and told me of the break-down, saying that there was a considerable delay in consequence? We have had trouble with the reversing-gear, as you know, and the break-down you speak of may have been in connection with it.
7735. Have you had much trouble with the reversing-gear since you have had the engines? Yes; we have changed a good many of the screws and are going to change more.
7736. Were those defects the result of bad workmanship—did they arise through anything that occured in the shops? No; they were the results of inefficient designs.
7737. And you have had to renew the reversing-gear on a great many of them in consequence of it? We are renewing the reversing-gear at the expense of the Baldwin Company.
7738. That does not matter to me for the purpose of this inquiry whether the Baldwin Company pay for the renewals or not, the charge sets out that the Baldwin engines were defective in design and construction? You must understand that ordinary reversing-gear cannot be used on the steep grades of our lines; they are much steeper than anything they have in America, and the Baldwin Company did not know what our requirements were, all they knew was that we had asked for reversing screw gear, but as they always use levers instead of screws in America, they had not made anything of the kind before. They did their best, but their best has not been strong enough. Our heavy grades put such a strain upon the motion of the engine that the reversing gear has to be unusually strong, otherwise it will not last.
7739. *President.*] Then would the reversing-gear that the engines came out with have been sufficiently strong for the requirements of an engine running in America? Oh; it would have been strong enough.
7740. *Mr. Fehon.*] You might ask Mr. President whether in point of fact is it not the universally used reversing-gear.
7741. *President* (to Witness).] Yes. Was the gear that the engines had when they came out the kind of gear that is always used in America? No; the usual gear used in America is a lever, but these engines came out with screws. We have to abandon the lever in this country and use a screw, because of our very heavy grades.
7742. *Professor Warren.*] Have they not very heavy gradients in America? Is not for instance that Baltimore and Ohio used on a 187-mile grade? Well; they have some steep grades in America, of course, but generally speaking their ruling grades are nothing like as heavy as ours.
7743. *Mr. Brown.*] Did you go over the Marshall Pass, on the Rocky Mountains, when you were in America, Mr. Thow? I know the part you are alluding to, but I did not go over it, although I went by Rio Grande Route, and of course there are some exceedingly heavy gradients there.
7744. *Mr. Hoyle.*] Did you see a report in yesterday's *Daily Telegraph*, stating that the coupling of the Melbourne express broke? Yes.
7745. Had that anything to do with the reversing-gear? No; I might explain how it occurred. The coupling that broke was an old screw-coupling put on by mistake at Redfern station, between two carriages.
7746. Can you tell us—but perhaps you cannot—as you were not here at the time the engines were ordered, whether the Baldwin passenger engines were brought here to run the express service? I fancy they were.
7747. If you will allow me for a moment I will read a paragraph from the *Sydney Morning Herald*, of 26th June, 1891. In that paper it is stated that, the locomotives are of the ten-wheel make-six driving-wheels and a four-wheeled truck, and attached to each is an eight-wheel tender. They are the heaviest and most powerful locomotives introduced to the Australian continent. They are guaranteed to accomplish double the work of any engine now in use on the New South Wales railways. For instance, one of the new engines will run an express train to the Northern and Southern borders as quickly and as safely as two of the ordinary locomotives do similar work now." You have heard that extract, Mr. Thow, can you tell me whether the facts are as stated?
7748. (*President.* (To Mr. Hoyle).] One moment, I do not understand the nature of your question exactly. What paper is that you are quoting from? Mr. Hoyle: The *Sydney Morning Herald*, of June 26, 1891.
7749. *President.*] Yes, it does not matter what paper it is. The only question is whether it is admissable as evidence, and in order to determine that we must know whether the information was supplied by any of the Railway Commissioners, or indeed by any body in the department. Or whether the paragraph is simply a description written by some gentleman whose business it is to write for the papers.
7750. *Mr. Hoyle.*] I do not know who supplied the information, it must have been somebody who knew something about the engines. I conclude that whoever wrote the paragraph must have obtained the information from somebody in the Department.
7751. *President.*] Yes, but a gentleman who wanted to get a paragraph for a newspaper very often comes to the persons from whom he expects to get the necessary information, and after being told a few bare facts, goes back to the office and writes a long description. He arranges the matter as picturesquely as he can, and it would, of course, be unfair to bind the Commissioners to anything that was written in that way. If the gentleman who wrote the paragraph indulged in a little word-painting, it would be impossible to hold the Commissioners responsible for that.
7752. *Mr. Hoyle.*] Well, my only object in reading the paragraph and asking Mr. Thow about it—if indeed he knew anything about it, which, as I said, he perhaps does not—was to save the time of the Commission, because I may think it necessary to bring a number of reporters from the *Sydney Morning Herald* as witnesses to prove who gave them the information.
7753. *President.*] But surely there is no necessity to do that, Mr. Hoyle. You can get all the information you want in regard to the paragraph, if it is in Mr. Thow's power to give you any information, by asking him to answer a few questions upon it.
7754. *Mr. Hoyle.*] Very well, Mr. President, I will not press the matter.
7755–6. [*To Witness.*] Can you tell me, Mr. Thow, whether as stated in this paragraph the Baldwin passenger engines were intended for the express service? I believe they were intended to run the express service. It was, however, stated in my former evidence that we intended to run passenger engines in one direction and goods in another; the idea was that by getting these large engines we should be able to diminish the accidents and delays of haulage, and, as a matter of fact, we have succeeded in that to a considerable extent. If the engines were wanted to take a passenger train from here to Bathurst, the same engines should be powerful enough to bring back a goods train, and the new Baldwin engines are sufficiently powerful.

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7757. Were they put on the express service? They were.
7758. And they were taken off I believe because of the breaking of the axles? Yes.
7759. Why were they not put on again? I believe the principal reason was that we had at the time a number of engines from Manchester—the Beyer and Peacock's new engines, which are running the express trains now, and consequently it is not necessary to use, as was previously used, the Baldwin engines for that purpose.
7760. Tell me, then, were these powerful Beyer and Peacock engines which the Commission saw in the Eveleigh workshops here at the time the Baldwins commenced to run the express? No, they were not in the Colony when the Baldwin engines were taken off the express service owing to the breaking of the axles.
7761. Then, what engines were used for the express trains at that time, how did you manage to get along without the Baldwin engines for your express trains when they were taken off after once beginning to run them? We returned to the old engines—the engines that used to run the express trains before the Baldwin engines arrived. We used the 304 class for the Newcastle express on some occasions, and we always use the 255 class, which is a two-wheeled couple engine for the Melbourne express.
7762. Then, as a matter of fact, when the Baldwin engines, after being laid up for repairs to the axles, were put in running order again, there was no necessity to use them for express purposes because you had other engines in the service sufficiently powerful for the work, and the Baldwin engines were put on ordinary passenger and goods traffic? Yes.
7763. *Mr. Brown.*] Why are they all used in the West? Well, because it is better to keep one class of engines in one district. When that is done the men whose duty it is to repair them get used to one particular kind of engine, and they work more efficiently and more economically than as though they were engaged in repairing a number of types. The drivers and firemen also get used to a certain class of engines, and they do their work better.
7764. *Mr. Fehon.*] Yes, but as a matter of fact, the Baldwin engines are used in the West because it is the Mountain line and there is the heaviest work to be done upon it.
7765. *Mr. Hoyle.*] They did run the Southern express at one time, did they not? Yes; as far as Goulburn.
7766. It must have been as far as Junee, because we had evidence of a broken axle at Junee, you remember that? Yes, I remember the broken axle, they did run as far as Junee for a short time.
7767. *Mr. Fehon.*] It was only for a very short time.
7768. *Mr. Hoyle.* (To witness).] And they were taken off the Southern express because of their defective axles? Yes.
7769. *Mr. Fehon* (to Witness).] Is it not a fact that they used a push-up engine on the mountains for years before the Baldwin engines were thought of? Yes.
7770. *Professor Warren.*] I want to ask Mr. Thow a few questions. The English engines that you have been referring to draw from 130 to 192 tons, do they not? We have had an engine (English) in evidence to some extent, and I wish to get a few particulars about it from you? I can give you the loads of the engines if you like.
7771. Give me the biggest load on the Picton incline and also the speed? From Picton to Mittagong is one section, and the load on the mail trains is eight and a quarter carriages.
7772. That is eight and a quarter times twenty? Yes; and the load on the express trains is seven and a quarter, and at times if the trains are unusually heavy we take eight and a quarter—that is up the Picton incline. We take the same load with the express as we do with the mails if occasion requires that we should; but we ask the traffic people to keep the load on the express down to seven and a quarter if they possibly can. At the same time there is foot-note in this load table that permits them to load the express up to the weight of the mail train if necessary, provided that they give us a little more time to do the work.
7773. Something has been said about the speed that these engines have on the inclines; I suppose you must know something about what the English engines do with this load of 178 tons. What speed will an English engine come up the Picton incline with that load? We have never made any experiment, so I am not able to give you any valuable evidence on that point.
7774. Can you give me any figures that will enable me to get at the horse-power of the English engines? No, we have not made any experiments in that direction.
7775. You say that the draw gear is limited to the hauling of 10 tons? Yes.
7776. So that your draw-gear is now, I think, four to five times as strong as your strain ever can be? I was speaking generally with regard to the draw-gear.
7777. What factor of safety have you got in your draw-gear? It is quite six in the draw-gear on the engines, and four and a half to five in the other vehicles.
7778. How many types of engines have you in use which you propose to continue to use; of course, we understand that you are endeavouring to gradually reduce the number of types of engines on the line? We have eighteen types of engines in use that we intend to continue. That includes the new Baldwin engines.
7779. You would call the new Baldwin engines three types, I suppose—that is to say, Baldwin passenger engines, Baldwin goods engines, and compound engines? No, we call the Baldwin engines two types.
7780. But how do you account for the compound engines? I do not consider that to be a special type; indeed, there is nothing special about it, except the cylinder and the side-bars.
7781. Then you classify them in the same type as the passenger engines, I suppose? No, we classify with the goods engines.
7782. You intend to keep them for running the goods trains then? Yes.
7783–4. When you stated the Baldwin engines did more work than English engines you merely meant that they were more powerful, I take it? Yes; they are so constructed as to do more work, because of their greater size.
7785. You did not intend to institute a comparison between an English engine and an American engine? No; I merely meant that they are fitted for heavier work by reason of their larger cylinder and larger heating service.
7786–7. With regard to the trials that we made the other day, I am very sorry that I have not a copy of the results with me. I know that they are printed, but I would like to have it to refer to now. I am referring of course to the report of Mr. Kidd and Mr. Pollock; but as a matter of fact they would have to come here, or one of them at all events. Still, before then I should like to have gone over the results with you and ask you a few questions upon them.

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7788. *Mr. Hoyle.*] If you want a copy of the report of Mr. Kidd and Mr. Pollock on the trial made the other Sunday with the Baldwin engines, I can let you have it. I have it beside me. It was read by Mr. Eddy in the course of his evidence the other day.
7789. *Professor Warren.*] That is only a preliminary report. The report is very much longer. I saw it printed in Mr McLachlan's hands yesterday, and should very much like to have it before me now.
7790. *To Witness.*] I notice that in taking these tests the average speed up the incline is given;—does that not include the inertia of the engine when it begins to make the ascent? Yes; in these particular tests that would be the case, because the speed was pretty high after leaving Picton, and then it began to fall as the engine settled down to her work.
7791. So that if we were to calculate the horse-power for the first quarter of a mile or so, that would be altogether misleading? As regards the power of the engine, I think it would.
7792. It would depend upon how much work you got on the incline? Yes.
7793. In fact, you may get a very large apparent horse-power out of some very ordinary engine by making the test in that way? Yes; the only way the horse-power of an engine could be tested would be by taking the area of the indicated diagrams after the engine had settled down to her work, and computing the speed of the wheels. If that were not done, it would be like trying to weigh a body in a scale, and pushing the scale up and down.
7794. Of course I do not want to alter any of the figures in the report. The speed up the incline is rightly recorded; but when the horse-power is put on I think it should be as you say, after the engine has settled down to her work, and then that should be put against the indicated diagrams, which correspond with the mileage on the wheel, and thus show what the engine is doing? It is not done here.
7795. You do not consider the defects in the wheels are flaws? I do not say that I would regard them as absolute fractures.
7796. Here is a report by Mr. Robertson, Mr. Stanger, and Mr. Neale, relating to tests with the new American engine. This of course is before the trial, and I think it looks like the report that Mr. Stranger handed to me when he was giving his evidence. It is the report of the test made with the Baldwin passenger and Consolidation engines. Do you remember that? Yes; I think I have seen that.
7797. Have you considered the results as shown by these figures. I do not consider the table at all complete. It lacks one very important column, and that is horse-power. Did you calculate the horse-power when these tests were made? It can be done from the speeds, if the speeds are given there, provided that they are correct.
7798. I take it that you are anxious to find out what work has been done by all the engines in the service and of course the only way in which you can do that is by taking the horse-power? Yes; we like to know what each class of engine is doing, and I generally run out the horse-power.
7799. *Mr. Fehon.*] As a matter of practice, Professor Warren, we do not bother about horse-power. It does not matter to us what the horse-power of an engine is if she is doing her work well, and all that we calculate is the work done.
7800. *Professor Warren.*] That is all very well for the Railway Commissioners; but it would not be at all satisfactory to the Chief Mechanical Engineer. No doubt it is enough for the Commissioners to know that the engines are doing their work well; but it is necessary for a gentleman in Mr. Thow's position as he has just admitted, to know the horse-power which the engine is capable of developing under given conditions.
7801. *To Witness.*] You would not consider it a fair test of an engine unless the horse-power was given, would you? I always consider the horse-power an important factor in a test. For instance, if I wanted to compare the work done by an engine at one time with the work done by another engine at another time, each perhaps drawing a different load, it would be absolutely necessary for me to work them both out to horse-power. The work done by the two engines must be reduced to a common denominator, otherwise it might be made to appear as if one engine with a very small load behind her was doing more work than an engine with a very much heavier load.
7802. Exactly; your answer implies that it is impossible to form an exact estimate of what the engines are doing, unless you have a basis of comparison, and that you have to get by obtaining the horse-power? That, of course, depends entirely upon the point of view which you consider most important. It might be of the greatest possible importance in railway working to clear a station-yard of waggons. It might be much more important to clear a station-yard of waggons than to clear it at a great pace. If you could only get the waggons out of the station-yard, it might matter very little if they are cleared out at a high rate of speed or at a low rate of speed, and, therefore, horse-power does not come into consideration in such a matter.
7803. But in ordinary traffic it does? Yes, that is another thing altogether; there I should certainly consider the horse-power an important factor in calculating the work done by an engine.
7804. I was not thinking about the taking of waggons out of the yard, I was thinking about the hauling of a train up a grade, and in that you say the horse-power is an all important element;—have you worked out the horse-power in these tests—there are six of them made with Baldwin passenger engines and Baldwin Consolidation goods engines? It is the first time that I have seen that particular paper.
7805. Do you know what horse-power these engines are supposed to develop? Which engines are you referring to, the passenger or the Consolidation engines.
7806. The passenger engines? I know there are statements before they were put into use, but I do not remember the exact result.
7807. But do you know what they were supposed to exert;—do you remember what they were supposed to do in the correspondence that passed between the Railway Commissioners and the Baldwin Locomotive Company? No, I do not.
7808. *Mr. Fehon.*] I do not think that horse-power was once mentioned in the whole of that correspondence.
7809. *Professor Warren.*] I think that speed and weight and gradient are mentioned, so that although you may not have asked for the horse-power in so many words, you did the same thing in another way.
7810. *Mr. Fehon.*] No, we did not; we certified the size of the boilers, the wheels and the cylinder, and various more or less important details, but said nothing about horse-power.
7811. *Professor Warren* (to Witness).] You have read the correspondence between the Railway Commissioners and the Baldwin Locomotive Company, I suppose, Mr. Thow? I have read some of it, but I do not know whether I have read what you are referring to.

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7812. Do you know the horse-power which these engines are supposed to exert? No, I could not tell you.
7813. Do you know the horse-power that they do actually exert? No, I do not.
7814. But surely you have thought of this matter? I can tell you approximately from calculations as to what they did on the Sunday that we made the trials on the southern line.
7815. We know that they did excellent work on that occasion, and we want to find out whether they are doing what it was intended that they should do? Well, we have a record of the work that they did, and we know that it was thoroughly satisfactory.
7816. It would be much better to have the actual horse-power stated in evidence by the Chief Mechanical Engineer than a bare statement that the engine performed its work satisfactorily. What it says in the correspondence is this: "It is proposed to haul with this engine trains weighing 152 gross tons (340,500 lb.), up long grades of 130 feet per mile. This would be the usual train, and we expect it to be hauled up this grade at about 22 miles per hour. Occasionally the train would have an additional car, making the load without engine and tender 178 tons, or 394,240 lb. These loads include a full complement of passengers, mail, and baggage." So you have here a maximum load of 178 tons up a grade of 1 in 40 at 22 miles an hour. That is specified in the letter written by Mr. McLachlan to the Baldwin Company, on the 22nd of September, 1890. Is that not quite as good as if you had the horse-power stated in so many words?
7817. *Mr. Fehon.*] You must not forget, Professor Warren, that in answer to that letter the Baldwin Company said that they could not guarantee that speed.
7818. *Professor Warren.*] They said they could not guarantee the speed because it depended on certain other things. They also say this, that they could not guarantee the speed because of the reductions in the weight on the driving-wheels. What they say is this:—"The proposed reduction of weight per axle will, we fear, cause disappointment in the performance of the engines. We judge the same work is expected of them as that stated in the *Railroad Gazette* as being performed by the Baltimore and Ohio engines. It should be fully understood that their efficiency will be correspondingly reduced. As we understand that the permanent-way of the New South Wales railway is of a much more substantial character than the Baltimore and Ohio railroad, we see no reason why the engines built for the latter could not be adopted entire. We should be gratified if, on further consideration, this could be decided upon."
7819. *Mr. Fehon.*] And we accepted the engines on this understanding, and therefore our original estimate falls to the ground altogether.
7820. *Professor Warren.*] I do not think it does. The only difference between your original specification and the engines that you have received is that the engines sent out to you have less weight on the driving-wheel; but surely it does not follow that because they reduce the weight on the driving-wheel, although it was done at your request, and they said, "that they feared it might cause disappointment in the performance of the engines," that therefore the engines should do nothing.
7821. *Mr. Fehon.*] We reduced the width over the cylinder, and also the weight on the driving-wheels, and made various other alterations, and in consequence of that the Baldwin Company wrote to say that they could not guarantee that the engines would perform the work as far as speed is concerned, that we said that they would be required to perform in the first letter we wrote to them, and that is why I say that the original specification falls to the ground.
7822. *Professor Warren.*] That is a matter of opinion. I do not think that it does. It seems to me that in that first letter you stated distinctly what it was that you expected the engines to do, and, apart from that letter, we have no guide as to what your expectations were. In a subsequent letter the Baldwin Company say:—"We have carefully considered the conditions of service for which these locomotives are intended, namely, to haul from 150 to 176 gross tons of cars and load at a speed of 22 miles per hour, up long grades of 136 feet per mile, combined with severe curvature, and to haul, up grades of 176 feet per mile with easier curvature, loads of 120 to 144 gross tons. We note that the shortest curves are 538 feet radius, but it is not stated that this is the radius of the curves in combination with the 130 feet grade. Our calculations indicate that the engines will have sufficient tractive force to haul these loads, but we prefer not to make a definite guarantee of the speed, as it is more or less dependent upon conditions of which we are not fully informed, such as the quality of the coal, the wheel-base of the rolling-stock, condition of track, &c." That is the point. They do not guarantee the speed, because they are not informed of these things; but the next line in the letter shows that, although they do not guarantee the speed, they anticipate that the work will be done at the speed you expect it to be done, and they give as an example the performance of a Baltimore and Ohio engine in daily service on one of their own lines. They say that the maximum load taken up a 17-mile grade is about 214 nett tons, and that the speed is 22 miles per hour. They say that there is much curvature on the 117-ft. grade, and that they are informed that in some places the actual grade considerably exceeds 117 feet per mile. "The B. and O. locomotives," they add, "have a total heating surface of 1,945 square feet, whilst the heating surface of the proposed locomotives as per specification number 5,231 is 1,937 square feet. From these data you can readily judge as to the power and speed of the new engines.
7823. *Mr. Fehon.*] It was quite experimental. They altered the engines to accommodate us, and they sent them out, not knowing exactly, and not guaranteeing what speed they would travel.
7824. *Mr. Brown.*] I can quite understand that. The fact of the matter is that you wanted to strike the best bargain you could with the Baldwin Company, and in specifying the speed at which you expected the engines to travel, you gave a pretty high figure in your original letter. Then you make a reduction in some of the parts of the engine; and upon considering the effect that that reduction may have upon the performances of the engine, the Baldwin Company say we will not guarantee that they will do the same performances as we would have guaranteed if you had not made the alterations. Upon receiving that letter the Commissioners say, "Well, although we want the engines to do so and so, and you will not guarantee that they will do it, still we shall be glad to take them," and, as a matter of fact, you would have been satisfied if they had done less.
7825. *Mr. Fehon.*] Yes; that is exactly how the matter stands.
7826. *Professor Warren.*] Allow me to quote from a letter written by Mr. McLachlan on the 29th December, 1890, to the Baldwin Locomotive Company. In that letter he says, "We calculate that to take a train up the 130-ft. grade at 22 miles an hour will require about 50 indicated horse-power less than is wanted by the Baltimore and Ohio engine during its maximum work, and as in our weight for the train

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train (176 tons gross, exclusive of engine and tender), we include an ample allowance for the weight of passengers and baggage, we anticipate that the engine will be fully equal to this performance. We should, however, be glad of your confirmation on this point." That is the letter sent by Mr. McLaughlan on behalf of the Railway Commissioners after you had received the letter from the Baldwin Locomotive people to which you refer.

7827. *Mr. Fehon.*] Not after we had received the engines. The engines came here without any stipulation at all from the Baldwin locomotive people, or indeed from us, considering that our original specification was overthrown by the alteration in the parts of the engine.

7828. *Professor Warren.*] But you have been stipulating all along what you expected the engines to do, and in the letter which I have just quoted Mr. McLachlan says, referring to the work done by the Baltimore engine during its maximum performance, "We anticipate that the engine will be fully equal to this performance." Surely that is a stipulation on your part, or at least a very clear indication of what you expect the engine to do.

7829. *Mr. Fehon.*] We expected them to do very much more work than any engines we have had in the Colony before, and I think we have proved that they are doing very much more.

7830. *Professor Warren.*] The Commissioners evidently anticipated that the engines would do what I say, or else why should Mr. McLachlan have written to the Baldwin Locomotive Company on their behalf, saying, "We anticipate that the engines will be fully equal to this performance"?

7831. *Mr. Fehon.*] It takes two sides to make a bargain. The next sentence in Mr. McLachlan's letter reads, "We should, however, be glad of your confirmation on this point." We might have anticipated that the engines would do what you say, but as a matter of fact the Baldwin Company distinctly refused to guarantee the speed, and I do not know what they are doing to this day. All that I do know is that, engine for engine, they are doing more work than we could have expected.

7832. *Professor Warren.*] What I want is to have the horse-power that they are actually exerting worked out. I consider that you clearly indicate the horse-power expected of them by you when you ordered them, and it is only by a comparison between the two that we can find out whether they are performing the work that is expected of them.

7833. *Mr. Fehon.*] We never stipulated what the horse-power was to be in any engine that we imported, either from England or from America.

7834. *Professor Warren.*] But do you not see that horse-power is distinctly implied in what you ask for, when you state the load that the engine will have to draw, and the speed at which you expect it to haul that load?

7835. *Mr. Fehon.*] No. We wanted a particular engine for particular work, quite irrespective of horse-power, and we say that they are doing that work.

7836. *Professor Warren.*] But you will have to prove it; and you can only do that by working out the horse-power that the engines are actually exerting, and comparing that with the horse-power that you stated in your letters you expected them to exert.

7837. *Mr. Brown.*] I think you will have to construe that correspondence much as you will have to construe the correspondence about the axles. The Baldwin Company say they will pay for new axles to replace those of inferior quality sent out with the engines. I maintain, commercially, that they will do nothing of the kind; they will pay for a proportion of them, and you will have to bear the rest of the expense. The Baldwin Company will never pay for the boring of the hole to a larger size, and the other expenses incidental to putting the new axles into the engines.

7838. *Mr. Fehon.*] But we had the money in hand, and we have stopped it.

7839. *Mr. Brown.*] A bird in the hand is worth two in the bush. Do you mean to say that the Baldwin Company have actually paid for this work?

7840. *Mr. Fehon.*] Yes, I do; we have had a settlement with their own representative; they have paid for and settled everything; they have behaved in a most liberal manner; indeed, when they heard of the fault that we had to find with the axle, they voluntarily offered to make them good at their own expense.

7841. *President.*] Then instead of getting less than you anticipated you have, in that case, got more than you expected?

7842. *Professor Warren.*] I want to get this question of the work that was expected of them, and the work they are actually doing, placed upon a fair basis. In your letters to the Baldwin Company we have a certain statement; and what we want now is, to know exactly what the engines are doing. They are evidently doing very good work, but I want to see exactly what they are doing.

7843. (To Witness.) Have you worked out the horse-power represented by 176 tons on a grade of 1 in 40 at 22 miles an hour? Yes, I have worked it out; but I understand that the Baldwin Company did not guarantee any speed.

7844. Yes, but the Railway Commissioners expected that they would haul 176 tons up a grade of 1 in 40 at 22 miles an hour. That is evident from the letters? The speed has everything to do with the question, and if there was no guarantee of speed I do not see how we are to fix the horse-power that they were expected to exert. They did not say the engines would do a certain thing at a certain speed; then I do not see how we can make the comparison of horse-power that you ask for.

7845. What horse-power did they get in the correspondence? That would represent about 1,030 horse-power.

7846. Do you not think it is a little more than that? I do not think so.

7847. Well, we still call it 1,030, but I make it 1,222. Have you taken a load of 176 tons, or a load of 150 tons, as a basis for your calculations? I took 176 tons, plus the weight of the engine and tender, which gives altogether 270 tons.

7848. What is your total resistance? Sixty-five lb. per ton.

7849. And you reckon a speed of 22 miles an hour? Yes.

7850. And you get as a result a horse-power of 1,030? About that.

7851. What was the horse-power taken at the trial—not at the commencement of the grade, but after the engine had settled down to its work? I have not seen the card.

7852. What is the biggest horse-power you got altogether on the grade? It was something over 900, I think. I have not got the card, so that I cannot speak from facts. To the best of my recollection, however, it is about 900.

7853. *Mr. Fehon.*] Perhaps it might expedite matters a little if Professor Warren would leave this question until Mr. Stanger is called. I intend to call him this afternoon, and as he was here at the time the engines

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engines were ordered, and, as a matter of fact, prepared the specifications, he knows exactly what was expected of them.

7854. *President.*] As far as the question of what was expected of the engines is concerned, that cannot be gathered from these documents, because one thing was said by the Baldwin Company, and another thing by the Railway Commissioners, so that what we have to do is to determine broadly what work was expected of the engines. Professor Warren's point is this: That, in the first place, you wrote for engines capable of hauling 176 tons up a grade of 1 in 40 at the rate of 22 miles an hour, and that after you received the letter from the Baldwin Company, in which they said that owing to the alterations you had made in the engines they would not guarantee the speed. Mr. McLachlan, on behalf of the Railway Commissioners, said, "We calculate that to take a train up the 130-ft. grades at 22 miles an hour will require about 50 indicated horse-power less than is wanted by the Baltimore and Ohio engines during its maximum work, and as in our weight for the train (176 tons gross, exclusive of the engine and tender), we include an ample allowance for the weight of passengers and baggage, we anticipate that the engine will be fully equal to this performance." That is what Professor Warren says was expected of these engines, or rather he takes that as one of the elements of your expectations. The question for us is to consider whether that is actually what you expected, or whether you were simply trying to get the best you could from the company, and, in order to do that, stating more than you really expected to get.

7855. *Professor Warren.*] Well, if they had put it in that way, I should not have pressed the matter, but they have brought forward no evidence at all to show that they did not expect the engines to do all that was expected in the correspondence.

7856. *Mr. Fehon.*] You must not forget that the engines were ordered in a very great hurry.

7857. *President.*] Well, I am only putting my own views of the question before you. It seems to me that it is quite possible that as business people—for in this respect the Commissioners were acting as business people as well as the Baldwin Company—you were each trying to get as much as you could, and that there was no actual contract entered into.

7858. *Professor Warren.*] Is Mr. Stanger to be called?

7859. *Mr. Fehon.*] Yes; we will call him after Mr. Thow's evidence is concluded.

7860. *Professor Warren.*] Well, then I shall ask him a number of questions with regard to the tests that have been applied to these engines, and I hope that he will come prepared with figures. It is very unsatisfactory to receive answers couched in general terms.

7861. *Mr. Brown* (to Witness).] What kind of inspection were the engines submitted to after they arrived here? Just the ordinary inspection that an engine would get before being put to work.

7862. These engines were not inspected in America, as the engines built in England are; it was quite understood that they should not be inspected there; indeed, it was thought better that they should not be, and what I want to know is more for the sake of information than anything else—what kind of inspection they received after arriving in the Colony? An engine in process of manufacture is inspected as the parts are being made.

7863. Where is that? Either in England or America—where ever inspection during manufacture is instituted.

7864. But I am speaking now of the inspection to which the Baldwin engines were subjected at the hands of the Railway Commissioners or their officers; what inspection where they subjected to in Sydney? Only the inspection involved in the examination of the different pieces before they were put into their proper places. It was seen that they were alright and sound.

7865. It would only be a cursory examination? Oh, no. The different pieces could be examined in this way: Take the wheels; they were all completed when we got them. We could not see the process by which they were made; we could not see whether the iron that was put into them was clean iron or not, or whether the scrap was properly worked; and the same applies to the axle. We could not tell whether there was any foreign matter in them. All we could do was to judge by appearances, but as far as possible, without actually breaking the iron, we examined them as carefully as we could.

7866. Then, practically, it was not possible to subject them to any other inspection than that involved in looking at them before they were put on the road? Quite so. That was the only inspection that in the nature of things could take place here.

7867. And is that the only inspection that could be given to that kind of work after it arrived? Yes; that is so.

7868. There could not be any other? No.

7869. What is the inspection that is given to engines being built in England by Sir John Fowler? When these things are being manufactured in England, Sir John Fowler or his assistants inspect them when they are in the rough. That is before the machine itself has been made out of the raw material. The inspection that he carries out is an inspection in detail before the parts are finished, and whilst they are being made.

7870. Then would he see the engines tested after they were made? Yes; he would see them tested in the maker's works. He would first of all see the different pieces tested, and then he would see the engines tested in the maker's yard under steam or on rollers. They very frequently test engines on rollers, and consequently the inspection that the Baldwin engines underwent here is similar to the subsequent part of the inspection in England.

7871. So that no matter what kind of examination you had submitted the engines to here, you could not have discovered the defects that subsequently manifested themselves? You could not have discovered them in the course of the examination in the works. They were defects that could only manifest themselves after the engines had once began to run. We saw that there was a roughness about the wheels which we did not like; but after examining them as closely as we possibly could without pulling the wheels to pieces, we saw that there was no actual unsoundness, and satisfied ourselves that the flaws were only apparent flaws—not real ones.

7872. It would not have been a wise thing to have submitted the axles to the drop test, would it? No; I do not think there was anything in their appearance to justify it.

7873. Although it became necessary to do it afterwards? Yes; it did become necessary to test the axles subsequently.

7874. I am speaking about the axles? There was nothing to show any want of soundness about the axles when we examined them before putting the parts together. It was only after the engines had once began to run that the flaws were discoverable.

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7875. How many axles would there be in these thirty locomotives? There were twenty-four axles similar to those that broke, and there are also forty-eight tender axles.
7876. Did they send you any spare axles? No; we had no spare axles. We had duplicate wheels and axles, but no axles alone, except those that were in the locomotives.
7877. Well, would it not have been judicious to have tested one of these at any rate for what it was worth? No; I do not think it was at all required, because we did not suspect that there was any want of soundness or strength about the engines. There was nothing to indicate that there was, and it has not been the practice to test new finished axles as you suggest. Such a thing has never been done.
7878. Did you see Dr. Williams when you were in America? Yes, I did.
7879. Did he say anything to you about the engines that were being ordered by the Railway Commissioners;—did he compare them in any way with the Baltimore and Ohio engines? No.
7880. Had you any conversation with him about it? No; I did not know anything about the Baltimore and Ohio engines at that time.
7881. Did you not know about the alteration in the specification of the engines ordered by the Railway Commissioners, and the fact that the Baldwin Company had recommended that they should have been built from the same model as the Baltimore and Ohio engine? I inquired about the specifications when I went to the works, and they showed me some of the correspondence.
7882. And did they not say anything about the alterations that were being made? No.
7883. They did not refer to the fact that the Railway Commissioners wanted an alteration in the type of engine, and that the Baldwin Company recommended them to take a Baltimore and Ohio engine? No; they did not.
7884. *Mr. Hoyle.*] Were the Consolidation goods engines here before the Beyer and Peacock express engines? I think they were.
7885. Were they running before the Manchester engines arrived? I think some of them were.
7886. But were the twenty in work before the Beyer and Peacock express engines arrived in the Colony? I think they were, but I am not very sure.
7887. Was it very long after the Baldwin express engines began to work that the Beyer and Peacock engines came? You are speaking of the Consolidation engines now, are you not?
7888. Yes? No; not very long after.
7889. There was a loose wheel on engine 456, was there not. That is the engine that the members of the Commission saw when they went to the workshops at Eveleigh. Could not that wheel have been put into the furnace to show whether those roughnesses that you speak of in the wheels were real flaws or only apparent cracks? Yes; no doubt it could have been put into the furnace, but, as a matter of fact, we want to use the wheel again, and do not wish to injure it.
7890. It would not have hurt it at all, and it would have been just as well to make perfectly sure? Yes; I think it might have hurt it. At all events, I do not think it would be a wise thing to do. If it were a wheel that we did not want to use again we might have done it, but, as a matter of fact, if the spokes are going they will show it. I have no doubt you are aware that we often have spokes broken on the wheels of engines. I have seen an engine with three or four spokes broken in one wheel, and there has been no risk whatever. It is not at all an uncommon thing for the spokes of wheels to crack. You hear them jingle just as you hear the wheel of a car or a buggy jingle if its spokes were broken. There are scores of locomotives running that way.
7891. Do you not take them out when they are running like that? No.
7892. *Mr. Brown.*] I know there are not scores of buggies running like that. If the spokes of a buggy wheel break we soon get them repaired? Unless there are a large number of spokes broken in one wheel we never think of throwing the wheel away.
7893. *Mr. Hoyle.*] Yes; but in that engine, No. 447, more than two-thirds of the spokes in the wheel appear to be cracked. Supposing that the tire of that wheel was to break if the spokes are really cracked as they certainly appear to be, would there not be a liability of their giving way? No; I do not apprehend any danger whatever, because I do not think those are cracks. The marks that you see are fins. When the iron is in a molten state, and being pressed into a mould, a thin film always squeezes over the colder parts of the wheel, and that is exactly what has taken place there. Those apparent cracks that you saw are simply thin films of iron squeezed over the spokes of the wheel.
7894. *Mr. Hoyle.*] At all events one or two of them sounded decidedly bad when they tried them with the hammer.
7895. *President* (to Witness).] The thin film, looking as though you could dig a knife into it is what you call a fin? Yes; that is the technical name given to the thin pieces of iron which overlap the spokes in some cases, but I do not think for a moment that these could be regarded as broken spokes—not at present, at all events.
7896. *Mr. Hoyle.*] Would they not be liable to break sooner than the ordinary English spokes? That I cannot say. I have not had any experience of these wheels, and there is one thing that must be regarded as a set-off to the roughness of manufacture. The English wheel, although it may be stronger, is built in various pieces, whilst these wheels are made of rolled bars. They are continuous, and as rolled bars the spokes would no doubt be stronger per square inch of section than as though they were built up, as is done in the case of English wheels, and therefore I should not be surprised to find that as a matter of fact they will last very well although they are light.
7897. Can you give us the height of the Baldwin engine from the rail to the top of the cab. Mr. Gregory's report states that the measurement from the rail to the top of the gauge on the cab is 12 ft. 6 in., whilst that shown on the sketch put in evidence by the Railway Commissioners is 12 ft. 3 in.;—would that be the distance from the rail to the widest portion of the cab—12 ft. 6 in.? I have not the dimensions with me so I cannot say, but I will get them for you, and send them to you.
7898. Thank you; you see, in this case Mr. Eddy put in a diagram of a Mann car, to show that we had a vehicle wider than the cab of the Baldwin engines on the line before the Baldwin engines arrived, but I maintain that whether it would foul the structures on the stations or not depends entirely on the height of its widest point from the rail. The cab of a Baldwin engine may foul a structure by reason of its being higher than the Mann car. The height of the widest portion of the rail of the Mann car is 9 ft. 6¾ inches, and the cab of a Baldwin engine is 9 feet 5¾ inches; but according to Mr. Gregory's report the widest point of the Baldwin engine would be 12 feet 6 inches from the top of the rail, whereas the

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Mann car is only 11 feet and ⅜ inch. Therefore the Mann car, although wider, would go clear of the structure, whereas the cab of a Baldwin engine, being higher, might foul the structure, so that there is really no analogy between the two. The statement that Mr. Eddy made with regard to a vehicle wider than the Baldwin engines running clear of the structures before they were altered is nothing more than a broad assertion without any point in it? I cannot give you any information upon the point at present.
7899. Can you tell me whether this [*producing a diagram of engine* 132, *class J*], was the widest engine you had in the service before the Baldwin engine came? Yes.
7900. And that engine is wider over the cylinders than a Baldwin engine. According to the measurement it is not;—will you give me the measurement? Nine feet three and a half inches.
7901. The measurement of a Baldwin engine is 9 feet 4⅞ inches? Yes; but that measurement is taken from the altered dimensions. They were to be within those dimensions.
7902. Nine feet three inches? The drawing shows 9 feet 3 inches, so that the engine ought to be within that dimension.
7903. And the engines to which you have just referred (No. 132, class J.), have been running on the western road for many years. They are 9 feet 3¼ inches according to their drawing dimensions, but this 9 feet 4 inches is a variation due to the workshops, and not to designs? Quite so; but it is a variation all the same.
7904. Can you tell me whether this engine carries her cylinders higher than that? The cylinders in the passenger engine will be higher than these, but in the consolidation goods engine they are about the same level. Perhaps the new Consolidation engines may be a little lower in the cylinders.
7905. *Mr. Brown.*] What is the value in money of one of these axles—say, a tender axle? About £7.
7906. And of a driving axle? The driving axles have not given any trouble to us.
7907. No; but I am only asking for my own information. I wanted to know what was about their commercial value? The driving axle would be worth about £24 or £25 when put into the wheel.
7908. *Mr. Hoyle.*] The Baldwin engines were narrower in the cab, I presume? I think they would have a smaller cab on the J class.
7909. I notice here, by Mr. Robertson's report, that the cab of a Baldwin engine fouls several times in the coal-stages, particularly against the Bathurst coal-stage. Mr. Robinson showed where the cab fouled, so I suppose it must be lower than the cabs of the other engines? Yes; it is a smaller cab.

Charles Hursthouse Stanger recalled:—

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7910. *Mr. Felon.*] Mr. Stanger has already stated the position he occupies in the Service. From certain questions asked by Mr. Hoyle during this inquiry, it appears that surprise is experienced in some quarters that the Baldwin passenger engines have required assistance in working the mail and passenger trains between Penrith and Katoomba. Will you kindly tell us what the facts are? Well, I never expected that the Baldwin passenger engine would work the mail between Penrith and Katoomba without assistance. I never expected that she would take over a load of 124 tons up the mountain grades, and I knew that the mail would never be kept down to that load. The minimum weight of the Western mail-train, as it is now made up, is about 140 tons.
7911. *Professor Warren.*] One hundred and forty tons you say? Yes.
7912. You are sure of it, I suppose? Yes; though I should not like to be bound by a cwt. or two; but I know it is approximately that.
7913. It is not 144 tons, is it? Oh, no; certainly not. One hundred and forty tons represent the minimum train that we can run as the Western mail, I always thought that we should have to assist the mail-trains to Katoomba every night.
7914. *Mr. Felon.*] You were one of the officers who advised the Commissioners in regard to the ordering of these Baldwin engines, were you not? Yes.
7915. You know the conditions that were first of all put before the Baldwin Company. In those conditions we stated that we expected the engines to do a certain thing? Yes.
7916. And are they really doing that? Yes.
7917. *President.*] What did you expect them to do?
7918. Have your expectations been fulfilled? Fully.
7919. *President.*] Wait one moment, what did you expect them to do. Let us have that point fairly defined? I only tried to estimate their load for goods trains at slow speed. I did not go very much into the question of their loads at high speeds, but when we first put them into the service on the passenger trains between Sydney and Newcastle, I then tried them with a load of a little over 160 tons.
7920. *Professor Warren.*] On what grades? 1 in 40, and to make time with that train, a man ought to get up the Hawkesbury bank, the most severe grade between here and Newcastle, at certainly not less than 15 miles an hour.
7921. *President.*] Have you looked at the correspondence. As I take it, there is no contract whatever between you and the Baldwin Company as to the speed which it is expected these engines will run? No; I understand not.
7922. If you look at the correspondence you will see that you say you expect them to do one thing, and the Baldwin Company write to you to say that, inasmuch as you altered the specifications, they could not guarantee the speed. Subsequently to that, however, you wrote to them saying that you expected them to do a certain thing. It may be that in the letter, in which Mr. McLachlan said, "We calculate that to take a train up the 130-feet grade at 22 miles an hour, will require about 50 indicated horse-power less than is wanted by the Baltimore and Ohio engines during its maximum work, and as in our weight (176 for the train, 176 tons gross, exclusive of engine and tender) we include an ample allowance for the weight of passenger and baggage, we anticipate that the engine will be fully equal to this performance." In that letter, it may be that you were only writing to the Baldwin Company, as business people doing your best to get the most you could for your money, and that whilst you stated that you expected the engines to do this you had calculated upon being satisfied with something less than that. What I want to know is what you actually expected, no matter what you may have said in the course of your correspondence with the Company that you expected?
7923. *Mr. Brown.*] I believe if you ask Mr. Stanger he will tell you that he never saw the letter from which you have just quoted until the correspondence was printed? It is quite true that I did not see the letter

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letter at the time it was written, and was quite ignorant of the fact that it had been sent. I was consulted as to whether the engines should be ordered, and also as to the specifications, and after that I do not recollect seeing any of the papers or having anything to do with the Baldwin Company.

7924. *President.*] Then what do you expect the engines to do?

7925. *Professor Warren.*] 160 tons he said.

7926. *Mr. Brown.*] That is what he told them when they were ordering the engines, but as a matter of fact what did you expect them to do Mr. Stanger, at the time you ordered them what did you think they would do? I thought they would take 190 tons up 1 in 40 at the rate of 15 miles an hour.

7927. *Mr. Fehon.*] Which engine? I am referring to the Baldwin passenger engine.

7928. *President.*] Will they do that? I think so.

7929. *Professor Warren.*] Mr. Stanger did not order the engines, we must remember that it was the Commissioners who ordered the engines, and therefore it was not what Mr. Stanger expected them to do but what the Commissioners expected.

7930. *President.*] Exactly, but entirely in consequence of a report by Mr. Stanger;—subsequently the Secretary wrote to the Baldwin Company without consulting Mr. Stanger, and we know what was stated in that letter, but what I want to find out now is what Mr. Stanger, as the person who put the Commissioners in motion expected? Well, I expected them as I have just said to take 196 tons up 1 in 40 at a speed of 15 miles an hour. I expected a tractive power of a little over 19,433, but I then had to assume the pressure on the cylinders.

7931. *Professor Warren.*] What did you assume as the pressure on the cylinders? I assumed it at 128.

7932. That is the mean pressure on the cylinders? That is what I assumed. I am not quite sure of the exact figures, I have not got my note-book with me.

7933. Of course you assume that you had a full load, and were giving the engine as much pressure as you could? Yes.

7934. *Mr. Fehon.*] Have your expectations been fulfilled by the performance of these engines? Quite, in fact I think the passenger engines are taking a larger load than I expected they would be. I first of all thought they would take 124 tons, but we have since made them take 132 tons as a regular load, and if on a fine day a driver told me that he could take more than that load without an assistant engine I should have no hesitation in letting him do so. I would be quite willing to let a driver try an extra 8 tons over the mountain grades.

7935. You use a Consolidation engine on the mail-train, and that is the result of a recent idea, and is intended to avoid assistant mileage, and not at all because you were disappointed in the Baldwin passenger engines not taking the mail without assistance? Yes.

7936. What was your object in using a goods engine? It was done with the idea of saving assistant mileage with the mail-trains to the extent of about 10,000 miles a year, and light return mileage to the same extent, or in other words with the idea of saving 20,000 useless engine miles in every year. I made the proposal and felt perfectly certain that it would answer, because the speed of the mail-train is necessarily slow up the steep grades to Katoomba. I was allowed a trial, and I think it has been very successful. We are now taking the very heavy mail-trains up without assistance.

7937. It was not that you were disappointed with the Baldwin passenger engines? No; I have already said that I did not expect the Baldwin passenger engine to take more than 124 tons. I think that the report that I addressed to Mr. Thow explained distinctly that the chief object I had in view was the saving of so much unnecessary mileage.

7938. And the assistant engine usually returns from Katoomba light? Yes.

7939. Why is that? That is inevitable. We must of necessity have some engines running light from Katoomba to Penrith, because an engine can bring a much heavier load back to Penrith than it can take from Penrith to Katoomba.

7940. One of the witnesses, Driver Gasgoine, was asked if there was not a special quality of coal kept at Penrith for the Consolidation engines. What are the facts? It is a fact to some extent; but I think that Gasgoine would have been fairer if he had said that the special quality of coal was kept for the mail-trains.

7941. *Professor Warren.*] He did say that as a matter of fact, I remember that he said although he drove a Consolidation engine himself he did not get the special coal and would like to get it.

7942. *Witness.*] Well, as a matter of fact we have abandoned that arrangement, because now the mail Consolidation engine uses mountain coal for the mail-train—the best mountain coal it is true, but not the rich southern coal.

7943. Has the working of the Consolidation engine on the mail-train been satisfactory? I should like here to make a statement giving a history of the mail working between Penrith and Dubbo. Before the Baldwin passenger engines came into use, the maximum load for one engine on the passenger trains, between Penrith and Katoomba was equal to 104 tons, and even this load on the mail-train had to be reduced to 96 tons just before last Christmas, owing to the 436 class engines not being in very good condition. Excepting when the mail-train was divided and run in two divisions from Penrith, the 436 class engines invariably required assistance from Penrith to Katoomba, and when the load exceeded 130 tons, which was of frequent occurence, a pilot engine had to go on to Wallerawang. This was a very expensive matter owing to the difficulty in getting a return load for the engines. Occasionally the pilot engine had to go on to Bathurst, and then unless the load could be reduced at Bathurst station an assistant engine was required to assist the train from Bathurst to Dubbo. The load for this class of engine from Katoomba to Dubbo being the same. For the up journey from Dubbo, the locomotive foreman, at Dubbo, had always to be prepared with an assistant engine in case the load exceeded equal to about 130 tons. The same applied to Bathurst. At Wallerawang the liability to require an assistant engine was so great that both men and engines had to be provided and held in readiness until the mail-train had gone past, in case it was required to assist the mail to Clarence siding. All of this is now done away with since we have had the larger engines to use for the mail service. I do not know any case in which we have assisted the larger engines.

7944. *Mr. Fehon.*] Has there been any instance in which the Consolidation engine, for some reason or other, was prevented from joining its train and two other engines had to take the mail? A Consolidation engine failed one night. There was a slight mishap when it was coming out of the shed yard, there was a load that night of about 148 tons, and as the Consolidation engine was not available we had to put on

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on two of the 304 class Mogul engines, and those two engines lost time. I feel confident in my own mind that if the Consolidation engine had been running the train instead of losing time it would have made time with that load. It is true that they had to make an extra stop at Wentworth Falls, but apart from that the two engines made a loss of ten minutes.

7945. Then as a matter of fact you believe that a Consolidation engine would not only have kept time, but would have made time with that load? Yes, I think so. The time allowed between Penrith and Katoomba is much less than it was a year ago, and I think we send a heavy train away with the Consolidation engine with more likelihood of its reaching Katoomba to time than if we were using two engines.

7946. In questions to Mr. Howe, Nos. 1129, 1130, and 1132, of the printed evidence, Mr. Hoyle refers to the fact that the wheels of some of the passenger engines having to be put in the lathe to be turned up shortly after the engines commenced to run, and asked if it were due to any failure of the brake-gear or to carelessness on the part of the drivers. What are the facts? That was not owing to a failure of the brake gear. The engine had to have the large coupled wheels taken out and put into the lathe. The fact was, that the driver had to do something to avert a collision. He allowed his train to go into the station too fast, and seeing something ahead of him was obliged to put the brakes on, and I think apply the reversing-gear and that made the wheels skid.

7947. And of course produced a flat place on the tires? Yes. The man did the proper thing under the circumstances only that he should not have allowed his engine to run into the station so fast.

7948. What was the practice when the Commissioners took office with regard to working heavy trains, when although not sufficient to make two trains the load was beyond the power of one engine, and when a portion could not be left for a considerable time, such traffic as for instance live stock? We were not allowed to make up a train of more than 50 per cent. above one engine's load; that is to say, that two engines would have to take a train with only a load equal to one and a-half of the engine-power, and that, of course, meant a great deal of waste in engine-power, particularly in the case of live stock. What I mean is this, if there were forty trucks to be moved, and that represented the power of two engines, we would only be allowed to haul thirty with the two engines.

7949. And has the use of the Baldwin engines entirely remedied that defect? Yes, before we got the Baldwin engines, the Chief Commissioner was, I think it must have been, so disgusted at seeing the number of small trains that were going along one night that when I explained to him on one of the Western tours that we were prohibited putting more than 50 per cent. of the assistant engine's power into a train he consulted with Mr. Kirkcaldie as to whether we could not put a double load on. I demurred a little at first, because I thought that with the slack couplings there would be a difficulty in doing so, but it was ultimately decided that if the combined power of the two engines was forty, we might put thirty-seven on, and that the couplings should always be screw connections when that was done. The result was, in my opinion, very successful as an expedient until we got the large Baldwin engines, which take almost the double load. The double load is twenty-six of sheep and two brake vans. The Baldwin engines take twenty-five of sheep and two brake vans.

7950. You stated in your evidence, when called by Mr. Hoyle, that you considered the Baldwin engines, which are the subject of this inquiry, compare favourably as regards the cost of repairs with other American engines that you have had experience of;—how do they compare as regards failures on the road? I have made a short return in regard to that. There is one thing I should like to mention. I intended to have done so when you asked me the last question. That was that I consider that doing away with the two engines, and having one powerful engine, has been a very great improvement in our working as far as brake and draw-gear goes. When working the trains with two engines we used to have a great many broken couplings between the two engines. Now that we have only one engine that is done away with. Then again, I think that one driver taking control of the whole train is likely to be more careful in handling the train than two drivers with two engines can possibly be.

7951. Of course it conduces to economy of working the traffic? It must be a very great advantage to the traffic in that respect. About these failures I have taken from our monthly returns for the last three months particulars with regard to the failures in the best used American engines—the 304 class engine, built by the Baldwin Co., and known as the Mogul engine, the improved 304 class engine, built by Dubs and Co., and the 446 "O" class engines, built by the Baldwin Co. From these returns I get the following facts:—That the ten Baldwin engines of the 304 class "L" show an average for the last three months of one failure for every 4,466 miles run; ten Dubs engines "L" 4,366 class show an average for the three months of one failure for every 3,076 miles run; and the twelve Baldwin engines of "O" 446 class show an average for the three months of one failure for every 7,431 miles run. Of course it is fair to say that the Baldwin passenger was a new engine, but on the other hand that has been a reason for the failures in many instances. We blame it for being a new engine. The other engine—the 436 class, built by Dubs & Co., known by the men as the Scotch-Yankees, have been through the shop very recently, and have in consequence, I think, been in very fair order, and I also think that the engines built by the Baldwin Co., and known as the "L" 304 class, have been in very fair order during the last three months. I could have given details with regard to other engines, but as the Scotch Yankees were not in good order, I did not consider it fair to include them in the comparison.

7952. *Professor Warren.*] Do you consider that a fair return? Yes, I do. I have also compared the new Consolidation goods engines, with the old goods engines purchased from the Baldwin Company, and this is what I find. The average in the case of eleven of the old engines for the last three months was one failure for every 3,386 miles, whilst the average in the case of the twenty new Consolidation engines for the three months was one failure for every 7,848 miles. I attribute that to the fact that the new engines are of a better design than the old ones. Of course we have had a large experience, and were satisfied that the new ones would be an improvement.

7953. *Mr. Fehon.*] All the Baldwin engines are in your charge? Yes; with the exception of one, and it is working ballast on the South Coast line.

7954. With that exception, all the Baldwin engines are in your charge? Yes; I think so.

7955. You are in constant communication with the inspectors and drivers who work these engines? Yes.

7956. What is the general opinion as to their suitability for the service they are in? I have never heard anything but great praise of the passenger engines given to them by the driver even at the time when we had serious trouble with the axles breaking. The drivers said that they were sorry to lose them and

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and would be glad to have them back again. Since we have put in the axles the drivers like them very well, and speak highly of them. With regard to the goods engines I thought the drivers would not like them so well, but to my surprise they spoke very highly of them. The only one I have heard speak against them is Gascoigne, who was brought here by Mr. Hoyle. I am surprised at that, because I have met him often, and he has said nothing about them to me. I think Gascoigne must have been unfortunate in a few trips and got down-hearted about them. The motion, I think, is less than it would be with a lighter engine.

7957. *President.*] Gascoigne, I think, said that the engines were not good for the health, as they were a little hot? Well, I have ridden with the drivers of the engines, and travelled long distances with them. It is true that they are hot, but then every locomotive is hot on the foot-plate. They are certainly not the coolest engine I have been on; but I do not think they are more hot than the old express engine—the four-wheeled couple.

7958. *President.*] It is part of the driver's contract to live a rather hot life? Yes; he accepts that as part of the conditions.

7959. *Mr. Fehon.*] One of the charges made before this Commission is that "The Baldwin engines are too wide for the platforms;" you have heard what has been said on the subject;—can you give us any information as to whether you have had any difficulty in the past in working other engines on any portions of the line? Yes, I can. It is more than two years ago now since I wished to put the Mogul engine on the Northern mail service at Murrurundi to go on to Werris Creek with a mixed train. I had only just been put in charge of the Northern line, and was rather strange to it, and somebody reminded me that before using wide engines I had better look out for the platforms. Then I got templets made showing the width of the Mogul engine, and sent them up to the inspectors of Newcastle and Murrurundi, asking them to bolt them to the buffer beam of an engine working a slow train, and report to me if they fouled any of the platforms. They were to run them over the line and allow the drivers to measure the distance between the platform and the templet and report to me whether they fouled or not. This was quite early in 1890 I got that report, and the work required seemed to me to be so much that I dropped my intention of using these engines, and made shift with the Vulcan class.

7960. *President.*] You refer to the work of altering the platform? Yes; the Baldwin engines had not been thought of. We expected to get engines from an English syndicate. After the Baldwin engines had been ordered I was asked by the Commissioners to reduce the assistant mileage that was being run with the Northern mail-train. Almost night after night we ran two engines with the mail-train to Werris Creek, and the Commissioners, upon receiving that statement said, "We have powerful engines and ought to use them," and I said that they might be used on the Northern line if the platforms were altered. That was then done, and these engines were used very successfully on the line between Singleton and Werris Creek.

7961. This was in 1890? Yes, it was early in 1890 that I put the templet on. Towards the end of 1890 I sent in a report as to the alterations that would be required. I was compelled to ask for these platforms to be altered. I did not know much about the Richmond line but I was not able to work the American engines which had been imported at that time until some of the platforms had been altered. It is well known that on the Western line the roads were slewed in front of some of the stations. When I went to Wellington in 1884 I saw that the line had been slewed in front of the station 6 inches, and upon making inquiry I was told that it was to make room for the Baldwin engines which were then running.

7962. *Mr. Fehon.*] When was that? In 1884, or rather before that. I think I was stationed there in 1884.

7963. These alterations of platforms have been going on more or less since 1884? Yes, slewing rails and so forth.

7964. From your experience of these engines and from what you have heard do you consider that they are suitable for the permanent ways of New South Wales? Yes, I do. I have heard a great deal of the evidence here. On all the occasions that I have ridden on the engines and when I knew that I was going over roads laid with the lightest rails we have I have not experienced the slightest uneasiness. It never occurred to me that there was a disproportion between the weight of the engines and the rails. I am not a civil engineer and therefore I have not gone into the question of roads in any scientific sense, but as I have stated I never in travelling on these engines felt the slightest fear with regard to their safety. At the same time I should not care to run them at a very high speed on that portion of the road that lies between Newcastle and Maitland, but I do not think we do that as a matter of fact.

7965. *Mr. Hoyle.*] I do not think this statement is of any value whatever. In any comparative statement it is only fair to state what the failures were. You may have a pin falling out or an axle breaking; two very different things in relative importance. There are failures and failures. So far as I am concerned, I think this is a very misleading statement. It would be much better in a statement of this kind to include all the details and as it is I must regard it as a very misleading statement? It is very kind of you Mr. Hoyle to remind me of my omission. I should have said that this statement includes every failure that has caused any delay to the traffic.

7966. I think it ought to be stated what the failure was? One class of failure only has been kept out, and I thought it only fair to keep it out. I refer to failures to keep time owing to bad coal, every other failure that has effected the traffic has been included.

7967. *Mr. Hoyle.*] Quite so, but I think it would be fair to both sides if the particular nature of each failure was stated.

7968. *President.*] Mr. Hoyle says that whether it is the breaking of the reversing-gear, draw-gear, axle, or anything else, it should be stated in detail.

7969. *Witness.*] I meant to say that the statement included everything that happened to the engines, such as the breaking of axles and everything else.

7970. *Mr. Hoyle.*] Mr. Thow, who vacated that chair just before you took it said that the "Scotch Yankee" engines were giving no trouble? Neither are they at the present time.

7971. You have compiled a statement in the last three months, and by that statement you show that these engines are really giving more trouble than the Baldwin? During the last month they have not given much trouble. We have put them through the shops and they do their work very well.

7972. *Professor Warren.*] Mr. Thow said that a great deal of money had been spent on these engines? Yes, and it is since the money has been spent upon them that they have given no trouble.

7973. *President.*] That is evidently so.

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7974. *Mr. Hoyle.*] What I complain of is that in a statement purporting to be a comparison of the various engines certain details have been given in one case and not in another? You cannot complain of that in this instance, because everything is given, each class of engines have been treated alike.
7975. Mr. Thow has already promised to submit an amended return with these details, and to put in the figures we require in regard to these statements, stating what the repairs were, and how they have happened.
7976. *Professor Warren.*] I did not understand him to say, that I think he said he might do so. I do not know whether he will or not.
7977. *Mr. Fehon.*] I think it comes back to what I said before. Only failures of construction should be considered by the Commission. If there are faults in construction, let them be given by all means. Such details as Mr. Hoyle talks of—hot-boxes, &c.—will happen anywhere; if there are errors of construction, well, let me know, but it is useless spending time by going into petty details of this kind.
7978. *President.*] Surely if the more important things were set out Mr. Hoyle would be satisfied. Engines, I understand, go into the workshops for all sorts of little things.
7979. *Mr. Hoyle.*] No; there is the distinction; small repairs are attended to in the running-shops between the trips of the engines. They only go into the workshops for important repairs; the workshop repairs are comprehensive repairs.
7980. *President.*] You want to show, Mr. Hoyle, that there are repairs necessitated by defective designs; will it answer your purpose if you have a statement of all repairs that have been necessitated by defective design?
7981. *Mr. Hoyle.*] Yes; and of failures which ought not to occur in engines so new as these are.
7982. It says distinctly in the charge, "failures of construction."
7983. *President.*] Surely it would be enough for Mr. Hoyle if he got that. I mean the statement I have referred to. If we keep on multiplying the arguments it will be interminable.
7984. *Mr. Hoyle.*] I only want one report, and that is to be comprehensive. If it is to be a comparative statement, let it be one giving the details in each case.
7985. *Mr. Fehon.*] I do not see any necessity for a comparative report; why should we have one?
7986. There is nothing in making a comparative report which will give you no information; why compare the "Scotch Yankees" or others with any other class of engine; it will lead to no decision
7987. *Mr. Hoyle.*] Well, if it is a mistake it is one of your own department.
7988. *Mr. Fehon.*] Very well, then, we will withdraw the statement.
7989. *Witness.*] The reason why we made this comparative statement was that when I was previously examined I told Mr. Hoyle that these engines did not give us any more trouble than other American engines we have had; that is why I supplied this comparative statement. Every failure is noted in that list that caused a stoppage of the traffic, because the stoppage in the traffic had necessitated a loss of time. Every failure, whether great or small, is entered there.
7990. *Mr. Brown.*] I understand that Mr. Hoyle is dissatisfied with the report; suppose we let it be left out altogether.
7991. *President.*] Very well, then, we won't have it put in evidence unless you want it put in Mr. Hoyle; shall we leave it out altogether?
7992. *Mr. Hoyle.*] I do not want it in that form; it will be very much more satisfactory to have it inclusive of the cause of the failure, but as I say, I did not ask for it.
7993. *Witness.*] As I have said before, I only drew up this statement because I thought I had committed myself to certain facts when last examined, and I was desirous of doing what I could to substantiate those statements.
7994. *Professor Warren.*] You want a statement of repairs to be put in.
7995. *Mr. Fehon.*] I do not think it is at all necessary.
7996. *Mr. Brown.*] But I am afraid they have already decided that it should be supplied.
7997. *Mr. Fehon.*] I do not object to a statement of that kind being made, and it was only with the idea of shortening the inquiry that I spoke.
7998. *Mr. Hoyle.*] I do not think I can ask Mr. Stanger any more questions.
7999. *Professor Warren.*] You say that you took a load of 195 tons at a rate of 15 miles an hour as a basis of your test. Of course you have not read the correspondence—I mean you only saw it in this room, and not before? Yes.

FRIDAY, 27 MAY, 1892.

[The Commission met in the Board-room, Colonial Secretary's Office, at 2 p.m.]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., M.L.C., J.P.

8000. *Mr. Fehon.*] Mr. Thow, who made a slight mistake in his evidence yesterday with reference to the tests which took place in connection with the rail broken at Tarana, wishes to correct what he stated. He is present. Will the Commission permit him to make the correction he desires?
8001. *President.*] Certainly.

William Thow recalled:—

Mr. W. Thow. 27 May, 1892.

8002. *President.*] I understand, Mr. Thow, that you want to correct an error in the evidence you gave yesterday with reference to the rail broken at the Tarana accident. I believe you had not your notes when you were here yesterday? No.
8003. You found, I understand, that the rail you said was broken and submitted to a test, and which was fractured by a fall of from 6 to 12 inches, was not the rail in question, but another taken from a scrap

Mr. W. Thow. 27 May, 1892.

scrap-heap. Will you explain what took place with regard to the Tarana rail and the tests you applied to it? We tested two pieces of that rail. There was only one drop test applied to the first piece, and it broke with a fall of 4 feet 2½ inches. It broke very freely.

8004. *Professor Warren.*] That was the worse of the two, I take it? Yes; the first we tested. It had only one blow.

8005. It broke with a test then of 4·3 foot tons? Yes; that would be about it. We then tested the second piece of the same rail, and subjected it to four blows, 1, 2, 3, and 6 feet falls, and it broke very freely under the last blow (6 feet).

8006. That equals 12 foot tons? 6 foot tons, I think.

8007. Yes; 6 foot tons is the final blow? It broke very freely. That is all I have to correct.

8008. *The President.*] Mr. Hoyle wanted a copy of the Western load table? Yes; I hand that in.

8009. I understand, Mr. Thow, that yesterday you undertook to give Mr. Hoyle the height of the cab of the American passenger engine from the rail. I understand you to say in the paper before me that the height is 12 feet 2 inches at the sides, and 13 feet in the middle.

8010. *Mr. Hoyle.*] That is 12 feet 2 inches from the rail to the highest point? Yes.

8011. *Professor Warren.*] I see, Mr. Thow, that your name is attached to the report of tests I have before me. In it I see a statement that looks like a bending test, is that so? The first table in that statement relates to the hydraulic test, and the second is the falling-weight test.

8012. *Mr. Fehon.*] With regard to Messrs. Pollock and Kidd's original report of the trial of tests made at the desire of the Commission upon a recent occasion, I desire to state that Mr. Pollock is now present, and I wish to call him in order to answer any questions the Commission may desire to put to him.

8013. *Professor Warren.*] Unfortunately I have not had an opportunity of reading that report; perhaps you can call another witness first.

8014. *Mr. Hoyle.*] I wish to explain before that is done that a minute was asked for by me yesterday in connection with the cost-book which has been produced before this Commission. I notice on a page where the entry of the alteration I have referred to, made for the purpose of permitting the Baldwin engines to pass, that minute is given as D.E. 91-1048, but on getting that minute, at least one bearing that number, I find that it has got no reference whatever to this matter; therefore the minute that has been handed in to me is of no use.

8015. *President.*] What officer handed that in?

8016. *Mr. Brown.*] Do you want that paper, Mr. Hoyle?

8017. *Mr. Hoyle.*] I did want it, but I will not press for it now.

8018. *Mr. Fehon.*] You will have Mr. Halligan recalled, and you can question him about it.

8019. *Mr. Brown.*] Where was it obtained from?

8020. *Mr. Fehon.*] Bathurst.

8021. *Mr. Hoyle.*] It should be Newcastle. I think I can explain how the mistake arose. I asked for a copy of the report sent to the Engineer for Existing Lines made by Mr. Watson with reference to the effect of the Baldwin engines upon the road. Mr. Watson is the divisional engineer at Bathurst. Probably this number has been sent to him by mistake. The telegram for the minute I asked for should have been sent to Newcastle.

8022. *Mr. Fehon.*] Mr. Halligan will be called presently, and perhaps he will be able to give you some information upon the point.

Edwin Molloy Halligan recalled:—

Mr. E. M. Halligan. 27 May, 1892.

8023. *Mr. Hoyle.*] I wish to point out that certain questions were asked Mr. Halligan relative to alterations to platforms. The answers to those questions did not seem to me to correspond with the entries in the cost-book of alterations made in his district, and I wish to recall him in order that he may have an opportunity of correcting that evidence, or explaining the discrepancy between it and the entries in the cost-book. He may have given the statements contained in his evidence from memory, which was only partially correct, and I therefore thought it right that he should now have an opportunity of correcting those statements.

8024. *Mr. Brown.*] I understand that certain questions were asked by Mr. Hoyle, and Mr. Halligan, in the report of the evidence which was forwarded to him, desired to alter the word "here," contained in Mr. Hoyle's questions, to the words "to Newcastle."

8025. *President.*] Yes, you will find one place at least where he alters "here" to "Newcastle."

8026. *Mr. Hoyle.*] You were asked, Mr. Halligan, "Have any additions been made to the structure or permanent-way since the Baldwin engines came here?" to which you answered "None." Now, from a charge I see in the cost-book, I see that alterations have been made in the platforms since the engines came here.

8027. *Mr. Brown.*] Mr. Halligan, I understand, desired to amend that statement by striking out the word "here" and inserting "to Newcastle" in Mr. Hoyle's question, the effect of which would be to alter the whole tenor of the question. Now we find, since the book containing the entries of the alterations has been produced, that your evidence would correspond with those entries if the word "Newcastle" were substituted for "here" in Mr. Hoyle's question? (*Witness*): I did not know the word "here," and so I made the alteration.

8028. *Mr. Brown.*] It was very important to Mr. Hoyle's case if your answer were given as it stands to the question he put, so it was thought desirable to recall you, that you might have an opportunity of correcting or explaining this matter. You did make the correction, but it was in Mr. Hoyle's question, and being very material, the Secretary would not allow it, and so you have been recalled. The question put to you was, "Have any additions been made to the structure or permanent-way since the Baldwin engines came here?" to which you answered "No." Now, what have you to say about that? (*Witness*): I don't know when they came here; I have no idea when they arrived. I meant to say that after the first Baldwin engine came to Newcastle there were no alterations made.

Mr. E. M. Halligan, 27 May, 1892.

8029. *The President.*] But you said in your evidence "here"—meaning, I presume, "Sydney"?
8030. *Mr. Hoyle.*] I suppose you took "here" as meaning Newcastle?
8031. *Mr. Brown.*] You see, Mr. Halligan, that it is material to Mr. Hoyle's case to show that these alterations were made for the Baldwin engines; that is what he desired to get from you, and the alteration you have made has changed that altogether.
8032. *Mr. Hoyle.*] "You told us that nearly all the platforms had been altered in the North—why was that?" to which you answered, "In order to get uniformity of gauge, I understood. There was a Conference of Engineers in Mr. Goodchap's time in 1888, before the line was opened to Hawkesbury, before I took charge of the Northern district the platforms were all different gauges, and he wanted uniformity in them." He then asked you "When was this work absolutely commenced" and you answered "About twelve months afterwards, about June." He then said "Were these platforms altered prior to the importation of the Baldwin engines," and to this you answered "Yes." You were subsequently asked if on the trial trip you made you saw any of the engines touch anywhere, and you said "No," and that the cab of the engine did not touch anywhere but was very close at some places; it was close at Cockle Creek, and you also said that after this trial trip spouting was lifted about 3 inches at East Maitland and Cockle Creek. Mr. Halligan has stated that these alterations in the platforms were made to bring the lines to gauge, and I wish to know how he reconciles this with the statement contained in the cost-book.
8033. *Mr. Brown.*] The entry in the cost-book is "Altering platforms to give clearance to new locomotives"? That is a heading I would not take any notice of, the clerk who made the entry would put any heading to it which he thought would distinguish it. I think I can show you other entries in similar words in the books.
8034. *Mr. Hoyle.*] Yes, there are others.
8035. *Mr. Brown.*] Mr. Hoyle says that these alterations were made in consequence of the importation of these locomotives, and this entry is made in a book connected with your department. It appears to be against these new engines, it says "To give clearance to the new locomotives," and the sum debited is over £1,000. (Witness): It is just a question of how a clerk enters it up. [*Witness here pointed out another entry of a similar nature.*] This alteration was made in order to bring the line up to guage, and yet it is entered for the clearance of engine 304.
8036. *President.*] So that in both cases you have put it to the engine instead of the gauge? Yes; it is a matter of entering up.
8037. *Mr. Brown.*] Do you not see the importance of your evidence in connection with the charge made against the engine. Is there no other explanation you can give, except that with regard to the clerk? We had the same charge previously, and it was all for the same thing, widening the gauge. I do not enter up the charges myself, there is a number to each of them.
8038. *Mr. Hoyle.*] 229 A. is the number of the order attached to this charge.
8039. *Mr. Brown.*] Do you remember the contents of that order from memory? (Witness): No, I do not.
8040. Could you find it out? I daresay I could.
8041. *Mr. Brown.*] Would that order correspond with this heading? It might or it might not. The heading might be in the words of the order or it might not.
8042. Would not the clerk follow the words of the order? As a rule I think he would follow pretty near the words of the order.
8043. *Mr. Fehon.*] As a matter of fact the alteration of the platforms was proposed some years before the Baldwin engines were thought of; is not that so? Yes, on the north.
8044. And when the Baldwin engines were ordered it was known that a great number of the platforms were not to gauge, and instructions were given to bring them to gauge? Yes, as quickly as possible.
8045. And you hurried it on? Yes, it was rushed towards the end.
8046. *Mr. Brown.*] I thought the case for the Commissioners was, that the importation of these engines had nothing to do with the platform.
8047. *President.*] Neither has it. They say "We were going to alter these platforms to a uniform gauge, orders had been given to bring them to that uniform gauge years before these engines arrived," and the Commissioners say that they were only carrying out those orders, but that when the Baldwin engines had been determined on, anticipating that they would be of a large size, they hurried on the work.
8048. *Mr. Brown.*] So it is a coincidence?
8049. *Mr. Fehon.*] Yes.
8050. *Mr. Hoyle.*] You say in your evidence that these platforms were altered prior to the importation of the Baldwin engines, I find that the date of the completion of the platforms was the 14th September, 1891, It does not say in your evidence that the platforms were in course of alteration, but that they were altered? I certainly stated that, for I knew the platforms were altered before I went on the trial trip. I am certain they were. I am speaking of when I took the trial trip to the Queensland border and back, at that time the platforms were all altered.
8051. *Professor Warren.*] They were finished before you started? Yes, if they had not been I should not have attempted to start.
8052. *Mr. Hoyle.*] I may state that probably this matter of the Baldwin engines may not end here, and there might be attempts made in the future if this matter cropped up to question what has been said, and if I should have to review this case hereafter, and perhaps have to go to my constituents upon it, I would not care to say that Mr. Halligan's book stated one thing and the evidence another, therefore I have recalled witness, in order to giving him an opportunity of reconciling his evidence. (Witness): Quite so.
8053. *Mr. Hoyle.*] I did not wish to take advantage of you, in any way. (Witness): Could I ask Mr. Hoyle if he would instead of giving the date of importation give me an exact date?
8054. *Mr. Brown.*] The engines came here in June or July, 1891.
8055. *Mr. Fehon.*] The first engines were in steam in July, 1891; but they were not running on the road regularly, they were doing their 1,000 miles preliminary running, which it was necessary for them to do before being passed and considered fit to run on the main line in regular work. I do not think any of them were running regularly in July. It was well into August before any of them ran on the main line.
8056. *Mr. Brown.*] You see that these engines were not in steam until July, 1891, and the cost-book shows that on the 14th September of the same year certain alterations were made in connection with the platform, under the head of "Giving clearance to the new locomotives."

Mr. E. M. Halligan. 27 May, 1892.

8057. *Mr. Hoyle.*] This passage is contained in your evidence:—
Mr. Brown.] Were any alterations made prior to the engines arriving? Yes.
How long before? They were altered six months before, and some up to date of arrival in Newcastle.
Were many of them altered? A great number of the platforms.
Nearly all of them? Yes, nearly all on the old line.
When were these alterations begun? About 14 months ago.
January, 1891? Yes; I think that is the date; about 14 months ago.
8058. *Mr. Brown.*] Then he must be wrong in that.
8059. *Mr. Hoyle.*] Now the book shows that alterations were made to the platforms on the 14th September of last year.
8060. *Mr. Brown.*] And the engines were imported in June last, 1891? That is the importation into Sydney, sir, not Newcastle.
8061. *Mr. Brown.*] The date of importation is not the place, but the time when they arrived here? I was not aware of that.
8062. *President.*] Why could you not have said in your answer when your evidence was sent to you:—"I do not know the date of the importation of the engines into the Colony, but I can say that all of the alterations in my district were made before a certain date," that would fix it.
8063. *Mr. Hoyle.*] All the alterations were made before the engines went to Newcastle, you say? Yes.
8064. The platforms were all altered before the engines came to you? Yes, in my division.
8065. And you believe that the heading contained in the cost-book is a mistake so far as the clerks are concerned? I do not blame anybody for that. It might have been entered up in a clerical way. It might be right so far as I know.
8066. *Mr. Brown.*] You say the heading would probably follow the words of the order 229 A. I might add this point—that the evidence you tender, or that tendered by anyone else in your position, ought to be as reliable as you can make it.

Robert Pollock, being sworn, said:—

Mr. R. Pollock. 27 May, 1892.

8067. I am a consulting engineer, practicing upon my own account. I am President of the Engineering Association of New South Wales.
8068. *Mr. Fehon.*] Have you had considerable experience in determining the power of various engines at various times? Yes.
8069. Did you conduct certain trials on Sunday, May 15? Yes.
8070. You were associated with Mr. Kidd in making those trials? Yes.
8071. And you and Mr. Kidd reported upon them? We did. [*Report produced.*]
8072. Did you consider the result of those trials satisfactory? Yes, I did.
8073. I have no further questions to ask you.
8074. *Professor Warren.*] Did you work out the horse-power required in drawing a load of 176 tons on the 1 in 40 grade at 22 miles an hour? No; I think you will see that the tractive power is given in the report.
8075. You have not compared it with any fixed standard of requirements which have been submitted to you? No; only the weights the engine was supposed to pull.
8076. Did not the Commissioners send you a letter saying that the engine was expected to pull a load of 176 tons up a grade of 1 in 40 at a speed of 22 miles an hour? Yes.
8077. Did you work out the horse-power necessary to do that? No; I only worked out the horse-power the engine developed at different times on the trial trips.
8078. I am sorry you did not do that, for then you could have compared the horse-power you actually obtained with the horse-power which the engine was expected to develop? I worked out the horse-power of the work accomplished in the day.
8079. I refer to the horse-power that would be shown by drawing a load of 152 tons up a grade of 1 in 40 at a speed of 22 miles per hour? I do not remember the tenor of that letter.
8080. None of your speeds reached 22 miles per hour, though your loads sometimes exceed the standard of 152 tons, what was the highest speed you obtained? The highest speed we obtained was on the fifth trial, it is given in the report.
8081. Did you compare the speeds I sent you with your own? Yes, and with your times also. They all come out very closely to within an eighth I believe. In the main they were very good.
8082. The load was 5 tons 2 cwt. and 11 qrs., and more than was intended I think? Yes.
8083. You agree that it is right to take the indicated horse-power after the engine had settled down to its work? Yes. You will notice that on the fourth trip she was gaining speed, and gaining steam up the 1 in 30.

No of indicator card.	Mile-post where taken.	Speed in miles per hour.	Boiler pressure.	Initial pressure.	M.E.P.	I.H.P.	Tractive power.	Resistance in lbs. per ton of whole train.
			lbs.				lbs.	
19	66½	20·45	155	142	97·85	912·0	16,732	4·12
20	67	17·64	155	144	107·5	864·7	18,382	11·8
21	67½	17·45	160	144	106·6	849·8	18,228	11·17
22	67⅞	16·82	153	145	109·7	841·8	18,758	13·6
23	68⅛	17·47	155	142	108·4	863·5	18,536	12·6
24	68½	18·18	150	136	103·8	830	17,749	8·9

Mr. R. Pollock. 27 May, 1892.

8084. In recording the horse-power of these engines, would you take the last four results in this report as your basis? There is a diagram accompanying this report showing the grades and the time in which they were taken, and a tracing that will show you when the engine was fairly on the grade, there are a good many curves on the gradients, and they, of course, would affect the speed. I think the gradient, in order to try the engine fairly, ought to be straight. In the diagram, I have referred to, you will see exactly where the curves are, and where the engine settled down to her work.
8085. It would be unfair to average all the horse-powers, and take that as the horse-power of the engine, would it not? Yes. I should take out the first trip, I think.
8086. *Mr. Fehon.*] The horse-power will fall going up the grade.
8087. *Professor Warren.*] No; because if you were drawing nothing you would get no pressure on your cards, but these have all been taken from indicated diagrams, and they would correspond with what you would get drawing a weight up a certain height? There is a beautiful correspondence between these horse-powers, and what we expected.
8088. How did you get the resistance? We first took the whole weight of the train and engine, and then divided it by the grade.
8089. This is the resistance in lbs. per ton in the report? Yes; on the level.
8090. That varies considerably? I put it down considerably; the curves affected it to some extent.
8091. Take trial No. 1, you say the speeds there were 17, 17, and 15; the engine was evidently feeling the effect of the grade? You must compare that with the falling steam power.
8092. Then take the other, 18, 18, and then it increases a little;—that would be a fair average to take? I think you might leave out the first two, but that is a good deal a matter of opinion.
8093. You would consider that a fair thing? Yes.
8094. I think it would rather overstate the horse-power, but you would think it fair? Yes.
8095. If I average it at 64 or 65, I would take a fair average? Yes; I think you would.
8096. The best test of all is No. 5;—that is undoubtedly better than any of the others; the speed is higher and the road heavier—5 tons 12 cwt. and 2 qrs. heavier, more than was ever expected, and the speed is practically 20 miles an hour? Our speeds were sometimes a little over or a little under yours, but on the whole we thought that they were remarkably alike.
8097. There is one diagram that Mr. Pollock has referred to, which shows the grade and the position on the grade at which the indicator diagram is taken;—could you let me have that tracing, Mr. Fehon?
8098. *Mr. Fehon.*] Yes.
8099. *Professor Warren.*] I shall send it back to you; I merely want it in order to check for the purpose of verification.
8100. Did you use a planimeter? Yes; and then we checked off.

Howell Bland, being sworn, said:—

Mr. H. Bland. 27 May, 1892.

8101. I am assistant running foreman at Eveleigh; previous to that I was travelling locomotive inspector on the Southern and Suburban line. I have been in the service of the New South Wales Railway Department between twenty-three and twenty-four years; for about fourteen years I was a driver.
8102. *Mr. Fehon.*] You have had a large experience of engines, and have ridden on the footplates of all the different types? Yes.
8103. You have ridden on the Baldwin passenger and goods engines? I have.
8104. Will you tell the Commission briefly your experience of these engines? I found that both the passenger and goods engine did all that was required of them. Their performances were beyond my expectation. I always found them to run freely and well, and to take the curves better than most of our English engines. I have ridden on the passenger engine at the rate of 50 miles an hour, and I have no hesitation in saying that they rode comfortably and safely, and did not injure the road in any way so far as I could see.
8105. Did you consider that they rolled more than other enges do? No, I did not, although the impression might be given that they did on account of the driver standing so high. The driver stands much higher on the Baldwin engine than he does on the ordinary English engine, so that these engines would appear to roll much more than they would if the driver stood lower down.
8106. You consider them to be comparatively easier then than any other class of engines on our lines? Yes, I fancy that they ride easier.
8107. Do not they draw alone the loads which previously required two engines to draw them? They do.
8108. What is your opinion as to whether one large Baldwin engine or two smaller engines coupled together are easier on the road? Certainly I think the one Baldwin engine is easier than the two engines coupled together.
8109. Are they not easier in every way, being controlled by one set of men instead of by two? It must necessarily follow that a train is more easily managed and better in other ways in the hands of one man—that is, under his control—than under that of two. It is difficult to get two men to work in unison with each other.
8110. With your experience of the lines and roads of the New South Wales Railway, do you consider them to be suitable to the Baldwin engines? Yes; I do.
8111. Do you think them a valuable addition to the rolling stock of the New South Wales Railways? Yes; I think they are a valuable addition, so valuable that we have been able to reduce the number of drivers considerably, on account of these engines doing the work which previously two engines had to do, necessitating the employment of two sets of men where now only one set is required.
8112. *Mr. Hoyle.*] You say that these engines did more than you expected of them;—what would you expect? I expected them to haul about 200 up the 1 in 30 grade. I am speaking now of the consolidation goods engine. The passenger engine I expected to draw 125 to 130 tons up the same grade, and they are doing more than that now.
8113. Upon what do you base your opinion;—were you consulted when the engines were ordered? No.
8114. Did you know anything about them before they came here? No.
8115. So you had no way of forming an opinion about them till they actually came here? No, only that from my practical experience I came to the conclusion in my own mind as to what they would do.

Mr. H. Bland. 27 May, 1892.

8116. What was there about the engine that led you to come to that conclusion? There was nothing in particular except that, from the way the old Baldwin's handled the light trains, I came to the conclusion that the new engines would handle a heavier train in a certain way.
8117. But you must have had something to go upon that made you arrive at this conclusion; what made you think that they would haul these loads of 200 tons in the case of the consolidation engine, and 125 to 130 tons in that of the passenger engine; what was it led you to believe that these engines would do that—I mean from an engineering point of view;—how did you arrive at these conclusions? I was led to believe that the engines were brought here to run the through Southern express to Junee, and they were put on that road and did run the express, and I have no hesitation in saying that if the material in the bogie axles had been what it ought to have been they would have been running that service now.
8118. You say you believe that these engines were brought here to run the express? Well, I did not know.
8119. You were told? Yes; it was the general opinion.
8120. Well, now that these axles are put right, and since the engines haul so much more than others, why are they not used for the express service? We have other engines on the line now doing the work just as well.
8121. You said that two engines coupled together would do more harm to the road than one heavy engine? I said that is my opinion.
8122. But we want you to give more than an opinion; what you are giving here is evidence; if you say these engines are doing a certain thing, it comes before the Commission as a fact. Have you had anything to do with the permanent-way of the colony? No.
8123. Do you know anything about civil engineering? No.
8124. Then, do you think you are qualified to give, or capable of giving an opinion upon this matter? No.
8125. Then, any statement you make upon this question will be simply a matter of opinion of an unprofessional character? Yes, quite so.
8126. Now, about the loads these engines will haul, you say these passenger engines will haul 125 to 130 tons up the 1 in 30 grade at what speed? About 12 to 14 miles an hour.
8127. I presume that your experience only extends to the metropolitan district; have you control beyond Sydney? Yes.
8128. Does your duty take you to Newcastle? No.
8129. Or Penrith? No.
8130. The metropolitan district will extend, I suppose, up to Picton? I have control to Albury.
8131. When these engines were running in Sydney did they give much trouble; were the breakages in connection with them any greater than those in connection with other classes of engine? Not more than with new engines usually. That is until the axles began to give way; that was the first serious trouble they gave.
8132. Would you be prepared to answer any questions relative to the axles, the bearing service, and that class of matter? No.
8133. You are not competent to do so? No.
8134. You belong to the driving section of the Department only? Yes.
8135. *Mr. Fehon.*] As far as you have had experience with these engines, have they had more breakages than ordinary new engines? No.
8136. Was it a new experience for reversing gear to give way, or a fulcrum pin to drop out? No; there is always something in new engines that requires to be done; when 304 class was brought here we had to make a great number of alterations.
8137. *Mr. Hoyle.*] Do you mean the 304 Dubs, or Baldwin engines? The 304 Baldwin; when that class first came here there was very considerable trouble in getting them to run at all, on account of the big ends getting hot, on account of the faulty lubrication; it was some weeks before we could get them beyond Parramatta.
8138. *Mr. Fehon.*] Comparing new English engines with these new American engines, have the breakages and repairs in the latter been excessive? Yes; I rather think it has been more on these engines than on the English engines; yes, I think so.
8139. About the mechanical part of the Department you know nothing?
8140. *Mr. Hoyle.*] Have any of the drivers complained about these engines? So far as I know, the drivers have always spoken highly about the engines, and have wanted to get them again.
8141. Are you sure there have been no complaints of a general nature since they first commenced to run? Not that I know of.
8142. Have you heard that there were complaints about them? No, I never have.
8143. *Mr. Hoyle.*] That is all I wish to ask the witness.
8144. *Professor Warren.*] I would like to ask Mr. Pollock a question. There was a certain amount of coal and water consumed on our trial trips, and I find that that has not been deducted from the load, there were 3 tons of coal taken, I believe. Would Mr. Pollock give me the quantities consumed?
8145. *Mr. Fehon.*] I do not know anything about it. The driver running that trip would probably know.
8146. *Professor Warren.*] Did he take a note of the quantity of water and coal consumed?
8147. *Mr. Fehon.*] Yes, I think the driver would perhaps have the best knowledge of that.

John Chudleigh, being sworn, said:—

Mr. J. Chudleigh. 27 May, 1892.

8148. I am the driver of the train which made the trials on Sunday, 15th May.
8149. *Mr. Fehon.*] Do you know how much water was consumed on the total trip—how many gallons? No, I do not.
8150. I have the coal, but I want to get the water.
8151. *Mr. Bland.*] I believe I could get you the water consumed, but not immediately.
8152. *Mr. Fehon.*] How many years have you been in the service of the Department of Railways? I have been eleven years in the service, and have been a driver for eight years. I have had experience on other lines—Joadja Creek and other places.
8153. You have driven a Baldwin engine have you not? Yes.
8154. Do you consider that they travel as easily, or more easily, than other classes of engines you have driven? I think they travel more easily than other classes. 8155.

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8155. Do they take their curves more easily? Yes; very much.
8156. Do they not draw the loads alone which previously you had two engines to draw? Yes. I can only speak with regard to passenger trains, as they are all that I have had experience of.
8157. Can you give an opinion as to whether you consider one Baldwin engine or two ordinary engines coupled together to be easier on the road? I should say one Baldwin engine, certainly.
8158. Do you not feel more confidence in keeping time and drawing your load with a Baldwin engine than with any other class of engine on the New South Wales Railways? Yes, so far as I have experience of them.
8159. You have had better time with the Baldwin engine than with any other class of engine? Yes; we have kept time easier.
8160. And I understand that you have never driven an engine in which have had greater confidence than in the Baldwin engine? I have never had more confidence with other engines than with the Baldwin.
8161. With your experience of these engines and of the roads of the New South Wales Railways, do you consider these engines to be well suited to the roads and the roads to be well suited to the engines? Speaking of that, I do not find any difference in the running between the Baldwin engines and the others—it does not seem to me to make any alteration in the road, that I know of.
8162. They run very smoothly, do they not? Yes; they run smoother than any other that I know of.
8163. And you consider that these engines are a valuable acquisition to the locomotive stock of the railways of New South Wales? Yes; I certainly do.
8164. *Mr. Hoyle.*] How long have you been driving these engines? Not regularly for any time to speak of—three months is the longest, regularly.
8165. Where? On the South Coast line and to Goulburn (and as far as Junee junction in the south).
8166. When you were running on the South Coast, you said that you did not find that the engine gave you any more trouble than other engines;—did you find about Stanwell Park that they were any worse? No worse.
8167. How many vehicles could the "Scotch Yankee" take? It could take fourteen up 1 in 30 grade.
8168. And the Baldwin could take eighteen? Yes.
8169. So that, as a matter of fact, the Baldwin could only haul four more vehicles than the "Scotch Yankee." Is it within your knowledge that the "Scotch Yankee" has taken sixteen vehicles to Newcastle unassisted? I am speaking of the southern road.
8170. But the Newcastle is a harder road? I beg your pardon.
8171. *Professor Warren.*] You have 1 in 30 and 1 in 40 grades, have you not? The Southern is the heaviest.
8172. *Mr. Hoyle.*] Do you think the "Scotch Yankee" could take more than fourteen vehicles? No; I think it would take them all their time to haul the fourteen to time.
8173. You say you had more confidence in driving the Baldwin engine than in driving any other engines you know of; did you have more confidence in driving it than in driving the "Scotch Yankee"? I do not say that. I had as much confidence in the Baldwin as in the others.
8174. No more? I could not say more, but they rode easier.
8175. Is that because of the greater weight on the road or of the better compensation? Yes; I think it was the better compensation.
8176. It is only fair to explain that, because it has a great deal to do with the easy riding, but that does not presuppose that necessarily the engine is doing less injury to the road, does it? No.
8177. You said that one engine on the road was easier than two coupled together? Well, you find that out from practical experience. In curves, for example, the coupled engines strike very hard, but with the Baldwin engines that is not so.
8178. What speed do you run round a curve with a Baldwin engine? Up to 20 miles an hour.
8179. And at what speed with the other engines? Twenty-five miles an hour.
8180. And you say at 20 miles with a Baldwin,—that is less than with the others? We are not allowed to go at more than 20 miles an hour with the Baldwin engines round the curves.
8181. Why are you restricted to 20 miles an hour with the Baldwin engines round the curves? I do not know.
8182. Is it because of the extra weight striking the curve? I would be prepared to go at a higher rate with the Baldwin than with the others; I do not know why the order was given.
8183. Then there has been an order issued? Yes.
8184. Then as to the two engines coupled together, you know that the two do not strike together? No, but they make a longer wheel-base.
8185. Has that anything to do with the effect on the curve? The engines are binding more, the leading parts of the engine would bind more on the curve.
8186. Why? Because of the two engines being longer on the same circle.
8187. But does not the bogies give to the curve in going round it? On the first engine it might, but the other engine is tightly coupled to the first.
8188. So then it is the tight coupling? Yes; they must be coupled tightly together to prevent jerking.
8189. I may say that you have given me the most satisfactory explanation that I have had from any one as to this matter since we came here? But I am only telling the truth.
8190. How did you know? By the feel of the engine.
8191. You are not prepared, I suppose, to give an opinion outside of what you think? You can feel the engine over the road, and tell whether the engine rides smoothly or roughly over the road.
8192. Did you ever get stuck up in the Otford tunnel? No.
8193. Did you ever hear of others getting stuck up there? Yes.
8194. What caused that, was it slipping or a too heavy load? Either of those causes would do it.
8195. What loads do you haul on the South Coast with these engines? What I ran on the South Coast were trial trips, breaking the engines in, but I hauled double passenger loads on the South.
8196. What do you mean by that? That is double the ordinary passenger load—eighteen vehicles in all.
8197. Are there nine vehicles to each load? Yes.
8198. Do you know what was running on the express then? The Dubs engine.
8199. "Scotch Yankee"? No.
8200. The four-wheeled couple? Yes.
8201. Was the Dubs passenger engine the strongest you had then, or was there any more powerful engine in the service than it? Yes.

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8202. But not running on the express? No.
8203. Have you a passenger engine in the service that can take a greater load than the Dubs express engine? The "Scotch Yankee."
8204. But they were never used on that run? No.
8205. The platforms had something to do with that, had they not? No; I ran them on the same road.
8206. Have you ever driven these engines at 50 miles an hour? Yes, before the order was given to reduce speed to 40 miles an hour.
8207. Why was that? I do not know, it is not because the engines are not doing the work.
8208. But there must be some reason for it? Yes.
8209. When you were driving these engines did you have any failures? I did not have a break down—but I had some little failures.
8210. Of what kind? Hot tender-boxes, but nothing to cause the engine to lose time.
8211. Did you have any failures of reversing-gear or brake-gear? I had one with the brake-gear—a bolt came out.
8212. Have you driven the engines since the new steel axles have been put in? I have.
8213. Have you found any trouble with them? No.
8214. They are not running hot are they? No.
8215. How about your tender-wheels generally, have you found them pretty good, and free from heating? Yes, even with the old axles, there was only one I had any trouble with.
8216. They are now all fitted with the new axles, are they not? I believe so.
8217. Will you tell me what coal you used for the trial trip? Nearly 5 tons.
8218. What kind of coal was it? Helensburgh.
8219. That is the best coal, is it not?
8220. *Mr. Brown.*] No; Newcastle coal is the best.
8221. *Mr. Hoyle.*] The Helensburgh coal is splendid steaming coal, that I know from my own experience. I heard that you used ordinary coal on the trip? It was the common coal we used. If you get the large Helensburgh coal it is very good, but the small is very bad.
8222. Did you use sand on the trial? Yes, we always do, on passenger trains especially.
8223. But on the trial did you use sand? Yes.
8224. Much? About 1 cwt.
8225. Did you apply it on the 1 in 30 grade? Yes, round curves.
8226. But on the grade? Not always—where the wheels were liable to slip.
8227. Are the Baldwin engines more liable to slip in ascending the grade than other engines? I do not think they are.
8228. Are they more liable to slip than the "Scotch Yankees"? I do not think so.
8229. I do not wish to ask the witness any further questions.

[*Mr. Fehon was about to call certain other witnesses.*]

8230. *Mr. Brown.*] Will the evidence of these witnesses be a repetition of what we have already had?
8231. *Mr. Fehon.*] Yes; it will be very similar, I believe. I have not asked them.
8232. *President.*] I presume they will come, and all say they are greatly satisfied with the Baldwin engines, and that they do their work well.
8233. *Mr. Brown.*] And probably Mr. Hoyle will make the same cross-examination—is it necessary to call these witnesses.
8234. *Mr. Fehon.*] Perhaps not. If the Commission is satisfied, I will not examine them.
8235. *President.*] Very well.
8236. *Mr. Hoyle.*] My cross-examination would be the same, but there is Driver Young, I would like to put him in the box for certain reasons.

W. W. Young recalled:—

Mr. W. W. Young. 27 May, 1892.

8237. *Mr. Hoyle.*] I want to ask you, Mr. Young, if you have ever driven an engine with a broken bar? I had not driven one at the time I was last before this Commission, but since then the engine I have been driving has a broken frame.
8238. You have an engine with a broken frame, you say,—what is the nature of the breakage? The breakage is in the main frame.
8239. Will you kindly point it out on the photograph in this room? Yes. [*Witness pointing out the breakage on the photograph.*] It is exactly between the leading wheel and the cylinder—it is a bar of the frame.
8240. Is it only cracked, or is it broken? It is broken.
8241. And what would have to be done in that case;—would not the engine have to be taken to pieces in order to put that right? The question as to how it would be done rests with the engineer more than with me.
8242. But the engine would not run again until it was made right? She is now running with a clip on the broken place.
8243. *Professor Warren.*] Do you know what the section is,—is it 3 x 2½? It is more than that,—I think it will run 4 x 4 or 5 x 5.
8244. *Mr. Hoyle.*] Were there any other engines with broken frames being driven before you gave your evidence last time? No.
8244½. Since then have you had any other mishap; since you have had this one, perhaps we may find out some others? The rocker arms are also showing signs of breaking—I refer to the top rocker arm. I would just like to say that I attribute that more to the system of lubrication than anything else, at all events, than to any defect in construction. I attribute the failure with regard to the rocking arm and the gear altogether more especially to the lubrication, the lubrication for the purposes of the pistons, the brake, and reversing-gear, communications of the valve does not seem to be sufficient to reduce the friction.
8245. *President.*] You do not like the system of lubrication? I do not think the lubrication sufficient to reduce the friction.
8246. *Mr. Hoyle.*] But with proper attention could there not be a sufficient supply of lubrication? It is the quality rather than the quantity; the quality is very bad, and the quantity is not sufficient.
8247. *Mr. Brown.*] What you say is the case with all engineers, they have not found out a really good stuff to lubricate with.

8248.

Mr. W. W. Young. 27 May, 1892.

8248. *Mr. Hoyle.*] Do you think the provision for lubrication is sufficient if you had the lubricant? It is a case of getting lubrication which will reduce friction under a high temperature; it is not a question of keeping cool, but of reducing friction under a high temperature.
8249. *Mr. Brown.*] There must be thousands of specifics in the way of lubricants? Too many.
8250. *Mr. Hoyle.*] Can you account in any way for the rocker-arm breaking;—if there was any undue strain on the frame let us know, or anything which happened to the engine in whatever way that would cause an undue strain,—was there anything of this kind, such as a defect in the road or anything of that kind which might bring this about? Not to my knowledge; but there are two keys in the framing which are put there with the purpose of bringing it up to its highest pitch. I noticed that these keys began to shift, and I drew attention to them and they were driven up. After I had been down here at Sydney I went back to my post, and found that one of these keys had been lost altogether, and that of the other there was only about half an inch in place. I believe this gave the bottom bar an undue strain, and therefore it has broken. There is no reason why the keys should shift if strongly fitted at first. I believe that is the reason why the bottom bars broke, namely, from the severe strain it got in consequence of these keys shifting.
8251. Would there be an undue strain in consequence of an exceptionally heavy load? You have a given pressure of 161, but if you were to put on twice the load you could not put on a greater strain; that is to say, you could not increase the strain by increasing the load, but you might get a strain through slipping. When the engine is slipping, say in going round curves, and with sand on both rails, then it would be hard for anyone to determine exactly what strain comes on the whole frame or any part of the engine.
8252. Do you find that these engines slip much? Yes.
8253. More than other classes of engines that you have driven? Yes, I believe they do.
8254. When you have exerted the whole power of your cylinder, have you found any slip then? Yes.
8255. Does that give you much trouble? It does that.
8256. How do you account for that—is it want of tractive power in the weight being too great for the wheels, or what is it? I am of opinion that in consequence of the pressure on the load the engine is loaded beyond her power of cohesion, considering the state of the rails and the wheels. The engines are not cleaned, the oil comes from the bosses and runs down and gets on the wheels, and the grip of the wheel on the rail is consequently affected.
8257. What is the average mileage when these engines run for 24 hours? Well; we don't run regularly for 24 hours.
8258. How many miles do they do in a week then. What is your distance? I run from Bathurst to Wellington, but the engine runs to Dubbo, and sometimes beyond that, so that I could not determine what mileage she does in a week.
8259. So that you cannot give us the mileage per week? No; I cannot. If I were running the engine myself I could.
8260. Have you had any failures of the reversing-gear or brake-gear? There have been little breakages which have taken place, but so far they have not stopped the engine, so that I would not call them failures. I have had a lot of trouble with the tubes leaking, but I have not actually had a break-down or anything of that kind.
8261. *Mr. Hoyle.*] I have no other questions to ask this witness.
8262. *Professor Warren.*] You say that these engines slip more than other engines? Yes.
8263. That looks as if there were not sufficient weight on the driving wheel? Yes; either that or the pressure is too high for the power of cohesion. You could lighten the load and then she would not slip, or you might reduce the pressure and then she would not slip, you could take it either way.
8264. Does the engine slip on a good dry rail? Yes; she would slip on a dry rail.
8265. That is, supposing that she had a maximum load? Yes; that is why I think she is loaded beyond her power of cohesion, because no engine ought to slip on a dry rail if she is properly proportioned.
8266. *Mr. Brown.*] Do you mean that she slips during her progress or at the start? During progress.
8267. *Professor Warren.*] Slipping at the start is nothing.
8268. *Mr. Hoyle.*] Did you find her slip much at taking the grade? She is worse on the grade, and better on the straight. That, as I have explained already, is caused to a certain extent by the oiling of the wheels; if she were clean and kept free from oil where the wheel comes in contact with the rail, it would be better; a greasy wheel will not have the same cohesion as a dry wheel.
8269. *Mr. Fehon.*] Are you speaking of the passenger or Consolidation engine? The Consolidation goods engine.
8270. You say that they are not faulty in construction, but the question is one of lubrication, or rather want of lubrication. It is this that causes the rocking-gear and reversing-gear to get out of order? Yes, although the reversing-gear, which is fixed up with pinions, does not look like a thorough mechanical invention; but as for the rocking-arm, eccentric rods, and so on, I do not see why they should not perform the work required of them if properly lubricated. The reason why I come to that conclusion is this: I have fired on the old Consolidation American engines, and I have never seen anything wrong with their rocker-arms or reversing-gear; but they were lubricated with tallow, and I do not think there has been any lubricant yet invented that can reduce friction under a high temperature better than tallow.
8271. And the breaking of the frame you attribute to the keys dropping out? That I think is the primary cause.
8272. And that would happen to any engine? Yes, if anything of that kind were allowed to go astray, it might appear to be simple at first, but there is no knowing what the result might be eventually.
8273. Where are the keys in the frame? They seem to join the front and the back part of the frame together; the two ends come together and are secured by bolts and keys; the bolts did not drop out but the keys did work out.
8274. *Mr. Hoyle.*] Would that be caused by improper fitting in the first instance? Yes, there is no doubt about that.
8275. Is it defective workmanship? Yes, it is defective workmanship, and has been the cause of the keys working out.
8276. Did you find that the old Consolidation American engine had as many failures as the Baldwin engine? Not with regard to slipping, and I never knew any of their reversing-gear to be; there have been failures with those engines, but not of the same description as these.

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8277. Taking the failures of the old Consolidation engines, would they be of the same or of more importance than those in the baldwin Engine? Well, you must take into consideration the greater time the former had been running; the principal failures of the old Consolidation engine were blowing the cylinder ends out, and with regard to crank pins, and I do not doubt that these faults will also show in the Baldwin engines with the high pressure they have and the amount of slipping they do.

8278. *Professor Warren.*] The slipping shows the high power of the cylinder, does it not? Yes, or that there is something preventing cohesion.

8279. Would the reduction of the pressure obviate this? It might obviate the slipping.

8280. And the blowing out of the cylinders and the breaking of the crank-pins?

8281. *Mr. Felon.*] But that does not happen in these engines? No, it does not take place in the Baldwin engines, I was referring to the old Consolidation. If you reduced the pressure you would reduce the speed.

8282. *Professor Warren.*] And therefore the utility of the engine.

Henry Robinson recalled :—

Mr. H. Robinson. 27 May, 1892.

8283. *Mr. Brown.*] Have you ever seen this paper? [*Paper produced being a report on No. 455 American engine working special between Emu Plains and Dubbo, to ascertain the clearance for cylinders and cab of engine between all platforms, verandahs, bridges, and tunnels, &c.*] *Witness:* Yes, it seems somewhat similar to a report I made, with reference to the clearance for cylinders and cab of engine between platforms, &c.

8284. *Mr. Brown.*] Will you turn to page 2, what does this portion of the report refer to? That was in connection with measurements made of the coal-stage at Bathurst.

8285. Has it anything to do with the coal-stages Mr. Hoyle asked you about? None whatever.

8286. Has it anything to do with the question contained in your evidence :—

Mr. Hoyle (to witness).] Did you make any reports in connection with the coal-stages? I made no report whatever.

Witness: That was in connection with the Eveleigh coal-stage.

8287. *Mr. Brown.*] Is that so, Mr. Hoyle?

8288. *Mr. Hoyle.*] I did ask some questions about the Eveleigh coal-stage, but then I asked elsewhere the general question you have quoted.

8289. *Mr. Brown.*] This is the general question you refer to? (Witness:) I answered that thinking you were referring to the Eveleigh coal-stage.

8290. *Mr. Hoyle.*] But then I asked you the general question before that.

8291. *Mr. Brown.*] You were asked this question, and gave the reply I have read. You must remember that you come here to give correct evidence, and not to mislead the Commission. Now here is the tenor of your evidence, and it goes to show, just as Mr. Hoyle says, that you are asked generally with regard to the coal-stages. This is your evidence on the general question, "Did you make any reports in connection with the coal-stages?" to which you answered, "Made no report whatever." Your evidence then goes on as follows :—

Was there not any investigation made relative to the coal-stages in connection with these engines? Not that I am aware of.

Were any alterations made at any of these stages to meet the convenience of these engines? I cannot say whether there was any alteration made or not, but I daresay the line was altered a few inches perhaps.

Had that anything to do with the width of the cylinders of the Baldwin engines? I do not know why it was altered at all.

Do you know if the coal-stage at Eveleigh was altered in connection with these engines or not? I do not.

This is a general report upon the whole question [*referring to paper produced*]. It is signed by you, and it refers, among other matters, to the coal-stage at Bathurst fouling the cab of the engine. Yet, when Mr. Hoyle asked you if you made any report in connection with the coal-stages, you said you had made no report whatever? (Witness:) At the time I was giving my evidence I was referring particularly to the Eveleigh coal-stage.

8292. How can you say that, when you were asked generally about the coal-stages? I was asked about the clearance of the engines on the Northern line.

8293. You had been as far as Wallerawang on the Northern, and Bourke on the Western line, and Mr. Hoyle asked you certain questions incidental to those trips;—it is not as if you were on one particular part of the line, but you went as far as Wallerawang? Yes.

8294. And you went to Bourke? No; I went to Dubbo.

8295. At all events you took two trips, one on the north and one on the west? Yes.

8296. You have been recalled with regard to that particular part of the evidence to which I have referred, and the Commission wish to know now if you desire to amend that part of your evidence, because they are under the impression that your remarks applied to the coal-stages generally.

8297. *President.*] Do you want to say that when you were asked if any alterations were made to the coal stages, and you replied "No," you meant that none had been made at Eveleigh coal-stage? Yes.

8298. *Mr. Brown.*] Our object in recalling you is that you may correct your evidence now. Is there anything more you have to say about Eveleigh. It seemed to me to be a very light and airy way of giving evidence, considering the difficulties the Commission labour under. Your explanation is that you intended to refer to Eveleigh coal-stage alone; but there is no reference to Eveleigh coal-stage whatever in the previous part of your evidence. You gave evidence that you had been as far as the Queensland border, and after that you were asked this question in connection with coal-stages generally.

8299. *Mr. Hoyle.*] I suppose you really had in your mind at the time the Eveleigh coal-stage only, and you meant to refer to that alone? At the time of my examination I was referring to the northern line and Eveleigh.

8300. I wish you would correct your evidence in that respect. There is another little matter that also requires clearing up. I asked a question with reference to Picton; the evidence was as follows :—

Did you go to Picton on the Southern Line with an engine? Yes.

Could you come past Picton platform before the rails shifted, I mean the line was altered? No.

You could not? No.

8301.

Mr. H. Robinson. 27 May, 1892.

You could not pass Picton platform with the Baldwin engine until the rails were lifted or the station altered? Oh, we got past the station certainly, but the lines were afterwards altered I believe.

But the cylinder touched? No, it went very close.

8301. *President.*] Now, here is your report, which has been produced to you, and on page 3 you will find the following:—"Picton, cylinder fouled platform on down run," and here is your examination before this Commission on the other hand, in the words just read to you—how do you reconcile those two statements? (Witness): Well, certainly, the cylinder did go very close; it was the buffer that touched the platform.

8302. *Mr. Hoyle.*] But your report says: "Cylinder fouled platform on down run"; and in answer to Mr. Hoyle's question, "Did the cylinder touch?" you said, "No, but it went very close." Then he asked, "Could the engine have passed with safety running at the rate of say 30 miles an hour?" To which you replied, "I daresay, if all the brasses were in good condition. In that event we might have got through safely." I do not quite understand what is meant by the brasses.

8303. *Witness.*] In all the measurements, if there was not sufficient clearance, I made use of the word "foul." I have given no measurements in the case of Picton.

8304. *Mr. Brown.*] You have stated what was incorrect, as a matter of fact.

8305. *President.*] I understand this to be the fact, that the cylinder fouled. I could understand you making a mistake with your measurements, but whether the cylinder fouled or not is a fact which there was no getting beyond.

8306. *President.*] It is for your own sake that we have called attention to this.

8307. *Mr. Brown.*] Have you had an opportunity of perusing the evidence? I have had an opportunity.

8308. *President.*] Have you got a copy of your own report? I think I have; I think I can find it.

8309. It would be well to find it and amend your evidence, for the two statements are inconsistent. How do you explain this inconsistency? (Witness): We went up to measure the clearance between the platforms and the cylinder, and I made use of the word "cylinder" all along, because the buffer being of the same size it was just the same as if the cylinder had fouled. Coming into Picton we were on a curve, and naturally the platform would be very close to the buffer. The buffer-beam would strike.

8310. *Professor Warren.*] But in your evidence, in answer to Mr. Hoyle, you said nothing about that.

8311. *President.*] How could the engine get by if the buffer-beam struck? It might have scraped a little.

8312. Would it not be rather risky if you were going at any pace? Well, it would not be a safe thing to do in usual every day practice.

8313. But I see in your evidence that Mr. Brown asked you, "Would you like to be on an engine, going at the rate of 30 miles an hour, and have it pass so close to the platform as this passed;—would you have liked to have driven an engine through at that rate?"—to which you answered, "Yes, I daresay I could have driven the engine." Again he asked you, "Do you think it would have derailed the engine?"—and to this you said, "No; perhaps it might have scraped the buffer-beam, that is all."

8314. *Professor Warren.*] I should say, remembering the oscillation, that it would have knocked the buffer-beam all to pieces? (Witness): No; it just scraped.

8315. Do you mean to say that if you were going at the rate of 30 miles an hour, and the buffer-beam touched the platform, it would not be knocked to pieces; it is obvious from your report that it fouled? Well, I have been asked my opinion, and that is all I can say.

8316. *President.*] Do you say that you could drive an engine through the station with the buffer-beams scraping the platform whilst travelling at a speed of 30 miles an hour;—would you not have smashed something up? Mr. Brown, when he asked you the question I have quoted, meant, of course, did you get through clear? We could have passed that platform without carrying anything away.

8317. *Mr. Brown.*] Do you desire to amend your evidence? You had better take a copy of it with you, and, after comparing it with your report, consider what you really intend to say, and amend it accordingly.

8318. *Mr. Fehon.*] I may as well explain to the Commission that it is a very common thing, if a cylinder runs close to a platform, to say that it fouls.

8319. *President.*] Showing that the platform needs some alteration.

D. H. Neale recalled:—

Mr. D. H. Neale. 27 May, 1892.

8320. *Mr. Felon.*] You are a member of the Institute of Mechanical Engineers? No; I belong to the Institution of Civil Engineers.

8321. How many years have you been a member? I have been an Associate Member 19½ years nearly, and I was a student before that.

8322. And do you hold any other diploma? I am an Associate of the Master Car Builders' Association of America, which embraces the principal locomotive and rolling-stock men of that country.

8323. What has been your experience in railway management? I have had altogether twenty-five years' experience. I served my pupilage on the North London Railway, after having served a pupilage with a civil engineer. I was on the North British Railway as general assistant to the Locomotive Superintendent. I was chief draftsman on the Monmouthshire and also on the Great Eastern Railway, holding the former position for twenty months and the latter for four years. I was assistant locomotive superintendent, and for a short time acting locomotive superintendent of the Cape Government Railways. I was inspector at home for the South Indian Railway, and I was also independent engineer for the Metropolitan District Railway, for which I designed standard rolling stock, and I have been connected more or less with other railways.

8324. Were you an editor of the *Railroad Gazette* in America? Yes; I was mechanical editor for that paper for five years, and in that capacity I wrote the articles about locomotives and rolling stock, and also many about permanent-way.

8325. Is not the *Railroad Gazette* considered amongst professional men a paper of very high standing as an engineering journal, particularly on questions of the management of railways? Yes; it is the leading paper for railway officers not only in the United States, but also, I may say, throughout the world.

8326. Had you, in the capacity as editor of the *Railroad Gazette*, an opportunity of becoming acquainted with the condition, from a civil and mechanical point of view, of all the principal railways of the

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the United States? Yes, I had; I met the leading railroad men in the United States, and they were all very kind in giving me facilities to inspect their latest improvements and information on subjects of interest to railroad men. And they depended upon me to disseminate that information.

8327. Can you give the Commission some idea of the weight of the rails used in the United States? It varies very much indeed. The rails in use most generally vary from 56 to 67 lb. per yard in weight. Of course there are some lines that have heavier rails, and during the last few years very much heavier rails have been introduced. I saw the first 80-lb. rail that was used in America. It was used on the New York Central Railroad, and it gave satisfaction, and they have since laid the line from New York to Buffalo.

8328. *President.*] I should like to ask here, Mr. Neale, whether they gave such satisfaction by reason of their durability or by reason of additional safety insured by heavy rails over light rails? They gave satisfaction because of their durability and the fact that they gave less trouble with the fastenings, which are the weak point in American roads, owing to the soft character of the sleepers.

8329. *Mr. Fehon.*] Are not the sleepers very soft in America as compared with the hardwood sleepers in use here? Yes; it is entirely due to the fact that there was no timber used in the United States, that could be used for sleepers, that is as hard and durable as ironbark. White oak is the best and most durable wood in America for sleepering the roads, and that is far softer and lighter and much more liable to decay than iron-bark.

8330. *President.*] What do they use for sleepers on the English railroads? They use Baltic pine generally—yellow pine creosoted, oak would be too expensive.

8331. *Professor Warren.*] They use larch too do they not? Yes, but it is an inferior timber, and for that reason is not used on main lines.

8332. *Mr. Fehon.*] And is not the ballasting very much disregarded on a great portion of the United States? Yes; taking the American railroads as a whole there is very little ballasting indeed. Of course on some roads, particularly between New York and Philadelphia, for example, they have stone ballast something like ours, but taking the majority of the American roads, and amongst them the Baltimore and Ohio over which the Baldwin engines are running, the lines are very poorly ballasted indeed.

8333. *President.*] Why do they not pay more attention to the ballasting of their roads? It is a question of economy. The American road is built cheaply and improved out of the earnings.

8334. *Mr. Fehon.*] Are you acquainted with the new and improved class of engines that they are now using in America? Yes, I am; they use the Consolidation engines which were first introduced about twenty years ago. They have greatly increased them in size and power, and have found great advantage in doing so, and more recently they have superseded the old four-wheel couple engines which were used for passenger trains, and put six-wheel coupled engines on the road instead. I witnessed the beginning of that movement, and talked to the people who had charge of the new type of engines, and they expressed themselves as very much pleased and delighted with their superior performances. Since then I may say that the movement has very much extended on a large number of roads, and now the ten-wheeled and Mogul engines are used to a large extent. The preference is for the ten-wheelers although it is a little heavier. They prefer it because they think the ten wheels give a little more security.

8335. *Professor Warren.*] What is the maximum weight of consolidation engines in America? They run up to very heavy weights, the heaviest is about 66 or 67 tons without the tender.

8336. *Mr. Fehon.*] Give us the weight of the engine and tender combined, because that is the way in which it has been calculated in this Commission? Engine and tender combined in some instances is up to 100 English tons.

8337. *Professor Warren.*] The Decapod engine would be over 100 tons would it not? Well, it might, or it might not, they might use ten wheels instead of eight so as to better distribute the weight over more wheels. The Decapod engines are not, however, in general use in the main lines in America, they are only in use on the special inclines.

8338. And are not the Consolidation engines generally used in America with safety, and running with good results? Yes; the managers and engineers, to whom I have talked on the question, amongst them Mr. Ely, the leading Superintendent of Motive Power in the United States, with whom I had a long chat on the subject of the lower freight rates as compared with those in England, notwithstanding the difference in wages, said that he believed that the most important reason for the lowness of rates in America was the use of powerful locomotives. The average rate per ton per mile is a halfpenny on the American railways, and it is continually being reduced, whilst in Great Britain, although the rate is not actually known, I may safely say that it is fully a penny per ton per mile. I have just been working out the pecuniary result of these different rates, and I find from "Poor's Manual" that the difference in rates on the annual business of the American railroads as against the English rates is equal to a saving of from £130,000,000 to £150,000,000 per annum; that is to say, the low American rates mean a saving of £2 per head of the population as against the rates charged in England. If we only realise one quarter of the saving in New South Wales it would mean a saving of half a million a year. Of course, having been in America, I am perfectly conversant with this question, and any American who came here would tell you that the hauling of big loads, and consequently of the employment of engines of sufficient power to haul big loads unassisted, is a very important thing, not only to the railways of the country, but to the people at large.

8339. *Mr. Fehon.*] Some of these engines are running on the Baltimore and Ohio, are they not? Yes; they have used six coupled passenger engines for crossing the Alleghanies for years, and have been constantly increasing their weight and power for the corresponding increase in the weight and length of their passenger trains.

8340. What is the standard weight of rail on the New South Wales railways? The old standard was 71½ lb. to the yard for steel rails, and 75 lb. for iron rails, and the present standard is 80 lb. for steel rails.

8341. And what is the standard of the spacing of the sleepers? The present standard is 2 ft. 7 in.

8342. And is not the ballasting good and equal to the best of American roads, or even to the average of English roads? Yes; I think, taking the line from Penrith to Bathurst, over which I rode some little time ago with the special object of noticing the permanent way, I may safely say that I never rode over an equal length of line upon which so much work had been bestowed within the last two years by way of draining and ballasting and renewing rails and sleepers.

8343. Do you know the weight of the Baldwin engines now running in New South Wales;—what is your

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your opinion of them, taking into consideration the roads over which they have to run;—do you consider the engines suitable for the roads and the roads for the engines? I think they are eminently suitable, and that they will produce very important economical results; that they will save time, increase punctuality, and prove a great convenience not only to the Railway Department, but to the people of New South Wales.

8344. Do you know the builders of these engines? Yes; I visited their works very often, and I know the members of the firm, or at least some of them. They are very fine works—the largest locomotive works in the world, and the firm has a very high reputation indeed. The works are about four times larger than any works in Great Britain, and about three times as large as any other locomotive works in the United States.

8345. Then, if you ordered these engines from that firm you would have ordered them without troubling very much about supervision. In fact, you would take it for granted that they would only supply you with a first-class article, and that it was unnecessary to employ an inspector on the spot? Yes, I should take it for granted that they would give me a very good design, and put the best workmanship into the engines without supervision. I may add that it is not the custom in America when ordering locomotives to send in an inspector to see them built. I was an inspector of locomotives for some years at home, and I must say this, that I never would order a locomotive from a firm that I was not prepared to trust without the presence of an inspector. You send an inspector to supervise the building of a locomotive, and he is but one man among some thousands, and you may take it for granted that if those men do not know their work he certainly cannot teach them.

8346. Did you make some alterations in the specifications of these engines, and if so, for what reason? Yes, I did. I know there are divers opinions of steel fire-boxes and iron tubes; they are very much cheaper, and they have many advantages over copper, but where there is lime in the water they have a very short life. Now copper, while it is heavier and more expensive than steel, and in many respects an inferior material for fire-boxes, has this advantage,—that it disregards to a great extent the presence of lime in the water. If you have perfectly pure water and a steel fire-box, a person inspecting it after sixteen or seventeen years wear would not be able to tell that it had been in use for more than six or seven months; but, on the other hand, if there is lime in the water, it will wear out possibly in six months. With regard to the screw reversing-gear, I may say that, personally, I prefer it to a lever, but apart from that, there are two very strong reasons why we should adopt it in this case. First of all, nearly all our engines have screw reversing-gear, and consequently our men are accustomed to it, and secondly, on our steep gradients it is advisable to have every possible appliance for stopping an engine. If a brake gives way or is out of order you have to reverse your engine at once, and sometimes it is almost impossible to do so as quickly as is necessary if your engine is only fitted with a lever; but a screw is always easy to handle because you have so much power over it; and, consequently, under the circumstances to which you have referred, with a screw you can act with greater certainty. Then there is another thing, though it very rarely occurs. Sometimes you cannot shut steam off your engine, and under those circumstances it is very necessary to be able to reverse without a moment's delay, because an engine running down an incline with steam on in forward gear cannot be held by the brake. The other alterations made in the specifications are not of much importance, and I do not think it is necessary for me to refer to them in detail.

8347. Was the design of this engine entirely original, or was it suggested by that of an engine already in use? It was suggested by an engine in use on the Baltimore and Ohio railway which gave very good results.

8348. It has been said that your modifications somewhat impaired the power of these engines—is that a fact? I have gone into that question carefully, and have not quite finished my investigation; but here is a diagram which may throw some light upon it. I have plotted here the horse-power and different speeds of the Baltimore and Ohio engines, and have done the same with regard to our own engines. The blue figures on the diagrams represent our engines and the red the Baltimore and Ohio engines, and the two things pretty well coincide.

8349. *Professor Warren.*] Has that anything to do with the gradients, or is it simply a statement of horse-power? No; the gradients are not shown. These figures are taken from the results of a test of the Baltimore and Ohio engines and the results of the tests that we made on 11th May with our Baldwin passenger engine. I may say with regard to tractive power, that of course is the most important feature in locomotives for heavy gradients, that our engines develop a greater maximum than the Baltimore and Ohio engines. Our engine on 11th May developed 19,836 lb. as maximum, and the Baltimore and Ohio engines developed 19,064 lb. as a maximum.

8350. But it fell as low as 9,000 lb.? Yes; but that was before it was exerting its full power. I do not know if you have the figures of the 4th test made on May 11th when the engine was ascending the 1-30 gradient with a load of 144 tons. The tractive power varies as follows:—19,152 lb., 19,836 lb., 19,323 lb., 19,545 lb., 19,237 lb., 19,476 lb., 19,647 lb., 19,297 lb. Now the Baltimore and Ohio engines never once exerted these powers.

8351. That is merely tractive force? Yes.

8352. It has been said that these engines slipped their wheels? The engines do not slip.

8353. Therefore it does not follow that the hauling power of the train is proportionate to the tractive power? Certainly.

8354. But does it not depend on the weight on the driving-wheels, and so on? If the engine can exert that tractive force, the train will have to move.

8355. But the tractive force does not depend upon the weight on the driving-wheel; will you give me the formula from which you obtained your results? $\frac{d^2 S}{D}$ = tractive co-efficient; d = diameter of cylinder; S = stroke; D = diameter of driving-wheel.

8356. Well, where does the weight of the driving-wheels come in there? It does not come in there; but if the weight on the driving-wheels is deficient, the engine will slip.

8357. Exactly, that is what I say; the weight on the driving wheel must be proportionate to the tractive power, but we have it in evidence that the engines do slip? If all the evidence you have on that point is like the evidence I heard this afternoon, it has not much bearing upon the question. It was stated by the witness who referred to the slipping of the driving-wheel that it was owing to bad cleaning, and in consequence the oil was dripping on to the driving-tire. Any engine in the world would slip under those conditions.

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conditions. I am perfectly satisfied, from my experience after riding upon the engines, and after speaking to the drivers, that they are very well proportioned and rarely slip. Indeed, their adhesive weight is rather more in proportion to their cylinder power than that of other types of engines on the line. I investigated this question some two years ago, and came to the conclusion that in this climate we could do with a lower co-efficient of adhesion than you would require in the United States or in Canada; and in the United States and Canada they can do with a lower co-efficient than they can in Great Britain.

8358. In other words, you have a "better rail"? Yes.

8359. The point is with regard to the letters that were sent by the Secretary to the Railway Commissioners to the Baldwin Company. You, in conjunction with others, advised the Commissioners as to the purchase of these engines. Did you authorise this statement?

8360. You made a report in which it is stated that these engines are expected to haul such-and-such a weight at such-and-such a speed up a certain grade? The essential statement is in a letter from the Railway Commissioners to the Baldwin Company, dated 22nd December, 1890, and found on page 4 of the correspondence.

8361. Yes, that is it; in that letter you say:—There is a mis-print in that letter. The weight should be 176 and not 178 tons.

8362. So that really it is intended to haul 176 tons up 1 in 40 at a speed of 22 miles an hour? No, I do not read it in that way.

8363. Well, let me read you another letter; this is on page 7 of the correspondence, and the letter is dated December 29th, 1890. It is from the Secretary of the Railway Commissioners to the Baldwin Company. I admit that the load which it was said necessary to haul up 1 in 40 at 22 miles an hour was not mentioned in the first letter, but it certainly is stated distinctly in this letter. So you see that in this statement to the effect that the engine will be expected to haul 176 tons up 132 feet per mile, or 1 in 40, at 22 miles an hour? [*The correspondence was then handed to the witness.*]

8364. The power of the engine is implied in this letter very distinctly? Yes, that is a little mistake. I certainly consider that the engine should haul 152 gross tons, as I stated in the former letter. I expected to be able to put on an additional car occasionally up the 1 in 40, but I hardly expected that under these circumstances the engine would keep this time. We named our very maximum requirements. The Chief Commissioner asked me before the letter was written what was the very best speed at which the load could be hauled up the gradient in question, and asked me if it could not be done at 25 miles at hour. I told him that it could not be done at that speed up that incline, and ultimately I told him that he had better say 22 miles an hour.

8365. Then we may take it that you are the author of these figures? Yes, I believe I am professionally responsible for them.

8366. And you worked out the horse-power, I suppose? Yes, and found it as stated in the letter.

8367. I may say that I have checked them and made the same difference? Yes.

8368. What horse-power did you put down? I have lost those calculations.

8369. Well, the highest horse-power recorded in the Baltimore and Ohio trials is 1,003, is there another table? Yes, there are various runs in which the horse-power is shown.

8370. I see one runs up to 1,300, but that is taken from the *Railroad Gazette*, which says that the Baltimore and Ohio engines developed 1,300 horse-power, but then that was before she had settled down to her work? Yes, that was before she struck the grade that they work out 1,300 horse-power.

8371. You know the horse-power that the New South Wales engines develope? I expected them to develop from 900 to 960 as maximum.

8371½. Yes, that is very well, but the figures you give in the letter work out considerably beyond that? I think not.

8372. I think, if you work them out by the American practice, you will find that they give a result exceeding 1,000 horse-power. It is certainly more than 1,000 horse-power to haul 176 tons up 1 in 40 at 22 miles an hour? Yes; but I did not expect them to haul 176 tons up 1 in 40 at that rate. I thought it would be a very good performance if they hauled 150 at that rate.

8373. Well, but if you work that out you will find that it comes to more than 960, I think? I think not.

8374. Of course I know there is a train resistance. However, let us take 960 as what you expected them to perform? I expected them to perform between 900 and 960.

8375. Then I will refer you to some of your own tests. Did any one of the tests made by Mr. Richardson and yourself with the ten-wheeled engine come up to 930 horse-power? No, not any of them, but you cannot develop a very great horse-power in going up a long incline with such an extreme load, as the speed is necessarily slow.

8376. That is very well, but we cannot accept that? But that is a mere statement of fact. I am telling you what the engines actually did.

8377. But if they will develop from 900 to 960 horse-power up such a steep incline as 1 in 40, why would they not develop it on the trials you had between Wallerawang and Mount Victoria? They have done it, they did it on May 11; but I did not expect them to do it with a welter weight on such as we had between Wallerawang and Mount Victoria. On that occasion we hauled heavier loads than we did on May 11, and consequently went at slower speed. Supposing the engine is exerting her very maximum tractive power but is only just moving, it is evident that if the motion is infinitely small the horse-power must be infinitely small also, although the engine is exerting her utmost tractive power. Then take the other extreme; if an engine is going at a very high velocity it will develop a high horse-power, though its tractive force will be very small.

8378. Therefore it is on the incline that we have to measure the performance? The weights that we hauled between Wallerawang and Mount Victoria were far larger than we should ever haul in actual practice, yet the engine kept time according to the time-table. I may also say that the loads were much larger than we asked the Baldwin Company to make the engines capable of hauling. The horse-power has no commercial value in locomotives. People do not know the indicated horse-power of the great majority of locomotives in the world; they have no object in finding it out, as it has no value from a pounds-shillings-and-pence point of view, and as a matter of fact it was not referred to in the whole of the correspondence between the Railway Commissioners and the Baldwin Company.

8379. But pardon me, you did mention the horse-power? No, we simply stated the load we expected these engines to haul at a given rate of speed. An engine might have indicated a very high horse-power

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and still be utterly useless for our purpose. Take an engine like the engine that won the first prize in the International Exhibition, 1862, the "Lady of the Lake." She has developed about 800 horse-power, but she would be utterly useless to us. She would barely haul her own weight up 1 in 30.

8380. Yes, but is that not apart from the question? I think not; I think it is rather an apt illustration.

8381. Well, I know the "Lady of the Lake" very well; I remember her when first she was built, and have assisted in taking her to pieces, but to compare that engine with these has nothing to do with the question; it is an absurd comparison? I think it has a great deal to do with it; if horse-power has to determine the fitness of the engine, our ten-wheeled engine and the "Lady of the Lake" are fit subjects for comparison.

8382. You are trying to show the Commission that the horse-power developed going up an incline has nothing to do with the power of the engine? I say that the horse-power is not a usual element in calculating the power of an engine on steep inclines, and that the usual criterion of the power of an engine as in the case of our engines working on exceedingly steep inclines is the weight of train hauled.

8383. Not the speed? Not the speed.

8384. Well, that is quite another matter altogether. What I want to know is why you ever put into the correspondence the speed at which you expected the engines to haul these loads up given grades, if you were quite indifferent to the speed? I do not say that we were quite indifferent to the speed; but what I do say is this: you do not buy these engines for the horse-power they exert, as you buy marine engines, because, as I have explained, the mere fact that an engine can exert good horse-power is no security that she will pull a good load up a given incline, and as a matter of fact I think these engines have quite exerted the horse-power that was expected of them.

8385. If you put your horse-power at 900 or 960 I think you are fairly within the mark? That is my calculation.

8386. They have developed that; but a great deal has been said about this horse-power, as though it had nothing to do with the question, and I do not think that evidence ought to be given to that effect. The case is good enough as it stands—quite? You take a light train and run it up the Picton bank, and you will probably obtain a higher horse-power than we developed on the 11th of May; but take a heavier train than we hauled—and an engine has taken a heavier train up—and you would probably get a lower horse-power. I say, therefore, that the horse-power up an incline has very little to do with the question. I think you will find on referring to the occasion when the engine exerted its maximum tractive power that the horse-power developed was from 730 to 860.

8387. That was the fourth test? Yes, but on a grade of 1 in 33 where the engine was exerting 4,000 lbs. less tractive force it developed 1,029 horse-power simply because it was running faster.

8388. Yes, but that was not on a grade? It was on a grade, but the engine had not dropped down to its work. The driver had not "opened it out."

8389. Yes; I understand the meaning of the horse-power there, and I should certainly take that out, as the engine had not settled down to her work; do you agree with that? In order to get an accurate statement of the horse-power, you should certainly wait until the engine had settled down to her work, but for practical purposes the speed from the top to the bottom of the incline should be taken.

8390. When you said that the engine should exert from 900 to 960, do you mean from the beginning of the incline or after the engine has settled down to her work? After the engine has settled down to her work; but I did not expect that in a gradient of 1 in 30 or 1 in 33. I only expected it to do that on a gradient of 1 in 40. I did not expect it to develop as much horse-power on 1 in 30 or 1 in 33, although it would probably develop more tractive power.

8391. We have 920 in one case. It was hardly on the incline then, and it will show that the engine could do 900? Well, I should like to say that the engine would do much better on the 1 in 40 than she did on the 11th May. When we made the tests between Wallerawang and Mount Victoria the mean steam-pressure was never lower than 158 lb., and in two trials it was 159 lb., and in another one it was 162 lb. That was because there are very few people about the footplate and in the cab. The driver was not hampered; but on the 11th of May the fire was dead when the driver started. On one occasion he started from Picton with steam 20 lb. below the standard, and he would never have done a thing like that in running an express train; and thus the difference in the steam-pressure will make the train run faster and to develop more horse-power in ordinary work than she did in the test on May 11th up the 1 in 40 gradients.

8392. You have mentioned that, and it is quite right; but we repeated the second test because of the conditions under which it made it in the first instance? Yes, and on that fifth test the pressure never was above 155; and when the engine had fairly entered the incline, it was only 150. That sort of thing does not occur in regular work.

8393. Yes, but in the 1 in 40 she developed 1029 horse-power, what would you say to that? What I do say is this—that in ordinary working the engines do better than they do in these tests.

8394. And therefore, since she actually developed 940 up the 1 in 40, the engine is up to what you expected? It is most decidedly up to what I expected.

8395. The 176 tons at which you set down in the correspondence to the load that you required hauling up the 1 in 40 gradient slipped into the letter unawares, and as a matter of fact you did not expect it to be hauled at 22 miles an hour? I did not expect 176 tons to be taken up 1 in 40 at 22 miles an hour; I expected her to take it up a 1 in 40 without sticking, but I thought that she might perhaps lose a little time in doing it.

8396. You expected that she would pull the extra load, but at a lower rate of speed? Yes.

8397. That explains the whole thing, and it is a pity that it was not stated at first.

8398. *Mr. Fehon* (to witness).] What was the result of the modifications made by you in the specifications as tested by actual working experience? As far as I am able to judge, the modifications have somewhat improved the steaming powers of the engine. As far as I can judge, they will steam a little better than the Baltimore and Ohio engines.

8399. *Professor Warren.*] That is owing to their copper fire-boxes and brass tubes, I suppose? Yes; though I do not think there will be much difference.

8400. *Mr. Fehon.*] What is your opinion as to the effect these engines have on the permanent way? Well, I have ridden on a great many engines on a great many railways. I have ridden 1,500 miles a week,

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week after week, and I may say this most emphatically—that better riding engines and better engines to enter a curve I never set foot upon, and I think that they must be very easy on the permanent way. I think that for these reasons:—First of all, the arrangement of their wheel-base is very good. They have a good guiding power round curves, and that is most important. I would like to point out that the highest figure in the diagram of these four typical engines shows these ten-wheeled engines. The manner in which any engine takes the curve is a very important point. Here you have the bogie with four wheels to guide it round a curve, and part of the work of guiding round the curve is done by the leading pair of drivers. If you take the Scotch-Yankee, which, I believe, is a good engine, you will find that they have only two bogie wheels to guide them round curves, and that the rigid wheel-base will make it more difficult for them to take curves. It is 2 feet 6 inches longer than the rigid wheel-base on the ten-wheel engines. If the road is going to be damaged at all it will be damaged by the leading driving-wheel; and secondly, we know that the Scotch-Yankee is heavier on the leading driving-wheel than the Baldwin ten-wheeled engine. Therefore, they are more likely to do damage to the permanent way than the ten-wheeled engines, and if anything should go wrong with the bogie—a spring break, or anything else happen—you have in the case of the ten-wheeled engine four bogie wheels to depend upon instead of two. For these reasons I consider that the Baldwin engines are easier on the curves than the Scotch-Yankees. The rigid wheel-base of the Baldwin engine is only 12 feet 6 inches, and that of the Scotch-Yankees is 15 feet. On the Monmouthshire where they have 5-chain curves—much shorter curves than any we have here—we could not use an engine with more than 13 feet rigid wheel-base, and every additional inch in the length of wheel-base tells on sharp curves. For those two reasons I calculate that the Baldwin engines are much easier than the Scotch-Yankees. Then these engines are very well equalized as far as the weight is concerned. I mean by that that the weight on the wheel-base is very well distributed among the various wheels. Often, sitting on an ordinary chair, we find that it is only resting on three legs, and that the fourth leg, instead of being on the ground, is in the air. The weight on the wheels of an English engine is not, as a rule, equalized, and they may, consequently, be compared to four-legged chairs.

8401. *Professor Warren.*] Does that apply to the newly imported engine? It does to a certain extent; but I am speaking of English engines generally, which are not so well equalized as American engines. If you take a three-legged stool you may pitch it down anywhere and it will always take a bearing on three points, however uneven the surface, and that is the principle upon which the American engines are built. The wheels of these engines are so equalized that the engine is, in this respect, like a three-legged stool. Put them down as you will, all the wheels bear equally on the rails. It is a very important principle indeed, and it is one that is recognised by the Scotch and English engineers in charge of the Canadian railways.

8402. Yes, but that applies to American roads, which are very bad ones; ours are the best roads in the world? I should be very sorry to say that ours are the best roads in the world. I admit that they are well sleepered, well ballasted, and well looked after generally; but you cannot call any road first-class in which there are 8-chain curves and 1 in 30 gradients on the main line. I say that our road, taking only the gradients and curves into consideration, renders the Baldwin engines very valuable. There is another point. All American engineers are of opinion that equalisation has a very powerful effect in preventing the engines slipping. Engines in which the weight on the wheel varies are apt to commence slipping, while with a constant weight on the wheels they do not slip. Now it is obvious, that, putting out of the question the permanent way, putting out of the question the curves, equalisation is a very important factor in that respect, because we want engines to pull. We have grades here steeper than any road over the Alps; we have steeper grades and a greater total height to surmount.

8403–4. *President.*] Would it be convenient for Mr. Neale to come on Tuesday. Mr. Brown, who has been obliged to leave the meeting, wants to ask him a few questions, and Professor Warren, I believe, proposes to examine him further.

8405. *Mr. Fehon.*] I have also a good many questions to put to Mr. Neale.

8406. *President.*] Well, if Mr. Neale can attend again on Tuesday we had better adjourn the inquiry at this stage until . Will Mr. Eddy be able to attend then?

8407–8. *Mr. Fehon.*] Yes, I think so.

8409. *President.*] He is better, is he?

8410. *Mr. Fehon.*] Yes; but he has not been at the office at all during the week.

8411. *Professor Warren.*] Have you any other witnesses to call, Mr. Fehon, besides Mr. Neale and Mr. Eddy?

8412. *Mr. Fehon.*] No, I think not.

8413. *Professor Warren.*] I should like Mr. Deane to be here again.

8414. *Mr. Fehon.*] Oh, we can get him easily.

8415. *Professor Warren.*] Then the secretary will give him notice, because Mr. Eddy will not be very long under examination, I suppose; and Mr. Deane's further examination will not take more than half an hour.

8416. *President.*] If Mr. Eddy is not able to come on Tuesday, we shall want him to come some other day. We do not wish to bring him here if he is not quite better; but we should be glad to know when he will be able to come.

8417–18. *Mr. Hoyle.*] Before we adjourn, I would like to ask this one question. There was a great deal involved in Mr. Eddy's statement that one cannot get out in cross-examination, and I want to know whether, when the case for the Railway Commissioners is over, I shall be allowed to get into the box and make a statement, which will be a sort of review of the evidence given up to the present. I should also like to put in certain evidence as to the weight of rails being used in America, the spacing of the sleepers there, and other information in connection with the whole inquiry.

8419. *President.*] I thought, Mr. Hoyle, that you had finished your case, and that it was understood that you would not call any more evidence?

8420. *Mr. Hoyle.*] I do not propose to call any further witnesses; but I am asking now whether the Commission will allow me to make a personal statement, in the nature of a reply to the evidence that has been given by the Railway Commissioners. Mr. Eddy made a very powerful and carefully prepared statement, traversing a very wide range of subjects connected with railway management. He had the advice of many able officers, backed by the assistance of his entire department.

8421. *President.*] Well, I hardly like to decide this matter in Mr. Brown's absence, because he may not agree

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agree with my views; but as far as I am concerned, I thought that you made your statement at the outset of the inquiry, and I do not think that we want any statement in the way of advocacy. If it is part of your evidence, the Railway Commissioners are making out their case now, you having previously concluded your case. I would like you to think the matter over, and if you still wish to make a statement ask the question again on Tuesday, when Mr. Brown will be present.

8422. *Mr. Hoyle.*] Well, I would state this that many of the statements made by Mr. Eddy cannot be borne out by facts, whilst I believe that I am in a position to contradict them by a statement of facts if I am only permitted to make it.

8423. *President.*] The way in which what you seek to do is done in a court is this, you put a witness in a box, perhaps a doctor, and he is describing the effect of some poison, and you want to get in some authority who does not agree with him which is much the same as getting in a document as you wish to do in this instance. You say to him, "Have you read such and such a book," he says "Yes," or "No," as the case may be, and then you proceed to ask him whether he knows that that authority says "so and so."

8424. *Mr. Hoyle.*] Then, sir, I will make the application as you suggest on Tuesday, and if it is not granted I shall then do the best I can to get at the facts I want to adduce in the course of cross-examination; but I must say that Mr. Eddy made a very exhaustive statement which was fully published in the newspapers, and I think it is only just to myself that I should endeavour to obtain equal publicity to the facts that I am able to bring forward. The time will come when I shall have to face my constituents—I am under a pledge to do so at the termination of this inquiry—and I am naturally anxious that they should have as fair an opportunity of judging for themselves the gravity of my allegations as possible.

8425. *President.*] Quite so, Mr. Hoyle, but I have no doubt that the representatives of the press, if asked to do so, will give equal publicity to anything that you may say that they have given to the statement of Mr. Eddy.

8426. *Mr. Fehon.*] I presume, Mr. President, that Mr. Eddy is coming here for the purpose of being examined upon the statements that he made the other day.

8427. *President.*] Yes.

8428. *Mr. Fehon.*] Mr. Hoyle will then I imagine have every opportunity of eliciting any information that he desires, but I do not see how, having once finished his case, he can in fairness ask to be allowed to go again into the witness box.

TUESDAY, 31 *MAY*, 1892.

[*The Commission met in the Board-room, Colonial Secretary's Office, at 2 o'clock p.m.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | ALEXANDER BROWN, Esq., M.L.C., J.P.

Mr. Deane, recalled:—

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8429. *Professor Warren.*] I wish to ask you some questions, Mr. Deane, about the Solitary Creek and Wollondilly bridges, and especially with regard to the actual factor of safety existing in those structures at the present time;—the particular point to which I wish you to direct your attention is with regard to the maximum intensity of the tensile strength of these bridges when loaded with the Baldwin engines? I find the stress very heavy with these engines, one calculation shows it to be 8·24 tons per square inch, but I myself make it a little more than that in another calculation, indeed a good deal more, I make it up to 9 tons per square inch.

8430. That shows the tensile strength on the bottom flange of the Wollondilly bridge? Yes.

8431. What then would be the breaking strength with the range of stress which exists in the Solitary Creek bridges;—what is the breaking strength with regard to the range of stress? The breaking stress with Launhart's formula would be 15·6 tons, and that would give a factor of safety of less than two.

8432. That is to say, there is not a factor of safety of two in the bridges? Yes. That is to say, taking the more modern way of computing these things. If you merely took the breaking strength of the material itself the factor of safety would be more than I have stated. It would be undesirable to run any heavier weight upon these bridges. I do not believe there is any immediate danger, but it must be remembered that every time an engine goes over these bridges it exhausts so much of their life. I have strongly recommended that steps should be taken to strengthen them, and I believe that that is now being done.

8433. It means that when one of these bridges has had the 5,000,000 applications of its maximum stress there would be a factor of safety of 1·7? Yes.

8434. So that you recommend that these bridges should be strengthened? Yes.

8435. So that there is no allowance in these calculations for the dynamic effects, except in Launhart's formula? No.

8436. That gives practically the dynamic effect? Yes.

8437. Have you tried the Wollondilly bridges? No; I have not tried them specially. I have no particulars with me, but I have examined all the bridges to see what should be done to them.

8438. From what you saw of these bridges you recommend that they should be strengthened in a similar way, is that so? Yes, undoubtedly.

8439. The proposal that Mr. Foxlee has made to strengthen these bridges is a girder in the centre and underneath the bridges;—do you agree with that proposal? Yes. I discussed that matter with Mr. Foxlee some time ago, and that was the conclusion we came to, namely, that the bridge should be strengthened in that way. There is plenty of room between the flood level and the under side of the bridge to insert a third girder.

8440. I would like to ask you another question, Mr. Deane. Do you consider that the Board of Trade rules are good rules for determining the working stresses of bridges? Do you mean their rules for tension and compression strains?

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8441. Yes. I mean the rules which give 4 tons and 5 tons as the required stresses. They say nothing, you will remember, about the range of stresses or alternating stresses, but simply take the 4 tons and 5 tons? It is a convenient rule for ordinary structures, but, of course, it is not scientific.

8442. Have you seen formulæ that have been proposed by the French Government recently. They are recorded in *Engineering*, and were given about a couple of months ago. They give the working stresses for both iron and steel bridges? No; I do not think I have seen it.

8443. It is almost identical with Launhadt's formula. All I mean to say is that the formula given by him has become generally recognised as the proper system to go upon. It is now beyond discussion that the working strength should depend upon the range of strength, is that not so? Yes.

8444. Your keys, those in your bridge, are, I believe, 6 by 3. I am not certain what the size of the Glenlee bridges keys are. You would not think the keys excessive in this bridge? [*Plan of bridge produced.*] I think that is a convenient size, and such as would answer the purpose.

8445. If you were designing a beam so as to make it carry its greatest load would you not make the keys larger than you have done here? Theoretically, they should be larger towards the end, and I should not make them any smaller than that. I am not sure about the size of the keys in the Glenlee bridge. They are a little smaller, I believe, but I do not think that of very great importance, but I think the span is somewhat smaller also.

8445½. Do you not think the beam in your viaduct, and the same would apply to the Glenlee bridge, would be stiffer if the keys were made larger, and consequently the beams would carry a little more? Yes.

8446. You have made these keys smaller for convenience, I suppose? You have to take into consideration that the keys work loose occasionally; they require constant supervision to see that they are tight. If made very large they would still get loose, and, of course, the bridge would then be depending too much upon the reduced section of the girders, so that I think it would be undesirable to have them larger, or, at all events, very much larger than shown here.

8447. You have not any in the centre? No; merely in the ends. In the centre there is very little horizontal shear.

8448. Then this is designed to resist the horizontal shearing stress? Yes.

8449. Provided the bolts are kept tight there would be very little stress?

8450. I am not hinting that the bridge is not strong enough, but a question having arisen as to the bridges, I thought I would ask your opinion about it; I see that you have twice the shearing resistance in your case, besides there are only two wedges in the corbels, whereas you have four, so that makes four times the sheering resistance, and apparently there are only two attached to the end of the beam, so that you have a larger amount of sheering resistance in your viaduct? Yes; the keys are small, but in spite of that I consider that the bridge is perfectly safe. The spans are shorter, and there is also another point about it. Taking the bridge as a girder, there is an additional stringer on the top of the transomes, running along the top of the bridge.

8451. The Guard? Yes.

8452. I have to test that bridge, and work out the calculations of it, and that is the reason I have asked you the questions I have just put. There are six ironbark beams in each span, 12 x 12; they are fully 12 x 12, in the Glenlee bridge, in your case, they are slightly less; the centre ones there are 11 x 12, I think, so that there are six beams carrying the load? There is the small additional strength given by the kerb.

8453. That is only spiked? No; it is bolted through. It seems, according to this drawing, to be bolted right through, so as to form part and parcel of the structure.

8454. So that it would seem that the Glenlee bridge is as strong as your viaduct, except that there are two extra guard timbers; that should be a set-off against the small size of the keys? Yes.

8455. I think that is all I have to ask, Mr. Deane.

8456. *Mr. Brown.*] Do you want to ask any questions, Mr. Fehon?

8457. *Mr. Fehon.*] No.

8458. *Professor Warren.*] Do you, Mr. Hoyle?

8459. *Mr. Hoyle.*] No.

D. H. Neale, recalled:—

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8460. *Mr. Fehon.*] Have the Baldwin engines any features in which, in your opinion, they are superior to the engines previously in use? Yes; I think they have many features in which they are superior to the other engines in use. They have, for example, a very efficient means of lagging the boiler, preventing the radiation of heat, and the regulator is also very efficient and very convenient for the driver, enabling him to regulate the motion of the engine very easily and exactly. The brake on the driving-wheels, which few of our other engines have, is of very great importance, especially on our steep inclines. These features are of course entirely independent of the great power and flexibility of the engines to which I have already alluded.

8461. Have you investigated their consumption of fuel? I have, with the Consolidation engines, and owing to the large loads they draw the consumption per unit of load hauled is 75 per cent. of that of the goods Mogul engines formerly in use.

8462. What has been your experience in other railways with new engines? It is a well-known fact that new engines always give trouble, and that is especially so in the case of a new type of engine. I have been connected with many railways, and I could give you a long list of failures in almost every part of an engine. All sorts of trouble arise with new engines, the most prevalent being inability to make steam, and the next incapacity to haul loads required of them. Many other troubles arise, the source of which it is often difficult to detect.

8463. Did the defects you have mentioned occur in engines well designed and built? Yes; it is a well-known fact that engines built by some of our most skilful engineers, and turned out of the largest locomotive shops, have had to be started with their trains by means of a pinch-bar. There have also been new engines which have thrown their coupling rods into adjacent fields. Others have frequently broken away from their tenders, although coupled together with exceedingly strong couplings, in fact, all sorts of troubles have arisen in connection with new engines.

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8464. Then do you say that engineers generally are agreed that it is practically impossible for new engines to have an entire immunity from failures? I never know of any new engines that had such an immunity.
8465. Have the Baldwin engines on our lines shown any of the defects you have enumerated, as occurring in new engines, in your experience? No, they have not; they have steamed well, and they have pulled their loads, and shortcomings in these respects are the two most important kinds of failures that occur in new engines.
8466. Do you say that they have hauled their specified loads? Yes; and more than their specified loads.
8467. Is it not exceptional for engines to haul more than their stipulated load in regular working? Yes; it is decidedly exceptional.
8468. Do you consider that the quality of the axles could have been detected earlier than it was? No; I do not see how it could have possibly been detected earlier than it was, and I may state that I have had similar experience with regard to other engines that were otherwise well built. After running for a little time the tires all stretched and showed themselves to be soft and became loose. I do not suppose that the makers could have possibly anticipated that. I do not see how their quality could have been detected earlier than it was.
8469. Are scrap-iron axles cheaper than steel axles? No; they are dearer.
8470. It was left to the Baldwin Company to determine whether they would supply scrap-iron or steel axles, was it not? Yes.
8471–2. And you consider that they exercised proper judgment in sending us iron axles? Yes; I think they did. It is a matter of opinion whether iron or steel axles are the best, and the Baldwin Company acted on its experience, and I do not think they could have done better than they did.
8473. Then the reason for selecting scrap-iron instead of steel axles was not because there was any economy in it? Certainly not.
8474. Why are tests of scrap axles not usually made? Because a test of one axle is no certain criterion of the strength of the whole of them.
8475. Why is steel more generally tested than iron? Because a very small difference in the chemical composition, such as, for example, a fraction of 1 per cent. more or less of phosphorus in the composition of the steel would make all the difference. It is, therefore, necessary to test every batch in order to make sure of the quality of the material.
8476. Can you tell us whether iron or steel axles are more frequently used in Great Britain? Well, for the crank axles iron is very nearly as much in use in England as steel, and as this is a part which is exposed to very violent strains, and is consequently liable to fail, iron is used as the more trustworthy material.
8477. Have you any figures showing the accidents resulting from broken axles in Great Britain? Yes. I have compiled some figures on that subject from the Board of Trade returns. From these returns it will be seen that 245 leading or trailing axles were broken in ten years, and only two accidents resulted, and only one life was lost, the axle having run 619,414 miles, and being flawed.
8478. So that the chances would be about 1 in 100? Yes.
8479. *Professor Warren.*] Will you put that return in? Yes.
8480. *Mr. Fehon.*] Have you examined the driving-wheels of these engines, and do you consider them sound or not? I have, and consider them to be perfectly sound.
8481. *Professor Warren.*] Do you refer to the driving-wheels? Yes; the driving-wheels.
8482. *Mr. Fehon.*] Have you had much experience in making locomotive wheels? Yes, I have; and I understand the process thoroughly. I have had to inspect hundreds of locomotive wheels being made, and can speak with a good deal of confidence upon that point.
8483. Do you know the process by which these wheels are made? Yes; I understand the process, and I think it a very good one; I consider it to be better than the ordinary English practice, because there are no transverse welds, and therefore a faulty weld cannot be so serious as in an ordinary wheel.
8484. How do you account for what some people consider to be flaws in these wheels? In making the wheels the iron is pressed in an hydraulic press, and any surplus iron may flow over under the pressure, and consequently partly cover the spokes.
8485. Do you consider the hoop on the boss of the bogie wheels needs fastening as much as tires do;—do you consider that it should be fastened on the same way as tires? No; I do not think it at all necessary. I have seen similar hoops upon wheels elsewhere, and they have been running for years. A tire is likely and liable to be heated by the brake blocks; it is continually hammered on the rail, and that stretches it; it also gets hammered sideways on the rail, and all these things tend to loosen it, but the hoops have nothing of that kind to contend against, consequently they are not so likely to get loose as the tire is.
8486. It is a very common practice is it not? I will not say that it is a very common practice, but I have seen these hoops on thousands of wheels.
8487. Is the thickness of the smoke-box tube-plate in accordance with general American practice? Yes; I looked that question up, and went through a number of drawings of American locomotives, and I found only one that was one-sixteenth thinner, all the rest were of the same thickness.
8488. What is the height of the centre of the boiler as compared with that of other express engines? Well, it is lower than a good many express engines. For example, the Central of New Jersey, an express engine running at an extremely high speed is 9 inches higher than our Baldwin engine, Baltimore and Ohio engines, 1½ inches higher, the New York Central engine which runs the Empire State express, the fastest train in the world, and going around numerous curves, is 10½ inches higher. Philadelphia and Reading express is 1 foot higher. Cleveland, Cincinatti, Chicago and St. Louis express is the same as ours. The North Eastern Railway, in England, express is 2 inches higher—and one of the engines is 1 inch lower. The Great Northern Standard express engines, which have for many years run about the fastest trains in England, is 5¾ inches lower, but the wheel is 3 feet greater in diameter. Of course the vital thing in these matters is, what is the height of the centre of gravity above the rails, and I find on making an approximate calculations that the Great Northern express engine is about 3 inches higher in the centre of gravity than the Baldwin engines running here, therefore I think our centre of gravity is perfectly safe, that is to say our ten-wheeled locomotives have a lower centre of gravity than any of the English and American engines I have just quoted. The North-eastern express engine which has attained the highest speed ever made in England, 86 miles an hour, is about 6 inches higher in the centre of gravity than our Baldwin engines, and I find the same generally with regard to other engines.
8489. *President.*] Did you say 86 miles an hour? Yes; that was accurately ascertained.

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8490. Then do you consider our height at the centre of boiler excessive? Certainly not. I put in a table of figures on this point.

New South Wales Government Railways.

Heights of centre of Boiler, Gravity, &c., various Express Locomotives.

Railways.	No. of wheels coupled	Centre of boiler above rail.	Diameter of wheels. Driving	Diameter of wheels. Bogie	Diameter boiler.	Weight engine working order.	Centre of gravity above rail.	Fire-box above or between frames.	Remarks.
		ft. in.	ft. in.	ft. in.	inches	ton cwt.	ft.		
Central of New Jersey ...	4	8 6	5 8	3 0	58	55 6	5·13	Above	Runs regularly over 70 miles per hour.
Baltimore and Ohio	6	7 10½	5 2	2 6½	64	59 8	4·60	Between.	
New York Central	4	8 7½	6 6	3 0	58	57 1	5·24	Above	Runs fastest train in world over numerous curves.
Philadelphia and Reading	4	8 9	6 6	4 0	57½	50 0	5·22	Wootton above	Runs regularly over 70 miles per hour.
Cleveland, Cincinnati, Chicago, and St. Louis.	6	7 9	5 6	2 6	60	53 13	...	Between.	
Erie	6	8 5½	5 8	2 9	60	58 0	...	Above.	
North-Eastern	2	7 11	7 7½	3 7½ / 4 7½ trailing.	51	46 13 (about)	5·03	Between ...	Attained highest speed, 86 miles per hour, ever made in England.
Do	4	7 8	6 8½	3 7½	57½	47 10	4·79	do ...	Runs fastest train on line over sharp curves.
Great Northern.....	2	7 3½	8 1½	3 11	50	45 3	4·79	do ..	Has run fastest trains in England for many years.
New South Wales	6	7 9	5 1	2 6	62	58 0	4·52	do	
Do	6	7 8	5 0½	.....	58	56 15	...	do	

NOTE.—The New South Wales ten-wheelers have, therefore, a lower centre of gravity than any of the above English and American engines, though the latter comprise engines running the fastest trains in the world.

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8491. Do you consider the power of the engine unduly strains the draw-gear at the rear end of the tender? No, I do not; and I have made some calculations showing the strain on the rear of the tender that is upon the couplings there. The two following tables show the maximum working strain on the draw-gear with ordinary goods trains working loads.

Gradient.	No. loaded waggons.	No. bogie brake-vans.	Weight of train behind tender.	Total tractive power of engine.	Total draft back of tender max. strain on draw-gear.	Safe load on draw-gear-quarter breaking strain on draw-hook.
			tons.	lb.	lb.	lb.
Consolidation engines.						
1-30	20	1	196	23,781	15,876	25,200
1-33	22	1	216	23,238	15,984	.....
1-40	30	1	288	23,990	17,852	.....
1-50	35	1	336	23,181	17,136	.....
1-60	42	1	394	21,313	16,942	.....
American ten-wheeled engines.						
1-30	13	1	137	18,747	11,097	.....
1-33	15	1	156	18,204	11,544	.....
1-40	20	1	197	18,152	12,212	.....
1-50	25	1	248	17,598	12,648	.....
1-60	31	1	297	16,841	12,971	.....

8492. *Professor Warren.*] Then will you give me the breaking strength of the draw-gear? Yes; from the table I have just quoted you will see that 25,200 lb. is the safe load on the draw-gear.

8493. Then what do you say is the breaking strain? Forty-five tons.

8494. That is about a factor of 4? Yes. These draw-hooks have all been tested, and have been found to be good iron with a great elongation. I think it is safe, certainly, at that figure. It is a strain of about 6 tons per square inch in tension.

8495. That is a steady pull of 6 tons, not a jerk? Yes, a steady pull. It would be a high strain for inferior iron, but this is as good iron as we could possibly get, we have taken every precaution to get good elastic iron, and so I think it is perfectly safe.

8496. What are the other qualities? Tensile strength in all cases above what we asked for, and so is the elongation.

8497. What did you ask for? I could not tell at the present moment, there is a little difference for the links, the draw-hooks, and the draw-bar.

8498. *Mr. Fehon.*] To put it in another way. How many times the hauling strength of the engine would the draw-gear be? I think the hauling power of the engine is about three-fifths of the safe load of the draw-gear.

8499. *Professor Warren.*] So that the other two-fifths will go for shock? Yes, and there are also springs which are supposed to take up the shock.

8500. *Mr. Fehon.*] Has there ever been any breakage of draw-gear since the heavier hooks have been put on? Not that I am aware of, I have never heard of any breakage.

8501. It has been alleged that negligence has been displayed in not supplying the Works Manager with a copy of the specifications of these engines when they arrived;—can you tell us what is the usual practice on English railroads in this respect? It is not the usual custom to supply the Works Manager with a copy of the specifications, for this reason, that up to the time the engine arrives the Chief Draughtsman is the

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the person responsible for it. He has (under the instructions of the Locomotive Superintendent) designed it, made the drawings, and conveys instructions of the Inspector. When the engine arrives, it is turned over to a fresh officer (the Works Manager), and he, by inspecting the engine independently of the specification, is a check both on the maker and on the specification. It might be that the Chief Draughtsman had made errors in the design and also in the specification, and if the Works Manager simply saw that the engines were made in accordance with the specifications, he would not check their accuracy; but not doing so, he ascertains if the engine is fit for the work she has to do and can be sent out and maintained in order hereafter. If he finds anything wrong about the construction of the engine, he calls attention to it, and then possibly it will be found that the error has been made in the specification, and the Chief Draughtsman will then be called to account for it.

8502. Is the brake gear on the engine of a pattern used in the United States? Yes; it is of a pattern which is largely used in the United States, and it is highly esteemed, being regarded as the best in use for that purpose.

8503. Has not the question of the relative superiority of the ten-wheeled engine over the Mogul engine been discussed by the Master Mechanics' Association? Yes; I think I have the report of that discussion with me, but I cannot find it at present. [*The Report was put in later.*]

8504. Generally speaking, what was the tenor of that report? The question was discussed by the master mechanics' and whilst there was some little difference of opinion on the matter, the general concensus of opinion was in favour of the ten-wheeled engine for passenger trains. They considered that the four-wheeled bogie gave a greater margin of safety than the two-wheeled bogie. They also discussed the links which regulate the play of the bogie, and whilst there was also some difference of opinion about that, I can certainly say there is no question that vertical links are unsafe or dangerous, and riding upon the engines would show this to be the case, they ride extremely well. There is no fault to find with them. It is all very well to say that theoretically the vertical links are bad, but you must ride upon them and judge by experience; certainly, in this respect, the Baldwin engines are irreproachable.

8505. Has your attention been drawn to a discussion in the proceedings of the Master Mechanics' Association as to the weight on a wheel for given weights of rail? Yes; a report was presented and discussed in June of last year, and the report thereon was drawn up by five members, three of whom I know, personally, Messrs. Pulaski Leeds, C. E. Smart, and James Meehan. These gentlemen represented large railway companies, and had charge of about 1,000 locomotives, running on 6,000 miles of road, and they stated that they considered 14 tons 6 cwt. was a safe load for rails under 60 lb., and 16 tons for rails above 60 lb. and that was not traversed in any way whatever in subsequent discussions, though it was suggested that the tyres would wear faster with the heavier weights.

8506. Have you any figures as to the American practice on different lines as regards the weight on wheels with certain weights of rails? Yes; I have some figures, which I have taken from *Poor's Manual*, which is the standard authority in America for the earnings, history, officers, weights of rail, &c., in connection with the various railway companies. I have taken also the *Railroad Gazette* as my authority for the weights of the engines, and I find there that the relative weights are as follows:—

Railway.	Maximum weight on one axle.		Weight of steel rail per yard per ton on each wheel.	
			Lightest rail.	Heaviest rail.
	Tons.	cwt.	lb.	lb.
Central of New Jersey	19	14	6·3	7·1
Baltimore and Ohio	15	14	8·5	
New York Central	17	16	7·4	9·0
Philadelphia, and Reading	17	0	6·6	10·6
C. C. C. and St. Louis	15	6	8·8	
Erie about	15	0	7·4	8·7
Atchison, Topeka, and St. Fe	15	9	7·2	8·4
Chesapeake and Ohio	15	6	7·3	9·3
Master Mechanics	14	18	...	...
L. and N. W. R.	15	10	10·8	11·6
North Eastern	17	15	...	10·1
Great Northern	17	0	...	9·6
N. S. W. (10-wheeled Baldwin)	15	5½	9·2	10·4
Eastern, of France	16	2	8·5	11·0

8507. Have you devoted some attention to the question of permanent-way? Yes; I have for a great many years.

8508. What have you found to be the most frequent causes of derailment? I find from the Board of Trade returns, and from such information as I can get in Sydney, that the most frequent cause is something the matter with the switches, and next to that something the matter with the fastenings of the rail. Of course there are a great many other causes, such as decayed sleepers, and the train being allowed to run at too high a speed over places where ballast has been removed for repacking, also from various other causes. I find that broken rails are a very infrequent cause of accident.

8509. *Professor Warren.*] Like axles? Yes.

8510. *Mr. Fehon.*] Are breakages of rails of frequent occurrence in England? I have searched the Board of Trade returns carefully, and I find that the total number of broken rails during twelve and a half complete years was 6,005.

8511. That is about 500 a year? About 480. There were in the North British line 898 broken rails in one year, and no one was injured. During that year there were 1,541 rails broken altogether in the United Kingdom. In the whole of these twelve and a half years these 6,005 broken rails resulted in accidents in which only one person was killed and forty-one injured.

8512. Have not the Baldwin engines up to date run over 500,000 miles on the railways of New South Wales, that is half a million of miles? Yes; I believe they have.

8513. And with the exception of the defective axles and one or two other small defects made good by the Company have they not done their work in a very admirable manner, and given the greatest satisfaction

in

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in keeping time and drawing heavy loads? Yes, they have done their work in a very satisfactory manner. The return of the loads that they draw passes through my hands, therefore, I am in a position to make this statement. They have drawn the maximum load which we gave them to draw regularly day after day.

8514. Has not their performance proved a complete contradiction to everything said against them by Mr. Hoyle in his speech in Parliament on the 20th August last, which statements form the subject of this inquiry? I think most undoubtedly they have.

8515. *President.*] If Mr. Hoyle had objected to that question I should not have admitted it.

8516. *Mr. Hoyle.*] Oh, I do not object to it.

8517. *President.*] You should not put such a question to the witness, we have nothing to do with what Mr. Hoyle may have said in Parliament.

8518. *Mr. Fehon.*] Very well, I shall put a question or two in detail.

8519. *Mr. Brown.*] Oh, I do not think we require that.

8520. *President.*] We think the evidence Mr. Neale gives will be quite sufficient for your purpose. He says in effect that these engines completely answer your expectations, and are not defective in any way.

8521. *Mr. Fehon.*] Well, it was rather a comprehensive question, perhaps as you say so, I had better not refer to the subject of Mr. Hoyle's speech.

8522. *President.*] No, I think it would be better not.

8523. *Mr. Fehon.*] Then I shall refrain from referring to it.

8524. *President.*] Yes; I think it is just as well. There are three distinct matters this Commission has to inquire into, whether the engines are defective, whether they are unsuitable for the permanent way of the railways of New South Wales, and whether they are doing what was expected of them.

8525. *Mr. Fehon.*] So far as the Railway Commissioners are concerned, it takes a much wider scope; it attacks our administration.

8526. *Mr. Brown.*] We are not trying the Railway Commissioners, Mr. Fehon.

8527. *Mr. Fehon.*] You would not find them wanting if you were.

8528. *Witness.*] Since you have referred to the question of the engines doing what was expected of them, I may state that I have here a diagram showing the different loads the engines haul. It gives the tons hauled and the grades on which they were drawn. [*Diagram produced and explained to the Commission.*] The loads in this diagram are all goods train loads, taking a goods train speed, which is, of course, slow in going up an incline. Three dots indicated upon this diagram show that the ten-wheeled Baldwin engines have actually hauled these loads at a passenger speed, that it is to say, they have hauled at a passenger speed what we only expected them to haul at a goods train speed.

8529–30. *Mr. Fehon.*] With the experience of the work these engines do and the opportunities we have had of testing their suitableness for the New South Wales railways, could we do better to-day, supposing the same necessity should arise, than purchase similar engines, with the exception only of stipulating for steel axles instead of iron axles? I do not think we could order more suitable engines for the New South Wales railways than the ten-wheeled and Consolidation engines we possess to-day.

8531. *Professor Warren.*] You state that the passenger engines haul a much heavier load at passenger speed than you expected them to haul? Yes; than we expected them to haul at a goods train speed.

8532. The dots on the diagram you have produced, do they show that these engines haul 150 tons at 22 miles an hour on a gradient of 1 in 40? They show that they haul a bigger load at a slower speed.

8533. That is, a load of 195¾ tons at what speed? On this gradient of 1 in 40 there was a long reverse curve of 10 chains radius and a piece of 1 in 37·5 in the middle of it. They hauled that load at 12½ miles an hour, and that would equal passenger speed. All trains go very slowly over that bad piece.

8534. And you say that is better than hauling 150 tons 22 miles an hour up a grade of 1 in 40? Yes, I consider it to be better.

8535. It is a far lower horse-power? Yes; but as I have tried to explain, horse-power varies according to speed. I have plotted out the performances of the engines on this diagram which I produce. The red line on this diagram shows the performance over the Picton grade of 1 in 40; they are a little the lowest, because the fire had not burnt up. The green dots show the Baltimore and Ohio engine performances, and the black show the Wallerawang trials. It is obvious from this diagram that all these performances are nearly equal, and that there is very little to choose between them. The black curves on the diagram show the indicated horse-power. The following table shows the mean results obtained on the trials of a Baldwin 10-wheeled engine on May 15th of this year, of the Baltimore and Ohio engines in May, 1891, and the Wallerawang trials on April 11th, 1892.

No. of Test.	Maximum Grade.	Mean speed whole length of gradient.	Mean Boiler Pressure.	Mean Initial Pressure.	Mean I.H.P.*	Mean Tractive Power.*	Mean speed at which diagrams were taken.
			Picton Trials (N.S.W.), May 15, 1892.				
		m.p.h.	lb.	lb.		lb.	m.p.h.
1	1-40	18·5	146	137	812	17,661	17·23
2	1-40	20·15	148	137	830	16,461	18·90
5	1-40	21·09	149	133	874	16,270	20·30
3	1-30	18·87	155	142	865	18,064	18·0
4	1-30	16·71	153½	143	777	19,455	15·0
			Baltimore and Ohio, May, 1891.				
2	1-46·3	.....	150	.....	968	15,676	23·4
3	1-46·3	22·0	146½	.....	857	16,656	19·3
4	1-46·3	.....	149	.....	825	18,420	16·8
5	1-46·3	19·7	.....	.....	791	16,945	17·6
6	1-56	18·5	157	.....	933	17,288	20·3
			Wallerawang Trials (N.S.W.), April 11, 1892.				
1	1-33	.....	162	.....	754	19,500	14·5
2	1-40	.....	159	.....	652	19,600	12·5
3	1-50	.....	159	.....	694	18,250	14·3

* These figures are mean results obtained on the last 1¼ or 2 miles of gradient.

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8536. I should say that since I was last under examination I have studied the report of the Baltimore and Ohio trials, which I think the Commission has already seen, and the result of my examination is that I find a little different value should be attached to that report with regard to the speeds stated therein. We intended that the speed of 22 miles an hour should refer to the speed from the foot to the top of the incline of the 1 in 40. The Baltimore and Ohio Company in their trial seem to refer to the speed from the station near the bottom of the incline to the station near the top. The whole incline averages 1 in 51, whereas they give the maximum of 1 in 45. It is evident to my mind that you cannot judge of engines from expectation, you must judge from what they have actually done, and the diagram I have explained to the Commission shows what they have actually done. I dare say that the Baltimore and Ohio engines had not been tested in that accurate way previous to May, 1891, and it was quite allowable under the circumstances for the general superintendent of motive power of that line to speak in the way he has done, as quoted in Messrs. Towns' letter of December 15, 1890. It was merely a point of scientific interest to ascertain what was the speed obtained on that portion of the line on a grade of 1 in 40. For example, if the Chief Commissioner were to say, "I want a train to run from Penrith to Katoomba at 20 miles an hour," he would not tell you the exact speed on any particular incline, but would only allude to the train arriving within that time at the particular station indicated; that I think was how this misapprehension has arisen.

8537. *Professor Warren.*] Where engines haul a load up an incline, is not the speed proportionate to the horse-power exerted? Yes, and the result ought to be the same with the same engine and the same gradient, but here we have to compare different gradients and different engines.

8538. The load of 152 tons at 22 miles an hour up a grade of 1 in 40, does not that really express the maximum hauling power of that engine at that speed? Yes.

8539. So that we are not confounding it with other grades? Messrs. Towns & Co., in their letter of 15th December, 1890, quote a letter from the Baldwin Works, as follows:—"In order to compare the stipulated performance with what the B. and O. engines are actually performing in daily service, we telegraphed the general superintendent of motive power of that company, enquiring as to the latter, and have the following telegram in reply:—'Have never had maximum load weight taken up 17-mile grade by 1,300 class engine. It is about 240 net tons at schedule speed of 22 miles per hour, exclusive of weight of engine and tender. The 240 tons of 2,000 lbs. are equal to 214 tons of 2,240 lbs. There is much curvature on the 117-ft. grade, and we are informed that in some places the actual grade considerably exceeds 117 feet per mile. The latter is the theoretical grade, as shown by the profiles.'" When he says that, he does not say that it is on the 117-ft. grade that the speed was 22 miles an hour, but that the speed from Piedmont to Altamont, 16·8 miles distant, is 22 miles an hour. Now a great deal of that distance is on a grade of 1 in 45, and some of it 1 in 132, but the average is 1 in 51 and not 1 in 45.

8540. You are certain of that? Yes.

8541. Could you show us a profile of it? Yes; you will find it on that page of the report of the Baltimore and Ohio trials in your hand. The height of each station above the sea is given in the profile, and the distances are given in another table. By dividing one with the other I get an average of 1 in 51, and it is on that that a speed of 22 miles per hour was obtained. It is true that upon this piece of road there is a grade of 1 in 45, but the actual speed there is 19·8 miles.

8542. Does not the letter imply that it is on a grade of 1 in 45? Yes; it is not quite clear, but I never expected the engines to do that. Only a few years ago it was very doubtful whether it was possible for an engine to indicate 1,000 horse-power under the most favourable conditions, and to expect an engine to realize 1,100 horse-power at a speed of 22 miles an hour is beyond reasonable expectation.

8543. Do you know the *Railroad Gazette?* Yes.

8544. Do you consider it to be a reliable paper? Yes.

8545. Then I shall quote from the *Railroad Gazette* for the year 1890, page 421, as follows:—"The Baldwin Locomotive Works built for the Baltimore and Ohio Railroad a 10-wheeled express locomotive having 21 x 26 inch cylinders, under a guarantee to haul seven passenger cars up a 117-ft. grade 17 miles long, at 25 miles per hour. This engine has been put in service, and has more than met the guarantee; it hauls readily eight cars up the grade mentioned. At that speed and up that grade the engine is performing over 1,300 horse-power of work, considering the total train load to be 440 tons. The weight on drivers is 102,000 lb. The total weight is 133,000 lb." (*Witness*): You have stated 440 tons, that is probably a misprint for 240 tons. Experiments were afterwards made by Mr. Barnes of the *Railroad Gazette*, in order to test accurately the performance of these Baltimore and Ohio engines, and he found that he did get 1,300 horse-power.

8546. Have you worked this out? Yes.

8547. Do you not think that 440 tons hauled up a 117-ft. grade of 17 miles long, at 25 miles an hour, would amount to a great deal more than 1,300 horse-power? American tons?

8548. Yes, given American tons, you see how much it exceeds our performances? Yes; but I have already stated that it is founded on a misprint.

8549. I quite agree with you that it was a misprint, it should have been 240 tons? Yes; and it is stated in the letter of December 15, 1890, that the probable maximum load was about 240 net tons, at 22 miles per hour.

8550. But the 240 tons would be about equivalent to about 1,300 horse-power, whereas the actual load they give is more nearly 1,900 horse-power? The 440 tons is evidently a mistake. The 1,300 horse-power was done, but it was when they were running at the foot of the incline on a grade of 1 in 132, at 30 miles per hour.

8551. Running down? No; running up. And the driver probably put the lever over preparatory to striking the grade, and when he did so he got that recorded horse-power.

8552. That simply means the indicated horse-power was wrongly obtained? Yes. An English locomotive superintendent, some years ago, obtained a maximum of 1,000 horse-power; but it was a *tour de force*, and he did it by putting the engine in full gear whilst running at 60 miles per hour, and at that time he obtained one diagram showing a horse-power of 1,000; but that is, I think, of no scientific value.

8553. Does not your diagram show the work that is done? Yes; but you only get credit in this diagram for the work you actually do in that particular time. Our inquiries have been directed to the engines hauling a train up the 1 in 40 grade.

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8555. And the indicated horse-power has all to do with that question? No. As I have previously stated an engine would develop its maximum horse-power running down hill or on a level at high speed, whereas we want an engine that can climb gradients.
8556. *Mr. Fehon.*] We never mentioned the horse-power in ordering engines.
8557. *Professor Warren.*] But you have what is equivalent to that, the load, the grade, and the speed.
8558. *Witness.*] Yes.
8559. And you have got a very fair bargain if you do not get any more fractures in the iron. I think the Commission by the by would like to see more of these fractures,—the fulcrum pins broken from the reversing gear for example.
8560. *Mr. Fehon.*] I think you saw the axles.
8561. *Professor Warren.*] Are there any other parts?
8562. *Mr. Hoyle.*] There are the draw-gear, the fulcrum pins.
8563. *Mr. Fehon.*] The draw-gear was acknowledged to be a mistake and was renewed at the expense of the Baldwin Co.
8564. *Mr. Hoyle.*] There is the brake gear also.
8565. *Professor Warren.*] Where did that go to, Mr. Hoyle?
8566. *Mr. Fehon.*] Well, it might be on the scrap heap; these things are not kept for inspection.
8567. *Mr. Hoyle.*] I think the Commission should see the wheels of the engine 457 about which so much has been said.
8568. *Mr. Fehon.*] Would you not like to see the one referred to in your speech, Mr. Hoyle? The one with the fourteen or fifteen broken spokes?
8569. *Mr. Hoyle.*] Don't you think you had better give my speech a rest.
8570. *Professor Warren* (to Witness).] You have seen these tests of the bogie axles, and I presume you have made experiments with the drop test yourself? No, I have not.
8571. Well, you saw the results? No; I think I have only heard of them; I do not think I have seen the paper containing them; I have heard about them, but I cannot give the exact results.
8572. I was going to ask you about the quality of the iron, but you can only judge by the fracture? Yes.
8573. Well, what do you think of the quality of the iron? I think it is inferior iron.
8574. Undoubtedly bad? Yes.
8575. You were speaking about the permanent way? Yes.
8576. Do you think an 80-lb. rail would be better if it had angle fish-plates, such as they have on the railways in America? That is a matter of opinion, even in America, and there may be some reason against the adoption of the angle fish-plate on these railways.
8577. *Mr. Fehon.*] There are some of these fish-plates in use upon our lines. I saw some myself on the suburban line.
8578. *Professor Warren.*] But it is not a standard here? No; the standard is the straight fish-plate, I believe.
8579. What is your opinion;—which is the best? Personally I prefer Fisher's joint underneath the rail to any fish-plate.
8580. Is that because it is stronger and stiffer? It is more logical in construction and likely to keep up better; but it is entirely unknown here.
8581. But the angle fish-plate would be stronger and stiffer than the ordinary one, would it not? Yes, but possibly there are difficulties in the way of its use here. There are a great many broken fish-plates even when the angle fish-plate is used.
8582. You know about the number of rails that have been broken on the lines over which the Baldwin engines run;—could you tell me how many have been actually broken for a certain time on the line between Bathurst and Penrith;—you keep records, Mr. Fehon, do you not?
8583. *Mr. Fehon.*] Yes.
8584. Will you supply the Commission with the number of rails that have been broken during the time that the Baldwin engines have been running, and also with the number in an equal time before they have been running, between Penrith and Bathurst.
8585. *Mr. Fehon.*] We have relaid 200 miles with new rails, so that probably the breakage would not be so numerous.
8586. *Professor Warren.*] Well, that would be so much in favour of the Baldwin engines.
8587. *Mr. Fehon.*] Yes, the breakages would be greater with the old iron than with the present steel rails.
8588. Yes? Our experience is that there has been no greater proportion of rails broken with these engines.
8589. Well, the Commission would like to have that information, in order to support the evidence with regard to the weight of the rails? Yes.
8590. *Mr. Brown.*] You were largely concerned, Mr. Neale, in amending the specifications that were sent for the Baldwin engines? Yes.
8591. Are you aware of the contents of a letter of the 10th October? Will you look at that letter? Yes, I see that letter.
8592. When were you first informed of the contents of this letter of the 10th October, 1890, and also the contents of the letter of the 15th December, 1890? I believe I was informed as soon as they were received, but I cannot exactly remember.
8593. Does your memory serve you as to the intimation received by the Commissioners that the company would not guarantee the speed or efficiency of the engines if the suggested alterations in the design of the engines were carried out? Yes.
8594. Did it strike you at that particular time, on receipt of the letter of the 15th December, 1890, whether it would have been advisable for you to report, with a view to receiving a guarantee of the speed and efficiency of the engine, either when these alterations should be carried out, or if you could not get a guarantee with those alterations, then that the alterations should be done away with? No; I thought our alterations were necessary, and it did not at all alarm me that the Baldwin Engine Company could not guarantee the speed, because I thought we had put the speed very high; I had that opinion myself, and I think the Commissioners thought so also.
8595. Then you thought it was better to accept the engines as modified, rather than obtain a guarantee from the company? Yes; and because I knew that we did not want as much from the engines as the

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Baltimore and Ohio engine could do, and also, having regard to our having a copper fire-box and brass tubes, I knew that the engines would steam a little better, and beyond all that I knew that our engines in this climate would do a certain amount of work, with a less amount of weight on the driving-wheels than they would do in any country that I am acquainted with. I should have no hesitation in putting 43½ tons on our driving wheels where the Baltimore and Ohio Company would think it necessary to have 46½ tons, so I was satisfied that we had sufficient power, and consequently what was said did not alarm me.

8596. And if you had to order engines to-morrow, would you add these engines which are stock of your own type to your plant as against guaranteed engines from the Baldwin Engine Company? Yes; I think I would. I do not see anything the matter with these engines.

8597. And do you, representing the Railway Department of this Colony, think that you could afford to disregard the advice of this large company, with its large responsibility, when they gave a guarantee for an engine then running on the Baltimore and Ohio line as against one which the Commissioners had altered to their own design, and for which the Baldwin Company would give no guarantee;—if you had an opportunity of repeating the order, would you carry out the same tactics? I would certainly, because I think the engines have given perfect satisfaction.

8598. Then would you accept an engine not guaranteed from the Baldwin Company, although they being very responsible people, were prepared to guarantee another kind of engine, which they regarded as suitable for our lines? Yes; and I think we are right in doing so. If we had accepted these engines as they were we would have taken, for example, steel fire-boxes, and when we found that these boxes wore away rapidly, if we expostulated with the Baldwin Company they would say, "you have lime-water in your Colony, and you knew it when you purchased these engines, consequently you must renew these boxes at your own expense."

8599. And altogether you are satisfied? Yes.

8600. There was no inspection of these engines, and you say it was contrary to the practice in America to make any inspection? It is contrary to the usual practice.

8601. But you see it is the practice in England to have an inspection? We had an inspection when the locomotives arrived here.

8602. *Mr. Brown.*] When the engines came here they had spare axles and wheels. The expenditure for a bogie axle represents about £7, and for a driving axle about £25. That we have in evidence. It is also in evidence that the Baldwin Company sent us engines, the axles of which had to be fitted by boring out the axle-boxes from 5 to 6 inches. Now, bearing in mind that these engines came to the colony without having been inspected, contrary to the practice prevailing in England, and also bearing in mind the fact that we had engines of a similar kind here whose bogie axles had been altered, do you not think that before these engines were put on the road some precaution should have been taken in order to secure the public safety. What we find is that the public transfers the responsibility to the Railway Commissioners, and the Railway Commissioners transfer that responsibility to the Baldwin Company, and the Baldwin Company in turn transfers it to a certain firm of waggon-makers, and we do not know how many others may be behind that last firm. Taking that into consideration, do you not think that it would have been well to test these axles by the drop test hydraulic press before they were allowed to run upon our lines? No, I never heard of it being done on any railway.

8603. Supposing the Commissioners had destroyed a number of axles, representing £100 expenditure, for testing purposes, would you not consider that to be a judicious outlay. The tests were made after the mischief was done—after the axles had actually failed, and the result of those tests was to satisfy the Commissioners that the axles were made of inferior material. Well, now, looking at the responsibility of the Commissioners it would have been possible to make such a test before the engines were put in use. Do you think would it have been of any value to have made such a test? In the first place I never heard of such a thing having been done, and I do not think that anybody can be blamed because it has not been done, and in the second place I doubt if such a test would be of value, as I am not sure in my own mind that these axles were defective when leaving the Baldwin Works, or whether they were made defective since they have been here by running hot.

8604. *Mr. Brown.*] But it is a fact that these tests have been made since, I want to know from you if it was not necessary for the railway authorities to make such a test before running these engines, or whether you think it would have been judicious for them to have done so. The railway Commissioners representing the Colony sent an order to the Baldwin Company, and they send it to some waggon-maker, and these axles come out to us without having been inspected; now remembering that the axles are a very material part of the engine, do you not think it would have been advisable for the Commissioners to have made some sort of experiment to test their quality before permitting the engines to run upon our road? It is not quite correct to say that they were not inspected, they were inspected—that is to say they passed through the usual inspection by the foremen of the workshops.

8605. *Mr. Brown.*] But the shop inspection is not the same inspection that is made in England? It is really more efficient. The person appointed to act as inspector in England often knows very little about the work that is going on, is frequently a young man just out of his time, who is sent to gain experience in this way. An inspection by the foreman in the shop where each foreman is held responsible for work done under him is in my opinion far more efficient than the inspection made in England. In a large shop where much work is going on at the same time in connection with the same contract it is impossible for any inspector to exercise a thorough supervision over the whole; he cannot be everywhere at once.

3606. *Professor Warren.*] Is what you have said your opinion with regard to Sir John Fowler's inspectors, for if it is so it seems to be a reflection upon Sir John Fowler? I do not know any of Sir John Fowler's inspectors, but I have been an inspector myself.

8607. But what you say is a reflection upon Sir John Fowler? I do not know anything with regard to Sir John Fowler's inspectors beyond this that I once met a man who was inspecting for him; he was older than myself, and no doubt he was a very efficient man.

3608. *Professor Warren.*] Was not Mr. Thow an inspector under Sir John Fowler? I believe so.

8609. Would he not have selected pieces from the axles in order to have them tested in the testing machine? I do not think so at the time he was inspector.

8610. You mean to say that Sir John Fowler does not do so? I cannot say what he does or does not do; I can only say what has been done in connection with the railway companies I have had to do with.

8611. It is well known that Sir John Fowler does select pieces; the inspection he makes is most thorough? I think you will find that his tests may be made with regard to steel axles but not with iron.

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8612. *Mr. Brown.*] But if such a test as I have alluded to and such tests as were made after the accident happened had been made prior to the accident, would not the defects in the bogie axle have been discovered? Probably they would.
8613. *Professor Warren.*] Would there be the slightest doubt about it? I think there is a doubt about it.
8614. *Mr. Brown.*] It strikes me that this particular phase of it is incontrovertible. I want to know if some such test should not reasonably have been made? I do not think you could reasonably expect anyone to do it; in all my experience I never knew anyone to do it.
8615. *Professor Warren (placing a table of the tensile test before the witness).*
8616. *Witness.*] From what part of the axle were the pieces of iron subjected to these tests taken?
8617. *Professor Warren.*] They were taken from the journal and the centre of the axle. There were a great number of pieces tested—the wheel-seat, the centre of the axle, and the centre of the journal principally.
8618. *Witness.*] The limit of elasticity seems to be fairly high in most of these cases.
8619. Would you pass such material for axles? Not some of it. I may state that I have formed a theory about the cause of this trouble, it is only a theory, however, and I have not had time to test it. These results appear to me to support my theory.
8620. What results? I see the contraction of area is 19½, and the elongation 14 in one case, in another it is 15 and 13; the limit of the elasticity is over 11 tons per square inch. I do not call that such bad iron; at all events I do not think it bad enough to account for the fracture.
8621. Is the irregularity accounted for by theory? Yes.
8622. Would you take that iron for any purpose whatever, even the commonest bridge work, when it is so irregular as that? No, it is too irregular; but the question in my mind is whether that irregularity existed at the time the iron left the makers' works, or whether it was produced here by the journal running hot.
8623. *President.*] You think that the constitution of the iron was changed in the meantime? Yes, I do.
8624. What temperature would be necessary to alter the constitution of the material? The whole thing is very novel. There are a great many mysterious cases in which trouble has occurred lately of steel forgings and flanged plates failing after the steel had been tested and found right. It is only when they have been traced to their origin that they are capable of remedy. In some cases it has been found that some phosphor bronze has been used in the same furnace as that in which the material was made, and has impregnated it. If these bearings were made of phosphor bronze, then when they ran hot the phosphorus would be possibly absorbed by the journal, and would deteriorate the quality of the material. It will be noticed in these tests that pieces possibly taken from the centre were not deteriorated to the same degree as pieces taken from the journal. I merely put this forward as a theory.
8625. *Professor Warren.*] If your theory is correct, it would have made the iron cold short on the surface, though it would have remained sound in the centre? Yes.
8626. Then, if a piece were cut out in the centre, it would be good according to your theory? Yes; but it is impossible to say how far the phosphorus may have penetrated.
8627. Well, you are the first who has said anything in favour of the axle? I say it is not such iron as I would use in an axle, but a part of it is not so bad as to explain the breakage of the axle.
8628. Is it not usual to specify the ductility tensile strength of the material in your specification? I have not been accustomed to do so; it is not usual in iron axles.
8629. *Professor Warren.*] I can show you a specification of tests of iron axles? Witness: Ductility tests?
8630. Yes? Then it must be recently.
8631. These tests were so conclusive that it surprises me that anything has been said in favour of the material?
8632. Have you any guarantee that the driving axles are not of bad material? So far they run very freely. The driving axles are not made by the same firm as the bogie.
8633. But you have not any proof of the soundness of the material; you have not made any test up to the present time, and yet it would only cost about £24 to make it? You would have no guarantee that the whole were sound if you did test one of them. In my last examination I referred to a case where the axles of certain engines, after running very satisfactorily for some three years, commenced every one of them to break, though the axles were the largest then used in England.
8634. Were they iron? No; steel, made by a first-class firm. I found, on making inquiries, that another railway had similar trouble; the cause was unsuspected by anyone, and could not be reasonably anticipated.
8635. Is not what you were saying just now about steel due to the fact that steel must be homogeneous if it is any good at all? Yes, certainly.
8636. The want of homogeneity in steel would cause fracture? Yes.
8637. Then you believe that the present driving axles are all right? Yes, I do.
8638. And the reason for that is that they have not given any trouble during the nine months they have been running? No; my reason for that is a great deal beyond the mere fact that they have been running for nine months without giving trouble. They are procured from as first-rate a firm of manufacturers as there is in the world.
8639. Yes, but we have had experience of that firm in the bogie axles? Yes, but everybody is apt to make mistakes sometimes; and what I mean to say is, that if you go to a first-rate firm, whilst they make a mistake once in a thousand times the probability is that nine hundred and ninety-nine times they will supply first-rate material.
8640. *Mr. Brown.*] Did we take all the precautions that we could have taken here with the bogie axles after their arrival in the Colony? Yes.
8641. *Professor Warren.*] But if the bogie axles could have been tested after they had arrived in the Colony how can you say that would not be a guarantee as to their quality? I do not know that I did say that.
8642. *Mr. Brown.*] There is not the slightest doubt about what the result would have been if the bogie axles had been tested; it has been admitted by the Commissioners that they were bad material, there can be no further question about it? You may have a number of tests and still you may have trouble; for instance, there have been nine broken shafts in the steam-ships that have come to this port, from one builder alone, and yet that builder is one of the best builders in Great Britain, and has given special attention

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attention to testing steel. In this instance, no doubt the machinery was subjected to all the tests that were considered necessary, and yet the breakages have been so striking that a special report has been sent to the Board of Trade about them.

8643. *Professor Warren.*] But supposing that the tests had been made, and the results had been pretty much as represented in this list, would you have allowed the axles to run? No; I should not.

8644. *Mr. Hoyle.*] I would like to ask Mr. Neale whether this is a correct copy of the letter that he addressed to the Commissioners in respect to the Baldwin engines. You have seen this letter, Mr. Neale, is it a copy of the one to which I refer? Yes; I believe it is.

8645. I noticed in your evidence on Friday last that you used these words, "If you take the 'Scotch "Yankee,' which I believe is a good engine, you will find that they have only two bogie wheels to guide "them round curves, and that the rigid wheel-base will make it more difficult for them to take curves. It "is 2 ft. 6 in. longer than the rigid wheel-base on the 10-wheel engines. If the road is going to be damaged "at all it will be damaged by the leading driving-wheel, and, secondly, we know that the 'Scotch Yankee' is "heavier on the leading driving-wheel than the Baldwin 10-wheeled engine, therefore they are more likely "to do damage to the permanent-way than the 10-wheeled engines, and if anything should go wrong with "the bogie—a spring break, or anything else happen—you have, in the case of the 10-wheeled engine, four "bogie wheels to depend on instead of two. For these reasons I consider that the Baldwin engines are "easier on the curves than the 'Scotch Yankees.' The rigid wheel-base of the Baldwin engine is only "12 ft. 6 in., and that of the 'Scotch Yankees' is 15 ft. On the Monmouthshire, where they have 5-chain "curves—much shorter curve than any we have here—we could not use an engine with more than 13 ft. "rigid wheel-base, and every additional inch in the length of wheel-base used tells on sharp curves. For "those two reasons I calculate that the Baldwin engines are much easier than the 'Scotch Yankees.' Then "these engines are very well equalised as far as the weight is concerned. I mean by that that the weight "on the wheel-base is very well distributed among the various wheels. Often sitting on an ordinary chair "we find that it is only resting on three legs, and that the fourth leg, instead of being on the ground, is in "the air. The weight on the wheels of an English engine is not, as a rule, equalised, and they may con-"sequently be compared to four-legged chairs.

"8401. *Professor Warren.*] Does that apply to the newly imported engine? It does to a certain "extent, but I am speaking of English engines generally, which are not so well equalised as American "engines. If you take a three-legged stool you may pitch it down anywhere, and it will always take a "bearing on three points, however uneven the surface, and that is the principle on which the American "engines are built. The wheels of these engines are so equalised that the engine is, in this respect, like a "three-legged stool."

8646-7. Now you say in you evidence on Friday——? There are some mistakes in that; you have not read it quite as I gave it.

8648. I read it just as it has been given to me by the officers of the Commission;—will you point out where the mistakes to which you allude are? What I said was that we used a 13-ft. wheel-base on the Monmouthshire railway, and you said that I said a 15-ft. wheel-base.

8649. Well, I will not deal with the Monmouthshire railways at all;—can you say why the "Scotch Yankee" does more harm to the permanent-way than the Baldwin engine;—is because it has a longer rigid wheel-base; and you also say that that it is a 2-wheeled instead of a 4-wheeled bogie;—will you tell me why you, believing that it is better to have a 4-wheeled than a 2-wheeled, recommended the Commissioners to take a 2-wheeled bogie instead of a 4-wheeled bogie; judging by the correspondence, you evidently recommended the Commissioners to get a 2-wheeled bogie-engine from the Baldwin Company, and now you say that a 4-wheeled bogie is better? Well, you yourself, in Parliament, stated that I "had gone one better," and the fact that I recommended a 10-wheeled engine shows that I did go one better.

8650. The fact that I did make a certain speech in the House has nothing to do with it; I am asking you questions in the course of your examination, and it is quite unnecessary to refer to anything that I may have said in the House;—I ask you the questions just as one gentleman may ask questions of another? I do not see that you can object to my reference to your speech in Parliament—you quote from my letter to the Commissioners, and I quote from your speech in the House.

8650½. Here is your evidence that you gave before the Commission on Friday last. You do not deny it, and in it you say, "If you take the "Scotch Yankee," which I believe is a good engine, you will find that they have only two bogie wheels to guide them round curves," this implying that it is better for engines to have four bogie wheels, and yet you recommend the Commissioners to purchase engines with two bogie wheels;—how was that? Well, I certainly may be permitted to improve upon a suggestion; the world improves, and I hope that I do. I have explained what are the advantages of the 10-wheeled engine; I have said that it is heavier and more expensive than the Mogul; but that, after taking the question very carefully into consideration, the Master Mechanics' Association (than which I should wish for no better authority) decided that the balance of advantages lay with the 10-wheel engine for purposes of passenger traffic. I am supported by that authority, and I do not know what more you want.

8651. Then again you say that the Baldwin engine has a 12-ft. 6-in. rigid wheel-base, and the "Scotch Yankee" has a 15-ft. rigid wheel-base;—as a matter of fact, I find that the Baldwin Consolidation engine has a rigid wheel-base 14 ft. 3 in. in length? I was talking about Baldwin passenger engines, and not Consolidation engines at all; they are very different things.

8652. Yes, but the evidence speaks of Baldwin engines;—does it not imply that you are speaking of Baldwin Consolidation engines only? Yes; I was certainly only alluding to the passenger engines at that particular time.

8653. And here again [*showing the witness a diagram of a Consolidation engine*] you say that this one has a pony truck, which you can condemn? Well, the very name Consolidation engine is enough to indicate to anyone who knows about the subject that it has a pony truck. As a matter of fact, I was only speaking about passenger traffic in this particular portion of my evidence, and drawing a distinction between a 10-wheeled engine and a Mogul, for the purpose of passenger traffic.

8654. You were simply speaking about Baldwin engines, and we must take the lot? When I referred to the 4-wheeled bogie, it must be taken for granted that I am referring to an engine with a 4-wheeled bogie, and the only engines under discussion that have 4-wheeled bogies are 10-wheeled engines. The very name of the Consolidation engine shows that they have only pony trucks.

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8655. But you said here that the rigid wheel-base of 15 feet in length on the "Scotch Yankees," is injurious to our curves. The Consolidation engine has a rigid wheel-base of 14 ft. 3 in. Now, if a rigid wheel base of 15 feet is injurious to the curves, is not a rigid wheel-base of 14 ft. 3 in. also injurious? The speed has a good deal to do with that, and you must remember that the Consolidation engines are only employed in running passenger trains up the mountains, where the speed is necessarily slow.

8656. But there are many places where the engine can travel at a high rate of speed round the curves on the mountains. For instance, at Tarana, where the accident occurred, you attain a high rate of speed? I beg your pardon; I know very few places on which it is more difficult to obtain a high rate of speed than on the road between Penrith and Bathurst.

8657. But I say that from Wallerawang to Bathurst, where the accident occurred, you were going down hill, and if a high rate of speed is possible upon any curves, it is possible there? When you are going down from Katoomba to Emu Plains you are going down hill continually, but you would not for a moment say that it was possible to attain a high rate of speed there. It certainly does not follow that because you are going down hill that you can attain a high rate of speed.

8658. What I want to know is this: If a 15-ft. wheel-base is injurious to the curves, is not the 14 ft. 3 in. also injurious to the curves? No, it is not, for the simple reason that there are thousands of these engines working with most satisfactory results. The Master Mechanics' Association highly approves of them, and in further evidence of the advantage of using them I may say that they have saved several millions of pounds sterling annually to the American people.

8659. There was nothing about speed given in the evidence by Mr. Neale on Friday, you did not qualify your statement in any way, what you did say was that engines with a 15-ft. wheel-base were injurious to the curves, and now I ask you why a wheel-base of 14 ft. 3 in. will not be injurious to the curves also? My answer to that is that engines with a rigid wheel-base of 14 ft. 3 in., if run at a limited speed, are not injurious, and we know, as a matter of fact, that these engines are run at a limited speed.

8659½. Then would the "Scotch Yankees" be injurious to the curves when run to moderate speed? Well, not if run at a moderate speed, though, as they are 15 feet the wheel-base, they will be more injurious than the Baldwin engines, as every additional foot tells; but I was not speaking of goods engines at all—I was speaking of passenger engines.

8660. *Mr. Fehon.*] This is a very unfair comparison to make. Mr. Hoyle is pitting the rigid wheel-base of a goods engine against the rigid wheel-base of a passenger engine.

8661. *President.*] What Mr. Neale says is that although my previous evidence bears the construction that Mr. Hoyle put upon it, as a matter of fact, I did not mean that it should have that construction. I was comparing a Baldwin passenger engine with Mogul engines, and not referring to goods engines at all.

8662. *Mr. Fehon.*] Yes, but the engine which Mr. Hoyle was referring to is an engine that runs at a low rate of speed, whilst the "Scotch Yankee" is a passenger engine, and an engine that runs at a high rate of speed.

8663. *President.*] We shall see that when we come to read through the evidence. There is no need for any explanation about it at all.

8664. *Mr. Hoyle.*] With regard to these axles, I should like to know whether Mr. Neale has any guarantee that the axles supplied by the Baldwin Company were not a lot that they had on hand, and were not specially made for these engines at all.

8665. *Mr. Brown.*] How can he tell whether they were or were not made specially for these engines?

8666. *President.*] Of course he has no guarantee. That is quite plain. We can see that. The evidence upon that point was given by Mr. Eddy, or Mr. Rhodes, of the Baldwin Company, who said that the axles were not made by them, but were got by them from a firm upon whom they placed entire reliance. They could not tell you more than that. That is all they know themselves.

8667. *Mr. Hoyle* (to Witness).] Do you consider that iron is as good as steel for axles? It is a matter of opinion. Steel is the cheapest, and therefore I generally prefer to use it for that reason.

8668. Can you tell us what was the thickness of the tube-plates of the Baldwin engines? Well, I believe that in my evidence in chief I got a little confused about that. I thought that you referred to the fire-box tube-plates, but, upon reading it over, I am of opinion that you were really referring to the smoke-box tube-plates.

8669. Yes; the smoke-box tube-plates? They are half-inch plates.

8670. Do not most of the English railway companies build their own engines? No.

8671. Well, now, in England, when an engine is being built, is it a fact that the English companies do not provide or do not insist upon some rigid inspection when the engine is being constructed? They send an inspector down to either visit the works every day or so many days every week, and he walks through the shop and endeavours to see that everything is progressing satisfactorily. He sees the boilers tested, and tries the truth of a good many measurements, and so on.

8672. You are referring now to an inspection undertaken by a person provided by the railway company themselves? By the railway company, yes.

8673. But I understood you to say before that it was only boys or young men just out of their time who were sent to the locomotive works for that purpose? Yes.

8674. You said that you were an inspector on the English railways? Yes.

8675. Was that just when you were out of your time? Very shortly afterwards.

8676. Well, do you mean to tell me that when you were out of your time you really did not know and were not capable of properly inspecting all the parts of an engine? It is not a question of whether you are competent to examine all the parts of an engine; it is a question whether you can watch work that is going on in a large number of shops, and can be sure that that work is being done honestly. It is a question of whether you can watch a couple of thousand men all on your work at the same time. You go into the boiler shop, and there may be twelve of your boilers under construction at once. At the same time there may be a large number of wheels being welded in the wheel shop. You cannot possibly see that the work that is put into your boilers is all honest work, or that your wheels are properly welded. You can only make the best inspection possible under the circumstances.

8677. But is that not better than having nobody there at all? It is a matter of custom, and in America it is a custom for the locomotive makers to take the whole responsibility upon their own shoulders.

8678. *Mr. Brown.*] Yet, if you were going to get any more engines from the Baldwin Company, that custom would hardly obtain, I imagine? That is not for me to say.

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8679. *Mr. Hoyle.*] You say that there are no flaws in the wheels, but that the indications we saw only appeared to be flaws, that is to say that they are only flukes in the iron, raised by the application of the hydraulic press? Yes.
8680. Do you not know, because I do as a mechanic, that one of the first things that a mechanic could be dismissed for would be for laying down a piece of work with galls in it. If I were foreman of a blacksmith's shop, and a man under me was laying down work with galls in it, I should dismiss him at once? Yes; but you have not seen work done by a hydraulic press. I have.
8681. And you think that these wheels are perfectly safe? I am sure that they are perfectly safe.
8682. Well, I am not? That may be; but I doubt if you have ever seen a locomotive wheel made at all anywhere.
8683. Well, that is not to the point;—relative to *Poor's Manual*, which you have quoted as your authority for the weight of these engines on the road, and for the weights of the rails? I do not think I quoted *Poor's Manual* with regard to the weights of the engines.
8684. No, I recollect you did not; but you did with regard to the weights of the rails? Yes.
8685. Well, what date was the edition from which you quoted? 1891, I think it is. It was from the last edition of *Poor's Manual* procurable; but I cannot remember whether it was 1891 or 1892.
8686. Would the information in that not be compiled for the year 1889; it would not give data for the particular year in which it was published, would it? Well, you can see what the date of the reports in it are by looking at it.
8687. But do you not think that the reports from the *Engineering News* and the *Railroad Gazette* are of just as much value as the reports in *Poor's Manual*? Yes.
8688. You have spoken about the weight of the rails in America. You told us that you have written some articles on the question. Do you know anything about the spacing of the sleepers in America? Yes; they are placed at distances varying from what would be represented by 2,000 sleepers to the mile to 2,800 to the mile.
8689. And that would be about 2 feet apart? Yes.
8690. Do you consider that a road with the sleepers placed 2 feet apart is any stronger than a road with the sleepers placed 3 feet apart? It all depends upon the sleepers, the ballasting, the drainage, the fastenings, and the tamping.
8691. Would a road in the United States with sleepers placed 2 feet apart be any stronger than a double-headed rail with 2½-in. chairs spaced 3 feet apart? What is a 2½-in. chair?
8692. Our chairs are only 2½ in. wide? Do you mean chairs weighing 25 lb.?
8693. I cannot tell you exactly what their weight is, but I suppose it would be about that, and what I want to know is whether you consider that a road such as they have in the United States, with sleepers placed 2 feet apart, would be any stronger than our double-headed rail with 2½-in. chairs, and the sleepers placed 3 feet apart? I consider that our road would be the stronger of the two.
8694. That is inasmuch as our sleepers are of ironbark, I suppose? Yes, with our ironbark sleepers, our stone ballast, our very good drainage, our roads would be, in my opinion, better than the roads in America, if even they were paved with sleepers.
8695. That is not quite what I mean. I am referring particularly to the bearing surface of the rails. In America you have sleepers from 7 to 12 inches wide? I never heard of sleepers 12 inches wide.
8696. I think I can produce evidence to the effect that sleepers are used in America 12 inches wide?
8697. *President.*] Let me tell you, Mr. Hoyle, that now is the time for you, if you have anything to bring forward in the nature of rebutting evidence to do so. You can do so in the course of cross-examination. If you have some book which shows that the sleepers in America are 12 inches wide, or that there are sleepers used in parts of America 12 inches wide, your proper course is to ask Mr. Neale if he knows that it is so. Ask him whether he knows that in such and such a book it is stated that in America there are sleepers 12 inches in breadth.
8698. *Mr. Hoyle.*] Well, I take this from the *Encyclopædia Britannica*, page 244, vol. 20; the article is contributed by four eminent engineers—D. Kinnear Clarke, C.E.; Professor A. T. Hadley; A. M. Wellington, C.E.; and S. Wright Dunning. In that article these engineers say, "The usual dimensions are 6 (sometimes 7) inches thick, 8 (sometimes 8½ or 9) feet long, and 8 to 10 or even 12 inches face. The usual rule is to place them 2 feet or less apart, and 2,640 to 2,700 to the mile. The large bearing surface thus afforded has especially favoured the use of the flat-based or Vignoles rails, and it is in exclusive use throughout North and, for the most part, South America." These eminent men further state, on page 253, that "the close propinquity of the sleepers gives much greater stiffness to the rails than comparative weights above would indicate, a 60-lb. rail being fully equivalent in stiffness and strength to an 80-lb rail, supported on chairs 3 feet between centres"? Well, that only confirms what I say. I told you that 12 inches is a most unusual width for a sleeper; the general width is from 7 to 8 inches.
8699. Well, I will take sleepers 8 inches wide. Do not you consider that road with 8 inch sleepers 2 feet apart would be stronger than our own road with the sleepers placed 3 feet apart and 2½ bearing surface provided by the chairs? From a theoretical point of view it might be stronger, but not necessarily from a practical point of view. What you have to take into consideration are the fastenings. If you had 150-lb. rails laid upon sleepers ever so broad, and they were not fastened at all, you dare not run over them, and if your fastenings, by reason of the softness of the wood or anything else, are not secured, then you have not a safe road. An engine strikes the rails as it is running, oscillating from side to side, and gradually shifts it further and further outwards, and in time if the line is not attended to, she would slip in between them. There you have an instance in which an engine comes to grief and yet not a rail has been broken. The fastenings alone are gone.
8700. *President.*] Yes, but what I understand Mr. Hoyle to mean is this: he says, supposing a rail is resting on a sleeper 8 inches wide and 2 feet apart, is that not better than a rail resting on a little chair in the middle of the sleeper, some 7 inches wide and 3 feet apart from the next chair in the rail?
8701. *Witness.*] No, I do not think it is, and for this reason: that if the rails were simply strained by a dead load of (say) 30 or 40 or 50 tons, and placed on chairs 3 feet apart, you would probably find that such a load would bend them a great deal more than if you had a flat-footed rail with sleepers 2 feet apart, but that is not what you have got to calculate for in railway work. You have to allow for a running load, not for a dead load. When you come to investigate an American line you find, probably, that not one of

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the fastenings is perfectly secure; you find that you can draw the spikes; the spike-heads are cut by the rails, and so on, but when you walk along our road you find that the sleepers are perfectly tight, and that the fastenings are perfectly tight. That is what makes the difference. It is not the fact that the sleepers are placed so closely together. The reason they are so closely spaced in America is that they are none of them perfect. If they had such sleepers as we have they would put them further apart, but they know that they are putting down sleepers that are going to decay—sleepers out of which the fastenings are going to work loose, and therefore they put them closer together.

8702. *Mr. Hoyle.*] You assume that our fastenings are tight, and I cannot accept the statement.

8703. *Witness.*] Well, I am telling you from my own knowledge. The great complaint among permanent way men in America is that the rails are incessantly cutting into the sleepers, and that the spikes are always working out.

8704. *President.*] If they had as good wood in America as we have—if they had our ironbark, and the permanent way was as well ballasted, then, of course, sleepers placed 2 feet apart would be better than sleepers placed the distance that we place them apart. Perhaps they would be unnecessarily strong? They would to a certain extent be better, but the question would then arise whether it would be at all necessary to place them so close, and whether it would not be better to spend the money in some other direction.

8705. *Mr. Brown.*] In America I have seen sleepers placed almost on the virgin soil. The sleeper has hardly any ballast.

8706. *Mr. Hoyle.*] The article from which I have already quoted in the *Encyclopædia Britannica* states further:—"The close propinquity of the sleepers gives much greater stiffness to the rail when comparative weights above will indicate a 60-lb. rail being fully equivalent in stiffness and strength to an 80-lb. rail supported on chairs 3 feet between the centres." Would that be correct? I do not think that they say so at the present time. At the date that that was written Mr. Wellington had never been in England. I know these gentlemen well.

8707. *President.*] What heading in the *Encyclopædia Britannica* is that article under? I have quoted from pages 244 and 253, vol. 20, 1886.

8708. *Mr. Hoyle.*] I have no further questions to ask.

8709. *Mr. Brown.*] Have you any more witnesses, Mr. Fehon?

8710. *Mr. Fehon.*] I have no more witnesses.

8711. *President.*] Do you mean that you have no more witnesses to-day, or no more witnesses at all. Of course you are going to call Mr. Eddy?

8712. *Mr. Fehon.*] Well, Mr. Eddy is prepared to come, but we have no particular wish to call him unless the Commission or Mr. Hoyle desire that he should come.

8713. *President.*] Oh, Mr. Eddy must come. We understand that he is to come for the purpose of being cross-examined upon the statement that he made.

8714. *Mr. Hoyle.*] I made a request on Friday last that I should be permitted to make a statement in reply to the statement made by the Chief Commissioner. I would propose to read that statement exactly as the Chief Commissioner's was written, and either to read it or put it in as evidence in reply. I have gone to a great deal of trouble to search for information as to what is going on in various parts of the world in regard to railway matters, and as the Press gave a full report of Mr. Eddy's statement, I only ask that I may be allowed to make this statement in reply. You will remember, Mr. President, that I asked you a question on Friday, after Mr. Brown had left the meeting, and that you then said that I had better wait until to-day, and then ask it again in Mr. Brown's presence.

8715. *Mr. Fehon.*] I may say with regard to Mr. Eddy's statement that we look upon it as simply evidence. It did not travel outside the range of evidence, and if Mr. Hoyle has an opportunity of asking Mr. Eddy questions upon it, there is not the slightest objection to his doing so, and that, I think, should satisfy him, but Mr. Hoyle made his statement at the commencement of this inquiry, and if he is to make another at the termination of it, it will be necessary for the Railway Commissioners also to make a further statement, and in that case they might feel inclined to travel a little outside the range of the evidence which is before us.

8716. *Mr. Brown.*] I am very sorry, Mr. Fehon, that you have such a poor opinion of evidence as to say that the Commissioner's statement did not travel outside the ordinary nature of evidence.

8717. *Professor Warren* (to Mr. Hoyle).] Could not you give your statement in the form of evidence?

8718. *President.*] That does not make it any better. I would like to hear what you have to say in answer to Mr. Fehon, Mr. Hoyle?

8719. *Mr. Hoyle.*] It must be remembered that in bringing these charges before the Commission in the first instance, I went into the box for the purpose of stating the charges themselves, and not so much for the purpose of giving evidence upon them. Of course, whether I have made out the charges or not is not for me to say, but all the time this evidence has been going on the Commissioners have had at their command a number of very able gentlemen, who have been able to deal with it day after day. When called by me to give evidence, Mr. Eddy withheld a certain large amount of information that he subsequently gave, when giving evidence as a witness of the Railway Commissioners. Inasmuch, therefore, as the Railway Commissioners have had this large staff at their back to render them assistance, as they were able to cable to various parts of the world for information, and make a most important statement at the conclusion of my case, whilst I have had to attend here day after day, and attend to my private business as well, I ask this opportunity of reply may be accorded to me.

8720. *Mr. Fehon.*] Mr. Eddy's statement was made, not at the conclusion of your case, but at the beginning of ours.

8721. *Mr. Hoyle.*] It was practically made at the conclusion of my case. You may see, Mr. President, that whilst I was conducting this case and attending to my ordinary business, it was a very difficult thing for me to work at any information, and many things came out in the evidence given by the witnesses of the Railway Commissioners that I could not possibly be aware of, but now that the case has taken the turn that it has, and the Chief Commissioner having given the evidence that he has given in support of his case, I would ask to be allowed to make certain statements in evidence just as the Chief Commissioner has done. Considering the Chief Commissioner has had an opportunity of giving evidence twice, and I have only given evidence once, it seems to me that at present I am placed at a disadvantage.

8722. *Mr. Fehon.*] I would point out that it would be a most unfair thing for Mr. Hoyle to make a statement now.

8723.

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8723. *President.*] Well, Mr. Fehon, Mr. Hoyle has made his application. You have objected to it, and Mr. Hoyle has replied to that objection. That ought to be the end of it. Do I understand, Mr. Hoyle, that you want to call further evidence?
8724. *Mr. Hoyle.*] No, I merely want to make a statement.
8725. *President.*] Well the difficulty is this. If Mr. Eddy had confined himself simply to a statement of facts that could be looked upon really as evidence, and that we could take entirely as evidence—I mean to matters that he knew himself—the commission would certainly not allow any further statement to be made. That is to say they would take your case and they would take the Commissioners' case as they stand, but Mr. Eddy in his very able statement went a great deal beyond what could possibly be evidence, by which I mean facts within his knowledge. He pointed out to us various facts in connection with the American railways and the lines across the Alps, and many other things, and he also sighted authorities from books, and under these circumstances we think the fairest thing to do is this, that Mr. Hoyle should be allowed to make his statement in answer, and we will consider, when he has made it, whether it should be incorporated in the proceedings or not. That is to say that there are certain things that are really evidence in his statement—it may be that we will allow them to be incorporated in the printed evidence, but if we find that it is a mere speech, a mere citing of authorities, or a mere academical disquisition, it is very doubtful whether we shall allow them to be incorporated in the proceedings.
8726. *Mr. Hoyle.*] I am very much obliged.
8727. *Mr. Fehon.*] I understand that we shall have another opportunity of questioning anything that Mr. Hoyle may say.
8728. *President.*] I understand that if we take Mr. Hoyle's statement in as evidence Mr. Hoyle will be cross-examined upon it in the same way as Mr. Eddy is to be cross-examined on his statement.

WEDNESDAY, 1 *JUNE*, 1892.

[*The Commission met at 2 o'clock in the Board-room, Colonial Secretary's Office.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E. | A. BROWN, Esq., M.L.C., J.P.

Mr. Cowdery, recalled, said:—

Mr. Cowdery. 1 June, 1892.

8729. *President.*] I believe Mr. Cowdery you wish to make some explanation, or in some way to amend the evidence you have given? Shall I state what I wrote to you, Mr. President?
8730. In your letter to me, Mr. Cowdery, there were certain charges made against absent people, notably, I think, with regard to Mr. Whitton—and of course I could not, under the circumstances, permit that letter to be read, and I think it would be better if in the evidence you are now about to give, you should refrain from saying anything about persons who are absent from the proceedings of this Commission. I thought that instead of my reading your letter, you should make an explanation with regard to certain matters mentioned therein, and in doing so I trust you will refrain from saying anything that may in any way reflect in any way upon the people who are not here, and who, therefore, have not an opportunity of replying to your statements.
8731. *Witness.*] I will endeavour to do so. You will, I hope, allow me to refer to that letter?
8732. *President.*] Certainly.
8733. *Witness.*] In the letter addressed to the President, I said that my character as an engineer had suffered somewhat through the publication in the newspapers of certain mis-statements made by Mr. Fehon and some of the witnesses. They were, I thought, misleading statements, which I intend to correct. I have gathered my information from reports published in the *Sydney Morning Herald*.
8734. *Mr. Fehon.*] To whom do you refer?
8735. *Witness.*] In the first place I refer to the question you asked from Mr. Wearing.
8736. *Mr. Fehon.*] I submit that that is not in order.
8737. *President.*] Your explanation, Mr. Cowdery, must not be relative to the evidence given by other witnesses, but simply to the evidence given by yourself. I can only allow any explanation you have to give to that extent. As I understand your letter, you made certain explanations with regard to the railway lines being out of gauge. If you wish to explain that matter, you are at liberty to do so. You may say when you left the service or whilst the lines were under you management they were of proper gauge, you may do that, but you must not comment on any question of Mr. Fehon's or any answer given by the witnesses to him.
8738. *Witness.*] Yes; with reference to these gauges, it is well known that most of our lines are single lines, and it is quite patent to every body, I think, that it was not necessary in the case of single lines to alter the platforms in any shape or form. It would be a very simple matter to correct where these roads an inch or two outside or inside the gauge.
8739. *President.*] Were all the buildings connected with the platforms?
8740. *Witness.*] On the Murrurundi and Blayney lines it is a single line, and I believe no alteration was made. No alteration, I understand, was made there, but on the Illawarra railway, a portion of which is a double line, there are many stations which have been altered. If you will allow me to refer to the names of them, I will do so.
8741. *President.*] Yes, you may do so.
8742. *Witness.*] They were St. Peters, Rockdale, Hurstville, Arncliffe, Tempe, and Marrickville, all these platforms have been altered for the Baldwin engines to pass through.
8743. *President.*] Do you say they were altered for the Baldwin engines to pass through?
8744. *Witness.*] Yes, they were built by Mr. Whitton, and I had nothing to do with them. I make this statement because the whole onus has been laid upon my shoulders for the expenditure in altering these platforms. I had no objection to the width of the platforms; under Mr. Whitton the original standard gauge was Mr. Whitton's, and no other was used by me until, the introduction of the first American engine, the Carlton platforms were built by me and have not been altered; the Erskineville platforms were also built by me and they have also been slightly altered for the new engines. They were quite right

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for the old class of engine, which has run through them without obstruction at the time of the introduction of these new engines. Nos. 5 and 6 platforms in the Redfern station have been cut away from end to end for these new Baldwin engines. These platforms were built by Mr. Whitton. I had nothing at all to do with them. It is not Mr. Wearing's reply that I so much object to as to the answer Mr. Foxlee has given to some questions; but perhaps I cannot put the matter in that way.

8745. *President.*] You can make your explanation without mentioning any person's name. If there is anything in the evidence that calls for remark from you in opposition to it you can make it. It does not matter who gave the evidence. Make your corrections independent of any one else's statement. If anything a witness has said tends to refresh your memory, well and good; but you must not give what has been stated by any particular person in your evidence.

8745½. *Witness.*] Mr. Foxlee says that many of these platforms have been altered from the original standard gauge. Upon that point I wish to state that the original standard gauge was Mr. Whitton's, and no other was used by me until the introduction of the first American engine.

8746. *Professor Warren.*] You refer to the old Baldwin engine? Yes; and for them we only altered the stations of the Western line where they were supposed to run, and were in fact kept on this line. The evidence says, "Is it not a fact that as far back as 1879 the engines could not pass the structures as they existed?"

8747. *President.*] You say in 1879?

8748. *Witness.*] Yes; and it is said in the evidence to be a fact. This was before I had charge, but it is the first time I ever heard of it.

8749. *Professor Warren.*] Do you know when the new standard gauge was introduced?

8750. *Witness.*] I could not tell you exactly.

8751. *Professor Warren.*] Mr. Whitton I believe altered his gauge?

8752. *Witness.*] Not in my time. I think it was after the introduction of these wider engines. I never heard of the alteration of the gauge; it was adopted by every one up to that time. I never dreamed of altering his gauge.

8753. *Professor Warren.*] I suppose we could get that date from Mr. Deane.

8754. *President.*] I believe he has gone to Melbourne.

8755. *Witness.*] It is also stated in the evidence that to enable these engines to run on the western line the structures were altered. Now as this line was single beyond Parramatta there could not have been any necessity to alter the platform, as it would have been easy to slew the road in or out an inch or so. Again in the evidence it is reported that the width over the cylinders of some of the engines then in the Colony was slightly in excess of the width over the cylinders of the Baldwins. If this statement is true, how does it happen that in first running the American engines we had either to alter platforms or slew the roads; therefore if these engines were wider than the American engines the cylinders must have been placed at a different level in order to clear the platform. Then again it has been stated that if the structures had been to Mr. Whitton's standard width it would not have been necessary to spend one penny in altering the platforms. Now as a matter of fact no other gauge than Mr. Whitton's was ever used to my knowledge either before or after I took charge, until the arrival of the Baldwin engines. Then I altered the gauge 2-ft. 9-in. from the top of the rail to the top of the coping of the platform, and 2-ft. 5-in. from the outside of the rail to the front edge of the platform. To prove what I say here, it is only necessary to send to Redfern and ask for the gauge used by me.

8756. *Professor Warren.*] That is practically 5 feet from the centre.

8757. *Witness.*] I never gauge from the centre.

8758. *Professor Warren.*] We have had it that they were that width from the centre.

8759. *Witness.*] Yes, I daresay it would be about that.

8760. *Professor Warren.*] I quite agree with you as to the proper way of measuring the width.

8761. *Witness.*] I consider that Mr. Whitton's was a most suitable one for the then description of carriages and engines, and I believe that the present gauge has been made necessary by the introduction of the Baldwin engine and is dangerously far away for the carriages of the old stock.

8762. *Professor Warren.*] What was that gauge?

8763. *Witness.*] I would not be sure whether he measured from the inside or the outside of the rail, but I believe that 2-ft. 4-in. is the gauge.

8764. *President.*] You say it always existed?

8765. *Witness.*] Yes, twenty-five years ago I put up platforms for Mr. Whitton to that gauge. His gauge was 2-ft. 4-in.—whether from the outside or the inside of the rail I cannot say. But there are plenty of plans in the office which will show that.

8766. *Professor Warren.*] When you were Engineer for Existing Lines did you use any other gauge?

8767. *Witness.*] The gauge was never altered until the first Baldwin engine arrived, and I do not mean that mearly by me, but by anyone.

8768. *President.*] When did the first Baldwin engine come here?

8769. *Professor Warren.*] About eight years ago.

8770. *President.*] That was before the present Commissioners took office.

8771. *Professor Warren.*] So that as time went on, and Mr. Whitton found the necessities of the rolling stock required it, he altered the gauge.

8772. *Witness.*] Yes. I altered it to 2 ft. 5 in., as Engineer for Existing Lines, to allow these new American engines to pass.

8773. *President.*] Had Mr. Whitton anything to do with the new engines?

8774. *Witness.*] He was constructing the new lines, and he had information of the width, and, I suppose, he altered the platforms accordingly. I do not know what he did.

8775. *President.*] You say you altered the width to allow the old Baldwin engines to pass.

8776. *Witness.*] Yes.

8777. And about the same time Mr. Whitton altered his gauge? I do not know that he did so, but, I think, he did, because he had information of the width of these engines. I have no doubt that he did alter it, but I cannot say positively. I was saying that Mr. Whitton's gauge was a most suitable one for the description of carriages of the old stock, and the present gauge which has been made necessary by the introduction of the Baldwin engines is dangerously far away from the carriages of the old stock for passengers—that is to say, the gauge is dangerous for working the old stock with the new engines.

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8778. *President.*] I understand by that there is a great distance between the carriage and the platform? Yes, I think so. And even with the present carriages and the present engines I have heard complaints from many passengers that they are inconveniently far away from the platforms when passengers are stepping in or out of the carriages.
8779. *Professor Warren.*] What do you think yourself? Yes, I think that is so, the width of the cylinders of the engines is of no consequence in America where they do not use platforms as we do. I may mention that some years ago two carriages were brought to this Colony, one named the "Lady Parkes" and the other the "Lady Robertson." I saw them in the yard before they were placed on the line at all, and I thought that they were a great width, and so I put my rule across them, and ascertained that they were too wide for our lines, consequently the two sides had to be reduced, for they could not pass each other on the curves without touching, I mean when one carriage was on one road and one on the other. There is one of the platforms now—and I suppose it has been passed by the present Commissioners—for trains are running through it, where the gauge is 5 feet 8¾ inches in one place and 5 feet 10 inches in another.
8780. *Professor Warren.*] Where is that?
8781. *Witness.*] At Croydon, that is to say, it is out of gauge 3¼ inches in one place and 2 inches in another place—it is an old platform, and one end of it has been altered.
8782. *President.* Is it only in course of construction or is it going to be finished? The old and the new wall are blended together as if it were finished and the trains are running through at the present time, I may say that it is with the greatest reluctance that I have come to this room at all, and I should not now be here only that I thought an injustice had been done to me by what had been said.
8783. *Mr. Fehon.*] You say you think an injustice has been done to you? Yes, I do.
8784. Well, you have done it yourself by the way you have given your evidence? In what way?
8785. By not stating the facts thoroughly with regard to these platforms? It has been put in such a way that I am made to appear entirely responsible for the expense which has been gone to in altering these platforms.
8786. How many have you put up under your own superintendence? I do not know, but they were put up in accordance with the dimensions given to me.
8787. You put up seventy-eight, and out of the whole lot there were only two to gauge—seventy-six out of seventy-eight were out of gauge? You say I did that.
8788. Yes, or your people, those who were in your department when you had charge of it; I have a list here, and I shall read it if you like, shall I read them all?
8789. *President.*] I do not know if it is necessary to do so.
8790. *Mr. Brown.*] Read some of them.
8791. *Witness.*] They seem to be all too wide.
8792. *Mr. Fehon.*] Too wide or too narrow? A difference of an inch and an eighth might occur in the clearance of the road.
8793. You say that most of these are on the single road? Yes. The road has not been altered, but taken as a true road, and the platform has been calculated as a true platform.
8794. The road has not been shifted to meet the mistakes you made, but it has been considered to be a true road, and the platforms made what they ought to be to a true road? But you cannot get away from the fact that they are single roads.
8795. The fact that it is a single road is no excuse for it being out of guage to meet a mistake in the construction of the platforms? Those platforms were not erected by me.
8796. All these platforms were erected during the time you were in the Existing Lines Department? Not those lines you are now alluding to.
8797. *Professor Warren.*] Speaking of Redfern and other stations near Sydney, were not these platforms put up many years ago by Mr. Whitton? Yes, many years ago.
8798. *Mr. Fehon.*] Are you aware that Mr. Whitton's guage in 1878 or 1879 was 4 ft. 9 in. and not 5 ft. I never heard of that guage at all; it was never shown to me in that way at all.
8799. He had two gauges, one being 3 inches less than the present standard gauge, all the alterations which had to be made in Sydney and close to Sydney were they not carried out prior to the alteration of Mr. Whitton's gauge in 1878 or 1879? The Redfern platform you are speaking of.
8800. *President.*] Were not all these platforms erected before the alteration of gauge? I do not know of any alteration of gauge in 1879.
8801. *Mr. Fehon.*] Of course, if Mr. Cowdery does not know anything about it, I will ask him no more questions.
8802. *Professor Warren.*] Mr. Cowdery, I think, would not be officially informed of what Mr. Whitton's alteration of gauge was.
8803. *Mr. Fehon.*] I presume not; but Mr. Cowdery held an important position in the service, and he ought to have known all the gauges.
8804. *Witness.*] If Mr. Whitton did alter the gauge I was never advised of it. He may have done so, but I was never informed of it.
8805. *Mr. Fehon.*] Mr. Cowdery said when he was last before this Commission that his memory was a little defective, so that perhaps he cannot remember it.
8806. *Witness.*] Perhaps. I only remember one alteration of gauge; that was when the new engines came out.
8807. *Mr. Hoyle.*] Did you make any changes at Parramatta and along the suburban line for this class of engine [*Diagram of class J, 152, put in*]? That is an American engine. It must have been for that engine that the alterations were made.
8808. These engines have been running since 1879? Then it was for them that the alterations were made. I never made any alteration after the introduction of the American engine on our line, and it was only on the Western line that I made the alterations I referred to, that is, on the line from Sydney through to the west.
8809. If the platforms were altered for these engines in 1879, and they have been admitted to be wider than the present Baldwin engines, then it would not have been necessary to alter the line to the west in order to use the present engines? No, not to alter the Western line.
8810. This diagram I may mention that engines as wide as the present Baldwin engines, if not a little wider,

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wider, were running on our lines previous to the importation of the new Baldwin engines; if the line was altered in 1879 to use these engines, surely it need not have been altered in order to use engines which the Railway Commissioners have shown to be narrower? I think, if such alterations were made, it must have been because the cylinders of the recently imported engines were at a different level, and the alterations were made to enable these cylinders to clear the platform.

8811. That would have all to do with it? Yes; that is to say, the position in which the cylinders are placed in the present Baldwin engines. The new engines might be narrower over all, and still have carried the cylinders lower than the former engines.

8812. And that would have all to do with it? Yes, I suppose so. The question of the American engines coming in contact with the platforms might depend upon the bearings or the cylinders overhanging more than other cylinders have done. All these things would bring them close to the platforms in going round curves.

8813. When orders were issued for erecting platforms you always used plans? Certainly.

8814. And they were to the standard gauge of your department at that time? Certainly.

8815. And to the gauge of other platforms? Yes.

8816. And if an error were made it was made, by those who carried the work out? Certainly; I do not suppose that any of the gentlemen present expect that in the position I then held I could go out and strictly measure every inch and see if anything were carried out.

8817. *Professor Warren.*] You had competent men to do that? Yes, most competent men.

8818. *Mr. Fehon.*] And if they had been carried out to the 5-foot gauge? I do not know anything about the 5-foot gauge, it is a measurement I never heard of before.

8819. It comes to the same thing measured from the edge of the rail, or from the centre, if carried out to that gauge none of these alterations would have been necessary? I say it is wrong.

8820. *Professor Warren.*] We have not the amount of water consumed during the trial trip, Mr. Fehon, Mr. Bland promised to get it for me, but he has not done so; it is supplied, I suppose, to the Commissioners, could they get it for us? also, how many times they took water, so that we may be able to get the exact weight on the engine during the various trials; my object is simply to check the weight of the engine at the time the trials were made?

Mr. E. M. G. Eddy recalled:—

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8821. *President.*] Mr. Eddy is now present. Mr. Hoyle desires to ask you some questions by way of cross-examination upon the statement you made before us in opening your case.

8822. *Mr. Hoyle.*] I noticed that in Mr. Eddy's evidence given a few days ago he made the following statement. And I would ask at this point that if this matter has nothing to do with the subject of this inquiry, it would be well for the Commission to state so in order that time may not be wasted by going into it. Mr. Eddy says in paragraph 6119 of the evidence:—"The failure of the various negotiations for the supply of engines to be built in the Colony, and consequent great loss of time, the rapid increase of traffic, the worn out condition of many of the locomotives, and the prospect of an exceptionally heavy wool season, rendered the immediate addition of new stock absolutely necessary. English locomotive builders being very busily engaged and consequently being unable to supply our wants promptly, the Baldwin Works were applied to and offered to deliver a large number of most powerful locomotives within an unprecedently short period." I ask Mr. Eddy, through you, Mr. President, if the Baldwin Co. were applied to immediately on the failure of the negotiations to have the engines manufactured in the Colony?

8823. *Mr. Eddy.*] I do not think the question is one that has been referred to this Commission to inquire into. I stated at the commencement of my evidence that to make certain things intelligible I had to ask for little latitude to be allowed me to make a few general remarks.

8824. *President.*] What have we got to do with whether tenders had been called in the Colony or not, or whether the American companies were applied to before the tenders were called or anything of that kind? How does that affect the question as to whether the engines were rightly or wrongly ordered or were defective in their working and unsuitable to the permanent-way?

8825. *Mr. Hoyle.*] That is why I raised the question. It was to have the matter decided that I raised it, because I thought that this part of Mr. Eddy's evidence was not within the scope of the inquiry, and I did not wish to transgress in that direction.

8826. *Mr. Eddy.*] I think I said in opening my evidence that I must trespass upon the time of the Commission to explain what would be otherwise unintelligible to them. I know that Mr. Hoyle, Mr. Sebey, and Mr. Midelton—what I may call "a ring," an expression so common at the present time. I know that this "ring" has been scheming and plotting throughout the Commissioners' term of office, and I do object to be used in an improper way to get information from me for the use of this "ring," which has been using its best endeavours for the past three years and a half to get rid of the Railway Commissioners.

8827. *President.*] I do not think we can go into anything like that now. If I am asked to rule about it I must rule that Mr. Hoyle cannot put the question; it is right out of the scope of the Commission, and having ruled that, there need be no trouble about it, no matter what the motive is, whether it is the best or the worst motive.

8828. *Mr. Hoyle.*] I can only say here, as I have said many times since the inquiry began, that I regret that I should be made the subject of insult as I have been at the hands of the Chief Railway Commissioner. As far as Mr. Eddy's remarks concern myself as being one of a "ring" who have attacked the Railway Commissioners, I deny absolutely that I have had anything to do with a "ring," I have not been a tool, nor have I been a tool of Mr. Midelton's.

8829. *Mr. Eddy.*] If you will read your speech in Parliament of March 30th.

8830. *Mr. Hoyle.*] I am in possession of the chair.

8831. *Mr. Eddy.*] You are in possession of a scoundrel. This Commission, Mr. President, has been appointed to inquire into the truth or otherwise of certain charges. I refuse to answer any questions put to me by one of our dismissed men, who entered Parliament and declared that he went there for the purpose of revenge. I decline to answer that man's questions.

8832. *President.*] I have already ruled that Mr. Hoyle could not enter upon that line of inquiry, and after

after having ruled that there is no need for you to say anything that is offensive to Mr. Hoyle, or for Mr. Hoyle to say anything offensive to you. Supposing that he is connected with other people towards whom you have hostile feelings. Mr. E. M. G. Eddy. 1 June, 1892.

8833. *Mr. Hoyle.*] Which I say is absolutely untrue.

8834. *President.*] Supposing he was, what has it got to do with this inquiry? We want to conduct this inquiry quietly, calmly, and dispassionately. We want to see three things—whether these engines were required, are they doing the work expected of them, and are they suitable for the work; and we do not want anything else. No doubt Mr. Eddy has been very much annoyed.

8835. *Mr. Eddy.*] I am prepared to answer any questions which you, sir, or the other Commissioners put to me, but I decline to answer any such questions as those put to me by Mr. Hoyle.

8836. *Mr. Hoyle.*] I, as the son of an English gentleman, and from as good a family as anyone in this Colony ——

8837. *Mr. Eddy.*] Behave yourself like a gentleman, and not like a scoundrel, then.

8838. *Mr. Hoyle.*] I now decline to cross-examine a man who has forgotten what one gentleman owes to another when he stands before a Royal Commission of the country, and forgets all the dignity of the great position he occupies. I decline to cross-examine a man who has so far forgotten himself before the public of the country.

8839. *Mr. Eddy.*] I decline to answer you.

8840. *Mr. Hoyle.*] I decline to take any notice of you. I decline to cross-examine you. I am as good a man as you are, and came from as good a family.

8841. *Mr. Brown.*] You must not turn this Commission into a bear-garden, you know. Mr. Eddy has shown a certain amount of hostile feeling.

8842. *President.*] There need be no hostile feelings here.

8843. *Mr. Eddy.*] I have no hostile feelings.

8844. *Mr. Brown.*] You have displayed them in a very marvellous way since you have been in this room, then.

8845. *Mr. Eddy.*] I am the victim of a number of men in a conspiracy.

8846. *Mr. Hoyle.*] If I were in a position, I would make you prove it.

8847. *President* (to Mr. Eddy.)] So far as I can see, I do not think that there was any reason to call for anything you have said in reference to this, whatever may be your private feelings towards any person who is opposed to you. Mr. Hoyle is now here to ask you certain questions; why cannot you answer him without anything like a feeling of warmth being imported into the matter at all. If anything you think wrong is asked you, appeal to us; but I do not think, certainly, that you should make the Commission a means of using strong language about those who are opposed to you. I make every allowance for your feelings at this time, and I sympathise with you. (To Mr. Hoyle), I think it would be better to go on, Mr. Hoyle.

8848. *Mr. Hoyle.*] No, Mr. President. There was never a man who sprang from the stock that I spring from who would ever do it. Whilst I was an officer in the service I treated Mr. Eddy with all the respect and consideration that I could. I fought as hard as any man could to make the service as perfect as it possibly could be.

8849. *Mr. Eddy.*] Is this speech to be allowed?

8850. *Mr. Hoyle.*] I decline to cross-examine Mr. Eddy any further.

8851. *Mr. Eddy.*] I say distinctly that Mr. Hoyle and Mr. Schey have done more injury in the railway service of this Colony than, if they were given ten lives, they could overcome, and that if Mr. Hoyle considers it to be the work of a gentleman to make charges in Parliament about engines that had not yet reached the Colony, and fail absolutely to prove any one of those charges; to undermine the service; to cause papers to be stolen, and get information by tampering with the men in the service; and joins with Mr. Schey to work up the Bathurst ——

8852. *Mr. Hoyle.*] It is only my sense of what is due by one gentleman to another that prevents me from telling you what you are: Coward! D——d cur!!

8853. *Mr. Eddy.*] I decline to answer Mr. Hoyle.

8854. *Mr. Brown.*] Mr. Eddy, I think you lose sight of the fact that, whilst holding the high position you do in this country, yet before this Commission you are only a witness. Whilst I recognise your high position, I cannot admit any difference between you and any ordinary witness called to give evidence before us.

8855. *President.*] Would you like to put any questions to Mr. Eddy, through me, Mr. Hoyle? You can do so perfectly well through me.

8856. *Mr. Hoyle.*] No, Mr. President, I must decline.

8857. *Mr. Brown.*] There is one feature in connection with these things that I am not quite satisfied with, and that you can no doubt give me a satisfactory explanation of; I refer to the inspection of the locomotives in America. From the evidence that we have had it appears the practice is not to send inspectors to the various locomotive works in America to supervise the building of the engines, and in that way that the engines ordered from the Baldwin Company were not inspected whilst they were being built? No.

8858. And when they arrived they were put on the road, as far as I can make out, in the ordinary way. The question for me to consider is, whether it was incumbent upon you—and when I speak of you of course I mean your officials—to have had the axles tested in any way before they were put upon the road, bearing in mind the fact that some previous engines not manufactured by the Baldwin Company, it is true, and manufactured in Scotland, but engines of a similar character to the Baldwin engines, had been the cause of dissatisfaction as far as the bogie axles were concerned. Taking all these things into consideration, knowing that you had had trouble with the axles of engines of a similar class before, and knowing that these engines had been manufactured without the oversight of an inspector acting in your interest, do you think that it was incumbent on you to have subjected the axles to any test before you placed them upon the road? I think you have had evidence given before you that with steel axles you can apply a test to one axle which will indicate pretty accurately the condition of the test, that will be of value by testing one axle out of a lot. In the case of steel axles you can do that, and be pretty sure that the rest of the axles will be of the same material, but in the case of wrought iron axles the fact that one axle out of a lot has been tested and proved to be a good axle is no proof that the test of them are good; and therefore, unless you smash up the whole of your axles in the process of testing them, you could not possibly tell whether they were all good axles or not.

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8859. Yes; but the evidence is to the effect that after you had been running your axles some time you did make a test. You subjected them to a drop test and to some other tests. If your argument is a good one—if it would have been valueless to test the axles in the first instance, of what use was it to apply the tests when you did? I do not think that it would be a proper thing to break up axles sent with an engine for the purpose of testing whether the other axles were good. It is not the practice; but with regard to inspection, taking advantage of the fact that Mr. Thow was on his way to America at the time that the engines were being built, we cabled to him to get his advice as to whether an inspecting officer should be appointed to supervise the construction of the engines in the same way as our inspecting officer supervises the construction of all engines that are built in England. He cabled back to us that it was not the practice in America to inspect, and that in America the purchasers of engines trusted to the reputation of the firm with whom they placed their orders, and under those circumstances he asked for instructions, and we, not wishing to depart from the general practice, or to throw a doubt on the reputation of the Baldwin Engine Company, instructed Mr. Thow to follow the general custom in America.

8860. And you did not think it was necessary, on the part of yourselves or your officers, to subject the engines to any further inspection than the ordinary inspection to which you subject engines before they were put on the road? Looking at the reputation of the firm, no.

8861. Although subsequent evidence proved that it was advisable, and, as a matter of fact, you actually did subject the axles to a test? As they were scrap-iron axles, I did not see what could be the object of applying a test in the first instance.

8862. Yes; but we have this fact before us, that after you tested one axle the whole of the bogie axles were tested.

8863. *Professor Warren.*] Yes; but the axles had broken then. Mr. Eddy means, as I understand it, that it is not customary to test axles before they are put on the road, inasmuch as the test would mean the breaking of the axles, and that that was why it was not done in this particular case.

8864. *Mr. Eddy.*] Iron axles are better than steel. When the axle that broke was tested it was found that in its manufacture into an axle the iron had not been properly worked. When we found that the whole of the axles had been made by the same firm we thought that, as a matter of precaution, we had better remove them all for fear that there might be bad material in some of the others.

8865. *Professor Warren.*] To say that testing one of a series of scrap axles is no criterion of the quality of the remainder is rather a sweeping statement, I think, inasmuch as they were all made by one firm? I did not make that statement. What I said was, that the testing of one scrap axle does not prove the quality of another scrap axle. If you were to say to me, "Could you not apply a test which would be of advantage if you had an inspector on the ground, who told you that they were all made in the same way?" then I should say yes; a test under those circumstances might be of advantage; but inasmuch as the axles might have been made at different times, and in thirty different shops, I do not see that by taking one axle out of a lot and testing it you could obtain a standard of the quality of the other. It is simply an argument in favour of the system of inspecting engines as they are inspected by Sir John Fowler during the process of manufacture in England—a system that has been attacked here very much lately—that of having an inspecting officer on the ground.

8866. *Mr. Brown.*] You evidently had that system in your mind when you cabled to Mr. Thow, suggesting the propriety of appointing an inspector to supervise the constructing of the engines by the Baldwin Company; he told you that it was not the custom to appoint an inspector of that kind in America, and then very wisely retired from the field to await your instructions; you did not think, under the circumstances, that it would be wise to act contrary to the prevailing custom in America, and decided to throw the onus upon the manufacturers. Those are all the questions I want to ask.

8867. *Mr. Eddy.*] I saw in the newspapers something with regard to Mr. Hoyle making a statement respecting this inquiry. I raised the question the last time I had the pleasure of being before you as to making a statement at the end of the inquiry, and you said that if it were evidence you would be prepared to admit it, but that if it were not evidence you thought it would be unwise to do so. Before we leave the room, I would like to know what is going to be your decision in regard to the statement that Mr. Hoyle has asked to be allowed to make. My statement, as it is called, was my evidence, and I was prepared to be cross-examined on it at once, and to answer any question at once, though I have this afternoon objected to answering questions put in the way they were being put. Mr. Hoyle, in formulating his charge, made a statement on my evidence. I do not look upon that as a statement at all in regard to the case. Mr. Hoyle stated his case; I, on behalf of the Commissioners, when we began to place evidence before you, put the whole thing as concisely as I could, and that was done in the shape of evidence. The authorities I referred to I put in evidence, also drawings of engines and other references of that kind, so that those authorities, if it had been desirable, your Secretary could have checked, and thus arrived at the accuracy of what I said. If Mr. Hoyle is permitted to make a statement, I must ask, on the part of the Commissioners to be allowed to say something, but so far as my personal views are concerned, I think it would be better that no statement were made, because if I did make a statement I feel that it would be incumbent upon me perhaps to say something as a matter of duty that would be disagreeable.

8868. *President.*] Will I tell you exactly what happened in regard to that. Mr. Hoyle asked whether he would be allowed to make a statement. I said if it were a statement in the way of advocacy, no. I was then reminded that in the statement you were good enough to give us the other day certain authorities were referred to that Mr. Hoyle might wish to call in question, or perhaps to bring other authorities forward to rebut. I then said that Mr. Hoyle should be allowed to state what he wished, which I took to be mainly in regard to these authorities, and that if they were considered by the Commission to be strictly in reply with the statements made by you, then we would exercise our discretion as to whether his statement should go into evidence at all. If, on the other hand, he is going to say a number of things that has nothing to do with the case, then the Commission would stop him at once; but that if he was only going to quote authorities in conflict with authorities quoted by you then his statement might be made.

8869. *Mr. Eddy.*] Is he going to make his statement now?

8870. *President.*] I suppose he will, as soon as the Commissioners' case is concluded. There was a good deal of difficulty about it, but as it was thought that yours was a very able statement of the case it was considered fair if there was anything that Mr. Hoyle wished to question in it that he should have an opportunity of doing so. A good deal of your statement, you understand, was not really, strictly speaking, evidence.

8871. *President.*] Is that the case for the Commissioners? 8872.

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8872. *Mr. Eddy.*] Well, the Commissioners understand that you have stopped our evidence on certain points.
8873. *President.*] That is all in your favour.
8874. *Mr. Eddy.*] Yes, if you are satisfied. We of course can produce any quantity of evidence beyond what we have produced to prove what is the correct answer to these charges, but if you are satisfied that you have sufficient evidence we have no wish to further prolong the inquiry by putting any more witnesses before you.
8875. *President.*] I will tell you exactly how the matter stands. We understood the other day that there were a number of drivers who could come and testify to the same effect that the drivers whom you have already called have testified to. We said that we did not want them, because we took it for granted that they would come here and say precisely what had been said by the drivers whom you had already called.
8876. *Mr. Eddy.*] If you are satisfied, that is all we require.
8877. *Mr. Brown.*] On that particular point we are satisfied.
8878. *President.*] We were quite satisfied that the drivers whom you were prepared to call would say what the other drivers had said, and that in saying that they would be speaking quite conscientiously.
8879. *Mr. Eddy.*] The drivers of whom I have spoken would have been able to give very much stronger evidence than those whom you have already heard; they would have testified to the quality of the engines from daily experience.
8880. *President.*] Then perhaps we had better have them. What we say is that we are satisfied that these witnesses would all testify, and testify truthfully to the good qualities of the Baldwin engines. They would say that there was apparently nothing wrong about them in construction; that they took their curves well; that they did not do the road any harm; that they were good engines to work; and were hauling their full loads. We take it that you have a large number of good witnesses who are prepared to come here and say all that; but if you want to call them, you had better do so.
8881. *Mr. Eddy.*] No; if you are satisfied on that point, we do not want to call them.
8882. *Mr. Brown.*] Have you any other witnesses?
8883. *Mr. Eddy.*] We have no further witnesses, unless there is anything that you would like to hear.
8884. *President.*] I understand then that that closes the case for the Commissioners. What do you intend to do, Mr. Hoyle?
8885. *Mr. Hoyle.*] In reference to my statement, I may say that I am in the unfortunate position of not being able to go on with it at present. I have sent it to the typewriter, and it has not yet been returned. So far as that is concerned, I am not able to go on this evening with the statement, and must ask for an adjournment.
8886. *Mr. Brown.*] Will you be able to go on to-morrow?
8887. *Mr. Hoyle.*] Yes; I shall certainly be able to proceed with the statement to-morrow. I thought I should have been able to do so this afternoon; but it is not here, and therefore I cannot.
8888. *Mr. Eddy.*] I must point out that by reason of being here to-day, the Commissioners have had to postpone the hearing of twenty-six appeals from all parts of the Colony. They have had to send all these people back into the country, and already they have been waiting for a week or two. I cannot be here to-morrow; I have got another of these Commissions to attend—a Commission that is inquiring into charges made against me of all sorts of things—and it is rather hard upon the Railway Commissioners that another adjournment should be asked for.
8889. *President.*] What day could you conveniently attend. Your convenience shall certainly be considered as well as anybody else.
8890. *Mr. Eddy.*] I have not a day; the work of the railways is in fact now a month or more behind.
8891. *President.*] We cannot help that.
8892. *Mr. Eddy.*] I have had to work all the night through to be ready with my information—night after night and Sunday too. I have not delayed the Commission for one minute. Mr. Hoyle ought also to be in the position to proceed with his case without causing delay. He has had the Court adjourned on one or two occasions; he obtained an adjournment in the first place, owing to the Tarana accident.
8893. *President.*] I want to tell you this, Mr. Eddy. It is not Mr. Hoyle who is delaying us now. Mr. Hoyle has done his share towards getting ready, but some typewriter has not got ready for him what he anticipated this afternoon. That is not his fault.
8894. *Mr. Eddy.*] I do not know. I had to write my statement with my own hand—every word of it—and if, when it was given to the typewriter, it had not been ready, I should have gone on with it.
8895. *President.*] You quite understand this—how the case has been conducted. I called upon Mr. Hoyle, first of all, to specify the charges we had to inquire into. He made his case; you made your case; and if there are certain things which have come out for the first time when you made your statement, in answer to what he has said—things which he wants in some way to qualify or contradict—I cannot prevent him doing that. I shall not let him go beyond that, however. I do not know what his statement may be. If it goes beyond the contradiction of certain new facts which you brought out in your statement, I shall prevent his stating them.
8896. *Mr. Eddy.*] It is a week since I gave my evidence. I was prepared to be cross-examined at the time. Every witness Mr. Hoyle has brought we cross-examined on the spot. He had the same opportunity of cross-examining me. He did not do so. A week has elapsed since then, and now he is asking for another postponement.
8897. *Mr. Brown.*] The fact of the matter is, that if it had not been for the fire that took place just now Mr. Hoyle would have been all the afternoon in cross-examining you, but the proceedings have broken down. Unexpectedly, he finds he is in want of his notes, and they are at the typewriter's.
8898. *President.*] There is this difficulty in the way, Mr. Hoyle, as I pointed out to you before. Supposing, for the sake of argument, Mr. Eddy had said that the spacing of sleepers on certain lines in America is so much, and you want to make out by some authority that the spacing of sleepers in America is very much less—that they are spaced at distances quoted by you from the *Encyclopedia Britannica* yesterday—the proper way, and, indeed, the only way, for you to get it in evidence is to ask, in the course of cross-examination, from Mr. Eddy or anybody you like, whether he has heard the statement quoted in a certain article that sleepers are placed in America only 2 ft. 7 in. apart, whilst he stated that they were placed 3 feet apart. In that way, you get your authority recorded in evidence, otherwise I do not

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see how it is evidence at all. All the books that were cited by Mr. Eddy were not evidence in any way whatever. "In a Court of law in a poisoning case perhaps something of this kind would happen. A doctor has come into Court to swear that a man has exhibited signs of poisoning by strychnine, and it may be the case of the opposing counsel that the man was poisoned by arsenic, and in those circumstances the side that wanted to prove arsenical poisoning would probably say to the witness, 'Do you know such and such a book. In that book it is pointed out that the symptoms that you have described are symptoms of arsenical poisoning. How does that affect your conclusion?'" In that way the authority would be placed in evidence.

8899. *Mr. Hoyle.*] You promised that I should make a statement, Mr. President, and I concluded that in the course of making that statement I should not be interrupted. There was much in Mr. Eddy's statement that was not evidence; but in order that the public should have the benefit of it I did not rise from my seat once for the purpose of interrupting Mr. Eddy when he was reading it; and I consider that when I come to make my statement I should not be interrupted, but that when the matter came before the Commission in typewriting they might then strike out what they considered not to be evidence.

8900. *President.*] I want to point out to you what the exact position of things is. You made your statement in the beginning. You made that statement on oath, and we have got practically everything in it. Then Mr. Eddy made his statement. If you did not object to it when he was reading it, or to any part of it, I cannot help that. If you had objected to it, and the Commission had considered that it was not evidence, or that some parts of it were not evidence, they would have been disallowed. Now you say that you could make a statement. I do not know what was in the minds of the other Commissioners, but I certainly thought that if there were certain things in it that were not evidence that you would be told at once that it could not be admitted; but the other members of the Commission do not seem to agree with me. They seem to think that you were told that you might make your statement, and that afterwards, if we thought that some portions of it were not admissible as evidence, they would afterwards be eliminated. I am very sorry if you have been misled by what was said to you yesterday. What I meant to say was that if you had anything to advance in reply to any facts that Mr. Eddy brought out the first time in his statement you should have an opportunity of stating them, but not of going beyond that.

8901. *Mr. Eddy.*] And I would submit that all the evidence that I gave has been confirmed by our officers. They have been subjected to cross-examination, and if there was anything in my statement which, as I say, was confirmed by them that deserved challenge, they could have been cross-examined upon it.

8902. *President.*] Well, I do not know what Mr. Hoyle's statement is until I see it or hear it read. Then it will be necessary for the Commission to rule upon its admissibility or otherwise. I have my own views about it, but I do not want Mr. Hoyle to be misled by anything I have done. If I have misled him by any statement of mine I should be very much more inclined to give him more liberty than I otherwise should have done. I do not know what he wishes to say. He may wish to bring rebutting authority, or there may be some new fact which you mentioned that he wants to refute, and that will be allowed; but further than that, personally I shall be opposed to him going.

8903. *Mr. Hoyle.*] What I want to know is, whether I am allowed to make the statement in the first place, any whether, having made that statement, when it is placed before the Commission they will then consider the admissibility of the whole or any portion of it.

8904. *President.*] If, by making a statement, you mean that you want to make a reply upon the whole case, as far as my judgment goes I say "No." If you wish to point out that some of the facts stated by Mr. Eddy are wrong—some of the statements made by him for the first time when opening the case for the Railway Commissioners, I see no objection to your doing so.

8905. *Mr. Brown.*] Yes; but that is not the decision of the Commission; it is the decision of the President. As far as I am concerned, you may go through the whole case, and afterwards you may hand that statement in, and the Commissioners will go through it and eliminate what they consider ought not to form part of the proceedings. That is my opinion. I do not know what Professor Warren says.

8906. *Professor Warren.*] I entirely agree with Mr. Brown. I do not see that there can be the least harm in the world in Mr. Hoyle making a general statement, and I should like to hear it.

8907. *Mr. Eddy.*] In the meantime the whole of the statement having gone to the Press?

8908. *President.*] No, I do not think so. If your statement, and the majority of the Commission seem to think you can make that statement, is to be a sort of reply to the whole case, then it would be for us to consider whether they would not first hear you or any of your officers make your *resumé* of the whole case. That is what would be done anywhere else.

8909. *Mr. Brown.*] Then the Commissioners can cross-examine Mr. Hoyle.

8910. *President.*] Again?

8911. *Mr. Brown.*] Yes. My idea is that after Mr. Hoyle has made his statement Mr. Eddy might cross-examine him and then make his statement.

8912. *Professor Warren.*] If the Railway Commissioners wish to give further evidence.

8913. *Mr. Brown.*] But I should object to any more evidence coming in at all.

8914. *Mr. Eddy.*] I quite understand that if Mr. Hoyle is allowed to make a statement the Railway Commissioners will be allowed to do the same.

8915. *Mr. Brown.*] As far as I am concerned, yes. And if these statements are to be published I think they ought to be published together.

8916. *Mr. Eddy.*] I do not for one moment wish to be considered to be dictating to the Commission, and I hope that they will understand the spirit in which I make this suggestion, but inasmuch as there is a grave question as to the wisdom of Mr. Hoyle's statement being admitted, would it not be well for Mr. Hoyle to submit it to the Commission before he reads it. In that case they could consider whether it is of such a nature as it would be wise to make public; then after having considered the statement they could give their decision upon it.

8917. *Mr. Brown.*] I do not think so, because Mr. Hoyle is prepared to swear to the statement that he is going to make. Is that not so?

8918. *Mr. Hoyle.*] Yes.

8919. *Mr. Brown.*] Therefore he is in exactly the same position as you were in when you made your statement.

8920. *Mr. Eddy.*] I beg to differ. Mr. Hoyle made his statement and brought his witnesses. I made my statement and brought my witnesses, and so far as the Commission are concerned they have said the case may be

be closed this moment, but if Mr. Hoyle is permitted to sum up the whole case, and to make statements, the nature of which are not known at the present time, then we think that we should be permitted to cross-examine Mr. Hoyle, and to make a similar statement upon the whole case, but in view of the length of time that has been occupied by the proceedings up to now we should like to see them closed at once. Mr. E. M. G. Eddy. 1 June, 1892.

8921. *President.*] Well, I have given my opinion about it. I have said that I consider that Mr. Hoyle ought only to make a statement strictly in reply. That is to say, if there are any new facts brought up by you in your statement to be refuted, or if some authority that you then quoted is to be disputed or qualified, that is, as far as I am concerned, as far as Mr. Hoyle ought to go, but the majority of the Commission do not think so. They think that Mr. Hoyle is at liberty to make any statement he likes. If it is convenient to Mr. Hoyle to hand a type-written copy of his statement in I should be very glad to see it, but the probability is that, as far as I am concerned, the whole statement would be valueless.

8922. *Mr. Eddy.*] I believe that Mr. Hoyle has a type-written copy of his statement before him now.

8923. *Mr. Hoyle.*] It has just arrived, but I have not had time to revise it. If you will permit me however, Mr. President, I will end the matter now, and I do it against the advice of my friends and without any desire to

I now ask permission to withdraw my application to make a statement at all. I will endeavour to get another opportunity of placing it before the public. As a matter of fact the statement is here, but I have not had an opportunity of revising it. I beg now to thank the members of the Commission for the manner in which they have conducted the case. No man could have had more fair play than I have had in this matter. What I have done I did from a sense of public duty; I believed what I did to be right; and I trust that I should do the same though I were faced by any man in the world. Whatever the finding of this Commission may be I shall always consider

and I can only say in conclusion that what I have done I have done from a pure sense of public duty, absolutely free from the promptings of any man. That whatever information I obtained I obtained through documents published in the public press or laid on the table of Parliament House, and from my own experience of fifteen years in the Railway service. I am not a man to be induced to take a step simply because someone comes along and tells me that such-and-such a thing is the case without carefully considering the matter in all its bearings myself. However, the proceedings are now at an end, and all I can say is that again I thank you from the bottom of my heart for the kind and generous treatment that I have received at your hands.

8924. *Mr. Eddy.*] I have also to thank the Commission for the way in which they have conducted the business of the inquiry. I think I can say something very different from what Mr. Hoyle has said in regard to his sense of public duty in the making of statements and charges.

8925. *Mr. Brown.*] I hope you will not say it then.

8926. *Mr. Eddy.*] But I will refrain from doing so, and will only say that I regret that such grave charges should have been made with so little justification, and that the country should have suffered the enormous loss that it has suffered through the Railway Commissioners and their chief officers being withdrawn so much from their duties, the result of which can only be an enormous loss of money and the creation of considerable trouble in the Service; but so far as this Commission is concerned I thank you for the courteous way in which the Commissioners and their officers have been treated.

8927. *President.*] To both Mr. Eddy and Mr. Hoyle it is needless to say that the Commission have done no more than they thought to be perfectly right. They have, I hope, to each side meted out the same measure of justice; and I need hardly say that we are quite charitable enough to attribute good motives to Mr. Hoyle in bringing the charges forward, indeed nobody has supposed anything else. There is no necessity for him, on the one hand, to say that he is not actuated by any evil motive, for we do not consider that he is. On the other hand we shall consider the case apart from any warmth of feeling; and I think it is fair to say this, that if Mr. Eddy has been unduly warm to-day and has offended Mr. Hoyle there cannot be any doubt that he has suffered great provocation, I do not say from Mr. Hoyle, but from others, and that this is only the last straw that is breaking the camel's back, because it may be that Mr. Hoyle has not only brought this matter forward from the best of motives, but he may possible be quite right in some of his intentions, and, therefore, Mr. Eddy should not have questioned the motives which led him to bring it forward; but at the same time I think great allowance must be made for Mr. Eddy. It is a matter of notoriety that ever since he has been here, by disappointed people, and by people who ought to have known better—there is another Commission sitting and I cannot say more—otherwise I should speak very strongly regarding their actions, but I do not refer to Mr. Hoyle—but in other quarters there has been one of the most disgraceful persecutions I have ever seen in my life. I do not say by whom the persecutions have taken place, because the case is at present *sub judice*. I cannot say more; only let it be understood that Mr. Eddy has been the subject of persecution. I wish to be perfectly understood, that I do think Mr. Hoyle has had any part in them.

FRIDAY, 17 *JUNE*, 1892.

[*The Commission met in the Board-room, Colonial Secretary's Office, at* 3 *p.m.*]

Present:—

F. E. ROGERS, Esq., Q.C., President.

Professor WARREN, M.I.C.E., | ALEXANDER BROWN, Esq., M.L.C., J.P.

8928. *President.*] On the 3rd of this month I received the letter I hold in my hand from Mr. Eddy. It was marked upon the outside "private," but I presume that there is no harm in my referring to it.

8929. *Mr. Smith.*] Certainly not.

8930. *President.*] Because it has since appeared in the public press. The letter is couched in the following terms:—

Sir, Railway Commissioners' Office, 3 June, 1892.

I write to call your attention to the proceedings at the last meeting of the Railway Commission on the Baldwin engines, and to state that the remarks made by me to Mr. Hoyle were unguarded. But they were made under circumstances of great mental suffering and excitement, cause by the intolerable attacks made during many months past, not only upon my capacity and management, but also upon my integrity and reputation—attacks in which I felt convinced, from a great number

number of circumstances, Mr. Hoyle was involved. Nevertheless, on reflection, I feel I failed in the respect due to the Commission, and also in the respect due to Mr. Hoyle's position before the Commission. I therefore desire to express my regret, and to withdraw the offensive observations I used with reference to Mr. Hoyle and his conduct. If it could be arranged for the objectionable remarks to be omitted from the minutes of the proceedings I should be glad.

I am, &c.,
E. M. G. EDDY.

After that, at a meeting the Commissioners held in this room on the 9th June, which I may state was the first meeting at which I could command the attendance of my colleagues, I caused the following letter to be sent in answer to that of Mr. Eddy:—

Sir, Colonial Secretary's Office, 9 June, 1892.

Referring to your communication of the 3rd instant, which I regret to say I have not had an opportunity to answer before, in consequence of not having met my brother Commissioners, I desire to say that the Commission accept your withdrawal of the remarks made by you on the occasion referred to, and readily understand that they must have been made under circumstances of great mental suffering. With regard to your request, that "If it could be arranged for the objectionable remarks to be omitted from the minutes of the proceedings" you would be glad, the Commissioners are of opinion that whilst they would be most happy to fall in with your wishes, they think that the application you make should be considered publicly in the presence of all concerned in the inquiry, and with a view to this object being attained, they have convened a meeting of the Commission for the 17th instant, of the time of the holding of which due notice will be given to the parties interested.

I am, &c.,
F. E. ROGERS,
President.

8931. *Mr. Smith.*] I would like to make an explanation here, appearing as I do for Mr. Eddy. Since that letter of the 3rd instant was written, namely, on the 7th of this month, Mr. Eddy has been served with a writ, or rather a writ was issued out of the Supreme Court against him at the suit of Mr. Hoyle in which the endorsement states that the plaintiff claims £10,000 for damages, and so forth. It is a writ issuing out of the Supreme Court of New South Wales, and that writ being in the ordinary form it gave no information as to what the cause of action is, and for reasons which are obvious, it was not preceded by the ordinary solicitor's letter, which gives a general idea of the cause of the action. So that until the declaration is filed, the defendant does not really know what is the cause of action, but Mr. Eddy has, of course, no doubt that it is the outcome of the proceedings referred to in this correspondence, and in connection with which the Commission have met to-day. There are several small matters in connection with this writ which I need not now refer to. I mean in the way in which it was brought to Mr. Eddy's notice at a time when he was in attendance at another Commission, though probably this arose through a mistake. It must not, however, be understood that the reason Mr. Eddy does not appear here to-day is because he is terrified by these proceedings. It is not on account of that he is absent.

8932. *President.*] I do not understand what it is you desire to do, Mr. Smith.

8933. *Mr. Smith.*] I am explaining that in the interval between these two letters a writ was served on Mr. Eddy.

8934. *Mr. Brown.*] I do not think there ought to be any discussion about it in any shape or form. So far as the parties here are concerned, if there is no objection on the part of Mr. Hoyle or anyone else to the withdrawal of these objectionable remarks, the Commission think that course may be taken, but if Mr. Hoyle has any objection to the withdrawal of the report of these proceedings, he can say so, and there is an end to the matter.

8935. *Mr. Williamson.*] I appear for Mr. Hoyle.

8936. *Mr. Brown.*] You cannot appear for Mr. Hoyle. No one can appear here as the representative of any party, it having been resolved by the Commission that counsel should not appear.

8937. *President.*] I understand he appears only with regard to this one particular thing.

8938. *Mr. Williamson.*] Yes; it is only with regard to this one matter. A declaration has been put on record to-day, and Mr. Smith's firm has been served with a copy of it, and I have a copy with me setting forth the grounds of the action. The declaration will show Mr. Smith the full cause of the action.

8939. *Mr. Brown.*] Do you object to the report of the proceedings being withdrawn.

8940. *Mr. Williamson.*] I do; I object to any elimination of the remarks made by Mr. Eddy from the official report.

8941. *President.*] Does Mr. Hoyle object?

8942. *Mr. Williamson.*] Yes; I object on behalf of Mr. Hoyle.

8943. *President.*] I am only speaking for myself, but what struck me was this, that the passages in the proceedings referred to had nothing to do with the evidence in the case, and I proposed to have them eliminated. I refer to what was taken down in shorthand, relating to what was said by Mr. Eddy and also by Mr. Hoyle. I thought it would be better if those remarks should not appear in the printed record of the proceedings. What have they to do with the proceedings in any way whatever, and I understood that this would apply in one case as well as in another.

8944. *Mr. Williamson.*] Our cause of action is based upon what was said by Mr. Eddy.

8945. *President.*] We have nothing to do with your cause of action.

8946. *Mr. Williamson.*] We have been supplied with a type-written copy of the shorthand notes, manifesting that they were part of the records. This [*producing manuscript*] is a copy supplied to Mr. Hoyle.

8947. *President.*] They were not part of the records, then.

8948. *Mr. Williamson.*] It appeared to be so from the copy supplied to me.

8949. *President.*] What appears as part of the record is what is printed in the official report of the proceedings; what you have will not be part of the records until it is printed; and I think it would have been wise for both sides to have it kept out of the proceedings.

8950. *Mr. Williamson.*] The position in which Mr. Hoyle stands is this: A full report of these proceedings was contained in the summary published by the *Sydney Morning Herald*, and has been transmitted to other parts of the world.

8951. *President.*] That is so much damage, of course, but I cannot see how it affects your action in having these passages left out of the records of the Commission. For the sake of both sides I think it would be nicer to have them left out.

8952. *Mr. Williamson.*] If it were the party who was aggrieved—namely, Mr. Hoyle—who made the application, it would be different, and there would be something for the Commission to consider, but for the person who commits the offence to step in afterwards, and ask for these words to be eliminated from the official records, is quite another matter.

8953.

8953. *Mr. Smith.*] I do not ask to have the passages left out; I simply leave the matter to the Commission.
8954. *President.*] Mr. Eddy asks for it in this letter; he says he will be glad if it could be done.
8955. *Mr. Brown.*] If there is any objection to their being taken out of the records they must stand as part of the proceedings, at least, so far as I am concerned. If this objection is pressed I think we must allow them to stand as part of our proceedings.
8956. *President.*] If the matter were left to me I would leave them out. For the sake of both parties I think that would be the better thing to do. There were words, also, which were said on the other side. I do not say they were not very much provoked, but I think, for the sake of both parties, it would have been well to leave these passages out, and if the matter were left to me I would do so; but, of course, it depends upon what the majority of the Commission thinks ought to be done.
8957. *Professor Warren.*] I agree with Mr. Brown.
8958. *President* (after consultation with the other members of the Commission).] The majority of the Commission think that these passages should form part of our proceedings.
8959. *Mr. Smith.*] I beg to say now that inasmuch as proceedings have been brought to the Supreme Court of New South Wales against Mr. Eddy, he feels that he would not be showing sufficient respect to that Court if he continued to appear at the proceedings of this Commission otherwise than as a witness. He thinks he may injure himself by appearing before this Commission in any other capacity, or by taking part in its proceedings in any way other than as a witness. He is quite willing to attend and answer any questions that may be put to him, but his time is now so very much taken up that he thinks it would be more convenient if any information is required from him that the questions should be submitted to him, so that he may be able to furnish the answers required in the form of a return.
8960. *Mr. Brown.*] I do not think we shall want him.
8961. *Mr. Smith.*] Inasmuch as these charges have been brought against the corporation known as the Railway Commissioners, who are now the only party before this Royal Commission, they have furnished me with a retainer under their common seal to appear for them, and if anything should be required on their part I am here to represent them.
8962. *Mr. Brown.*] The inquiry is practically over. It has been reopened only for the benefit of the Commission, to enable them to secure certain information they want.
8963. *Mr. Smith.*] We are anxious to give the Commission all the information we can. So far as we are concerned, I think we will not call any witnesses.
8964. *Mr. Brown.*] We are simply holding this meeting for our own information, and not with the idea of having witnesses from either side.
8965. *President.*] Is Mr. Thow here?
8966. *Professor Warren.*] Before Mr. Thow is examined I would like to say a few words. I asked for a return of the broken rails on the lines where the Baldwin engines were running, showing the number of rails broken since the time they have been running, and also those broken during a similar time previously. That return has not been furnished to the Commission.
8967. *Mr. Smith.*] It will be furnished in due course.
8968. *Professor Warren.*] I hope it will be furnished as soon as possible, as we hope to bring our report out within a week or so.
8969. *Mr. Smith.*] As a matter of fact, there is not a complete record of these rails, but a return is being prepared, and will be furnished as soon as possible. Mr. M'Lachlan left Sydney yesterday to get the figures.
8970. *Mr. Hoyle.*] He did not leave yesterday. I believe I saw him yesterday myself.
8971. *Mr. Smith.*] I have had a telegram from him, despatched from Bathurst this morning.
8972. *Mr. Hoyle.*] He may have gone up by the morning train.
8973. *Mr. Smith.*] Yes, probably. Any particulars the Commission want relating to this matter will be furnished as soon as possible by the Railway Commissioners.
8974. *President.*] There is some difficulty about this matter, Mr. Smith. Hitherto we have not had either the Railway Commissioners or Mr. Hoyle, represented by counsel or solicitor, and one at all events of my fellow Commissioners, thinks it undesirable to admit counsel or solicitor to represent either party at this late stage of the proceedings.
8975. *Mr. Smith.*] I do not take any part in the proceedings in that way. The Railway Commissioners do not appear, and I am here simply as their representative. They are a corporate body represented by their common seal, and as they cannot very well bring their common seal here to represent them. I have been retained to appear on their behalf.
8976. *President.*] Mr. Eddy was here at the early stages of the inquiry, and in the later Mr. Fehon appeared.
8977. *Mr. Smith.*] And Mr. Eddy also appeared in the later stages. His sole reason for not appearing now is that an action has been brought against him.
8978. *Mr. Brown.*] If he likes to stay away, that is his own look out; but so far as we are concerned, we do not intend to have any of the parties represented here by counsel.
8979. *Mr. Smith.*] Quite so. I am not going to have any counsel here.
8980. *Professor Warren.*] You will write about the return I spoke of, Mr. Smith?
8981. *Mr. Smith.*] I undertake to furnish the return.
8982. *Professor Warren.*] I am surprised that it should take more than an hour or so to furnish the particulars. We know these things are kept on record by all railway companies.

William Thow recalled:—

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8983. *President.*] Mr. Thow, we want you to give us all the information you can about the breaking of a tire of one of the wheels of a Baldwin engine, which took place last Monday week between, I think, Bowenfels and the next station. Do you remember the breaking of that tire? Yes; I remember the case.
8984. Do you know anything yourself about it? I have seen the broken tire.
8985. Can you give us any reason for its breaking? I do not think I could just now. The steel has not yet been tested. The tire was made of steel by a very good firm in America, and it broke apparently without

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without any extra strain. There was no unusual work on the tire at the time it fractured, but the testing of the steel is the only thing that will reveal the cause of its breaking. To all appearance the material of the tire is very good steel, but I should say it was hard?

8986. Hard? Yes; hard; and that would cause the fracture. If it is over-hard it is unsuitable, because a tire must have a certain amount of elasticity, and you cannot have both hardness and elasticity.

8987. Would you call it good steel for a tire? I would rather not speak upon that point until the material has passed through the tensile test, because any opinion I now give is simply drawn from the appearance of the tire. We are preparing to test pieces of the tire, and they will be ready on Monday night or Tuesday, and the result of those tests will show what the steel is.

8988. When will you have the tests completed, that is to say, when will they be in such a condition that anyone could give us information about the tire? Wednesday or Thursday next, I should think.

8989. *Professor Warren.*] Might I ask who is going to test the pieces? I think it is very likely it will sent to the University.

8990. In any case I would like to know the nature of the tests, because one would then be able to form an opinion on the quality of the steel from the nature of the tests you are going to submit it to.

8991. *Mr. Brown.*] Was it the tire of the bogie-wheel or of the tender-wheel? It was on one of the tender-wheels.

8992. Is it usual for a tire to break in that way? I have known them to break; but it is not a very usual thing for tires to break in that way.

8993. *President.*] Was there anything the matter with the bolts? No; they were all right. They came off after the tire itself broke. That seemed to be proved by the examination that was made.

8994. So that there was nothing the matter with the bolts? Nothing at all.

8995. *Professor Warren.*] You think the breakage was entirely due to the steel of the tire? I think so, from the appearance of the steel. When we cut it, I saw it was very hard—probably too hard to be good material for a tire.

8996. *Professor Warren.*] We have had evidence of another tire breaking. Mr. Park gave some evidence on the subject? Yes, there was one that broke.

8997. *President.*] What tire was that? A tender-wheel tire.

8998. *Professor Warren.*] The present one is a tender-wheel tire also, is it not? Yes.

8999. *Mr. Brown.*] You do not know the circumstances under which it broke, do you; was it a passenger Baldwin engine? Yes; the tire of the wheel which broke at Bowenfels was on a Baldwin passenger engine. We have had three tires broken altogether. Two have been on passenger trains, and one on a goods train.

9000. *President.*] Was the one Professor Warren referred to on a passenger or a goods train? The first one was on a goods train, and the other on a passenger train.

9001. *Mr. R. Smith.*] I have a report by Mr. Thow, which gives details of these matters.

9001½. *Mr. Brown.*] How many of the Manchester engines have you—the large ones? We have twelve running, and I think eight in the harbour.

9002. How long have these been running? I suppose they have been running about seven weeks.

9003. Have they shown any defects in the wheels or tires? No; nothing at all.

9004. *Professor Warren.*] Do you not think it unusual for so many tires to have broken since these engines—I refer to the Baldwin engines, of course—have been here? It is unusual.

9005. And there is no guarantee that the other tires are any better?

9006. *Mr. Smith.*] I am authorised to say that on this tire breaking the Railway Commissioners took the opportunity of ordering that the whole of the tires, forty-eight in number, should be taken off, and other wheels and axles should be placed upon the Baldwin engines. They were withdrawn from traffic until this was done, and they are not being put into traffic where the ordinary standard tires still remain. In order to afford an opportunity to this Commission to examine the tires it was suggested that they should inspect all of them, and then select from the whole one, two, or three which they thought might look the worst and submit them to any strains or tensile tests thought fit. Of course, the Railway Commissioners are just as anxious as this Royal Commission to secure the safety of human life, and they felt that it was a very unusual circumstance that after an engine had travelled only 20,000 miles, a tire should break. They thought there was something extraordinary in this happening. This is not a matter which originally arose upon inquiry before this Commission; but since this accident has happened the Commissioners desire me to say that they have taken them off and put new wheels and axles in place of the old ones, and the whole of these old wheels and axles have been kept, so that it would be convenient, in the event of the Commission appointing experts to test the wheels. Professor Warren himself, who is a member of this Commission, might undertake the necessary tests. Of course, the broken tires will be examined by direction of the Railway Commissioners, and if they are not examined by Professor Warren himself, he will be asked to be present at the examination. Of course, in saying this I have presumed that the Commission defer to Professor Warren as their scientific representative.

9007. *President.*] Of course.

9008. *Professor Warren.*] I may state that the best examination will be in the testing machine, where we can obtain ductility and tensile results. The only machine available for such a purpose is at the University, so that if I could get the test pieces which have been already prepared we could settle the question beyond all doubt.

9009. *Mr. Smith.*] Hitherto the Baldwin Engine Company have not made any objection to refunding in cases where defective material has been proved to have been used. The Railway Commissioners have money in hand not yet paid to the Baldwin Company, and it is proposed to charge that company with the expense of refitting these engines. If it were considered advisable to break up five or six more of these wheels it might be done.

9010. *Mr. Thow.*] The following is the report I made with regard to the breakage of tires:—

THE first case of broken tires on Baldwin engines occurred on the tender of engine No. 485 (goods), which engine worked No. 46A up-goods into Penrith on the 4th May. After the arrival in locomotive yard at that station it was found that the left hand leading tender tire was broken. The wheels were changed, and no damage and no delay to traffic was caused by this breakage. The next case was that of engine No. 448 (passenger), on which the tender tire broke when working No. 28 up-passenger train on the 6th instant, from Bathurst to Penrith. Driver Fullerton reports that when approaching mileage 98·50 chains, between Wallerawang and Bowenfels, at about 11·50 a.m., his fireman (H. Smith) called out to him, "Hold hard." Fullerton at once stopped the train as quickly as possible, and upon looking round he found the tender and

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a horse-box, which was the leading vehicle on the train, oscillating very much. Upon getting down, he found the tire of the third pair of tender wheels on the right-hand side was broken and off the wheel, causing derailment of the trailing bogie of the tender and the leading wheels of the horse-box. Delay was occasioned to the two passenger trains by this accident. The only damage to permanent-way was a few chairs broken. The damage to the rolling-stock consisted of the trailing tender bogie frame being broken and some of the air pipes broken. The time-table speed for No. 28 up-passenger between Wallerawang and Bowenfels is 31 miles an hour. The next case occurred about midnight last Sunday, the 12th instant, when engine No. 449 (passenger), after having worked the up-mail train from Dubbo to Bathurst, was, upon examination by the driver, Beverley, after reaching the shed, found to have the third tender tire on the right-hand side broken. This tire had not left the wheel, and had only just broken, as the tire bolts were found lying close by. There have been two cases of stoppage of Baldwin engines in Bathurst, which may wrongly have been attributed to breakage of tires. Their defects were as follows:—One instance is that of engine 452, which was booked up to work the up-mail from Bathurst on the 7th instant, but during the day it was found that one of the tender wheels was loose on the axle. Nothing was wrong with the tire. This, however, rendered it necessary that the engine should be stopped, and another engine sent with the mail. The other instance is that of engine 450, which was discovered last week to have one tender wheel loose on the axle, and therefore could not be sent with the train until the wheels were changed.

9011. *President.*] I might mention to you that at a meeting we held last night, this very point was considered. Of course we were not in a position then to dictate to the Commissioners what should be done, but we were I think pretty well agreed that it would be a wise step if the engines were to some extent withdrawn from service until they had been thoroughly tested.

9012. *Mr. Brown.*] We came to the conclusion that you should remove the wheels and axles, and submit them to a proper test before you allowed them to run again. That was part of the Commissioners' decision last night, and it will be a part of their recommendations.

9013. *Mr. Smith.*] There is another little matter. Mr. Thow has stated that the tires were made by a good manufacturer. The specifications says that they were to be made by the Standard Company of America, and I understand that a tire made by the Standard Company means a tire made up to their test, which is a very severe one. A Standard Company's tire means not merely a tire made by the Standard Company, but a tire that has been submitted to a certain test provided by the company, just as Vicar's steel, or Otis steel, or B.P.B. steel means steel of a guaranteed quality.

9014. *Mr. Hoyle*]. I understand from what Mr. Smith says, that it is intended to put on new axles and wheels. I also understand that it is the English type of wheel and axle that is going to be placed in the engines when these have been removed and that these wheels and axles are not going on again.

9015. *Mr. Smith.*] Not until they have been tested. Those not broken will probably be sent back to America. If they are found to be unsatisfactory, the Railway Commissioners will return them to the Baldwin Company. Hitherto the Baldwin Company have never made the slightest objection to making good any loss that has occurred through an error on their part, and I might say that there are ninety-one locomotives in the Tramway Department all made by them, and that not a single one of the tires (and all of them were made by the Standard Company) have shown the slightest indication of giving way. I think I am right, Mr. Thow? Yes.

9016. *Mr. Smith.*] Further than that, none of the old Consolidation engines which have been in use for so many years have given any trouble by reason of defective workmanship or material in the tires.

9017. *Mr. Hoyle.*] One broke.

9018. *Mr. Smith.*] Well, I did not know that even one of them had broken. And what I want to point out is this, that it seems very strange as the tires had given such satisfaction in the past, in connection with the tramway motors, and the old Consolidation engines, they should have given trouble when manufactured for a more highly-finished machine.

9019. *Mr Brown.*] I would just like to read to you one paragraph from the report—a paragraph upon which the Commission decided last night: "The Commission further recommends, inasmuch as certain of the axles and wheels have not yet been submitted to any test, that in the interests of the travelling public steps should be taken immediately to have a thorough examination made by the drop and hydraulic tests of the axles and wheels which have not yet been tested, and in the meantime all the Baldwin engines be withdrawn from passenger traffic and that they be employed upon goods traffic for a reasonable period, until it has been demonstrated, as far as it can be conclusively, that there is no liability of further accident by the breakage of the axles or the loosening of the tires." It is somewhat singular that the Commission should have come to that conclusion last night, in the face of the announcement that you have made to-day with regard to the intention of the Railway Commissioners.

9020. *Mr. Smith.*] Yes; I should like to explain that inasmuch as the engines were required to keep time, and to avert the inconvenience of much delay in the traffic, they were not taken off the line, but were merely fitted with other wheels and axles, and have now nearly all been restored to service. I believe that is right, Mr. Thow?

9021. *Mr. Thow.*] Yes; they are being replaced. I should like to explain. The last breakage of a tire occurred on the 12th instant. Immediately after that—on the 13th instant—a meeting was held between the Commissioners, and one or two of their officers, including myself, and it was at that meeting decided that in order to give the public a feeling of security, the whole of the tires under the tenders should be withdrawn from passenger traffic, and as soon as possible they should be replaced by tires which we had greater confidence in. As soon as those tires have been changed, or I should say as soon as the wheels and tires have been changed, and English made tires and wheels put under the tenders of the Baldwin engines, then the engines will be returned to traffic. At present they are not doing any work whatever, but they will be returned, and we shall make the change as quickly as possible, probably at the end of next week, or very soon afterwards. The whole of the passenger engines, and one or two of the Consolidation engines—certainly one of them—will then have had the whole of their tires changed, and they will consequently be employed in the running of trains again, whether upon goods or passenger trains I am not at present in a position to say.

9022. *President.*] But have any of the tires of the engine wheels given away? I do not know that any of the engine tires have broken; I have not heard of any breaking. One wheel came off—got loose on the axle—but that is the only defect that I am aware of in connection with the engine wheels.

9023. *Professor Warren.*] You have then a great many of the tires taken off these engines and lying at Redfern? No; we are taking off the original tire, wheels, and axles, and putting in new tires, new wheels, and new axles, so that we have not taken the tires off the wheels.

9024. No; there are twenty Consolidation and twelve passenger engines, that is thirty-two engines altogether, and there are ten wheels under each engine. I want to get at the number of tires? You have eight tires under each tender and ten tires under each engine—eighteen under each machine.

9025. Then there are 576 tires altogether to be considered? Yes.

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9026. I think the usual practice is to take one in fifty for the purposes of testing, but one in 100 would be sufficient for all practical purposes? One per cent. is the usual thing.
9027. That would practically be six tires then. Do you think that would be too many to test? I think you would be in a better position after you have tested the tire that is broken. That is the way that I would go about it.
9028. And those will be ready by Tuesday? Yes; I think so.
9029. What would you consider to be the tensile strength and the elongation and contraction of area that tire steel ought to stand? Well, perhaps I had better hand in my own specification for tires. This gives the drop test and the tensile strength:—"The tire selected for test is to be placed in a vertical position without being annealed, reheated, or otherwise manipulated for test purposes, on a solid, metal foundation of at least 10 tons, and subjected to repeated blows from a 1-ton tup falling from a height of 10, 15, 20, and 25 feet or upwards, and it must be flattened at least one-sixth of its diameter without showing any signs of fracture."
9030. *Mr. Smith.*] What do you put the tensile strain at? Forty-five to 52 tons.
9031. *Professor Warren* (to Mr. Smith).] Will you supply me with the tests of the Standard Company. It will be interesting to have a specification of the test to which the Standard Company subject their tires?
9032. *President.*] Mr. Thow tells us now, that the tires about which there is any doubt are not running, and will not be running again until they are tested?
9033. *Witness.*] There are a few running on goods trains, but not on passenger trains.
9034. *President.*] But the same danger does not exist in the case of goods trains? No; I do not think there need be any anxiety whatever about the tires when the engines are employed in goods traffic, because it is very unusual for that kind of accident to happen. The tire that broke so recently had become so loose on the wheels that it was pushed by the pressure of the rail inwards towards the axle. The flange of the tire was gradually pushed off the wheel on to the axle, and became a loose ring there.
9035. *Professor Warren.*] How many wheels do you know of that have worked loose on their axles? I cannot give you the exact number, but I should fancy a dozen or fifteen.
9036. As many as that; but what you are going to do with the tires will not affect that question? We are going to put under the engines new axles, new wheels, and new tires.
9037. *President.*] In point of fact, the whole undercarriage, if one might use that word in connection with locomotives, is to be new? Only so far as the wheels, tires, and axles are concerned. The carriage proper is available, and new wheels will be fitted to it.
9038. *Professor Warren.*] I do not think there is any necessity to ask Mr. Thow further questions. Will you let me have the test pieces as quickly as possible, Mr. Thow? Yes.
9039. *Mr. Brown* (to Mr. Hoyle.)] I do not know that it will be necessary for you to ask any questions as this evidence has been called by the Commission purely for their own information.
9040. *Mr. Hoyle.*] Very well. I do not think there is anything that I want to ask questions about from Mr. Thow.
9041. *Mr. Smith* (to Witness).] Why were you not able to get all the test pieces ready before this, Mr. Thow. Perhaps it would be as well for you, merely as a matter of explanation, to tell the Commission? On account of the steel being so hard. We have been working upon this particular tire, endeavouring to get the test pieces prepared, for the last three or four days, but the steel is so hard that the machines will not make any progress with it.
9042. *Mr. Smith.*] Thank you. I merely wanted to get the reason for the delay on record.
9043. *President.*] If you want to ask any questions, Mr. Hoyle, you had certainly better do so, because something may come out as the result of your examination of the witness that has not transpired from any questions that have been asked by us.
9044. *Mr. Hoyle.*] Well, I might just ask whether the tires on the tramway motors are not of English steel? Yes. I think they are made by Vickers.
9045. The tires of the tramway motors are of English make—Vickers, I believe? Yes; I believe they are.
9046. There was a tire broken at Bathurst since the one you referred to broke at Narrangaroo? Yes; that would be the one that I referred to as happening on the 12th.
9047. Did it come off or did it break? It broke in the yard after the engine came in with its train, because after the tire was broken the bolts holding the tire were found by the broken pieces. It was evidently broken by being subjected to too great a tension. Of course, when a tire is running it gets hot, and when it stops it contracts, and I have no doubt that that tire broke as the result of contraction consequent upon cooling, showing also that the material was exceedingly hard. I subjected one to a test this morning. On that occasion I took the tire off the opposite wheel to that which broke at Bowenfels, and tried it under the drop-test. It stood two blows, one of a ton at any rate falling 6 feet, and the other a ton weight falling 10 feet, and it broke under the 10-foot blow.
9048. *Mr. Brown.*] And what ought it stand? It ought not to break at all. It ought to bend, not break. Our test requires such tires as we are dealing with to be bent one-sixth of their original diameter, so that if a tire is 24 inches in diameter it would have to bend 4 inches before it was passed as a good tire. The first blow of 6 feet bent this tire a quarter of an inch, which was a very small amount indeed, and the second blow broke it. From appearances, I should say that it broke simply because it was very hard steel. I do not say that the steel was bad quality steel, but it was very hard steel.
9049. *President.*] It would not be good steel for tires? No; certainly not. You must have a certain elasticity and a certain softness in the tire. The test that we specify is as follows:—"The tire selected for test is to be placed in a vertical position, without being annealed, reheated, or otherwise manipulated for test purposes on a solid metal foundation of at least 10 tons, and subjected to repeated blows from a 1-ton tup, falling from a height of 10, 15, 20, and 25 feet, or upwards, and it must be flattened at least one-sixth of its diameter without showing any sign of fracture."
9050. *Mr. Smith.*] There are two other witnesses, but I do not think they can give any evidence upon this matter. They are the driver of the engine No. 448, which broke the tire, and the locomotive foreman of the district, but they cannot, for the purpose of this inquiry, give any evidence at all of value. The principal thing is to test the tires, and no evidence that persons who have merely looked at it could give would be of any use whatever, would it, Professor Warren?
9051. *Professor Warren.*] Not the slightest.

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9052. *Mr. Smith.*] The only evidence worth having now is the evidence as to how it worked. That shows that it was hard, and the evidence that Mr. Thow has given also shows that it is hard, because it broke with a blow of 1 ton falling 10 feet, and the evidence you require in addition to that is the result of the test.

9053. *Mr. Brown.*] The action of the Railway Commissioners in having taken the wheels, tires, and axles off the engines used in the passenger traffic has changed the aspect of the whole thing. As far as I am concerned, I do not want to ask any more questions.

9054. *Mr. Smith.*] Professor Warren has referred to the return of broken rails for which he asked. I wish to explain how it is he has not received that return before. The practice is to remove from the line all crippled rails, and to keep a return of them, but not to specify how many of them were actually broken. As a matter of fact, I had occasion to look up the returns in the case of the late Tarana accident, and I found them utterly valueless for my purpose, because they included all the crippled rails.

9055. *Professor Warren.*] Now I quite understand what you mean, Mr. Smith.

9056. *Mr. Smith.*] The returns will not be very useful to you even when complete, because the rails are constantly getting older, and are being replaced by other rails. A return of the kind you ask for dealing with the later rails would be reliable, but not returns as old as two years ago. I do not know whether the Commission has seen Mr. Price Williams' report.

9057. *Mr. Hoyle.*] Yes. It has been put in evidence.

9058. *Mr. Smith.*] Mr. Price Williams, in his report, dealt with the very subject, speaking of the Goulburn line, and another important matter was this, that after the reballasting and boxing up of the line, necessarily there was a large number of crippled rails to take out.

9059. *Professor Warren.*] Yes; I see that. The crippled rails would then be brought to light.

9060. *Mr. Smith.*] At all events, the information the Commissioners ask for will be furnished.

9061. *Professor Warren.*] If I have to give evidence on the test, and can get the test pieces on Tuesday, I shall be able to run over them by Wednesday.

9062. *Mr. Smith.*] What about the Glenlee bridge?

9063. *Professor Warren.*] I have written the report, and intend to put it in evidence, and I thought of treating the axles in the same way.

9064. *Mr. Smith.*] I suppose the report on the Glenlee Bridge is not ready yet?

9065. *Professor Warren.*] Yes; it is ready, but that is all. I do not know whether I can disclose it.

9066. *Mr. Smith.*] I dare say that I shall be able to let the Secretary have the other particulars on Monday.

APPENDIX.

APPENDIX.

Correspondence *re* Purchase of Baldwin Engines.

Twelve 10-Wheeled Passenger Engines, 1890.

In consequence of the period of time that would elapse before delivery could be given of engines ordered from England, the Commissioners, after consultations with their officers, found it absolutely necessary that immediate steps should be taken to secure engine power to prevent the traffic in the wool season of 1890–1891 from being seriously hampered. Information being to hand that in the United States, where the conditions in many respects resemble the conditions on our lines, a new departure in engines has been tried with most satisfactory results, the Commissioners decided to instruct Mr. D. H. Neale (Mechanical Engineer), Messrs. Loughry and Stanger (our Out-Door Locomotive Superintendents), and Mr. Howe (workshops manager), to report in the matter of the merits of the 10-wheeled American Express engines and 8-wheel consolidated good engines.

Their report and other correspondence, &c., in connection with the ordering of the Baldwin engines, are appended.

Purchase of American Passenger Engines—Joint Report of Messrs. Loughry, Stanger, Howe, and Neale.

To the Railway Commissioners,—

Gentlemen, 1 September, 1890.

After carefully considering this question as requested, and in view of the urgent necessity for more locomotives, we are unanimously of the opinion that it would be advisable to purchase not less than twelve powerful American passenger engines, provided that the builders can guarantee early delivery.

The Rogers engine for the Chesapeake and Ohio (as illustrated in the *Railroad Journal* for July, 1890) and the Baldwin Engine for the Baltimore and Ohio (described in the *Railroad Gazette*, 13 June, 1890), both appear suitable and sufficiently powerful for our requirements, viz., hauling a train of four express carriages fully loaded, and two 28-ton sleeping cars up 1 in 40 at 25 miles per hour, and capable of attaining an average speed (including stoppages) of 32 miles per hour between, say, Goulburn and Junee, where there are constant undulating gradients of 1 in 40.

The engines require, however, the following modifications:—

Our coal being good the grate area might be somewhat reduced, lessening the weight on each driving axle to not exceed 14¼ gross tons or 32,500 lb.

Our water being bad, the fire box should be copper and the tubes brass.

No bell is required.

Hand-brakes and Westinghouse automatic are wanted on all driving and on all tender wheels.

Screw reversing gear is wanted.

Trailing sand-pipes behind rear driving-wheels are wanted.

The sand-boxes would be preferred on or under the footplate instead of on top of boiler.

Bushes are preferred on coupling-rods.

The connecting-rod would be preferred with adjusting cotters and split brasses as usual, but without straps.

The capacity of the tender should not be less than 3,600 American gallons.

The gauge of road is 4 ft. 8½ in.

The extreme height of chimney should not exceed 13 ft. 6 in.

The extreme width of engine should not exceed 9 ft. 6 in., and if possible should not exceed 9 ft. 3 in.

Particular care should be taken that all bearings of importance should have good oil-cups or cellars, capable of holding a proper worsted syphon or other efficient means of feeding oil. All oil-cups should have proper covers, well secured, and dust proof, as our line is very dusty, and hot bearings very common.

The workmanship throughout should be extra good, especially in boiler-work and in the smith-work of rods and frames.

The engine and tender should be fitted with the European style of cover buffers and draw-hook. The latter should stand a breaking-strain of not less than 100,000 lb. The pilot or cow-catcher should be arranged to suit the use of these buffers.

An ample supply of spare parts should be included, so that delay may be avoided in replacing parts damaged by accident.

It is presumed that these engines referred to, being for American trunk lines, and used in hauling their most important trains over the most trying parts of their systems, that the details of the engines (not before us) are in every respect first-class, and representative of the best American practice. That being the case, it would be safe to adhere to the other details of the engine as made for the American railways.

Both Baldwin and Rogers are excellent makers. The former firm have made many of our present engines, and therefore know many of our requirements, their travelling partner, Dr. Williams, having lived here for some time. The latter firm also do an export business, and are thought by some to turn out better finished work.

These engines would be especially useful between Penrith and Bathurst and between Picton and Junee, and might also be used on Northern Line on the long inclines between Tamworth and Armidale.

They would save a great deal of assisting mileage, and twelve such engines would virtually do the work of over twenty of the best of our present passenger engines.

We, remain, &c.,

H. D. NEALE,

(For H. HOWE),

E. A. LOUGHRY,

G. H. STANGER,

and Self.

Sirs,

New South Wales Government Railways,
Secretary's Office, Sydney, 2 September, 1890.

Sirs,

The Commissioners would be glad if you would quote a price for twelve engines, delivered in steam in Sydney, exactly similar to those constructed by the Baldwin Locomotive Works for the Baltimore and Ohio Railroad Company, and described in the *Railroad Gazette* of 13th June, 1890, with the following modifications:—

Our coal being good, the grate area might be somewhat reduced, lessening the weight on each driving-axle to not exceed 14½ gross tons, or 32,500 lb.
Our water being bad, the fire-box should be copper and the tubes brass.
No bell is required.
Hand-brakes and Westinghouse automatic are wanted on all driving and on all tender-wheels.
Screw reversing gear is wanted.
Trailing sand-pipes behind rear driving-wheels are wanted.
The sand-boxes would be preferred on or under foot-plate instead of on top of boiler.
Bushes are preferred on coupling-rods. The connecting-rod would be preferred with adjusting cotters and split brasses as usual, but without straps.
The capacity of the tender should not be less than 3,600 American gallons.
The gauge of road is 4 feet 8½ inches.
The extreme height of chimney should not exceed 13 feet 6 inches.
The extreme width of engine should not exceed 9 feet 6 inches, and if possible should not exceed 9 feet 3 inches.
Particular care should be taken that all bearings of importance should have good oil-cups or cellars, capable of holding proper worsted syphon or other efficient means of feeding oil. All oil-cups should have proper covers, well secured and dustproof, as our line is very dusty and hot bearings very common.
The workmanship throughout should be extra good, especially in boiler-work and in the smith-work of rods and frames.
The engine and tender should be fitted with the European style of corner buffers and draw-hook. The latter should stand a breaking strain of not less than 100,000 lb. The pilot or cow-catcher should be arranged to suit the use of these buffers.
An ample supply of spare parts should be included, so that delay may be avoided in replacing parts damaged by accident.

The Commissioners would, of course, allow you any shop facilities for erecting the engines, but would require you to send out a man to erect them and put them in steam. Early delivery is very essential, and will be an important factor in placing the order.

I have, &c.,
H. McLACHLAN,
Secretary.

Messrs. Towns & Co., Sydney.

There is some little doubt whether we can allow you anything beyond 9 feet 3 inches for the extreme width of the engines, but the matter is being inquired into, and you could cable your principals definitely on this point before the letter could reach them. It would be well if you arranged a code on this point and enclosed it in the letter.

The Commissioner for Railways, Sydney,—

Gentlemen,

Sydney, 8 September, 1890.

Immediately after our Mr. Stokes' interview, of 2nd instant, with Mr. Eddy, we forwarded following cable to the Baldwin Company:—

"Reply by wire quickly price and earliest date delivery approximately, in steam, at Redfern, twelve "passengers, similar to Baltimore and Ohio ten-wheeled express, copper fire boxes, despatch urgent."

And have just received following reply:—

"$15,000 each, including steel boiler, copper fire-boxes, iron tubes, wheel, hand-brake on tender, Westing-"house automatic on drivers and tender, tender and truck wheels with steel tyres, buffers, English, "free on board steamer, Redfern extra. If screw reversing gear, $75; copper stay bolts, $540; "brass tubes, $1,650; shipment five months."

From this you will see that the offer is free on board steamer. The time mentioned "five months" will, we hope, be within your idea of despatch.

I have, &c.,
R. TOWNS & CO.

New South Wales Government Railways,
Secretary's Office, Sydney, 9 September, 1890.

Gentlemen,

Referring to your letter of yesterday's date, I am directed to say that the Railway Commissioners are disposed to consider favourably Messrs. Baldwin's offer to supply twelve 10-wheeled express passenger engines as contained in your letter, but I have to call your attention to the fact that in my letter of the 2nd instant, I asked that the engines might be modified and reduced in weight by lessening the grate area. This would decrease the cost somewhat, and the Commissioners presume that it would be allowed for by the Baldwin Company. I have also to call your attention to the extreme width of the engine. This is a very important point, and it is thought that the width of the engine could be kept down to the figure given without making any serious alteration. The offer of the Baldwin Company does not include a hand-brake on the engine, but I presume there would be no difficulty about this. The Commissioners would like to understand whether the price quoted includes the services of a man from the Baldwin Company to superintend the erection.

I presume you have forwarded a copy of my letter, of the 2nd instant, to the Baldwin Company, but should be glad to hear definitely from you upon this point, and on the other points raised in this letter, before the Commissioners decide definitely upon giving the order.

I need hardly remind you that early delivery is of extreme importance, and that this order, if given, will be a trial one based on the understanding that the engines will perform the heavy work needed on our very severe gradients, and can be delivered f. o. b., New York, early in February, and be in steam here in April, 1891.

The Commissioners would be glad if you could also quote an inclusive price, delivered in steam here, and subject to the conditions in my letter of the 2nd instant.

I have, &c.,
H. McLACHLAN,
Secretary.

Messrs. R. Towns & Co., Sydney.

The

The Commissioners for Railways, &c., Sydney,—

Gentlemen, Sydney, 9 September, 1890.

We have the honor to acknowledge the receipt of your favour of this date, and have despatched following cable to Baldwin Company:—

"Reduce weight to 32,500 lb. per axle by reducing grate area, allowance expected for reduced "weight. Screw hand-brake on tender and drivers, Westinghouse air on drivers and tender. Width "over all, 9 feet 3 inches. Offer includes an engineer. Must supervise erection and trial. Commis- "sioners desire alternative offer to deliver on shore at destination of vessel. Must have immediate "reply."

We shall communicate with you immediately reply is received.

We have, &c.,
R. TOWNS & CO.

The Commissioners for Railways, Sydney,—

Gentlemen, Sydney, 11th September, 1890.

The following cable has reached us from the Baldwin Locomotive Co.:—

"Are working freight, wait advices."

The Company is endeavouring to secure the best terms for freight in the Locos., and it is very probable that in the course of the day we may receive a cable giving full particulars.

We remain, &c.,
R. TOWNS & CO.

The Commissioners for Railways, &c., Sydney,—

Dear Sirs, Sydney, 16 September, 1890.

We have just received following cable from the Baldwin Company in reply to ours, of which you have copy:—

"Price will be 13,500 dollars, f.o.b., New York, in February. Screw hand-brake on tender and drivers. Westinghouse air on tender and drivers. An engineer must supervise erection trial. Expecting figures steamer delivery."

You will see that they have met your wishes as to modification in price.

We shall no doubt receive the alternative offer in a few days.

Yours, &c.,
R. TOWNS & CO.

Accept.—E.M.G.E., C.O., 17/9/90.

Re Locomotives.

The Commissioners for Railways, Sydney,—

Dear Sirs, Sydney, 20 September, 1890.

As requested by Mr. Neale, we yesterday cabled the Baldwin Company as follows:—

"Commissioners will accept. Proceed with work as per telegram. Letter will give further detail. Waiting alternative offer,"

and have just received following reply:—

"Order entered for twelve, try to increase order to eighteen or twenty, full steamer load. Contract to deliver f.o.b. at destination of vessel (*i.e.* Sydney), $14,800; contract to deliver on shore at Sydney, $15,000."

This cable is, we think, sufficiently explicit. We shall be glad to wait upon you if desired.

Yours, &c.,
R. TOWNS & CO.

Government Railways of New South Wales,

Gentlemen, Secretary's Office, Sydney, 22 September, 1890.

I am directed by the Railway Commissioners to inform you that they accept the offer of the Baldwin locomotive works, to supply twelve 10-wheeled express engines and tenders similar to those recently supplied to the Baltimore and Ohio Railway under a guarantee to haul a passenger train of seven cars up a grade of 116 feet per mile, and 17 miles long at a speed of 25 miles per hour.

The price of these engines modified as under to be $15,000 landed at wharf, Sydney, April, 1891, copper fire-boxes, screw hand brakes on both engine and tender, Westinghouse automatic on engine-drivers and on all tender wheels. Grate area to be reduced so that weight on each driving axle is about 32,500 lb. The Baldwin Company to send out a competent engineer to supervise the erection of these engines, but the Commissioners will supply labour, and shop, and crane accommodation.

All wheels, engine, and tender, to have steel-tires, boiler to be of steel, no bell is required.

Trailing, sand-boxes, and pipes behind rear drivers are wanted.

All sand-boxes on or under foot-plate instead of on top of boiler.

English style buffers, and draw-hook on front of engine and back of tender.

Bushes on coupling-rods. Connecting rod would be preferred with split brasses and cotters as usual, but without straps. The capacity of the tender should not be less than 3,600 American gallons.

A tender interchangeable with those supplied in 1885 for passenger Mogul engines preferred.

The gauge of road is 4 feet 8½ inches.

The extreme height of chimney from rails should not exceed 13 feet 6 inches.

The extreme width of engine should not exceed 9 feet 3 inches.

Particular care should be taken that all bearings of importance should have good oil-cups or cellars capable of holding proper worsted syphon or other efficient means of feeding oil. All oil-cups should have proper covers, well secured, and dust-proof, as our line is very dusty, and hot bearings very common.

The workmanship throughout should be extra good, especially in boiler-work, and in the smith-work of rods and frames.

An ample supply of spare parts should be included, so that delay may be avoided in replacing parts damaged by accident. A list of these parts will be forwarded to the Baldwin works by an early mail, for which a C.I.F. quotation is requested by cable.

The

The prices quoted for the following extras are agreed to:—Copper fire-box stays, 540 dollars; screw reversing-gear, 75 dollars; brass tubes, 1,650 dollars.

The Commissioners will forward by next mail blue prints of the following parts as a guide to the Baldwin works:—(1) drawhook; (2) Turton buffer; (3) cylinder flange; (4) connecting rod-end; (5) contour of tire.

The Baldwin works are requested to work exactly to the dimensions of the first and second blue prints. The third is intended as a means of flattening the cylinder-flange, so as to keep the engine within the limits of width without narrowing the centres of the cylinders, and, therefore, shortening the crank-pins.

The Baldwin works are, however, at liberty to obtain the same end by any other means they consider preferable.

The connecting rod end shows a form that works well here, and one of similar design would be preferred to the strap end usual in the United States. The blue print shows an end for an engine with 18 in. cylinders and 150 lb. boiler pressure, and the dimensions would require modification for the larger cylinders, and higher pressure of the present engine.

The contour of the tire should be worked to exactly for all tires with flanges.

The sharpest curve on our road is 528 feet radius (nearly 11 degrees). The steepest grade is 176 feet per mile.

It is proposed to haul with this engine trains weighing 152 gross tons (340,500 lb.) up long grades of 130 feet per mile. This would be the usual train, and we expect it to be hauled up this grade at about 22 miles per hour. Occasionally the train would have an additional car, making the load without engine and tender 176 tons or 394,240 lb. These loads include a full complement of passengers, mail, and baggage. The cars are all on trucks or bogies.

The regular load up the 176-feet grades would be 120 gross tons (269,000 lb.) without engine or tender. These grades are free from very sharp curves, and, therefore, in practice a greater proportionate load can be hauled than on the 130 feet grades. It is therefore expected that occasionally an extra car could be hauled, making the total weight of the train 144 gross tons (322,500 lb.) without engine or tender.

The Commissioners would be glad to have your guarantee that your engines can perform this work.

The engines should have brick arches in fire-box.

American headlights and pilots or cow-catchers have not been hitherto used on our lines, but the trial of the latter is contemplated, and therefore we should be glad to have iron-pilot or cow-catchers on the engine you furnish, but headlights will not be required.

The Commissions regret that their urgent need of these engines prevents a further examination of their design, but trust the Baldwin works will do their best to supply thoroughly efficient and serviceable engines, which shall do credit to the builders.

I have, &c.,
H. McLACHLAN,
Secretary.

Re Locomotives.

The Commissioners for Railways, Sydney,—

Dear Sirs, Sydney, 24 September, 1890.

We have the honour to acknowledge your letter of the 22nd instant. Immediately on receipt of same copy was forwarded to the Baldwin Company, we also cabled to them as follows:—

"Commissioners have accepted offer of twelve locomotives landed at Sydney 15,000 dollars."

The mail *via* San Francisco will leave Sydney on 1st October, and we shall be very pleased to forward any documents or particulars which you may desire to send.

Terms of payment will, we presume, be as usual, *i.e.*, 85 per cent., to be paid on shipment by credit on Agent-General, London, balance on delivery, Sydney.

We remain, &c.,
R. TOWNS & CO.

New South Wales Government Railways,

Sir, Secretary's Office, Sydney, 1 October, 1890.

I enclose you herewith six tracings referred to in my letter to Messrs. R. Towns & Co., of this city, of the 22nd ultimo, and in accordance therewith would wish you to work exactly to the tracings of the draw hook and contour of tires. I should be glad if you would follow as closely as possible the Turton buffer, which is our standard, and which is a well-known article of commerce, and which you doubtless can procure from Sheffield (England), where they are made in large quantities. The connecting rod ends we send you have been found to work very well in practice, and we would like something of the same style, but larger dimensions to suit the increased size of cylinder and higher pressure. Those we send you are used for engines with 18-inch cylinders and 140 lb. pressure, and have been running for a good many years.

The tracing showing the cylinder flange is a method which has suggested itself as a means to keep the extreme width of the engine within the 9 feet 3 inches limit; if, however, you can carry out a preferable plan to effect the same object without reducing the distance apart of the centres of the cylinders, and so shortening the crank pins, I shall be glad if you will do it.

You will, of course, readily understand that we wish good bearing surfaces, and would prefer flattening the flange in some way to shortening the crank pins.

I have, &c.,
H. McLACHLAN,
Secretary (*per* A.P.)

The Manager the Baldwin Locomotive Works,

Baldwin Locomotive Works, Burnham, Parry, Williams, & Co., Philadelphia, 4 November, 1890.

Mr. H. McLachlan, Secretary Government Railways, New South Wales, Sydney, Australia,—

Dear Sir,

We acknowledge receipt of your valued favour of October 1st, together with six drawings showing respectively the buffers, draw-bars, section of tires, styles of main rod ends, and method suggested of reducing the width over the cylinders of the twelve ten-wheel passenger locomotives which we are to build for your railways. We will be governed by your wishes as expressed by these drawings. We regret that it is necessary to restrict the width of the engine within a limit of 9 feet 3 inches, as we fear

it will considerably interfere with the convenience of the enginemen. We will, however, make the most desirable arrangement practicable. We note your desire to avoid shortening the crank-pins, and we will take care to provide ample bearing surfaces with efficient means of lubrication.

Yours, &c.,
BURNHAM, PARRY, WILLIAMS, & CO.
(A. S. Johnson).

Government Railways of New South Wales,
Secretary's Office, Sydney, 19 December, 1890.

Gentlemen,

Referring to your letter of the 4th ultimo respecting the restriction of the width of the engine within a limit of 9ft. 3in., I have the honor to confirm cablegram sent to you on the same subject, viz., that the 9ft. 3in. only refers to a height of 5ft. from the ground, above that the extreme width may be 9ft. 6in.

I have, &c.,
H. McLACHLAN,
Secretary.

Messrs. Burnham, Parry, Williams, and Co., Baldwin Locomotive Works, Philadelphia, U.S.A.

Baldwin Locomotive Works,
Burnham, Parry, Williams, and Co.,
Philadelphia, 10 October, 1890.

Messrs. R. Towns & Co., Sydney, New South Wales,—

Gentlemen,

Your two favours of September 2nd are to hand, together with the letter of same date from Mr. McLachlan, Secretary for Railways, communicating the Government's requirements for twelve ten-wheel passenger locomotives similar to those built by us for the Baltimore and Ohio Railroad Company, and mentioned on page 420 of the *Railroad Gazette* of June 13 last. Before receiving these letters we have been in communication with you by wire, having duly received your messages of September 2nd, 9th, 19th, 22nd, and two of 23rd, and replied to same September 5th, 15th and 19th, all as per copies enclosed.

We observe that your message of September 2nd was sent specifying delivery "in steam, Redfern," whilst it was delivered to us "in steamer Redfern." We presumed an offer was desired including delivery f.o.b. Sydney by steamer, the word in being used as less likely to be misunderstood or altered in transmission than f.o.b. We presume our reply of September 5th made this clear. Basing our estimates on Dr. Williams' experience with the engines shipped per "Niobe" in 1879, we are willing to undertake the erection under steam at 300 dollars each, exclusive of cost of shop space. The propositions cabled you for these engines have been as follows:—

Engines like those for the Baltimore and Ohio Railroad, page 420, *Railroad Gazette*, 13th June last, but with copper fire-box, iron flues, hand brake, and Westinghouse automatic brake on drivers and tender, steel-tired truck and tender wheels and spring buffers, f.o.b. steamer at Sydney, each 15,000 dollars, or if delivered f.o.b. in New York, 13,500 dollars; additional for screw reverse gear, each, 75 dollars; copper stay-belts, if required, 540 dollars; for discharging at Sydney, if required, 200 dollars; brass tubes, if required, 1,650 dollars; deduct if weight is reduced to 32,500 lb. per axle each engine, 200 dollars. Enclosed please find specification No. 5,173, which was prepared before receipt of your message limiting the weight. It describes engines of the same dimensions as those furnished the Baltimore and Ohio Railroad, but owing to the change of copper fire-box the weight is somewhat greater than the B. and O. engines.

The proposed reduction of weight per axle, will, we fear, cause disappointment in the performance of the engines. We judge the same work is expected of them as that stated in the *Railroad Gazette* as being performed by the Baltimore and Ohio engines. It should be fully understood that their efficiency will be correspondingly reduced. As we understand that the permanent way of the New South Wales railways is of a much more substantial character than the Baltimore and Ohio railroad, we see no reason why the engines built for the latter should not be adopted entire. We should be gratified if, on further consideration, this is decided upon.

Since receipt of Mr. McLachlan's letter we have gone carefully over the details mentioned. We submit specification No. 5,231, of locomotives of the stipulated weight and details of construction. In preparing this design we have endeavoured to provide the maximum heating surface and interchangeability where practicable with locomotives previously supplied by us to your railways. With reference to the suggestion of the reduction of the grate area, as the *Railroad Gazette* contains no detailed description of the Baltimore and Ohio engine, it occurs to us that the railway authorities have based their conclusions upon the drawings published in the same paper, of a 10-wheel passenger locomotive for the New York, Lake Erie, and Western Railroad. We explain that the latter was designed for burning anthracite coal, which requires a specially large and rather shallow grate. The furnace was therefore made 11 feet long, and placed over the frames, giving an inside width of nearly 43 inches. The B. and O. engine, on the contrary, was designed to burn the best quality of bituminous coal. It is generally considered that there is no coal produced in this country of better quality than that mined on the line of the B. and O. R. R. As bituminous coal requires greater depth for proper combustion, we dropped the fire-box between the frames, making it 33 inches wide, and shortening it from 11 feet to 10 feet. We were at first disposed to think it too small, but further service confirmed the correctness of the dimensions adopted. As we believe it to be just right, we should regret to change it, and have not therefore altered it in preparing the enclosed specification. We fear difficulty in steaming with less grate area.

To secure interchangeability with the Midelton Moguls, we propose driving-wheels 61 inches diameter. In consequence of this smaller diameter, and of the somewhat reduced weight, we propose making the cylinders 21 x 24, instead of 21 x 26 inches. This will give correct proportions of cylinder power to adhesion, with a boiler pressure of say 150 lb. The B. and O. engines carry 160 lb.

The B. and O. engines have their crown sheet supported by radial stay-bolts 1 inch diameter, with upset ends, tapped through crown sheet and roof of boiler, and riveted over at both ends, care being taken to arch the sheets so as to have the bolts as nearly as possible at right angles to both sheets, as shown in the engraving of the N. Y. L. E. and W. locomotive, page 414 of the *Railroad Gazette*, June

June 13th. We believe this to be the simplest and strongest construction, and adopt it without hesitation with steel fire-boxes. With fire-boxes of copper, which expands at about double the rate of steel, we have had some doubts about using the radial stay-bolts, but these doubts have been removed by experience with engines so constructed for the Dom Pedro Second railway of Brazil. Some fifteen years ago we built six Mogul locomotives for this road, with copper boxes and radial stays. We have repeatedly made inquiries as to the results which they have given. These are indicated by enclosed copy of a letter from Dr. Niemeyer, the locomotive superintendent. As there is a saving of about 4,000 lb. weight by this construction, as compared with crown bars, we propose adopting it. If this is not approved we will support the crown by crown bars without extra charge. The change if required will, however, involve either an increase of about 4,000 lb. to the weight of the engine, all of which will come on the driving-wheels, or a corresponding reduction in the dimensions and capacity of the boiler. A method of decreasing the increased weight some 2,000 to 2,500 lb., if crown bars are desired, is to substitute wrought-iron for cast-iron driving-wheel centres. Their extra cost is estimated 100 dollars each, or 600 dollars per engine. We append code words for use in this connection.

Our offer of steamer, delivery, and discharging, is based upon the following conditions, which, from consulting with Dr. Williams, we understand prevail at Sydney :—

1. Steamer can discharge from ship's side to railway pier, where cars can come alongside to receive cargo.
2. Sufficient water at discharging berth to lie safely in all times of tide.
3. Discharging berth to be immediately available on arrival of steamer, or demurrage to be at the expense of the Government.
4. Cars to be tendered to receive cargo as fast as it can be discharged through all the steamers' hatches at the same time, and switching to be done promptly as required without cost to the ship.

We understand the new railway piers at Redfern have been completed, and that there is now a draw in the Pyrmont Bridge large enough for the passage of the largest steamers.

The price of each engine as per enclosed specification No. 5,231 and as per our cable quotations recited above will be :—Cost of locomotive with steel boiler, copper fire-box, screw hand brake, and Westinghouse automatic brake on driving-wheels and tender, spring buffers, &c., but with iron tubes, iron stay-bolts, discharged at Sydney as above, each, 15,000 dollars; additional for screw reversing-gear, 75 dollars; brass tubes, 1,650 dollars; price as per specification No. 5,231, 16,725 dollars. This price does not include duplicate parts other than the usual tools and accessories enumerated in the specification. We quote separately for such a supply as we presume may be required, prices for same including delivery, and being subject to the other conditions of the locomotive contract.

Our offer includes the services of a competent engineer to supervise the erection of the locomotives; all necessary labour, tools, and supplies being furnished by the Government, but no charge being made by us for his time or expenses. He will run each engine one or more trips on trial, to make sure that it is in efficient working order before being finally put into regular service. We trust a width of 9 ft. 6 in. over all can be allowed us, as suggested, as even this we fear will be difficult to work to where the diameter of the boiler is so large and a screw reverse is to be provided. We will adopt this width unless we are otherwise directed. We presume the terms of payment will be the same as in previous contracts viz.: 85 per cent. cash by the Agent-General in London, on production of shipping documents, and the, remaining 15 per cent. by the Colonial Treasurer, on arrival of the vessel carrying the locomotives. We also confirm the sale of fifteen motors, at 5,000 dollars each, delivered over ships' side at Sydney, terms of payment and other conditions as above. We understand these motors are to be duplicates of those shipped per "Luxor," in 1885, singled gear, with hollow crankpins. All rods, main and connecting, to have solid ends and bronze bushings, and the axles to be made of steel. We await further instructions as to the axle-boxes as directed. As the figure which we accept for these motors is an exceptionally low one, in consequence of the large shipment we are enabled to make, and other special circumstances prevailing at this time, it should not be regarded as a precedent. Our prices for the same machines are likely to be higher in any new quotations.

We expect to have the entire twenty-seven machines ready for shipment by the end of February. We are now chartering a steamer to begin loading at that time.

We remain, &c.,
BURNHAM, PARRY, WILLIAMS, & CO.

Messrs. Burnham, Parry, Williams, & Co., Baldwin Locomotive Works, Philidelphia,—

Gentlemen, Rio de Janeiro, 10 November, 1888.

I just received to day, 7 a.m., your favour of 9th October, 1888. I thought I had replied about these questions when you asked me before, but I do it again now, and can give you assurance that the engines from No. 83 to 88, which had their fire-box crown sheets supported by radial stay-bolts screwed and riveted, work very satisfactorily, as well as our others in usual manner.

I remain, &c.,
CARLOS DE NIEMEYER.

---

17 November, 1890.

Having carefully considered the specifications 5,173 and 5,231, enclosed in a letter from the Baldwin Locomotive Works to Messrs. R. Towns and Co., of Sydney, dated 10th October, 1890, I consider the engine in specification No. 5,231 would meet our requirements, with the following modifications :—

1. Steam-ports made wider.
2. Boiler pressure increased from 150 to 160 lb. per square inch.
3. Cast-steel driving-wheels adopted instead of wrought-iron, as suggested by the makers; this will lighten the engine.
4. The width over cab 9ft. 6in. over all, width over cylinders 9ft. 3in. over all.
5. Radial stays adopted for fire-box, as suggested by the makers.
6. The boiler barrel preferred $\frac{5}{8}$ in. thick instead of $\frac{1}{2}$in.

According to the makers offer, the price delivered at Sydney would then be £3,557 each ($17,325) or at the rate of £54 15s. per ton, which I consider very moderate. I estimate the engines would be fully equal in power to those recently ordered in England, and would haul five loaded lavatory carriages and two 28-ton sleepers up a long gradient of 1 in 40 at 22 miles per hour.

I

I would advise the Baldwin Locomotive Works be cabled to this effect:—
"Approve 5,231, but steam-ports wider; require high-speed boiler pressure; 160 lb. plates nine-sixteenths cast steel drivers, width cab nine six, cylinders nine three."

D. H. NEALE.

I concur.—E. A. LOUGHEY.

Government Railways of New South Wales,
Secretary's Office, Sydney, 18 November, 1890.

Gentlemen,

Your letter of the 15th November, together with the communication received by you from the Baldwin Company, have been laid before the Commissioners, and after considering the whole question, they will be glad if you will cable to the Baldwin Company to the following effect:—

"Approve 5,231; high speed necessary; steam-ports should be wider; boiler pressure 160 lb.; plates ⅝; cast-steel drivers; width over cylinders must not exceed 9 ft. 3 in.; width of cab may be 9 ft. 6 in.

I have, &c.,
H. McLACHLAN,
Secretary.

Messrs. R. Towns and Co., Margaret-street.

The Commissioners for Railways, Sydney,—

Dear Sirs,

Sydney, 12 January, 1891

We have the honor to enclose herewith letter received per mail just arrived from the Baldwin Locomotive Company, dated 20th November, the contents of which will, we trust, be satisfactory to you.

Under date 28th November the Baldwin Company write in reference to locomotives:—

"As we have already advised you, we are in excellent position to furnish prompt deliveries of these locomotives. We are now completing a new erecting-shop, having trackage space for the *simultaneous erection of sixty-five locomotives*. This shop is fitted with two electric travelling cranes, each of 100 tons capacity. With their assistance we expect to be able to construct twenty-four locomotives per week, whilst the increased facilities, improved machinery, and superior light will enable us to improve the quality as well as the quantity of our work."

We are, &c.,
R. TOWNS & CO.

[*Enclosure.*]

Baldwin Locomotive Works (Burnham, Parry, Williams, & Co.),
Philadelphia, 20 November, 1890.

Messrs. R. Towns & Co., Sydney, New South Wales, Australia, *via* England.

Gentlemen,

We have received your message of the 18th instant, as follows:—

"Government adhere to dimensions as specification 5,231, but modified as follows:—High speed necessary; steam-ports should be wider; boiler pressure, 160 lb.; plates, nine-sixteenths. Government accepts offer to supply wrought iron driving-wheel centres of cast steel. Cylinders:—Government will allow only 9 feet 3 inches for extreme width of cylinders, but cab allowed 9 feet 6 inches."

We have accordingly entered the order of the Government for wrought iron driving-wheel centres at $100 each wheel, or $600 each engine additional. We note that we are allowed a width of 9 feet 3 inches over cylinders and 9 feet 6 inches over cab. We will thicken the steel plates of the boiler shell to nine-sixteenths inch, as desired, and will make no additional charge therefor; but we call attention to the fact that this involves adding about 1,500 lb. extra weight.

Our specification, No. 5,231, was in error in proposing a waggon-top boiler. This error was merely clerical, the number of tubes and other dimensions being correctly stated for the straight-top boiler intended. The restricted limit of width makes it important to adhere to the straight form of boiler, as does the desirability of reducing the weight on each driving axle. The waggon-top boiler would throw a considerably larger proportion of the weight of the engine on the driving-wheels. We therefore assume that the straight-top boiler will be acceptable, and we are proceeding with work accordingly. We send this letter *via* England, hoping it may reach you before the next mail *via* San Francisco.

Very truly yours,
BURNHAM, PARRY, WILLIAMS, & CO.,
(*Per* A. B. JOHNSON).

To the Secretary to the Railway Commissioners,—

Re Locomotives.

Dear Sir,

Sydney, 15 December, 1890.

The following is extract from letter received by us this day from the Baldwin Locomotive Company. We forward same for your information:—

"We have carefully considered the conditions of service for which these locomotives are intended, "viz., to haul 152 to 176 gross tons of cars and load at a speed of 22 miles per hour up long grades "of 186 feet per mile combined with severe curvature, and to haul up grades of 176 feet per mile with "easier curvature, loads of 120 to 144 gross tons. We note that the sharpest curves are of 528 feet "radius, but it is not stated that this is the radius of the curves in combination with the 130-feet "grade. Our calculations indicate that the engines will have sufficient tractive force to haul these "loads, but we prefer not to make a definite guarantee of the speed, as it is more or less dependent "upon conditions of which we are not fully informed, such as the quality of the coal, the wheel base "of the rolling-stock, condition of track, &c."

"In order to compare the stipulated performance with what the B. and O. engines are actually "performing in daily service, we telegraphed the general superintendent of motive power of that company "inquiring as to the latter, and have the following telegram in reply:—

"Have never had maximum load weight taken up 17-mile grade by 1300 class engines. It is about 240 "net tons at schedule speed of 22 miles per hour, exclusive of weight of engine and tender. The 240

"tons

"tons of 2000 lb. are equal to 214 tons of 2,240 lb. There is much curvature on the 117-feet grade, "and we are informed that in some places the actual grade considerably exceeds 117 feet per mile. "The latter is the theoretical grade as shown by the profiles. The B. and O. locomotives have a total "heating surface of 1,945 square feet, whilst the heating surface of the proposed locomotives, as per "specification No. 5,231, is 1,937 square feet. From these data you can readily judge as to the power "and speed of the new engines.

"We will supply iron pilots, and in all other respects not specially herein mentioned conform to "the details desired in the Commissioners' letter of 22nd September."

We have, &c.,
TOWNS & CO.

Government Railways of New South Wales,
Secretary's Office, Sydney, 29 December, 1890.

Gentlemen,

With reference to the twelve express passenger engines ordered in September last, kindly note these should be numbered from 446 to 457 in plain block letters 7 inches high, in gold, on the sides of the cab, on the front buffer beam, and the back of the tender tank.

I think it well to inform you that our 12° curves on which these engines will work are on 160-feet grades, and that the worst curves on the 130-feet grades are about 7°. All our passenger rolling stock is carried on trucks chiefly four-wheel, with about 5' 6" wheel base. All the axle-boxes are made for oil; all the wheels under the rolling stock are 36" diameter, on tread and steel tyres.

We calculate that to take a train up the 130-feet grades at 22 miles an hour will require about 50 indicated horse-power less than is wanted by the Baltimore and Ohio engine during its maximum work, and, as in our weight for the train (176 tons gross exclusive of engine and tender) we include an ample allowance for the weight of passenger and baggage, we anticipate that the engine will be fully equal to this performance. We should, however, be glad of your confirmation on this point.

I enclose herewith a list of duplicate parts required, with prices as supplied by Messrs. Towns & Co.

I have, &c.,
H. McLACHLAN,
Secretary.

The Baldwin Locomotive Company, Philadelphia, Pa., U.S.A.

The Commissioners for Railways, Sydney,—

Dear Sirs,

Sydney, 5 February, 1891.

At your request we cabled to the Baldwin Company to know what progress was being made with the locomotives on order, and we have just received the following: "First order locomotives in progress rapidly," which we trust will be satisfactory.

We have, &c.,
R. TOWNS & CO.

H. McLachlan, Esq., Secretary N.S.W. Railways, Sydney,—

Dear Sir,

Sydney, 19 March, 1891.

Our friends, Messrs. R. W. Cameron & Co., write from New York *re* the advisableness of shipping the engines to come forward in May per sailer instead of per steamer.

The Baldwin Company are under contract to ship these per steamer, and on 30th January advise that they were inviting tenders for a steamer to carry them. Tenders to be opened and contract closed on 2nd March.

Messrs. Cameron have discussed the question with Mr. Thow and have written to him on the matter. They consider that the engines can be delivered as advantageously by sailer as per steamer, and desire that instructions may be cabled to the Baldwin Co. to ship per R. W. Cameron's line of sailing vessels.

Will you be good enough to favour us with the Commissioners' views on the matter? If they decide per sailer, we would on behalf of Cameron bear the expense of a cable to them.

With reference to the twenty Consolidation freight locomotives, the Baldwin say that they fear the detail particulars will arrive too late, as the work is well advanced. Mr. Thow, however, saw the specifications. At the time of writing, it was the intention of the Baldwin Co. to send Mr. Rhodes to take charge of the erection of locomotives.

We have, &c.,
R. TOWNS & CO

New South Wales Government Railways, Secretary's Office,
Sydney, 21 March, 1891.

Gentlemen,

Referring to your letter of the 19th inst., intimating that Messrs. Cameron & Co. suggest that the twenty goods engines manufactured by the Baldwin Locomotive Co. for this Department may be shipped by their line of sailing vessels, I have the honor to inform you that the conditions of contract—providing for shipment by steamer—cannot be departed from, as speedy delivery of the engines is one of the principal objects aimed at by the Commissioners.

I have, &c.,
H. McLACHLAN,
Secretary.

Messrs. Towns & Co., Sydney.

H. McLachlan, Esq., Secretary N.S.W. Railways,—

Dear Sir,

Sydney, 24 March, 1891.

We have just received a cable from the Baldwin Company informing us that the s.s. "Henley," 2,243 tons register, classed A1 100, and built 1887, takes the first shipment of locomotives and motors, in place of the s.s. "Duonmurry" which has been disabled. The "Henley" is now loading.

We have, &c.,
R. TOWNS & CO.

The

The Commissioners for Railways, Sydney,—

Sydney, 22 April, 1891.

Dear Sirs,

We have to-day been advised by cablegram received from London, that the s.s. "Henley" left Philadelphia for Sydney, on 16th April. We judge this vessel should make the passage direct to Sydney in something under 60 days, and therefore will be due here about middle of June at latest.

We have, &c.

R. TOWNS & CO.

The Commissioners for Railways, New South Wales,—

Sydney, 21 May, 1891.

Dear Sirs,

We have just received advice from the Baldwin Locomotive Co. confirming the date of the "Henley's" departure on 16th April.

They also advise us that the "Strathdon" is to sail on 15th June.

We have, &c.,

R. TOWNS & CO.

Wm. Thow, Esq., Chief Mechanical Engineer, Government Railways, Eveleigh,—

Sydney, 18 July, 1891.

Dear Sir,

At the request of Mr. Rhodes we have pleasure in handing you extract from letter from the Baldwin Locomotive Company, dated 26th December last, referring to the engine wheels on the locomotives just landed ex s.s. "Henley."

Yours, &c.,

R. TOWNS & CO.

[*Enclosure.*]

Copy of extract of the Baldwin Co.'s letter, dated 26th December, 1890.

We note the letters received from Mr. McLachlan, Secretary for Railways, and are glad to learn that we are constructing the locomotives in accordance with his wishes. We have elected to furnish driving-wheel centres of wrought-iron, rather than cast-steel, for the reason that no cast-steel centres have as yet been manufactured or used in this country, and we feel some hesitation at undertaking anything at all experimental in locomotives to be sent so far. We are therefore forging the wheels of wrought-iron. We are of the opinion that it has important advantages over any method heretofore devised for doing the work, and as the finished wheel centres will be entirely free from internal strains, we consider them more reliable than any steel casting.

Copy of cable from R. Towns & Co., to Messrs. R. W. Cameron & Co., New York, 24 August, 1891.

"TELEGRAPH immediately for Government how many six-wheel coupled passenger and eight-wheel Consolidated goods the same as "Henley" "Strathdon" are running America, is result satisfactory generally? Consult Forney advise weight rail Baltimore."

Copy of cable from R. W. Cameron & Co., to Towns & Co., 27 August, 1891.

"EIGHT-WHEEL goods in general use with favourable results, weight better distributed and less destructive to rails; coupled six-wheel passenger same result as to rails over four-wheels, with increasing demand for heavy trains, especially on Western Roads, but not used on Pennsylvania or New York Central. They preferring dividing trains. Baltimore steel rails 67 pounds per yard."

Sydney, 9 September, 1891.

The Secretary, N. S. Wales, Government Railways.

Sir,

We have the honor to enclose invoice of the 10 per cent. due on the twelve locomotives *ex* "Henley," say £4,466 5s., and we shall be obliged by your passing the same as far as possible so that on receipt of the certificate from the engineer that they have run their 1,000 miles we may have no delay in getting voucher for the balance.

We understand that about eight of them have run more than the required mileage and the other four should do so within the next few days.

We shall be glad to receive your account for sundry alterations and repairs which will be dealt with at once.

Yours, &c.,

R. TOWNS & Co.,

Agents for Baldwin Loco. Co.

Sydney, 19 September, 1891.

Dear Sir,

Referring to our letter of 9th instant, we shall be glad to know if you have yet received return of the completion of mileage of the Baldwin Company's engines.

We have, &c.,

The Secretary, N.S. Wales Government Railways, Sydney. R. TOWNS & Co.

Government Railways of New South Wales,

Sydney, 24 September, 1891.

Gentlemen,

In reply to your letter of the 19th instant, relative to mileage performed by the Baldwin engines, I have to inform you that up to the present ten of the engines have completed the specified distance of 1,000 miles, and the remaining two will shortly complete the same distance.

I have, &c.,

H. McLACHLAN,

Secretary.

Messrs. R. Towns & Co., Sydney.

Sydney,

Sydney, 17 November, 1891.

The Secretary, New South Wales Government Railways,—

Dear Sir,

Referring to your personal request that I would inform you how the engines *ex* "Henley" differ from those of similar class in America, I have the honor to report as follows:—

The difference between them is that the former have copper fire boxes and brass tubes, screw-reversing gear, screw engine and tender brakes, and a few other minor details.

The pattern Baldwin Engine has only been departed from to keep the engines within a limit of weight, height, and width, and I do not consider any of these departures an element of weakness.

I have, &c.,

WR. RHODES.

Copy of cable despatched by R. Towns & Co. to R. W. Cameron & Co., 18 November, 1891.

"We have to report the failure of Baldwin Locomotive Company passenger bogie axles through fast running. Has been affirmed it is not usual run similar class engines high speed America. What is the practice in such cases Government must know by cable. Time-table speed long fast runs similar class-confidential. Do not refer to Baldwin Locomotive Company."

Copy of cable from New York, addressed to R. Towns & Co., 21 November, 1891.

"Have returns nine railroads using similar engines; distances 100 to 350 miles; weight of cars 185 tons; 380 tons Baltimore, Ohio, Michigan Central and Erie Roads; speed per time-table up to 50 miles per hour. Erie considers them best engines built; just placed order with Baldwins for forty-five; intend equipping their entire roads; opinion expressed; cause of failure, bogie axles improperly lubricated, or sand heating bearing journals."

Government Railways of New South Wales,
Secretary's Office, Sydney, 27 November, 1891.

Gentlemen,

We regret to have to inform you that several defects have been found in the passenger engines received from your firm. The most serious of these are in breakages of bogie and tender axles. Before writing to you on these matters we have had the material in the broken axles carefully tested by an independent engineer, and we send you copy of the results obtained from his investigation; these we have marked "A" and "B." You will also find enclosed copies of the results obtained by our Works Manager from the falling weight machine belonging to this Department. These papers unmistakeably disclose the unsatisfactory quality of the iron employed in the axles which have broken. You will notice from Professor Warren's results that the tensile strength in lbs. per square inch is below your printed standard tests for ordinary bar-iron, whereas the elongation is infinitely below the limit which you name as the lowest acceptable for ordinary bar-iron, and we assume that you will agree with us that the axles of locomotives should be of higher quality than ordinary bar-iron. At first we were uncertain as to whether the breakage of the axles was due to inferior material or to imperfect lubrication, which permitted the axle to get hot, and might have led to fracture, but the tests we have made fully show that it is the inferiority of the material which is the cause. Care has been taken to select the test-bars from those portions of the axle which could not have been affected by any heating of the journals, and there is no doubt that the results obtained from the drop tests are in themselves conclusive of bad iron. We shall replace the axles of the bogies with those which you have been asked by cablegram to send, and the tender axles will be replaced by others which we have in stock.

We shall renew the axle-boxes of the bogies so as to admit axles of larger diameter, as we consider larger axles are desirable for the work which the engines have to do, and in order to minimise the alteration in the bogie, we shall make new boxes of solid gun-metal, so as to suit the present horns. We shall, of course, debit you with the cost of these alterations, as they are entailed by the inferiority of the material in the axles supplied under the engines and tenders.

We may say that the coupled axles of the same engines do not appear to be of a quality of iron good enough for locomotive purposes, and it is not unlikely that we may conduct some tests for ascertaining their reliability or otherwise.

There are other matters of minor importance, which we shall expect to debit against your account, such as the draw-hooks sent out with these engines and tenders, as well as with the Consolidation engines.

You will remember that a tracing was sent to you showing the form of hook that we use, but we find that instead of adhering to the dimensions thereon shown, the hook is nearly ½in. less in depth, and instead of having the breaking strength specified in your specification, viz., of at least 100,000 lb., some that have been tested, we find, fracture at between 80,000 and 90,000 lb. They are too light for our work, and are breaking on the road. We are replacing them all with stronger hooks. I may add there is an amount of £7,400 due to you as retention money on engines, and we consider it necessary to retain this money pending adjustment of accounts.

While feeling compelled to write you in this way, we are sure the occurrence is due to one of those accidents which occur in the conduct of the best managed establishments, and that you value the reputation of your firm—on which we entirely relied—so highly as to be equally anxious with the Commissioners to fully remedy the defects which have been ascertained.

I have, &c.,

H. McLACHLAN,
Secretary.

Messrs. The Baldwin Locomotive Company, Philadelphia, U.S.A.

UNIVERSITY

UNIVERSITY OF SYDNEY.

Results of testing Iron cut from Baldwin Locomotive Axles.

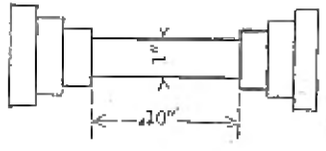
Test Number.	Description.	Original Dimensions.			Strain in Pounds.		Strain in Tons.	Limit of Elasticity.	Contracted Dimensions.			Contraction of area %.	Elongation, %.	Remarks.
		Breadth.	Thickness.	Area.	Total.	Per sq. inch.	Per sq. inch.		Breadth.	Thickness.	Area.			
A	Turned specimen length over which elongations were measured, 10 inches.	0·75	diam.	0·4,418	21,850	49,456	22·07	12·03	0·700	diam.	0·3,848	12·9	11	Very coarse crystalline fracture.
B		0·7,495	,,	0·4,412	17,150	43,404	19·36	14·53	0·749	,,	0·4,391	2·5	4	,, ,, with lamination.
C		0·7,495	,,	0·4,412	20,100	47,144	21·04	.....	0·620	,,	0·3,014	31·6	13	Dull fibrous fracture.

16 November, 1891.

W. H. WARREN, M. Inst. C.E.,
Professor of Engineering.

UNIVERSITY OF SYDNEY.

Results of testing Iron cut from Axles of Baldwin Locomotive Engines.

Test Number.	Description.	Original Dimensions.			Strain in Pounds.		Strain in Tons.	Limit of Elasticity.	Contracted Dimensions.			Contraction of area %.	Elongation, %.	Remarks.
		Breadth.	Thickness.	Area.	Total.	Per sq. inch.	Per sq. inch.		Breadth.	Thickness.	Area.			
A 1 452	 Turned in a lathe to 1 inch diameter. Elongations measured on the length marked 10".	1·00	Diameter	·7,854	34,850	44,372	19·8	11·55	·95	Diameter	·7,088	9·7	8·0	Very coarse crystalline fracture, with flaws.
A 2 452		,,	,,	·7,854	36,950	46,918	20·9	10·45	·897	,,	·6,319	19·5	14·2	Laminated and crystalline part of fracture appears burnt.
A 3 452		,,	,,	·7,854	37,100	47,236	21·0	11·30	·921	,,	·6,662	15·0	13·7	⅔ crystal; ⅓ burnt.
A 4 452		,,	,,	·7,854	37,500	47,746	21·3	10·24	·922	,,	·6,676	14·9	13·0	Coarse crystalline fracture.
A 5 456		,,	,,	·7,854	33,400	42,525	18·9	9·45	·916	,,	·6,734	14·2	9·0	½ crystal; ½ burnt.
A 6 456		,,	,,	·7,854	36,400	46,345	20·6	11·30	·965	,,	·7,314	6·8	5·7	Very coarse fracture.
A 7 456		,,	,,	·7,854	36,250	46,154	20·6	10· 3	·901	,,	·6,376	18·8	13·0	½ crystal; ½ burnt.
A 8 456		,,	,,	·7,854	29,250	37,242	16·6	11· 3	·970	,,	·7,390	5·9	4·0	¾ crystal; ¼ burnt.

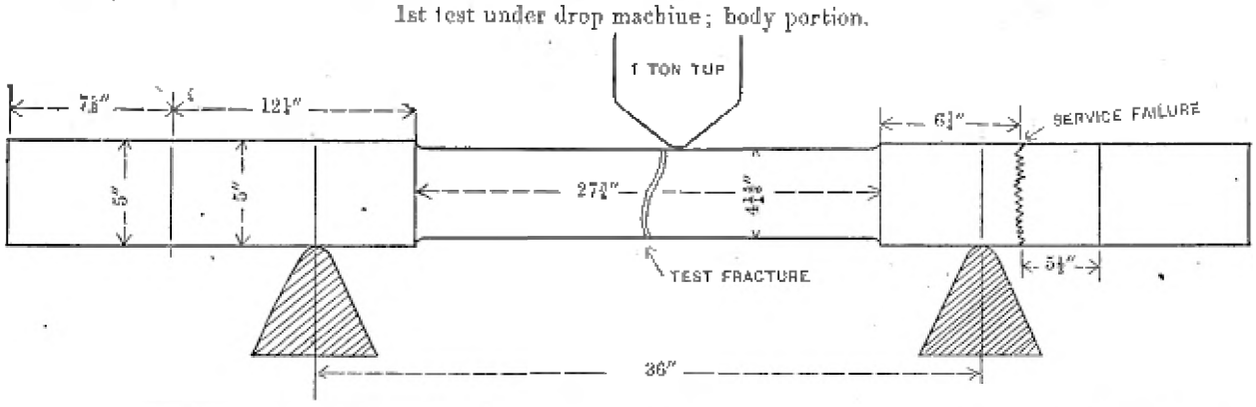
24 November, 1891.

W. H. WARREN,
Professor of Engineering.

Eveleigh Works, 30 October, 1891.

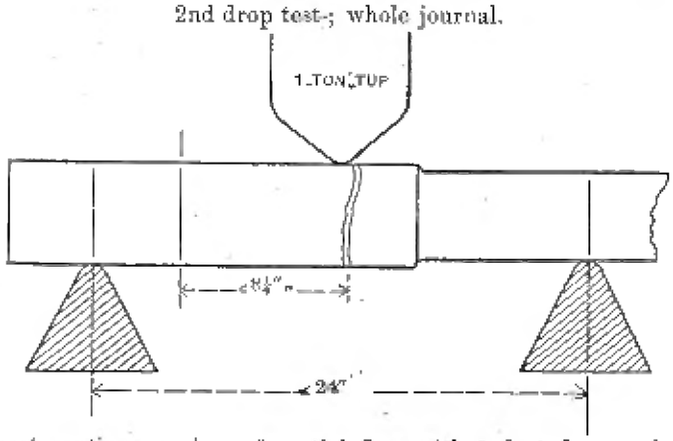
Test of engine bogie axle from No. 457 engine (new American passenger); failed in service at Redfern on 28th October, 1891.

1st test under drop machine; body portion.



Axle broke with first blow, 15 feet drop, and apparently with very slight resistance. Locality of fracture, about 1¼ inch to one side of blow centre; quality of fracture, mostly crystalline, but good colour. Considerably less drop would probably have fractured this axle.

2nd drop test-; whole journal.



Axle broke at an almost continuous circumferential flaw, with 1 foot drop, and apparently very slight resistance.

NOTE.—The flaw here mentioned had been considerably shaken and aggravated by the first or body test, and was found to penetrate from ¼ inch to ½ inch deep, or about ⅜ inch average all round, except at two spots, one about ⅝ inch long and the other about ¼ inch long; very slight signs of fibre and mostly crystalline, like previous fracture. J.C.

Eveleigh Works, 11 November, 1891.

Test of two samples of wrought-iron (hammer forged) machined from the broken bogie axle of an American passenger engine; Redfern accident. Samples, 1½ inch square turned down for 10 inches to 1 square inch sectional area.

1st Sample.		2nd Sample.	
Tons.	0·32" elongation in 10".	Tons.	0·32" elongation in 10".
6	Not tested.	5	Nil.
7	Sample failed at square end in one grip, the fracture showing crystalline and indications of pre-existing trans. flaw or shake right through, proved by water rust-marks. Material apparently rotton, and resembling case-hardened wrought-iron.	7	"
		8	"
		9	"
		10	"
		11	"
		12	2·32"
		13	4·32"
		14	7·32"
		15	10·32"
		16	12·32"
		17	15·32" signs of straining.
		18	20·32"b. "
		19	25·32"b.
		20	1-2·32"
		21	1-2·32"
		22	Axle broke without lifting beam.

Breaking strain, 22 tons.
Ult. elong. in 10", 1¼" = 12·5%.
Reduction of sec. area at fracture (1") = 21·5%.
Frac. about 50% fibrous, balance fine hard looking crystal. J.C.

New South Wales Government Railways,
Secretary's Office, Sydney, 30 November, 1891.

Gentlemen,

I have the honor to inform you that we have written to the Baldwin Company, intimating that the passenger engines recently supplied have developed defects, and that we should look to them to make good the same. We shall, therefore, claim in due course.

I have, &c.,
H. M'LACHLAN,
Secretary.

Messrs. R. Towns & Co., Sydney.

6—2 R

Gentlemen,

New South Wales Government Railways,
Secretary's Office, Sydney, 7 December, 1891.

Gentlemen,

Adverting to my letter of the 27th ultimo, I beg to say that a clerical error was made in the enclosed copy of Professor Warren's tests marked "B." You will notice in the eighth test (A 8–456) that the total strain in pounds is given as 37,242. This, however, should read 29,250. The strain per square inch is correct as given, namely, 37,242.

Will you kindly note?

I have, &c.,
H. McLACHLAN,
Secretary.

Messrs. Burnham, Barry, Williams, & Co.,
Baldwin Locomotive Works, Philadelphia, Pa., U.S.A.

The Secretary, N. S. Wales Government Railways,—

Dear Sir,

Sydney, 11 January, 1892.

As the freight engines ex "Strathdon" have now completed their mileage, we shall be obliged by your passing on the enclosed voucher for £7,427 1s. 8d. for payment, as we are anxious to remit same or a portion of it by the mail leaving on 25th instant.

We remain, &c.,
R. TOWNS & CO.

New South Wales Government Railways,
Secretary's Office, Sydney, 13 February, 1892.

Gentlemen,

With reference to previous letter relative to defects in locomotives supplied by the Baldwin Company, I am directed to inform you that, in order to be secure, we are having all engines examined as opportunity offers, and remedied any defects that may have been found in the axles. The cost of the work to date has been as follows:—

	£	s.	d.
Alterations to bogie axles, axle-boxes, and bogie-wheel bosses of engines...	555	11	1
Replacing condemned axles on tenders with new steel ones	59	16	3
	£615	7	4

This amount will be deducted from the retention money now in Commissioners' hands, and the Commissioners trust the Company will see the justice of this proposal.

I have, &c.,
H. McLACHLAN,
Secretary.

Messrs. Burnham, Parry, Williams, & Co.,
Baldwin Locomotive Works, Philadelphia, Pa., U.S.A.

Baldwin Locomotive Works (Burnham, Williams, & Co.),
Philadelphia, 15 February, 1892.

Mr. H. M'Lachlan, Secretary, Government Railways of New South Wales, Sydney, N.S.W.,—

Dear Sir,

Your two favours of November 27th and December 7th were duly received, but our reply has been unavoidably delayed. It is with the utmost regret that we have learned of the breakage of the engine and tender axles of the twelve ten-wheel passenger locomotives which were delivered last year per "Henley." The several reports sent us have received careful consideration.

In contracting for these locomotives the Commissioners desired to obtain engines adapted to unusually heavy service. In order to secure the utmost efficiency, and to obtain the best results of American experience, they left many of the details of the specification to our judgment. The material for the driving, truck, and tender axles was left optional, and as, in our opinion, the most satisfactory results are usually obtained from axles carefully forged from selected scrap-iron, we ordered such axles from the manufacturer whose product we had been largely using with good results, and whose reputation for excellent work is generally recognised. No test was prescribed by us, as it is well known that no test of scrap axles is conclusive. We relied upon their showing clean, uniform, well-worked material when turned up in the lathe. Steel axles, or axles forged from muck-bars, can be tested under a drop with reasonable probability of the uniformity of the axles not tested; but the fact that a hammered scrap axle withstands such test is no guarantee that others of similar manufacture and appearance will stand. Not only have we been buying axles in this way for many years, but, so far as we know, it is the general practice in buying hammered scrap axles, both by railroads and manufacturers. These axle forgings did turn up clean, smooth, and free from flaws, and we supposed them to be as good as the many hundreds which we had received from the same maker without one instance of failure coming to our knowledge. We go into the matter at this length to assure you that there was no conscious lack of diligence exercised by us to supply materials of the best quality, which your Government was entitled to receive from us.

We have already replaced the twenty-four engine truck-axles with others of steel. We offer to reimburse the Government the cost of replacing the forty-eight tender axles. We also offer to pay the reasonable cost of the labour involved in effecting the replacement.

We are of the opinion that the original dimensions of the truck and tender axles and journal bearings are ample for the fast speed for which the locomotives are suitable, provided the quality of the material is good and the bearings are well lubricated. These dimensions are here considered the best for such engines, and have been widely adopted for similar service with good results. We should have much hesitation in increasing the diameter of the bearings with such small wheels, owing to the higher rotative friction. It should be borne in mind that the smaller truck wheels necessary in engines of this type require closer attention to the lubrication than the larger wheels usual in English locomotives. If, however, larger bearings are adopted, we urge the desirability of making them 5½ inches rather than 6 inches diameter. In view of the above, we think the cost of new boxes, whether of iron or solid gun metal, should not be charged to us, as we are certain that the replacing of the axles will prove a sufficient remedy.

We remark that the driving axles were not made by the same party as the truck and tender axles. We therefore trust they will, upon investigation, prove satisfactory.

There

There appears to have been a clerical error in transmitting to our shopmen the dimensions of draw-hooks shown by your drawings. We authorise you to debit our account the cost of replacing them with stronger hooks.

With these modifications we trust the engines will speedily show the special adaptation, which we believe they possess, to the difficult service for which they were ordered. That similar engines are doing such work on our American railways is shown by the recent tests of our ten-wheel locomotives on the Baltimore and Ohio Railroad. Under separate cover we mail you three copies of the report of these tests. We trust these tests will, in a measure, justify the wisdom of the Commissioners in the purchase of these locomotives, and that after the defective axles are replaced, the performance of the locomotives will be such as to merit their entire approval.

Very truly yours,
BURNHAM, WILLIAMS, & CO.

Baldwin Locomotive Works, Philadelphia, 24 March, 1892.

Mr. H. M'Lachlan, Secretary, Government Railways of New South Wales, Sydney, N.S.W.,—

Dear Sir,

Your favour of the 13th ultimo is to hand this day informing us of the expenses, amounting to £615 7s. 4d., for alterations to bogie axles, axle-boxes, wheel-bosses, and replacing condemned axles on tenders of the locomotives last supplied by us to your railways. In reply, we beg to say that we have given our agents, Messrs. R. Towns & Co., full authority to make such settlement of this claim as may appear to you and them to be equitable. We have no doubt they will adjust the matter to your satisfaction.

Very truly yours,
BURNHAM, WILLIAMS, & CO.

Dear Sirs,

Sydney, 4 March, 1892.

In accordance with the promise made at the interview on the 26th ultimo, I beg to enclose herewith for your information a copy of the notes of the proceedings.

Yours faithfully,
H. McLACHLAN,
Secretary.

Messrs. R. Towns & Co., Sydney,

Dear Sir,

Sydney, 7 March, 1892.

We have the honor to acknowledge receipt of your letter of 4th instant, with copy of notes of the proceedings of interview on 26th ultimo.

Mr. Stokes has perused the same, and would wish that what Mr. Rhodes said in reference to the arrangement proposed by Mr. Thow for supporting the reversing gear be inserted, viz.:—"That as this would be an alteration of design he could not express an opinion, and desired that it should be referred to the Baldwin Company."

Mr. Thow then promised to furnish full particulars of his proposed alterations, to be sent to the Baldwin Company, and he has since done so.

Mr. Stokes and Mr. Rhodes understood that, save this matter, the settlement arrived at was a final one, and that should anything crop up in connection with the engines which, in the opinion of the Commissioners, ought to be borne by the Baldwin Company, the same would be referred to them, Mr. Rhodes having to leave for New Zealand, *en route* to America.

We have, &c.,
R. TOWNS & CO.

H. McLachlan, Esq., Secretary, New South Wales Railways.

Dear Sirs,

New South Wales Government Railways, Sydney, 9 March, 1892.

I have to acknowledge your letter of the 7th instant, respecting copy of notes of interview, and have to say that the Commissioners have no objection to the insertion of the clause quoted by you, and attached you will find slip embodying the same, which will replace the paragraph at bottom of page 2 of the notes.

Yours, &c.,
H. McLACHLAN,
Secretary.

Messrs. R. Towns & Co., Sydney.

Office of the Railway Commissioners of New South Wales,
Sydney, 26 February, 1892.

NOTES of interview relative to Baldwin Locomotives.

Present:

The RAILWAY COMMISSIONERS.
Mr. THOW.
Mr. RHODES (BALDWIN Co.)
Mr. STOKES (TOWNS & Co.)

A STATEMENT showing the whole of the expenditure which has been incurred in connection with the 32 engines purchased from the Baldwin Co., by the Railway Commissioners, since they have commenced working, was submitted by Mr. Thow, and the following items were agreed as being properly chargeable to the Baldwin Co., and it was understood that the amounts not already deducted from the retention money should be deducted.

On account of 12 Passenger engines:—	£	s.	d.
Repairs to portion of brake gear of engine No. 448	1	6	0
Fitting reversing screw catches to 12 engines	43	19	7
Fitting Westinghouse brake (finishing incomplete brake fitting)	6	2	11
Carrying out finishing work on buffers, &c.	38	2	11
Repairing or replacing damaged parts	123	2	5
Strengthening all reversing lever pins	5	4	0
Cost of fitting new bogie brass and turning up tires of bogie wheels of engine 451	8	15	6
(Has been deducted)	£226	13	4

On

	£	s.	d.
On account of 12 engines, yet to be charged :—			
Replacing draw-hooks on 12 engines and tenders	22	4	6
Making 12 wrenches, 1 for each engine	0	14	7
* One moiety of cost of testing axles	16	19	3
On account of 20 Consolidation engines :—			
Fixing catches to reversing screws, putting new fulcrum pins in reversing screw bracket	62	8	0
Fitting buffers on engines and tenders	10	16	0
Replacing draw-hooks on tenders and engines	34	10	0
Finishing incompleted brake fittings	16	1	8
Making 40 bars 3 ft. 6in. long to fit sockets of screwjacks (jack-bars)	5	3	3
Finishing work not completed	23	10	4
The following alterations are not yet completed and a further debit will be made for the work still to be done, as well as whatever is necessary to complete :—			
Alteration to bogie axle, axle-box, and bogie wheel-boss (changing axles, &c.) (12 engines)	626	2	4
Alterations to axle-box brass and shoe (32 tenders)	21	14	4
Replacing condemned axles	168	14	2
Total to be deducted to date	£1,008	18	5
Amount previously deducted, as above	226	13	4
Total amount chargeable to Baldwin Co. to date	£1,235	11	9
On account of 12 Passenger engines :—			
Testing 1 broken axle of engine No. 457	15	16	0
Breaking 2 axles and preparing pieces for University test (6 axles tested altogether)	18	2	6
	£33	18	6

The Commissioners decided that the following items, in addition to £16 19s. 3d., being one moiety of cost of testing axles before referred to, should be paid for by the Department, as they were details necessary for the working of the Department, and quite outside the work required from engine builders, unless specially ordered, and a special allowance made for the carrying out of the work.

Complete or Incomplete.	Particulars of Work.	Engines dealt with.	Cost. £	s.	d.
Complete	Fitting lamps and irons, also coal boards	20 Consolidated	34	10	10
Incomplete	Fitting 1 additional water gauge, and carrying main air-pipe to front	"	81	6	5
Complete	Repairing 1 tender bogie hook, 2 diagonal stays, and arm of tender brake shaft	"	27	14	4
"	Fitting hand-rails to tenders, and making 20 wrenches for oil-cups	"	38	2	3
"	Fixing 2 foot-boards on each engine	"	22	14	2
Incomplete	Alterations to bolt in large end of connecting rods	"	1	10	6
Complete	Fixing hand-rails in front of tenders	12 Passenger	32	1	3
"	Fixing coal boards to tender	"	4	14	10
Incomplete	Shield-plate for fire door-rings	32 Engines	10	1	2
"	Making frames for pothes in cabs	"	2	10	5
Complete	Making and fitting strainers in man-holes of tanks	"	32	11	9
Incomplete	Alterations to brake shoes	20 Consolidated	2	18	11
"	Alterations to brake shoes	12 Passenger	3	9	5
"	Alterations to reversing gear	32 Engines	0	5	4
"	Alterations to tender brake shoes	"	.....		

The arrangement for supporting the reversing screws was discussed, as in the opinion of Mr. Thow the strengthening was absolutely necessary, but at the present moment the details of the arrangement had not been fully worked out.

It was intimated that the Commissioners considered the Baldwin Company should bear the cost of this, and Mr. Rhodes said that as this would be an alteration of design he could not express an opinion, and desired that it should be referred to the Baldwin Company.

It was intimated that should any further weaknesses develop themselves which, in the opinion of the Commissioners, were defects in material, or should have been provided against by the Baldwin Company, the cost of making such alteration would be deducted from the retention money.

With regard to the axles which were sent by the Baldwin Company to replace the defective axles in the bogies of the engines, it was understood that no debit whatever should be made against the Railway Commissioners on account of these axles.

E.M.G.E.
W.M.F.
C.O.

Government Railways of New South Wales, Secretary's Office, Sydney, 22 September, 1890.

Dear Sir,

I send you copy of further letter to Towns & Co. (for the Baldwin Co. of America), ordering twelve locomotives from that firm, to be supplied in five months.

The letters already sent fully explain the steps we have taken, and you will notice in the present communication our requirements are fully stated. No provision, however, has been made with regard to the inspection of the engines; but, if you deem it desirable that the engines should be inspected, the Commissioners will be glad if you will arrange for the appointment of a suitable man, and pay whatever remuneration you may deem right for such services. No doubt leading local engineers would be glad to advise you as to the merits of suitable gentlemen, and you could arrange with Messrs. R. W. Cameron & Co. as to payment of an inspecting engineer's salary.

Yours faithfully,

H. McLACHLAN,
Secretary.

W. Thow, Esq., care Agent-General N.S.W., Westminster Chambers, London.

Sir,

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*The other moiety will be charged to the Railway Department, Messrs. Stokes and Rhodes having urged the Commissioners on the grounds that the tests were unusually severe, and consequently unusually expensive.

Sir, Chief Mechanical Engineer's Office, Eveleigh, Sydney, 8 December, 1891.

With reference to the subject of our conversation to-day, and your instruction of September 22, 1890, containing the following:—"If you deem it desirable that the engines should be inspected, the Commissioners will be glad if you will arrange for the appointment of a suitable man, and pay whatever remuneration you may deem right for such services,"—

I beg to inform you that, on reaching the States, I visited the Baldwin works on the 20th December following, and after I had ascertained the nature of the contract entered into, as well as the other state of the work, I consulted our agents in New York, and other gentlemen, whose knowledge of rolling stock contracts in America enabled them to advise me with regard to the question which your letter left to my judgment.

It was pointed out to me that the manufacture of locomotives under inspection was only usual when the purchaser furnished his own specifications and designs, and that although an inspector might still be appointed he could not have any useful status under a contract then three months old, which did not recognise his authority, and that any action he could take must of necessity, under such circumstances, be very feeble.

Our agents pointed out that the name of the Baldwin firm was a guarantee that the quality of the work they would send us would be equal to the high class productions which had made their reputation.

From what I heard and saw, I concluded that, except in the event of fraud, which there was no reason to apprehend, any inspector appointed by me would be more likely to relieve the makers of some of the responsibility and onus, which, under the contract, rested upon them, than to assist the Commissioners, and also that the cost of the engines would be increased without securing an equivalent benefit.

W. THOW,
Secretary.

Twenty Goods Engines.

H. M'Lachlan, Esq., Secretary, Government Railways, N.S.W.,—

Re Supply of Locomotives.

Dear Sir, Sydney, 15 December, 1890.

Referring to our letter of 15th November, on this subject, we have the honor to forward herewith three specifications of consolidation locomotives, Engine No. 5,291, class 10. 38 E, Engine No. 5,292, class 10. 36 E. Engine No. 5,293, class 10. 34 E., which have been forwarded by the Baldwin Locomotive Co., Philadelphia, for the information of the Commissioners.

In reference thereto, the Baldwin Co. write as follows:—"On the 23rd October we received your telegram informing us that the Commissioners for Railways require within the coming year about eighty locomotives, and if we can furnish engines sufficiently powerful for speedy delivery the order will probably be given us. We replied on the same date inquiring of what weight and power the locomotives are needed, as we have built engines weighing upwards of 150,000 lb., exclusive of the tender, and are constructing for the Grand Trunk Railway Decapad tank locomotives weighing in working order about 180,000 lb. or 81 gross tons. We offer to construct and ship the entire eighty engines within six months after receipt of order. We have not yet received your reply to this message, and we presume the delay is due to the difficulty in determining the exact specification upon which to invite our estimate. In order to assist in coming to a decision we enclose specifications of three sizes of consolidation freight locomotives."

Specification 5,291 describes the engine above referred to as weighing in working order upwards of 150,000 lb., with cylinders 22 and 28, boilers, 72 inch diameter, and with a wheel-box no greater than the consolidation locomotives at present in service on your lines. The weight per axle is about 34,000 lb., or somewhat more than the limit fixed for the 10-wheel passenger locomotives ordered. It may be, however, that this excess will not be objectionable, as these locomotives will be used in freight service at a much lower speed than the passenger engines, and therefore the effect of impact upon track and gradients will be much reduced. We enclose a statement of the performance of engines of this class on the Northern Pacific Railroad, on grades of 116 feet per mile, in combination with curves of 573 feet radius. We hereby propose and agree to construct locomotives to this specification for the sum of 19,250 dollars each, delivered on shore at Sydney by steamer.

Specification 5,292 describes lighter engines, with cylinders 21 and 26, and a weight per axle of 30,500 lb., or 2,000 lb. less than the limit fixed for the 10-wheel engines. We hereby propose and agree to construct locomotives to the specification for the sum of 17,750 dollars each, delivered as above.

Specification 5,293 describes engine still lighter, the weight per axle being about 26,400 lb. This is the size of freight engines most generally used in this country, being the standard freight engine of the Pennsylvania Railroad, the New York, Lake Erie and Western, the Boston and Albany, the Richmond and Danville, the Louisville and Nashville, the East Tennessee, Virginia, and Georgia, and many other lines. We offer to construct locomotives to this specification for the sum of 16,750 dollars each, delivered as above.

The wheel-base proposed for the three classes of engines is substantially the same. In all three specifications we have included copper fire-boxes, brass tubes, copper dry pipes, copper stay-bolts at the sides of the fire-box, and crown sheets supported either by crown bars or by iron radial stay-bolts. Steel-tired wheels throughout; Westinghouse automatic brake applied to all the driving and tender wheels; screw hand-brake on driving and tender wheels; buffers, draw-hooks and coupling-rods in accordance with the drawings sent us, and all details throughout in accordance with the most approved American practice, as modified by our correspondence respecting the 10-wheeled engines.

Should the Government decide to place the order with us we offer to construct at least twenty locomotives within five months after receipt of order, and to ship the balance in lots of twenty or more, if steamers can be obtained to carry them, at intervals of not more than monthly thereafter. We append memorandum of code words to be used in connection with these specifications.

Errata.—We desire to correct the following clerical error which we have discovered in specification 5,261. Fire-box to be of copper $\frac{1}{2}$ inch thick instead of $\frac{5}{8}$ inch thick.

We have, &c.,
R. TOWNS & CO.

The

The Locomotive Engineer,—

Referring to the subject discussed with the Chairman yesterday, viz., that of providing more powerful engines for goods and live stock traffic over the heavy portion of the line, we have considered the matter, and are of opinion that there is much to be gained in that direction. With heavy gradients on single lines, engines that will take heavy loads at a fair speed, thus reducing the number of trains passing over the line, and shortening the time occupied between stations, is an important consideration. As an instance, we may state that to move 100 trucks of cattle from Dubbo to Penrith seven trains are now run, the speed of which (including all stoppages) averages 13½ miles an hour. Engines are required that will take 33 per cent. greater load, and have a margin of power for increasing the speed to 17 miles an hour. Moreover as there will be shortly on the lines engines capable of hauling forty waggons of cattle from Bourke to Dubbo, assisted possibly for the last 9 miles, to be able to divide such trains into two at Dubbo will greatly facilitate the work. With our existing engines a train of forty trucks of cattle would have to be formed into three trains at Dubbo.

The same advantages, though possibly to a lesser extent, are to be gained on the Northern and Southern systems.

The engine described, viz., having cylinders, 21 inch diameter and 26 inch stroke will, we are satisfied, give such a service, but we would recommend that instead of 50-inch wheels they should be 51 inch, so that the wear of tyres will not bring the wheel diameter below 4 feet.

We would also recommend that the engines and tenders be fitted with the most powerful hand and power brakes, and that the details be specified in accordance with our present practice.

Twelve of these engines will be required to meet the Western live stock traffic alone between Dubbo and Penrith.

D. H. NEALE.
E. A. LOUGHRY.
C. H. STANGER.

20/12/90.

The Secretary—W. Thow (*per* C.A.N.).

Order twelve engines of No. 5,292 type, all details possible to be made interchangeable with the express passenger engines; ordered wheel to be 51-inch diameter. Pressure to be 160 lb. Breaks to be so arranged that only two men required. Early delivery most important.—E.M.G.E., W.M.F., C.O., 22/12/90.

New South Wales Government Railways,
Secretary's Office, Sydney, 22 December, 1891.

Gentlemen,

I am directed by the Railway Commissioners to request you to order from the Baldwin Locomotive Works twelve engines of the specification No. 5,292 type, all details possible to be made interchangeable with the express passenger engines ordered; wheel to be 51 inch diameter; pressure to be 160 lb. Brake to be so arranged that only two men required. Early delivery most important.

Further particulars will follow.

I have, &c.,
H. M'LACHLAN,
Secretary.

Messrs. R. Towns & Co., Sydney.

The Commissioners for Railways, New South Wales,—

ydney, 23 December, 1890.

Dear Sirs,

We have the honor to acknowledge receipt of your favor of 22nd instant, ordering twelve engines of the specification No. 5,292 type, as sent by the Baldwin Locomotive Works. As requested by you we wired this order and have pleasure to hand you herewith copy of cable sent.

We have, &c.,
R. TOWNS & Co.

Copy of cable sent Baldwin Locomotive Works, 23rd December, 1890, at request of Commissioners for Railways.

Commissioners for Railways, New South Wales.—Order twelve locomotives as per specification No. 5,292; all possible details interchangeable with previous orders; make driving-wheels diameter 51; pressure, 160 lb.; brakes so arranged that only two men required; despatch urgent, sending details.

The Commissioners for Railways, Sydney,

Sydney 29 December, 1890.

Dear Sirs,

In reply to cable to Baldwin Company, conveying your order for twelve locomotives, we have just received following reply:—

"Order entered, shipment May; can construct twenty to twenty-five within same time; this would permit best arrangements possible for shipping. We would advise trial compound system on two or more, 750 dollars each extra."

Should you decide to have twenty to twenty-five, shipped and to try the compound system, please be good enough to instruct us accordingly.

We have, &c.,
R. TOWNS & CO.

Increase the order to twenty, compound two; care to be taken not to exceed outside measurements already given. Inform Thow.—E.M.G.E., W.M.F., 29 12/90.

Sydney, 29 December, 1890.

Dear Sirs,

We are in receipt of your memo. to increase order for locomotives to twenty, two to be compounded, and care to be taken not to exceed outside measurements already given. We immediately, on receiving this, sent the following cable to the Baldwin Company:—

"Commissioners for Railways, New South Wales. Increase order to twenty; compound two, not increasing outside measurements. Inform Thow."

Yours, &c.,
R. TOWNS & CO.

The Commissioners for Railways, Sydney.

New South Wales Government Railways,
Secretary's Office, Sydney, 8 January, 1891.

Gentlemen,

I beg to confirm cablegram forwarded you through Messrs. R. Towns & Co. on the 29th ultimo, increasing the order for twelve goods engines, No. 5,292 specification, to twenty, two of the engines to be compounded, and care to be taken that the outside dimensions do not exceed the measurements already given, and asking that Mr. Thow might be advised.

I have, &c.,
H. M'LACHLAN,
Secretary.

The Baldwin Locomotive Company, Philadelphia, Pa., U.S.A.

(Form 186.)

BALDWIN LOCOMOTIVE WORKS,

BURNHAM, PARRY, WILLIAMS, & CO.,

PHILADELPHIA, PA., U.S.A.

No. 5433. CLASS 10-36 D. 9 to 20.

SPECIFICATION

OF A

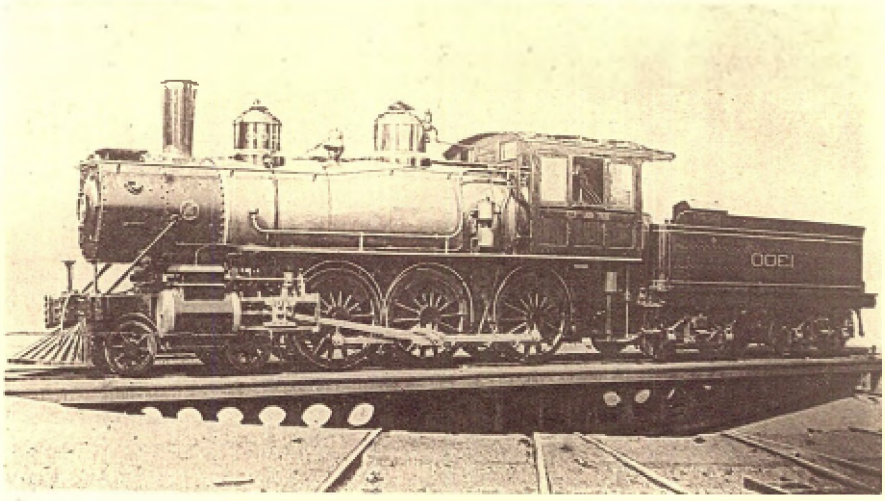
LOCOMOTIVE ENGINE

FOR THE

GOVERNMENT OF NEW SOUTH WALES. JAN. 17, 1891.

GENERAL DESCRIPTION.

General design, illustrated by attached photograph, of Engine 1300, with straight boiler. Design.



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DIMENSIONS.

Specification of Passenger Engines.

BALDWIN LOCOMOTIVE WORKS, BURNHAM, PARRY, WILLIAMS, AND CO., PHILADELPHIA, PA., U.S.A.

(No. 5433.) (Class 10–36, D 9 to 20.)

SPECIFICATION of a locomotive engine for the Government of New South Wales, Jan. 17, 1891.

General Description.

General design illustrated by attached photograph of engine 1300, with straight boiler. Design.

Dimensions.

Gauge of road, 4 feet 8½ inches in the clear between the rails. Gauge.

Extreme width not to exceed 9 feet 6 inches; across-cab, 9 feet 3 inches across cylinders; extreme height not to exceed 13 feet 6 inches; sharpest curve, 528 feet radius; maximum grade, 176 feet per mile. Limitations.

Diameter of cylinders, 21 inches; length of stroke, 24 inches. Cylinders.

Weight of engine, empty, about 112,000 pounds; with water and fuel, about 130,000 pounds; total weight on driving-wheels, in running order, about 97,500 pounds; weight on engine truck, in running order, about 32,000 pounds; 32,500 pounds per axle. Weight of engine.

Weight of tender, empty, about 33,000 pounds; with full load of fuel and water, about 72,000 pounds. Weight of tender.

Diameter of driving-wheels, 61 inches. Driving-wheels.

Total wheel-base of engine, 23 feet 4 inches; rigid wheel-base, 12 feet 6 inches; spread of engine truck-wheels, 6 feet; distance from centre of truck to centre of front driving-wheels, 7 feet 10 inches; centre of front driving-wheels to centre of second pair of driving-wheels, 5 feet 6 inches; centre of second to centre of third pair of driving-wheels, 7 feet. Wheel-base.

Springs throughout to be of best crucible cast-steel, carefully made and of proper proportions; to be carefully tested before being applied. All pins to be case-hardened. Springs.

The fuel will be bituminous coal. Fuel.

The Boiler.

The shell of boiler to be of best homogeneous cast-steel, of flange quality, ⅜ inch thick; riveted with 1-inch rivets, placed not more than 3½ inches from centre to centre for double riveting, and not more than 2¼ inches from centre to centre for single riveting. Seams of connecting sheets double riveted; longitudinal seams, butt-jointed, with double covering strips. Flue-sheet, at smoke-box end, of steel, half-inch thick. Throat-sheet ⅛ of an inch thicker than shell of boiler, to prevent undue thinning where flanged. All parts well and thoroughly stayed, and extra welt-pieces riveted to inside of side-sheets, providing double thickness of metal for studs of expansion-braces. All plates planed at edges with round-pointed caulking-tool, insuring plates against injury by chipping and caulking with sharp-edged tools. Working steam-pressure, 160 pounds per square inch; boiler tested with hot water to a pressure of 200 pounds per square inch, and with steam to a pressure of 180 pounds per square inch. Material.

Heating surface—
Tubes ....1,821½ sq. in.
Fire-box .. 105 sq. in.
Total ..1,926½ sq. in

Waist, 62 inches diameter at smoke-box end; made straight top, with one dome placed centrally. Waist.

Dome to be made of best homogeneous cast-steel, ½ inch thick, 31½ inches diameter, 30½ inches high, and flanged at bottom; to be fitted to boiler by flanging upward the waist-sheet on which dome rests, and flanging outward the bottom of dome to fit the flange of waist-sheet, the two flanges being riveted together by one row of horizontal and one row of vertical rivets. Dome.

Fire-box to be of best copper, ½ inch thick; flue-sheet, ½ and ⅝ inch thick; crown-sheet of copper, ½ inch thick; all plates to be thoroughly annealed after flanging; fire-box to be 120 inches long by 33½ inches wide, by $\frac{37}{16}$ inches deep inside. Fire-box.

Stay-bolts of copper 1 inch diameter and 4 inches apart; the bolts to be screwed into plates with fine threaded screw and both ends carefully riveted. Water space, 3 inches sides and back, 4 inches front. Stay-bolts.

Crown supported by iron radial stay-bolts, 1 inch diameter, not more than 4 inches from centre to centre, screwed through crown-sheet and roof of boiler and riveted over. Crown-staying.

Brass plug, with fusible centre, to be inserted in crown of fire-box. Fusible plug.

Fire-brick arch supported by studs, tapped into side-sheets of fire-box. Fire-brick arch.

Fire-door (oval) to be made of cast-iron, sliding, with cast-iron liner; fire-door opening formed by flanging and riveting together the inner and outer sheets. Tool guard to be cast on lower part of fire-door frame. Fire-box door.

Grate-bars of cast-iron; of design adapted to fuel, to be properly fitted and arranged. Grate bars.

Ash-pan of iron, No. 8 wire-gauge, to be properly secured to bottom of fire-box; bottom to be 12 inches clear of grate. Ash-pan.

Damper to be placed at each end of ash-pan, to be worked from foot-board; each damper when shut to keep itself well closed by its own weight. Dampers.

Mud-holes, for cleaning, to be made in the legs of the boiler at bottom, one in each corner, 2 inches diameter, and one under waist in front end, below the tubes, 2½ inches diameter, all with brass plugs screwed in; two cleaning-plugs 2½ inches diameter on right side, and one on left side level with crown-sheet. Mud-holes.

Flues to be made of brass, Nos. 12 and 14 wire-gauge; 270 in number, 2 inches diameter, 13 feet long; to be fitted at fire-box end with steel thimbles, and carefully expanded and beaded over both flue sheets. Flues.

Balanced poppet throttle-valve or regulator to be fitted in dome to vertical arm of dry-pipe and worked by rod and handle from the foot-plate. Regulator or throttle.

Steam-pipes, main and branch, leading from dome to cylinders; main or dry-pipe of copper, ½ inch thick, inside 7½ inches diameter; branch pipes, of cast-iron, accurately fitted with ground-joints and brass rings. Steam-pipes.

The smoke-box to be round, and extended, with netting, deflecting plate and spark ejector; smoke-box front of cast-iron; the door to be in one piece, to open horizontally; to be fastened by outside tap-bolts, fitted so that they will draw the door to a close joint. Smoke-box.

Smoke-stack of iron, taper pattern; to be perfectly and strongly fitted to smoke-box; top to be not more than 13 feet 6 inches above top of rails. Smoke-stack.

Machinery

Cylinders. Cylinders to be outside-connected, of close-grained iron as hard as can be worked; each cylinder cast in one piece with half saddle, placed horizontally; right and left hand cylinders reversible and interchangeable; accurately planed, fitted, and bolted together in the most approved manner. Valve-face and steam-chest seat raised above face of cylinder to allow for wear. Cylinders and valves oiled by Nathan 8-automatic sight feed lubricator, placed in cab, connected to steam-chests by copper-pipes running under jacket. Pipes proved to 200 pounds pressure. Cylinders to be 22 inches inside diameter; stroke to be 24 inches; cylinder-covers to have ground-joints; steam-ports to be 19 inches by 1⅞ inches; exhaust-ports to 19 inches by 3 inches.

Cylinder-cocks. Cylinder-cocks to be fitted to cylinders; to be operated from foot-board.

Pistons. Piston-heads of cast-iron, fitted with approved form of steam-packing; piston-rods of iron or steel, ground and keyed to cross-heads, and securely fastened to pistons.

Exhaust-pipes. Exhaust-pipes to be of cast-iron, with three different sizes of nozzles, of suitable capacity.

Steam jet or blower. Cock and pipe to be fitted to boiler to turn a jet of steam up the chimney when required; to be worked from foot-board.

Steam-joints. All steam-joints to be metal to metal when finished.

Cross-heads. Cross-heads to be made of cast-steel, with brass-bearings; wrist-pins to be 4 inches diameter and 3½ inches long. Stub solid as P.R.R., except wedge vertical.

Guides. Guides to be of steel, cast-iron, or wrought-iron case-hardened, fitted to wrought-iron guide yoke.

Valve-motion. Shifting link-motion, graduated to cut off equally at all points of the stroke. Links, sliding-blocks, pins, lifting-links, and eccentric-rod jaws made of hammered iron, well case-hardened. Sliding-blocks with long flanges to give ample wearing surface. Rock-shaft of wrought-iron; reverse-shaft of wrought-iron with arms forged on. Weight of links and eccentric-rods counterbalanced by a spring. Slide-valves, balanced pattern, with vacuum-valves; valve-stems to clasp valves. No screws or joints inside of steam-chests.

Packing. U.S. metallic packing for piston-rod and valve-stems.

Screw reverse-gear.

Rods. Connecting and parallel rods of steel, or hammered iron, forged solid. Connecting-rods with main stubs, keys, and brasses, but without straps. Parallel-rods with straps, keys, and brasses, or with solid ends and heavy brass bushings. Bushings put in by hydraulic pressure and well secured from turning in rod.

MAIN STUBS.



Crank-pins (large). Crank-pins of steel or wrought-iron, of proper size, accurately turned and fitted with care.

Oil-cups. Lubrication of all bearings carefully provided for and oil-cups attached where required. Wick, spindle, or adjustable needle oil-cups on rods and guides.

Feed-water. Supplied by two 10½-Sellers' 1887 injectors, valves and cages of best hard brass, accurately fitted; cock in feed-pipe regulated from foot-board; all pipes, feed, steam, and check, of copper.

Safety-valves. Three safety-valves to be placed on the dome; to be set to blow off at a pressure of 160 pounds per square inch; safety-valves to be furnished with relief lever, one with cap and lock.

Steam-gauge. Steam-gauge of approved make, after being tested, to be fitted on top of boiler, inside of cab.

Glass water-gauge. One glass water-gauge to be fitted to boiler, in cab, with brass cocks and guard-case of polished iron; gauge to be of Scotch annealed glass.

Gauge-cock. Three gauge-cocks, to be finished and fitted to face of boiler, with drip-funnel of brass.

Blow-off cock. Blow-off cock of brass, to be fitted in fire-box at bottom; to be worked from foot-board.

Frames and Running-gear.

Engine-frames. Frames of hammered iron, made in two sections, so as to be taken apart in or near the middle, for convenience of repairs or shipping. From rails bolted and keyed to main frames, with front and back lugs forged on for cylinder connections. Pedestals forged solid with main frame and protected from wear of boxes by cast-iron gibs and wedges. Pedestal-caps lugged and bolted to bottom of pedestals.

Boiler-braces. Waist of boiler securely braced to frames between fire-box and smoke-box by T-irons fitted to boiler and bolted to wrought-iron plates extending across.

Expansion room. Proper allowance for difference of expansion of boiler and frame to be made where frame is attached to boiler at fire-box end.

Driving-wheels.

Driving-wheels. Six in number, 61 inches in diameter. Centres of wrought-iron, turned to 55 inches diameter and carefully counterbalanced.

Tires. Of cast-steel, of Standard Steel Works' make, 3 inches thick when finished; front and back pairs flanged, 5½ inches wide, main pair plain, 6 wide.

AXLES PREFERRED THUS



Of hammered iron or steel; journals 8 inches diameter and 8½ inches long; to be made a true cylinder and carefully fitted.

Driving-boxes. Lubricators as specified by Mr. Thow. Driving-boxes of steeled cast-iron, planed true on all sides, and slotted to the bearings, which are to be turned and truly fitted; the upper bearings to have oil-box and cover and grooved diagonally on the inside; the lower part to have a sponge-box cast in it and to be supported by two bolts, easily removable for examination of bearings and journals; the boxes to be provided with wedges on one side to take up the wear.

Engine-truck.

Plan. Centre-bearing swivelling, 4-wheeled truck. Truck-frame of wrought or cast-iron, with braces of wrought iron; fitted with swinging bolster, or with fixed centre-bearing.

Wheels. Four cast-iron centre steel-tired wheels, 30 inches diameter. Axles of hammered iron or steel, with journals 5 inches diameter and 10 inches long.

Springs. Of crucible cast-steel, tempered in oil; connected by equalising beams resting on tops of boxes.

Equalization.

Equalisation. The weight of the locomotive to be distributed upon the wheels by equalising-levers, connecting to the springs and properly designed to give each wheel perfect bearing on the track under all conditions of service.

Accessories.

Accessories.

Substantially built of clear, sound ash, or clear pine, well seasoned and finished, and properly painted and varnished. Cab to be fitted together with joint-bolts and corner plates and firmly secured to boiler. To be provided with suitable windows and doors, conveniently arranged, and glazed with first-quality double American crystal glass. Doors to open on hinges and provided with strong fastenings to secure them shut or open at any distance. Roof to be covered with tin, properly put on, and painted. Cab made so that it can be taken to pieces to facilitate shipping. — Cab.

Running-boards of iron, with nosings of iron, polished or painted. — Running-boards.

Hand-rails of polished brass, or of iron, polished or painted. Wheel-cover nosings of polished brass, or of iron, polished or painted. — Hand-rails and wheel covers.

Cylinders lagged with wood and neatly cased with iron, painted. Cylinder-head covers of hydraulic forged steel or cast-iron, painted or polished. Steam-chests with cast-iron tops; bodies cased with iron, painted. Dome lagged with asbestos or magnesia, with iron, painted, casing on body, and cast iron top and bottom rings. Boiler lagged with asbestos or magnesia, neatly jacketed with planished iron, secured by brass or iron bands. — Finish.

Screw hand-brakes and Westinghouse automatic air-brake on all driving and tender-wheels. Ross modified shoes. — Brakes.

Pilot of iron, strongly braced with iron, arranged to suit buffers. — Pilot.

Draw-bar of wrought-iron, strongly fastened to centre of forward buffer beam. — Draw-bar.

Engine and tender fitted with spring buffers and draw-hook, latter to withstand breaking strain of at least 100,000 lb. Turton buffers same as furnished Beyer, Peacock, and Company. — Buffers and couplings.

Each locomotive shall be erected complete at the works of the builder, and a trial under steam be made sufficient to show that it is in perfect working order, and that proper clearances and adjustments have been provided. — Testing.

Engine and tender to be properly painted; to be neatly striped when required; to be varnished with three coats of best varnish. — Painting.

Engine to be furnished with front and back sand-boxes, but not on boiler, gong, whistle, cab-seats, and cab-seat cushions. — Furniture and tools.

To be provided with a complete set of wrenches to fit all nuts and bolts, including one large and one small monkey-wrench; six files, assorted; one gauge-lamp and holder; one brass torch; three iron and six wood tube plugs; one tube-plug holder; six cast-steel chisels, assorted; two pin-punches; one chipping hammer; one soft hammer; one copper tallow-kettle; one copper tallow-bucket; one brass oil-can; two oil-feeders; two galvanised buckets; one pick; one slice-bar; one rake; one fire-shovel; and two screw traversing jacks. Cab tool-boxes with locks and keys.

To be carefully taken apart and boxed ready for shipment. All the bright work, such as connecting rods, pistons, straps, eccentrics, guides, cross-heads, cylinder-covers, bolts, &c., to be well covered with and protected from oxidation by a mixture of tallow, beeswax, and white lead put on while warm; these parts to be then packed in boxes and securely braced, and not packed with shavings, hay straw, or any similar material. The bright work that cannot be boxed, such as crank pins, journals of axles and eccentrics, to be coated same as other bright work, then wrapped with stout canvas tied on and tarred. Packing-boxes to be made of suitable material and strongly hooped with iron. — Packing.

Packing-list, in duplicate, to be made by builders, showing weight and measurement, together with names and numbers of boxes, bundles and pieces. A drawing to be furnished for guidance in re-erecting the engine. — Packing-list.

General Features of Construction.

All principal parts of engine accurately fitted to gauges and templates, and thoroughly interchangeable. — Gauges.

All finished movable nuts and all wearing surfaces of machinery of steel, or iron, case-hardened. — Case-hardening.

All threads on bolts to United States standard; such bolts as require them to have jam-nuts. — Alloy.

Tender.

Tank of steel or iron, strongly put together, with angle iron corners and well braced. Top, inside, and bottom plates $\frac{1}{4}$ inch thick; outside plates $\frac{3}{8}$ inch thick; riveted with $\frac{3}{4}$ inch rivets, $1\frac{1}{4}$ inch pitch. — Tank.

Capacity 3,600 gallons (of 231 cubic inches). Shape of tank wedge, square top. — Capacity.

Tender-frame substantially built of channel iron, strongly braced. Tender floor to be of wrought-iron plates, $\frac{1}{4}$ inch thick. — Frame.

Two 4-wheeled centre-bearing trucks; additional bearings at sides of back truck. Pattern of truck, square wrought-iron frames equalised. — Trucks.

Springs of crucible cast-steel, tempered in oil. — Springs.

Wheels, cast-iron centres with steel tires, 36 inches diameter. — Wheels.

Axles of hammered iron or steel; journals 4 inches diameter by 8 inches long, $5\frac{1}{4}$" wheel fit. — Axles and journals.

Oil-tight boxes with brass bearings, accurately finished and fitted. — Journal-boxes.

Brakes on both trucks, operated by suitable brake-shaft at forward end of tender. — Brakes.

Tank-valves, with strainers conveniently arranged in front end of tank at bottom to connect with feed pipes, and worked from foot-board by levers at top of tank. — Tank-valves.

Tender connected with engine by India-rubber hose, one on each side, of best quality and proper size. — Hose-connections.

Two safety-chains to connect tender with engine; also two for each truck, connecting front corners of trucks with tank-frame. — Safety-chains.

Two tool-boxes of iron, strongly made, with good locks, and strong strap hinges; to be placed on top of tender. — Tool-boxes.

Particular care to be taken that all bearings of importance have good oil cups or cellars capable of holding a proper worsted syphon or other efficient means of feeding oil. — Lubrication.

All oil cups should have proper covers, well secured, and dust-proof, as our line is very dusty and hot bearings very common.

Especial care to be taken with boiler, frame, and rod work. — Workmanship.

Tire section as tracing 2090.

BALDWIN LOCOMOTIVE WORKS.

Physical Test of Materials.

All materials used in the construction of the locomotive shall be of the best quality of their respective kinds, carefully inspected, and subjected to the following tests. Notwithstanding these tests, should any defects be developed in working the corresponding part will be rejected.

Boiler iron. All boiler iron will be specified C. H. No. 1 Flange quality, and must be made from the best charcoal blooms.

A careful examination will be made of every sheet, and none will be accepted that show mechanical defects.

A piece for testing to be furnished from each sheet. A test piece to be furnished from each sheet, to be tested. Such test strips must show an ultimate tensile strength with the grain of not less than 50,000 pounds, an ultimate tensile strength across the grain of not less than 45,000 pounds, and must show a ductility, measured by elongation, of not less than 20 per cent. Should any of the test pieces fail to fulfil the above requirements, the corresponding sheet will be rejected.

Should any plates develop defects in working, they will be rejected.

Each plate must be stamped with the maker's name and the guaranteed tensile strength and elongation as above.

Boiler and fire-box steel. A careful examination will be made of every sheet, and none will be accepted that show mechanical defects.

Test strips taken lengthwise from each sheet and without annealing should have a tensile strength of 55,000 pounds per square inch, and an elongation of 30 per cent., in section originally 2 inches long.

Sheets will not be accepted if the test shows a tensile strength less than 50,000 pounds, or greater than 65,000 pounds per square inch, nor if the elongation falls below 25 per cent.

Should any sheets develop defects in working they will be rejected.

Fire-box copper. Copper plates for fire-boxes must be rolled from best quality Lake Superior ingots; they must have a tensile strength of not less than 30,000 pounds per square inch, and an elongation of from 20 to 25 per cent., in section originally 2 inches long. Test strips must be furnished with each fire-box for testing.

Iron and steel stay-bolts and boiler braces. Iron or steel for stay-bolts and braces must have an ultimate tensile strength of not more than 60,000 pounds nor less than 50,000 pounds per square inch, with an elongation of not less than 30 per cent., nor undergo a reduction of area of fractured section of more than 35 per cent.

Copper stay-bolts. Copper stay-bolts must be manufactured from the best Lake Superior ingots; they must have an ultimate tensile strength of not less than 30,000 pounds per square inch, and an elongation of from 20 to 25 per cent., in section originally 2 inches long.

Boiler-tubes of steel or iron. All boiler tubes must be carefully inspected and be free from pit-holes or other imperfections. Each tube must be subjected to an internal hydraulic pressure of not less than 500 pounds per square inch by the manufacturers before delivery. They must be rolled accurately to the gauge furnished by the Baldwin Locomotive Works, filling the gauge to a plump fit. They must be expanded in the boiler without crack or flaw.

When tested, iron or steel tubes must show a tensile strength of not less than 55,000 pounds per square inch, and a ductility of not less than 15 per cent.

Boiler-tubes of brass or copper, brass and copper pipes. Tubes of brass or copper to be of uniform circumferential thickness and solid drawn; to be perfectly round, and to resist an internal hydraulic pressure of 300 pounds per square inch. From the tubes under test, a piece 4 inches long will be cut, annealed, sawn lengthwise, and doubled inside out without showing sign of cracks.

When annealed they must withstand flanging cold a flange $\frac{1}{4}$ of an inch broad for 2-inch tubes without cracking. Copper tubes must withstand flanging hot as well as cold. Tubes other sizes than 2 inches diameter must flange to a width proportional to their diameter.

A piece 30 inches long, annealed and filled with rosin, must withstand being doubled until the extremities touch each other without showing defects.

A piece 30 inches long, not annealed, filled with rosin, and placed on supports 20 inches apart, must withstand bending to a deflection of 3 inches without showing defects.

Bar iron. Bar iron should have a tensile strength of 50,000 pounds per square inch, and an elongation of 20 per cent., in section originally 2 inches long. Iron will not be accepted if tensile strength falls below 48,000 pounds, nor if elongation is less than 15 per cent., nor if it shows a granular fracture.

Chilled wheels. Of approved make, and of following guaranteed mileage:—

For 28″ wheels...	... 40,000 miles.	For 33″ wheels...	... ... 50,000 miles.
„ 30″ „ ...	... 45,000 „	Other sizes in proportion.	

(Adopted by Joint Committee of Master Car Builders' Association, American Railway Master Mechanics' Association and Association of Manufacturers of Chilled Car-Wheels, 21st November, 1889.)

Deficient mileage will be adjusted upon return of the defective wheel, or that part of same containing the defect causing withdrawal from service. Or, if preferred, wheels will be furnished subject to approved specification and drop test, without mileage guarantee.

(Form

(Form 183.)

BALDWIN LOCOMOTIVE WORKS,

BURNHAM, PARRY, WILLIAMS, & CO.,

PHILADELPHIA, PA., U.S.A.

No. 5482.

CLASS 10-36 E. 40 to 57.
10 21/38 E. 1 & 2.

SPECIFICATION

OF A

LOCOMOTIVE ENGINE

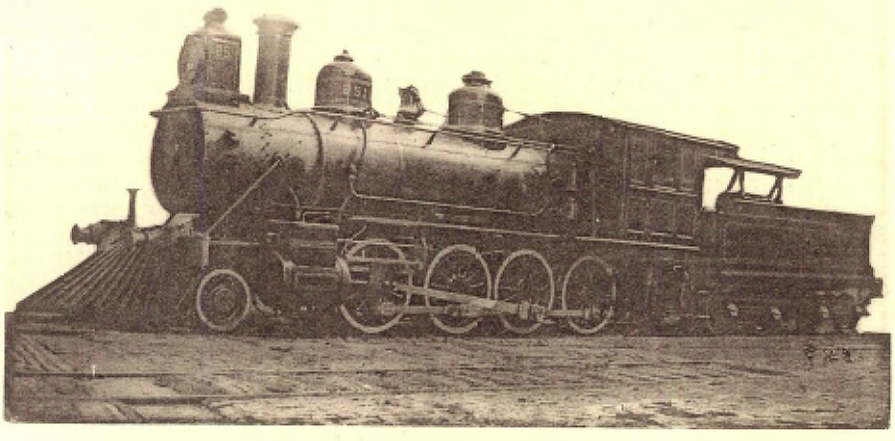
FOR THE

GOVERNMENT OF NEW SOUTH WALES.

JAN. 17, 1891.

GENERAL DESCRIPTION.

General design, illustrated by attached photograph, of Engine DOM PEDRO, 125. Design



Specification of Consolidation Goods Engines.

BALDWIN LOCOMOTIVE WORKS (BURNHAM, PARRY, WILLIAMS & Co.), PHILADELPHIA, P.A., U.S.A.

(No. 5,432.) (Class 10–36 E. 40 to 57, 10 21/38, E. 1 & 2.)

SPECIFICATION of a Locomotive Engine for the Government of New South Wales, January 17, 1891.

General Description.

General design illustrated by attached photograph of engine Dom Pedro, 125. Design.

Dimensions.

Gauge of road—4 feet 8½ inches in the clear between the rails. Gauge.

Extreme width not to exceed 9 feet 6 inches; extreme height not to exceed 13 feet 6 inches; 9 feet 3 inches across cylinders; sharpest curve, 528 feet radius; maximum grade, 176 feet per mile. Limitations.

Diameter of cylinders, 21 inches; length of stroke, 26 inches. Cylinders.

Weight of engine, empty, about 118,000 pounds; with water and fuel about 138,000 pounds; total weight on driving-wheels, in running order, about 122,000 pounds; weight on engine truck, in running order, about 16,000 pounds—30,500 per axle. Weight of Engine.

Weight of tender, empty, about 33,000 pounds; with full load of fuel and water about 72,000 pounds. Weight of Tender.

Diameter of driving-wheels, 51 inches. Driving-wheels.

Total wheel-base of engine, 22 feet 4 inches; rigid wheel-base, 14 feet 3 inches; distance from centre of truck to centre of front driving-wheels, 8 feet 1 inch; centre of front driving-wheels to centre of second pair of driving-wheels, 4 feet 11 inches; centre of second to centre of third pair of driving-wheels, 4 feet 6 inches; centre of third to centre of fourth pair of driving-wheels, 4 feet 10 inches. Wheel-base.

Springs throughout to be of the best crucible cast steel, carefully made and of proper proportions; to be carefully tested before being applied. All pins to be case-hardened. Springs.

The fuel will be bituminous coal. Fuel.

The Boiler.

The shell of boiler to be of best homogeneous cast steel, of flange quality, ⅝ inch thick; riveted with 1 inch rivets, placed not more than 3¼ inches from centre to centre for double riveting, and not more than 2¼ inches from centre to centre for single riveting. Seams of connecting sheets double riveted; longitudinal seams butt-jointed with double covering strips. Flue-sheet, at smoke-box end, of steel, half-inch thick. Throat-sheet one-eighth of an inch thicker than shell of boiler, to prevent undue thinning when flanged. All parts well and thoroughly stayed, and extra welt-pieces riveted to inside of side-sheets, providing double thickness of metal for studs of expansion-braces. All plates planed at edges with round-pointed caulking-tool, insuring plates against injury by chipping and calking with sharp-edged tools. Working-steam pressure 160 pounds per square inch; boiler tested with hot water to a pressure of 200 pounds per square inch, and with steam to a pressure of 180 pounds per square inch. Material.

Heating Surface—

Tubes ..	1,809 sq. ft.
Fire-box	158 sq. ft.
Total ..	1,967 sq. ft.

Waist 64 inches diameter at smoke-box end; made straight top, with one dome placed centrally. Waist.

Dome to be made of best homogeneous cast steel, ½ inch thick, 31½ inches diameter, 30½ inches high, and flanged at bottom; to be fitted to boiler by flanging upward the waist-sheet on which dome rests, and flanging outward the bottom of dome to fit the flange of waist-sheet, the two flanges being riveted together by one row of horizontal and one row of vertical rivets. Dome.

Fire-box to be of best copper, ½ inch thick; flue-sheet ⅝ and ⅝ inch thick; crown-sheet of copper, ½ inch thick; all plates to be thoroughly annealed after flanging; fire-box to be 112 inches long by 42 inches wide, by 62 F 58 B inches deep inside. Fire-box.

Stay-bolts of copper, one inch diameter, and four inches apart; the bolts to be screwed into plates with fine threaded screws, and both ends carefully riveted. Water space 3 sides and back, 4 inches front. Stay-bolts.

Crown supported by iron radial stay-bolts, one inch diameter, not more than four inches from centre to centre, screwed through crown-sheet and roof of boiler and riveted over.

Brass plug, with fusible centre, to be inserted in crown of fire-box. Fusible plug.

Fire-brick arch supported by studs tapped into side-sheets of fire-box. Fire-brick arch.

Fire-door oval to be made of cast iron sliding with cast-iron liner; fire-door opening formed by flanging and riveting together the inner and outer sheets. Tool guard to be cast on lower part of fire-door frame. Fire-box door.

Grate-bars of cast iron, of design adapted to fuel, to be properly fitted and arranged. Grate-bars.

Ash-pan of iron, No. 8 wire-gauge, to be properly secured to bottom of fire-box; bottom to be twelve inches clear of grate. Ash-pan.

Damper to be placed at each end of ash-pan, to be worked from foot-board; each damper when shut to keep itself well closed by its own weight. Dampers.

Mud-holes, for cleaning, to be made in the legs of the boiler at bottom, one in each corner, two inches diameter, and one under waist in front end, below the tubes, two and one-half inches diameter, all with brass plugs screwed in; two cleaning-plugs two and one-half inches diameter on right side and one on left side level with crown-sheet. Mud-holes.

Flues to be made of brass, No. 12 and 14 wire-gauge; 231 in number, 2¼ inches diameter, 13 feet 4½ inches long; to be fitted at fire-box end with steel thimbles, and carefully expanded and beaded over both flue-sheets. Flues.

Balanced poppet throttle-valve or regulator to be fitted in dome to vertical arm of dry-pipe and worked by rod and handle from the foot-plate. Regulator of throttle.

Steam-pipes, main and branch, leading from dome to cylinders; main or dry-pipe of copper, ¼ inch thick, inside 7½ inches diameter; branch pipes, of cast iron, accurately fitted with ground-joints and brass rings. Steam-pipes.

The smoke-box to be round, and extended, with netting, deflecting plate, and spark-ejector; smoke-box front of cast iron; the door to be in one piece, to open horizontally; to be fastened by outside tap-bolts, fitted so that they will draw the door to a close joint. Smoke-box.

Smoke-stack of iron, taper pattern; to be perfectly and strongly fitted to smoke-box; top to be not more than 13 feet 6 inches above top of rails. Smoke-stack.

Machinery.

Machinery.

Cylinders. Two engines compounded. H.P. Cyls. 13½ in. diam. L.P. " 22 in. " Stroke 26 in. "

Cylinders to be outside-connected, of close-grained iron as hard as can be worked; each cylinder cast in one piece, with half saddle placed horizontally; right and left hand cylinders reversible and interchangeable; accurately planed, fitted, and bolted together in the most approved manner. Valve-face and steam-chest seat raised above face of cylinder to allow for wear. Cylinders and valves oiled by Nathan 8 inch automatic sight feed lubricator placed in cab, connected to steam-chests by copper pipes running under jacket. Pipes proved to two hundred pounds pressure. Cylinders to be 21 inches inside diameter; stroke of piston to be 26 inches; cylinder-covers to have ground-joints; steam-ports to be 19 inches by 1¼ inch; exhaust-ports to be 19 inches by 3 inches.

Cylinder cocks.

Cylinder-cocks to be fitted to cylinders; to be operated from foot-board.

Pistons.

Piston-heads of cast iron, fitted with approved form of steam packing; piston-rods of iron or steel, ground and keyed to cross-heads, and securely fastened to pistons.

Exhaust-pipes.

Exhaust-pipes to be of cast iron, with three different sizes of nozzles, of suitable capacity.

Steam jet or blower.

Cock and pipe to be fitted to boiler to turn a jet of steam up the chimney when required; to be worked from foot-board.

Steam-joints.

All steam-joints to be metal to metal when finished.

Cross-heads.

Cross-heads to be made of cast steel, with brass bearings; wrist-pins to be 4 inches diameter, and 3¼ inches long.

Guides.

Guides to be of steel, cast iron, or wrought iron case-hardened, fitted to wrought-iron guide yoke.

Valve-motion.

Shifting link-motion, graduated to cut off equally at all points of the stroke. Links, sliding blocks, pins, lifting-links, and eccentric-rod jaws made of hammered iron, well case-hardened. Sliding-blocks with long flanges to give ample wearing surface. Rock shaft of wrought iron; reverse shaft of wrought iron, with arms forged on. Weight of links and eccentric-rods counterbalanced by a spring. Slide-valves balanced pattern with vacuum valves; valve-stems to clasp valves. No screws or joints inside of steam chests. U.S. metallic packing for piston rod and valve stems. Screw reverse gear.

Rods.

Connecting and parallel rods of steam or hammered iron, forged solid. Connecting rods with keys and split brasses. Parallel rods with solid ends and heavy brass bushings. Bushings put in by hydraulic pressure, and well secured from turning in rod. Main rod ends similar to prints 2,088 and 2,089.

Crank-pins.

Crank-pins of steel or wrought iron, of proper size, accurately turned and fitted with care.

Oil-cups.

Lubrication of all bearings carefully provided for, and oil-cups attached where required. Wick, spindle, or adjustable needle oil-cups on rods and guides.

Feed-water

Supplied by two 10½ inch Seller's 1887 injectors, valves and cages of best hard brass, accurately fitted; cock in feed-pipe regulated from foot-board; all pipes, feed, steam, and check, of copper.

Safety-valves.

Three safety-valves to be placed on the dome; to be set to blow off at a pressure of 160 pounds per square inch; two valves to be furnished with relief lever, one with cap and lock.

Steam-gauge.

Steam-gauge of approved make, after being tested, to be fitted on top of boiler, inside of cab.

Glass water-gauge.

One glass water-guage to be fitted to boiler, in cab, with brass cocks and guard-case of polished iron; gauge to be of Scotch annealed glass.

Gauge-cocks.

Three gauge-cocks to be finished and fitted to face of boiler, with drip-funnel of brass.

Blow-off cock.

Blow-off cock of brass, to be fitted in fire-box at bottom; to be worked from foot-board.

Frames and Running-gear.

Engine-frames.

Frames of hammered iron, made in two sections, so as to be taken apart in or near the middle for convenience of repairs or shipping. Front rails bolted and keyed to main frames, with front and back lugs forged on for cylinder connections. Pedestals forged solid with main frame, and protected from wear of boxes by cast-iron gibs and wedges. Pedestal-caps lugged and bolted to bottom of pedestals.

Boiler-braces.

Waist of boiler securely braced to frames between fire-box and smoke-box by T-irons fitted to boiler and bolted to wrought-iron plates extending across.

Expansion room.

Proper allowance for difference of expansion of boiler and frame to be made where frame is attached to boiler at fire-box end.

Driving-wheels.

Driving-wheels.

Eight in number, 51 inches in diameter. Centres of cast-iron, turned to 45 inches diameter, and carefully counterbalanced.

Tires.

Of cast steel, of Standard Steel Works make, 3 inches thick when finished; front and back pairs flanged, 5½ inches wide, intermediate pairs plain, 6 wide.

Axles.

Of hammered iron or steel; journals 8 inches diameter and 8½ inches long; to be made a true cylinder and carefully fitted.

Driving-boxes.

Lubricators as specified by Mr. Thow.

Driving-boxes of steeled cast iron, planed true on all sides and slotted to the bearings, which are to be turned and truly fitted; the upper bearings to have oil-box and cover and grooved diagonally on the inside; the lower part to have a sponge-box cast in it, and to be supported by two bolts, easily removable for examination of bearings and journals; the boxes to be provided with wedges on one side to take up the wear.

Engine-Truck.

Plan.

Centre-bearing swivelling two-wheeled truck with radius bar. Truck-frame of wrought or cast iron, with braces of wrought iron; fitted with swinging bolster or with fixed centre-bearing.

Wheels.

Two cast iron centre steel-tired wheels 30 inches diameter. Axles of hammered iron or steel, with journals 5 inches diameter and 10 long.

Springs.

Of crucible cast steel, tempered in oil; connected by equalising beams resting on tops of boxes.

Equalization.

Equalization.

The weight of the locomotive to be distributed upon the wheels by equalizing levers, connecting to the springs and properly designed to give each wheel perfect bearing on the track under all conditions of service.

Accessories.

Cab.

Substantially built of clear, sound ash, or clear pine, well seasoned and finished, and properly painted and varnished. Cab to be fitted together with joint-bolts and corner plates, and firmly secured to boiler. To be provided with suitable windows and doors, conveniently arranged, and glazed with first-quality

quality double American crystal glass. Doors to open on hinges and provided with strong fastenings to secure them shut or open at any distance. Roof to be covered with tin, properly put on and painted. Cab made so that it can be taken to pieces to facilitate shipping.

Running-boards of iron, with nosings of iron, polished or painted. — Running boards

Hand-rails of polished brass, or of iron polished or painted. Wheel-cover nosings of polished brass or of iron polished or painted. — Hand-rails and wheel-covers.

Cylinders lagged with wood and neatly cased with iron, painted. Cylinder-head covers of hydraulic-forged steel or cast iron, painted or polished. Steam chests with cast-iron tops; bodies cased with iron, painted. Dome lagged with asbestos or magnesia, with iron, painted, casing on body, and cast-iron top and bottom rings. Boiler lagged with asbestos or magnesia, neatly jacketed with planished iron, secured by brass or iron bands. — Finish.

Screw hand-brakes and Westinghouse automatic air-brake on all driving and tender wheels. Ross modified shoes. — Brakes.

Pilot of iron, strongly braced with iron, arranged to suit buffers. — Pilot.

Draw-bar of wrought iron, strongly fastened to centre of forward buffer beam. — Draw-bar.

Engine and tender fitted with spring buffers and draw-hook, similar to tracings 2,086 and 2,087. Turton buffers same as furnished Beyer, Peacock, and Co. — Buffers and couplings

Each locomotive shall be erected complete at the works of the builder, and a trial under steam be made sufficient to show that it is in perfect working order, and that proper clearances and adjustments have been provided. — Testing.

Engine and tender to be properly painted; to be neatly striped when required; to be varnished with three coats of best varnish. — Painting.

Engine to be furnished with front and back sand-boxes, not placed on boiler, gong, whistle, cab-seats, and cab-seat cushions. — Furniture and tools.

To be provided with a complete set of wrenches to fit all nuts and bolts, including one large and one small monkey-wrench, six files, assorted; one gauge-lamp and holder, one brass torch, three iron and six wood tube-plugs, one tube-plug holder, six cast-steel chisels, assorted; two pin-punches, one chipping hammer, one soft hammer, one copper tallow-kettle, one copper tallow-bucket, one brass oil-can, two oil-feeders, two galvanised buckets, one pick, one slice-bar, one rake, one fire-shovel, and two screw traversing jacks. Cab tool-boxes with locks and keys.

To be carefully taken apart and boxed ready for shipment. All the bright work, such as connecting-rods, pistons, straps, eccentrics, guides, cross-heads, cylinder-covers, bolts, etc., to be well covered with and protected from oxidation by a mixture of tallow, beeswax, and white-lead put on while warm; these parts to be then packed in boxes and securely braced, and not packed with shavings, hay, straw, or any similar material. The bright work that cannot be boxed, such as crank-pins, journals of axles and eccentrics to be coated same as other bright work, then wrapped with stout canvas, tied on and tarred. Packing-boxes to be made of suitable material and strongly hooped with iron. — Packing.

Packing-list, in duplicate, to be made by builders, showing weight and measurement, together with names and number of boxes, bundles, and pieces. A drawing to be furnished for guidance in re-erecting the engine. — Packing-list.

General Features of Construction.

All principal parts of engine accurately fitted to gauges and templates, and thoroughly interchangeable. — Gauges.

All finished movable nuts and all wearing surfaces of machinery of steel, or iron, case-hardened. — Case-hardening.

All threads on bolts to United States standard; such bolts as require them to have jam-nuts. — Alloy.

Tender.

Tank of steel or iron, strongly put together, with angle iron corners and well braced. Top, inside and bottom plates $\frac{1}{4}$ inch thick; outside plates $\frac{3}{8}$ inch thick; riveted with three-eighths inch rivets, one and one-quarter inch pitch. — Tank.

Capacity: 3,600 gallons (of 231 cubic inches.) Shape of tank: wedge, square-top, same as passenger engines. — Capacity.

Tender-frame substantially built of channel iron, strongly braced. Tender-floor to be of wrought-iron plates, one-quarter inch thick. — Frame.

Two four-wheeled centre-bearing trucks; additional bearings at sides of back truck. Pattern of truck: square wrought-iron frames, equalized. — Trucks.

Springs, of crucible cast-steel, tempered in oil. — Springs.

Wheels, cast-iron centres, with steel tires 36 inches diameter. — Wheels.

Axles of hammered iron or steel; journals, 4 inches diameter by 8 inches long, $5\frac{1}{4}$ inches wheel fit. — Axles and journals.

Oil-tight boxes with brass bearings, accurately finished and fitted. — Journal-boxes.

Brakes on both trucks, operated by suitable brake-shaft at forward end of tender. — Brakes.

Tank-valves with strainers conveniently arranged, in front end of tank at bottom to connect with feed-pipes, and worked from foot-board by levers at top of tank. — Tank-valves.

Tender connected with engine by indiarubber hose, one on each side, of best quality and proper size. — Hose-connections.

Two safety-chains to connect tender with engine; also two for each truck, connecting front corners of trucks with tank-frame. — Safety-chains.

Two tool-boxes, of iron, strongly made, with good locks, and strong strap hinges; to be placed on top of tender. — Tool-boxes.

Particular care to be taken that all bearings of importance have good oil-cups, or cellars, capable of holding a proper worsted syphon or other efficient means of feeding oil. All oil-cups should have proper covers, well secured and dust-proof, as line is very dusty and hot bearings very common. — Lubrication.

Especial care to be taken with boiler, rod, and frame work. Consider interchangeability with previous engines. — Workmanship.

Fire section, as tracing 2,090.

Baldwin Locomotive Works.

Physical Tests of Materials.

All materials used in the construction of the locomotive shall be of the best quality of their respective kinds, carefully inspected, and subject to the following tests. Notwithstanding these tests, should any defects be developed in working, the corresponding part will be rejected.

Boiler-iron.

All boiler iron will be specified C. H. No. 1 flange quality, and must be made from the best charcoal blooms.

A careful examination will be made of every sheet, and none will be accepted that show mechanical defects.

A piece for testing to be furnished from each sheet.

A test piece to be furnished from each sheet, to be tested. Such test strips must show an ultimate tensile strength with the grain of not less than 50,000 pounds, an ultimate tensible strength across the grain of not less lhan 45,000 pounds, and must show a ductility, measured by elongation, of not less than 20 per cent. Should any of the test pieces fail to fulfil the above requirements, the corresponding sheet will be rejected.

Should any plates develop defects in working, they will be rejected.

Each plate must be stamped with the maker's name and the guaranteed tensile strength and elongation as above.

Boiler and fire-box steel.

A careful examination will be made of every sheet, and none will be accepted that show mechanical defects.

Test strips taken lengthwise from each sheet and without annealing should have a tensile strength of 55,000 pounds per square inch, and an elongation of 30 per cent., in section originally 2 inches long.

Sheets will not be accepted if the test shows a tensile strength less than 50,000 pounds, or greater than 65,000 pounds per square inch, nor if the elongation falls below 25 per cent.

Should any sheets develop defects in working, they will be rejected.

Fire-box copper.

Copper plates for fire-boxes must be rolled from best quality Lake Superior ingots; they must have a tensile strength of not less than 30,000 pounds per square inch, and an elongation of from 20 to 25 per cent., in section originally 2 inches long. Test strips must be furnished with each fire-box for testing.

Iron and steel stay-bolts and boiler braces.

Iron or steel for stay-bolts and braces must have an ultimate tensile strength of not more than 60,000 pounds nor less than 50,000 pounds per square inch, with an elongation of not less than 30 per cent., nor undergo a reduction of area of fractured section of more than 35 per cent.

Copper stay-bolts.

Copper stay-bolts must be manufactured from the best Lake Superior ingots; they must have an ultimate tensile strength of not less than 30,000 pounds per square inch, and an elongation of from 20 to 25 per cent., in section originally 2 inches long.

Boiler tubes of steel or iron.

All boiler tubes must be carefully inspected and be free from pit-holes or other imperfections. Each tube must be subjected to an internal hydraulic pressure of not less than 500 pounds per square inch by the manufacturers before delivery. They must be rolled accurately to the gauge furnished by the Baldwin Locomotive Works, filling the gauge to a plump fit. They must be expanded in the boiler without crack or flaw.

When tested, iron or steel tubes must show a tensile strength of not less than 55,000 pounds per square inch, and a ductility of not less than 15 per cent.

Boiler tubes of brass or copper, brass and copper pipes.

Tubes of brass or copper to be of uniform circumferential thickness and solid drawn; to be perfectly round, and to resist an internal hydraulic pressure of 300 pounds per square inch. From the tubes under test, a piece 4 inches long will be cut, annealed, sawn lengthwise, and doubled inside out without showing sign of cracks.

When annealed they must withstand flanging cold a flange $\frac{1}{8}$ of an inch broad for 2-inch tubes without cracking. Copper tubes must withstand flanging hot as well as cold. Tubes other sizes than 2 inches diameter must flange to a width proportional to their diameter.

A piece 30 inches long, annealed and filled with resin, must withstand being doubled until the extremities touch each other without showing defects.

A piece 30 inches long, not annealed, filled with resin, and placed on supports 20 inches apart, must withstand bending to a deflection of 3 inches without showing defects.

Bar iron.

Bar iron should have a tensile strength of 50,000 pounds per square inch, and an elongation of 20 per cent., in section originally 2 inches long. Iron will not be accepted if tensile strength falls below 48,000 pounds, nor if elongation is less than 15 per cent., nor if it shows a granular fracture.

Chilled wheels.

Of approved make, and of following guaranteed mileage:—

For 28" wheels ...	... 40,000 miles.	For 33" wheels... ...	... 50,000 miles.
„ 30" „ ...	... 45,000 „	Other sizes in proportion.	

(Adopted by Joint Committee of Master Car Builders' Association, American Railway Master Mechanics' Association, and Association of Manufacturers of Chilled Car-Wheels, November 21, 1889.)

Deficient mileage will be adjusted upon return of the defective wheel, or that part of same containing the defect causing withdrawal from service. Or, if preferred, wheels will be furnished subject to approved specification and drop test, without mileage guarantee.

Letter

Letter from Mr. Hoyle to Acting Minister for Railways (Sir Henry Parkes, G.C.M.G.)

Dear Sir, Parliament House, 29 July, 1891.

I do myself the honor to apply for an order at your hands as Acting Minister for Railways, empowering me to inspect certain railway plant at Eveleigh Works, which plant, I am led to believe, is defective in construction and unfit for the service for which it has been imported, and generally of a nature to justify the most earnest scrutiny at the hands of the Government.

I do not desire to go to the Railway Works and incur the risk of being treated as an intruder.

When I have satisfied myself as to the statements that have been made I will do myself the honor to communicate with you.

I have, &c.,

To the Honorable Sir Henry Parkes, G.C.M.G. H. C. HOYLE.

Letter from Secretary for Railways to Mr. Hoyle.

Government Railways of New South Wales,

Sir, Secretary's Office, Sydney, 3 August, 1891.

I have the honor to acknowledge your letter of the 29th ultimo, addressed to the Honorable the Premier, asking permission to inspect certain railway plant at Eveleigh, which you are led to believe is defective.

I am directed to say that the Commissioners will feel obliged if you can furnish them with any information as to the defective plant referred to; they are more interested than anyone in securing only sound materials for the railway requirements, and on receipt of further and definite information will have a stringent inquiry made to elicit the facts of the case.

I have, &c.,

H. McLACHLAN,

H. C. Hoyle, Esq., M.L.A., Legislative Assembly. Secretary.

Correspondence between Railway Commissioners and Minister for Railways *re* Mr. Hoyle's statements in Parliament:

Office of the Railway Commissioners of New South Wales, Sydney, 7 October, 1891.

In accordance with the wish of the Minister for Railways, as expressed in his minute of the 2nd instant, we beg to enclose a paper containing extracts from the speech of Mr. Hoyle, M.P., delivered in the Legislative Assembly, on the 20th August last, wherein he makes certain allegations relative to the American engines recently imported. Opposite each is placed the statements of our officers who have been referred to in the matters, together with other information, which bears on the question.

In submitting this paper we think it proper to state that, in our opinion, one of the objects in view by Parliament when we were appointed was the working the railways according to the most modern ideas, so that the greatest possible results could be obtained by the country, and that it was never expected that we should be tied down to working the railways on the lines that were in operation before we took office; as, if so restricted, our appointment would be of no benefit to the country.

It must be remembered that the railways have been constructed with a very large proportion of steep gradients, and the only way (now that the traffic is increasing so rapidly) to stave off an enormous amount of duplication work is to introduce more powerful engines, and so, by taking much larger trains at a better uniform speed, enable the single lines to carry for years to come the traffic which could not be carried with the present class of motive power, or system of short trains, without grave delays and inconvenience. In addition to this, greater safety is obtained by working trains with one engine instead of two.

With regard to the alteration of the platforms and slewing roads. Even admitting that these alterations were necessary to enable the new engines to be introduced, it was wise to incur the expenditure and so enable engines of 65 per cent. more power to be used. The increasing of the weight of engines and improvement of the permanent way of railways has been general all over the world for years past, upon the grounds of true economy, so as to increase the utility of the railways; and if the interests of this country are to be considered, we must follow the same course. Special allusion has been made to the necessity for all our lines being laid with 80-lb. rails in consequence of the introduction of the American engines. It is perhaps well to add to what is stated in the enclosed paper, that no such necessity exists so far as these particular engines are concerned, although it has been proved by experience that where traffic is heavy and incessant, and there is a growing necessity for increasing the speed and weight of trains, it is true economy to use this weight of rail; indeed, the principal English companies are now adopting a rail weighing 90 lb. to the yard. The late Engineer-in-Chief (Mr. Whitton) considered the question of increasing the weight of our Permanent Way with us early in the year 1889, and cordially concurred in the step we proposed to take, and Sir John Fowler also cabled (May, 1889), through the Agent-General, advising us to adopt a heavier section of rail and heavier chair.

With reference to the allegations, as a whole, made by Mr. Hoyle, M.P., in his speech delivered on the 20th August last, it is perhaps well to mention that, in connection with a letter he had addressed to the Premier, a letter was sent to him by our direction on the 3rd August, being seventeen days prior to his speech, stating that we should feel obliged if he would furnish us with any information he might possess with regard to the defective railway plant referred to by him, pointing out that we were more interested than any one in securing only sound materials for the railway requirements, and promising, on the receipt of definite information, to have a stringent inquiry made to elicit the facts of the case. To this communication no reply has been received.

We hope that sufficient information is given to enable the Minister to deal with the matter as he wishes, and we would point out, although it should be quite apparent to every one, that our reputation in working the railways well and economically is of too great value to us to admit of the slightest risk of our doing anything that is not in the interests of true economy, and for the benefit of the country.

W. M. FEHON.

CHARLES OLIVER.

It was my intention to lay these statements concerning the charges made by Mr. Hoyle upon the Table of the House as a return. I trust my successor will do so in justice to the railway management, adding thereto the correspondence which passed between the Treasury and Messrs. Hoyle and O'Sullivan in the endeavour to induce those gentlemen to give to the Railway Commissioners through me any future information they possessed bearing on the matter. I think in the interest of the travelling public, and of the reputation of our railway management, these facts should be made widely known.—B.S., 23/10/91.

Mr. Hoyle's statement :—

"That a large blunder has been made by some officer in the Railway Department."

"The engines that have caused all the trouble were quite unnecessary, and should never have been ordered."

Remarks :—

Nothing of the kind occurred. The necessity for additional engine power was so pressing (as will be seen by subsequent remarks) that prompt delivery was most essential, and as the Baldwin Company offered terms in regard to expedition which were most satisfactory, an order was placed with that firm. The class of engine ordered was similar in type to locomotives which had performed exceptionally good work on the long inclines of the Baltimore-Ohio Railway. After manufacture, and before shipment, one of the engines was tested with the load which the Commissioners specified, and performed its work successfully, fully meeting all the requirements laid down.

So far back as May, 1886 (over five years ago) the then Locomotive Engineer, Mr. Scott, strongly urged that additional locomotives be obtained, stating : "On the northern line there are not sufficient goods engines now in stock to meet the traffic, and when the line is open to Tenterfield we shall have very great difficulty in meeting the increased requirements, so that it is absolutely necessary that more locomotives be supplied at the earliest possible moment." Again, "When the new extensions are opened (Southern and Western lines) an increase to our passenger stock will be indispensable." At the end of 1885 the locomotive stock numbered 392, and the mileage open 1,732 miles. Since that date the mileage has increased (on the date of the last Annual Report, June, 1891), to 2,182 miles, while the locomotive stock had only grown from 392 to 439. Had the engines been increased in proportion to the mileage, the number should have been 500 engines. Again, the traffic receipts in 1885 were £2,174,368 ; in the last financial year they increased to £2,974,421, while, as estimated, the locomotives only increased from 392 to 439. Had the engines been increased in relative proportion to the earnings, the number at the close of June should have been 536, or 100 more than the effective strength. It is not considered that these are the absolute factors to be regarded in determining the number of locomotives required, but they unmistakably illustrate the absolute necessity that existed, if the lines were to be satisfactorily worked, for the locomotive power being greatly augmented.

It may be further mentioned that under date 19th May, 1888, the then Locomotive Engineer reported to the late Commissioner for Railways that, "It is of vital importance that my previous recommendations for increasing the number of passenger and goods engines should receive due and timely consideration."

In the report made by the late Commissioner for Railways, under date the 20th July, 1888—to which the Locomotive Engineer's report referred to was appended—the following paragraph will be found :—

"In my report for 1886 I drew attention to the necessity for the supply of additional locomotives for adequately meeting the requirements of the traffic, and supported the statement by a reference to the statistics of locomotive work performed in Great Britain, in the various countries forming the continent of Europe, and in America, which showed that, with one exception, the locomotives in use on the lines in New South Wales were more heavily worked than the locomotives of any other country. The twenty additional engines supplied during 1887 afforded some relief, but more are required, and it is questionable whether the fifty engines recently ordered from Colonial manufacturers will be supplied in time to meet the demands."

Subsequently he wrote under date 20th October, 1888 (two days before the appointment of the present Commissioners), as follows :—

"The rolling-stock has been fairly well maintained, but the necessity for additional stock in certain classes becomes every day more apparent. The supplies now

Mr. Hoyle's statement :—

He wrote to the traffic manager, asking him what was the load he desired to carry, and the traffic manager replied as follows :—

I return the papers herewith, and from inquiries I have made I find that an engine capable of maintaining a speed of 35 miles per hour on an ordinary road, and of drawing thirteen loaded vehicles up an incline of 1 in 30 or 33 would meet the requirements of the department. I do not mean, of course, that a speed of that kind should be maintained upon such an incline, because that would be impossible. It will be a great desideratum if such an engine can be procured for our passenger trains, because I quite concur with Mr. Midelton, that it is undesirable to have two engines doing the work of one, as they have very frequently to do at present.—W.V.R., 25/4/83. Mr. Midelton.

We are here told that the load to be drawn with safety, with the draw-gear attached to the rolling stock at the present time, was considered to be thirteen loaded railway carriages, or twenty-five loaded goods trucks. Now, I would ask if a train of thirteen vehicles of one class, and twenty-five vehicles of another class, was all that the department considered the draw-gear able to carry, what was the use of ordering an engine from America capable of drawing 100 trucks?

We have ordered from America engines to do work which we have engines here already capable of doing.

During the late strike the traffic in the Railway Department was heavier than ever it was before. Goods could not be carried by sea-board, and the railways were used to their utmost capacity; yet, under those circumstances, we had sufficient engines, and the work was done without any hitch in the traffic. We had plenty of locomotives, and were only deficient in trucks. Although we had plenty of machinery to do that work, immediately

Remarks :—

under order will meet the requirement to a large extent. I have for the last three years pointed out that more locomotives were required. So much time has been lost in obtaining satisfactory contracts that the locomotive now under manufacture by colonial makers will not be supplied in time to meet pressing wants. Tenders have consequently been invited in England and America for the supply of ten locomotives for immediate use."

Of the sixty engines referred to in the paragraphs quoted, fifty were never supplied, as the colonial manufacturers failed to deliver a single engine.

Nothing further need be said as to the allegation that the engines were "quite unnecessary."

Mr. Thow, the Chief Mechanical Engineer, states :—"The reference is no doubt intended to apply to the engine manufactured by the Baldwin Co., and set to work in July, 1885. I have ascertained that the Minister for the day ordered these engines to be tested in 1887, both on goods and passenger trains with loads for passenger trains of thirteen vehicles, and for goods trains of twenty-five vehicles. This was done, and the tests showed clearly that the engines were quite unequal to the work, and the experiment was abandoned on account of delays on the road, and the unsatisfactory working of the traffic. Therefore it is manifestly an improper representation on the part of Mr. Hoyle, no doubt made without personal knowledge, that these engines had taken the loads which he mentions. As a matter of fact, at the present moment—and I may say that the engines are loaded to their utmost capacity—they are scheduled to take twelve small passenger carriages—equal to four of the lavatory type, and eighteen goods waggons loaded, but even then they must be assisted on any grade steeper than 1 in 40, when attached to goods trains. Mr. Hoyle is manifestly speaking from wrong information given to him." Then on the subject of draw-gear. It is a totally different question now since the light draw-gear has practically been entirely removed, thus enabling us to take much heavier trains; but the whole question is not one of draw-gear so much as the greater safety obtained by working-trains with one engine instead of two. It may also be added that the comparative values of the engines should be judged by their relative power to haul given loads up 1 in 40 grades. Unfortunately, to a large extent our loads are determined by this standard, and not by haulage power on the level.

The engines referred to are "passenger engines" and not "goods engines." At the date of these statements no "goods engines" had arrived. On this point, Mr. Thow states :—"Mr. Hoyle is wrong in stating that we have engines here capable of doing the work of those ordered from America. That is not correct. The power of these engines (passenger) must be compared, not with goods engines at present on our system, because they are intended for passenger work; the comparison must be made with passenger engines, and if that is done, for the same speed,—the new passenger engines are 65 per cent. more powerful than the strongest passenger engines at present on our lines. In other words, the most powerful passenger engines we had prior to the arrival of the new American engines are scheduled to take a load of 120 tons up a grade of 1 in 40 at 12 miles per hour. The engines in question will take 200 tons over the same road at the same speed.

Mr. Kirkcaldie, the Chief Traffic Manager, states :—"Our greatest difficulty during the last wool season was due, not so much to the want of waggons as to the insufficient supply of engine-power to move them, and the traffic was on many occasions seriously impeded from this cause. Since then, and even at the present time, notwithstanding the increased power that has recently been obtained, the Locomotive Department is unable at times to supply all

Mr. Hoyle's statement :—

afterwards we find the Government allowing the Commissioners to send to England for over 100 locomotives. Why was it necessary to incur such a large expenditure when we had quite enough locomotives in the country ?

When he (Mr. Neale) got Mr. Thow's back turned, he ordered twelve locomotives to be made on the pattern of those used on the Baltimore-Ohio Railway.

Mr. Neale knew that we only had a 70-lb. rail on our main lines, with the exception of a few rails lately laid down on the suburban lines. But the Baltimore and Ohio railway authorities were running their engines on an 80-lb. rail, and an order was sent that the new engines were to be made a little lighter. And what was the result? According to the daily papers, these engines were brought here to haul a load infinitely greater than could be drawn by any engine at present in the Colony. We find that by making the engines a little lighter there is too much power in the cylinder. There is an excess of weight on the driving wheels, and whenever the full power of the cylinder is used, instead of the engine pulling the load, the wheels skid round and do not draw the load at all.

That whereas, when Mr. Midelton was in the service, he reduced the types to three, we now find that there are forty-seven types. This means a large additional expense, as distinct stocks of patterns are required for each part of the engine.

I am informed, on what I believe to be very high authority, that these engines are decidedly of a very defective character. I am told that the wheels of one of the engines had to be taken into the shop and put into the turning lathe. The engine had not been out more than four times when she was brought back into the shop and had to be lifted and the wheels put into the lathe and turned. I am also told that four spokes either in the driving wheels or the trailing wheels were broken.

It is a serious defect of the engines that they are too wide for the platform.

Remarks :—

the engines required. This is especially noticeable on the days immediately preceding the live stock sales at Homebush, when the demand for engine-power is so great for the haulage of stock, that wool and other produce is frequently delayed. In view of the undue strain to which our locomotives have for a long time been subjected, I am decidedly of opinion that the increased traffic could not possibly be coped with, either with credit to ourselves or to the satisfaction of the public, unless the engine-power is very considerably added to."

Mr. Thow further states :—"Mr. Hoyle is also assuming that we had sufficient engine-power to do the business of the country last year. It is true that by unusual efforts and by suspension of proper repairs, the work has been done; but it resulted in a strain on the locomotive stock to an extent, which it would not possibly endure if repeated. The fact that nearly two-thirds of our engine stock available for work, averaged over 25,000 miles, and that many of them exceeded 40,000 miles during the year, is a proof, from an engineering point of view, that the engines were being unduly distressed, necessitating an abnormal and improper expenditure for repairs. The average mileage in England is about 18,000 miles per engine per annum."

This is quite incorrect. Mr. Neale had nothing to do with the matter. The engines were ordered by the Railway Commissioners under the circumstances previously stated.

By cable received from Messrs. R. W. Cameron & Co., agent for the New South Wales Government in America, the inaccuracy of the statement as to the weight of rail used by the Baltimore-Ohio Co. is confirmed. Their standard rail is 67 lb. (steel). As to the power of the cylinders Mr. Thow states :—"Mr. Hoyle is misinformed as to the power of the cylinders being so great as to skid the wheels of the new American engines. This is not the case. The engines are well proportioned in that respect, and they do not skid, or rather slip, that being what Mr. Hoyle means, unless they are working over a greasy rail in damp weather or in tunnels, and any engine would, under similar circumstances, do so."

Mr. Thow states :—"Mr. Hoyle is also quite misinformed on the subject of types of locomotives. When the Commissioners took office, there were forty-two types, and they are still in use, but as new engines are obtained, the types are being reduced."

Mr. Thow states :—"Mr. Hoyle is also misinformed as to the alleged defects in the new passenger engines. It is true that one of the engines has had the wheels removed and placed in the lathe, but that was due simply to a flat place having been worn in the wheels in consequence of the driver reversing the engine and putting on steam suddenly and under most exceptional circumstances, in no way due to the engine so as to stop his train as quickly as possible. The same thing would have occurred with any engine that a driver had handled in so smart a manner. As to the statement that four spokes were broken in these wheels it is incorrect."

Mr. Thow states :—"I find that the specification sent to America definitely stated that the width over cylinders of the new Baldwin engines in question was to be 9 ft. 3 in. This width is less by $\frac{1}{4}$ of an inch than the width of the cylinders of the consolidated engines which have been running in the Colony since 1879.

"The actual width over the castings of the new engines varies from 9 feet 3$\frac{1}{4}$ inches to 9 feet 4$\frac{5}{8}$ inches. The maximum average width is 9 feet 3$\frac{13}{16}$ inches, or $\frac{13}{16}$ inch wider than the limit ordered by the specifications. The makers' drawings show that the width intended by them is 9 feet 3 inches, as specified. The width over the Mann car, which was ordered prior to the Commissioners taking office, at the same

Mr. Hoyle's statement :

I am informed that one of them is now at Newcastle, and that another has been lifted four times.

Another point is that, according to the latest information from the cleverest men in the United States, from boards of railway management there, these engines cannot run with safety on a rail less heavy than 80 lb., and therefore if we run them on our main trunk lines, we shall have to lay down a new permanent way from Granville to Albury, from Granville to Bourke, and from Strathfield to Wallangarra.

I challenge the Railway Department to put these engines into competition with those lately designed by Mr. Thomas Midelton, and to give them a trial similar to that made in 1887. I am willing to stake my existence on the fact that we have engines in the service that can do anything to be done by these engines from America, and it would be cheaper to throw them on the stack heap than to relay the permanent way as I have described.

Remarks :—

height from the rail as the engine cylinders, is 9 feet, but its width over the body, which is above the level of the cylinders, is 9 feet 4 inches. Although the engines are slightly wider than laid down in the specifications, the difficulty with the platforms has been for the most part created by the standard adopted by the late Engineer-in-Chief, Mr. Whitton, not having been maintained or observed. This departure has given great trouble with old stock, and the direction to place the platforms to gauge had been given long before the American engines were ordered."

Mr. Thow states :—"No extensive alterations have been made. The locomotives have not yet failed through any defect in workmanship. Some slight alterations have been made to give greater security to the men, such as short hand-rails on the tenders, and a locking-catch on the reversing screws. The cost of the hand-rails, about 15s. for each engine, will be borne by the Department, and the cost of the locking catches will be charged to the manufacturers. There has not been any work done upon these engines of an unusual character. All new engines give a little trouble at first, no matter where they come from, and some that were imported in 1885 and 1887 gave far more trouble and cost a larger amount."

This is altogether fallacious. Messrs. R. W. Cameron & Co., agents for the New South Wales Government in America, cabled, on 28th August last, that this class of engine is in general use in America with favourable results, weight better distributed and less destructive of rail, and that the Baltimore-Ohio Co. use 67 lb. steel rails, and not, as stated, 80 lb. It may be here specially noted that engines with a greater weight per axle have been running upon our lines for years. As "the cleverest men in the United States" are not mentioned by name, it is difficult to determine who are referred to. It is, however, worthy of mention that the Committee appointed by the Master Mechanics' Association (the Locomotive Superintendents of the United States) state (June, 1891) that the limit of weight in their opinion is 14 tons 6 cwt. per axle for rails under 60 lb., and 16 tons for rails above that weight. They further recommend for fast passenger and goods traffic a ten-wheeled engine, similar to those obtained from the Baldwin Co., and having 14 tons 15 cwt. on the driving-wheels, being almost exactly the weight of the engines under discussion. They also state that engines with ten wheels are safer on crooked roads than Mogul engines of the type referred to by Mr. Hoyle.

Mr. Thow states :—"As to Mr. Hoyle's challenge to the Railway Department to put these engines in competition, and to give them a trial similar to that made in 1887, I have already shown that the engines referred to failed utterly in that trial with the loads which the Minister ordered they should be tested with, and it would simply be a ridiculous experiment to hold any competition whatever between engines which have an absolute power of something like 65 per cent. more than the engines referred to by Mr. Hoyle can exert." As to repetition about relaying permanent way, see previous reply.

The attached excerpts* from *Hansard* contain Mr. Hoyle's speech, in which he charges the Railway Department with certain maladministration and blundering, in connection with the ordering of certain locomotives from America and England. In order that these charges may be fully and completely dealt with, I desire the Railway Commissioners to call upon the respective officers, most competent for the purpose, to report upon these several charges, as numbered, in the order of their rotation. I should like the reports to be full and conclusive, as it is my intention to write a minute upon them when they are before me, and, ultimately, to lay the charges and the reports, together with my minute, upon the Table of the House in the form of an answer to Mr. Hoyle's speech. I should like this matter to be dealt with as promptly as possible, as it has already stood over some time since the speech in question was delivered.

BRUCE SMITH,
2/10/91.
H.

*See marginal extracts from Mr. Hoyle's speech.

H.

Sir, Parliament House, 2 September, 1891.

I do myself the honor to acknowledge receipt of your letter of the 1st inst., again inviting me to favour Mr. Bruce Smith with a call, in company with Mr. O'Sullivan, M.P., to supply any information of value on the subject of the lately-imported American engines, and offering the assurance of the Treasurer that the information to be supplied by me shall be held as confidential.

In reply, I have the honor to intimate that in my letter of the 27th ultimo I have already declined to act as public prosecutor in any such form of inquiry.

That I have stated as my opinion that Mr. Smith does not possess the necessary knowledge to hold an inquiry of the kind which the public demands.

That no inquiry short of the most searching investigation on the part of a Select Committee of the House, on oath, will be effective.

That I have offered to provide such Committee with all the information and names at my disposal; and further, I would point out that the offer of any information to be considered confidential has no weight with me.

I desire no assurance and no screening in the discharge of my public duty, and I again urge the Minister for Railways to consent to an inquiry of the kind I have suggested, and which the Premier promised.

In conclusion, I assert that the use of these American engines lately imported to drag heavy loads, and to run on our steep gradients, on our lines, is a public danger; and I warn the Minister that any paltering on his part with the gravity of this question endangers the safety of the travelling public, and the responsibility of any accident which may happen must rest on the backs of those who delay the only investigation that will satisfy the Parliament and the people.

I await your reply before bringing this correspondence before the House.

I have, &c.,

F. Kirkpatrick, Esq., Under-Secretary, Treasury. H. C. HOYLE.

Seen.—B.S., 3/9/91. Correct this misinterpretation. Inform Mr. Hoyle that it was only the *source* of the information I promised to regard as confidential, in deference to his disinclination to appear as a public prosecutor. This should be regarded as one of the charges to be dealt with.—B.S. Mr. Galloway.—F.K., 3/9/91. Mr. Hoyle informed.—F.G., 3/9/91. Records.

My dear Sir, Parliament House, Sydney, 27 August, 1891.

The accompanying letter to the Minister is of the greatest importance, and I will be much obliged if you will kindly put it before the Minister at once.

Yours, &c.,

H. C. HOYLE.

Submitted.—F.K., 28/8/91. Fix 12 noon, Sept. 3, for hearing any information which those gentlemen, Messrs. Hoyle, Midelton, or O'Sullivan, have to give.—B.S., 28/8/91.

My dear Sir, Parliament House, Sydney, 27 August, 1891.

I have the honor to acknowledge your letter of the 25th instant, in which you inform me the Honorable the Colonial Treasurer has determined to inquire personally into the whole matter of the lately-imported engines for the Railway Department, and asking if it would be convenient for me to meet Mr. Smith with a view to the grounds of my complaint being fully stated as a basis for such inquiry.

In reply, I beg to state that my complaint with regard to the inquiry in question is not of a personal character, but made for the purpose of bringing before Parliament certain evidence which has been communicated to me in the interests of the public, and from statements made, as I believe, of a reliable character, and of so serious a nature as to demand instant inquiry.

The Premier fully comprehended, and stated in his reply to me on Thursday last, *vide Hansard*, No. 12, page 1103, what the duties of the Government are in this matter, and the rights of Parliament.

I do not think an inquiry by Mr. Bruce Smith will sufficiently develop the gravity of the charges to be inferred from my statements, and any individual inquiry, even by a Minister of Mr. Bruce Smith's ability, will fail in obtaining the necessary information upon which a sound conclusion can be arrived at; and further, I decline to place myself in the position of a public prosecutor.

But I venture respectfully to point out that the whole truth in regard to these engines can only be obtained and brought to light in such a manner as will give confidence to the Parliament, the Government, and the public, by the most searching inquiry before a Select Committee of the ablest men of the House, at which the Government can be fully represented, and by obtaining all the evidence upon oath of the several witnesses; and that the inquiry should be searching and complete, I will gladly furnish such Committee with the names of the parties who can give evidence, and such Committee further can see with their own eyes many of the faults which such a form of inquiry will elicit.

I have, &c.,

F. Kirkpatrick, Esq., Under-Secretary for Finance and Trade. H. C. HOYLE.

Office of the Railway Commissioners of New South Wales,
Sydney, 7 November, 1891.

The Honorable the Minister for Railways.

With reference to our minute of the 7th ultimo, we beg to report for your information that three of the Baldwin passenger engines have shown weakness in the axles of the bogie carriages. The weakness in these parts points to the desirability of removing the engines from express passenger traffic until the cause can be fully ascertained, and this has been done. At the present time it would be unwise to cast the responsibility upon the manufacturers, but it is proper to state that the description given of the engines when ordered in no way warranted locomotives being supplied which were not fully equal in every respect to express service.

In

In order that no misunderstanding may arise as to the particular axles referred to, it is desirable to say that they are those under the bogie carriages in the front of the engine, and not the axles of the driving-wheels, which have shown no defects.

As regards the engines, they have done excellent work, and are favourably spoken of by the drivers who have worked them. We propose to put in stronger axles, and in this way expect the defect to be cured.

Although the engines have been taken out of the "Express service," they will be most advantageously used in other work, and prove, owing to their large hauling power, a most useful addition to our locomotive stock in the present time of pressure.

W. M. FEHON, Commissioner.
CHARLES OLIVER, Commissioner.

Office of the Railway Commissioners of New South Wales,
Sydney, 18 November, 1891.

As desired by the Minister for Railways, we beg to furnish him (in addition to the information we have previously been able to afford) with particulars of the circumstances under which the Baldwin engines were ordered, and experience of them since delivery.

It will be remembered that when we took office the engine-power of the New South Wales Railways was quite unequal to the then existing traffic, and consequently there was no hope of coping with any expansion of it. At that time there were under order in Sydney (the order having been given in December, 1887) twenty-five passenger engines from the Atlas Company, and twenty-five goods engines from T. Wearne & Co., but neither of these companies delivered an engine. In January, 1889, ten passenger engines were ordered from Messrs. Dubs & Co., of which five were delivered in January, 1890, and the balance in April of that year. In August, 1889, an order was given to Messrs. Dubs & Co., for twenty-five goods engines, which were delivered in February, March, April, June, and July, 1891. In the same month (August, 1889) six tank engines were ordered from Messrs. Beyer, Peacock, & Co., which were delivered in January, February, and March, 1891. In June, 1890, a further order was given to Messrs. Beyer, Peacock, & Co., for another six tank engines, which were delivered in June and August, 1891. To this date (and here it must be borne in mind that the traffic had increased from the date of the ordering of the fifty engines from the Atlas Company and Messrs. T. Wearne & Co. from £3,212,718 to £2,633,086, an increase of £420,368) we had only ordered forty-seven engines out of fifty it was deemed necessary to order nearly three years previously, and that out of the forty-seven engines thus ordered thirty-seven were not delivered until four years after the order for the fifty engines—indeed, the delivery of the majority exceeded that period.

The pressing necessity for engine-power continued, and could not be resisted, and in August, 1890, an order was placed with Messrs. Beyer, Peacock, & Co. for fifteen double bogie tank suburban engines, of which only six have been delivered. The struggle to meet traffic requirements was immense, and the cost of repairing and patching up worn out engines ruinous, and we had for a considerable time recognised the necessity of something being done to make better provision for the supply of engines, both as regards more expeditious delivery and better supervision. So far back as May, 1889, we addressed a letter to the Minister for Railways, urging that steps be taken to establish locomotive works, and for a time it appeared that this would be attended with success. However, the negotiations ultimately fell through, chiefly, we believe, in consequence of the price tendered by the firm who contemplated opening works being too low to leave a fair margin of profit.

Before we were aware that the parties whose tender had been accepted (and it may here be mentioned that the inducement to establish the works was an order for 100 engines at a specified price and subject to certain conditions, full particulars of which are given in papers printed by order of the Legislative Assembly, under date the 1st May, 1890) would retire from the contract, and, in order to save time in commencing the manufacture of the locomotives, we sent Mr. Thow, the Mechanical Engineer, to England, to confer with the Engineer of the Company, and settle details of the engines, so that he could commence to build with the least possible delay after arrival in the Colony. On Mr. Thow's arrival in England, he found that there was a disinclination to go on with the contract. This upset all our calculations as to obtaining engines, and we had to adopt some other course. It was decided, if the contract fell through, to place some orders with Messrs. Dubs & Co. and Messrs. Beyer, Peacock, & Co.; but much difficulty was experienced in getting these firms to accept orders for the delivery of engines within a reasonable time, they being so full of home and foreign orders. While matters were in this unsettled state, and after much consideration, we determined (12th September, 1890) to order twelve passenger engines from the Baldwin Company, and selected a type of engine which had done excellent work on the Baltimore and Ohio Railway, and here we wish it to be most clearly understood that we adopted this course to meet to meet the pressing necessities of the traffic, relying on the world-wide reputation of the Baldwin Company to supply good engines of the class mentioned (with specified modifications to meet our requirements), and in addition to this ensuring prompt delivery.

On the 10th October, 1890, we were apprised of the breaking of the contract for the establishment of locomotive works in the Colony, and took steps to make the best terms we could with Messrs. Dubs & Co. and Messrs. Beyer, Peacock, & Co. Eventually an order was given to the former for twenty mineral tank engines, and the latter for fifty passenger engines. Although prompt delivery was pressed for, it soon became clear to us that it could not be relied upon, indeed, although some of the engines have been shipped, none have yet arrived.

Again we felt it necessary to take some special steps to obtain engines promptly, as without increased locomotive power we could not hope to cope with the anticipated increased wool traffic, and on the 29th December last we ordered twenty goods engines of a specified class from the Baldwin Company.

The twelve passenger engines ordered from the Baldwin Company in September, 1890, were delivered in July last, and the twenty goods engines in September.

As already reported, the passenger engines, while proving highly satisfactory as regards hauling power, have shown defects in construction. These defects are reported to be mainly as follows:—

(1) Heating of axle-boxes of the engine and tender bogies.
(2) Breaking of engine bogie and tender axles.
(3) Breaking of reversing lever fulcrum pin.

The heating of the axles is due to defective construction of the brasses added to by unsuitable material having been used for packing. The Baldwin Company were specially instructed in regard to this matter as follows:—"Particular care to be taken that all bearings of importance have good oil-cups or collars capable of holding a proper worsted syphon or other efficient means of feeding oil. All oil-cups should have proper covers well secured and dust-proof, as our line is very dusty, and hot bearings are very common."

The breaking of the three engine bogie axles is due to defective material, the faulty axle-box only being a contributory cause to the failures.

The failure of the reversing gear is consequent upon the bolt which secures the reversing lever to the bracket in the boiler breaking. The bolts have been strengthened. This, however, is but a trifling defect.

The driving axle-boxes of the coupled wheels are also reported to have undue lateral wear. This will be remedied by a slight addition to the axle-boxes.

It is further reported that the engine brake-rods have in some instances broken at the joints, owing to bad workmanship.

In two instances the fire-box roof, stays, and tubes have leaked; but the appearance of the lead plugs points to this having arisen from shortness of water, which is of course the result of carelessness, and not a defect in the engines.

Some additions to the reversing screws have been necessary, and the tender draw-hooks are lighter than our present standard.

All the defects mentioned are capable of being remedied, and the Baldwin Company will be called upon to bear the expense.

As regards the defective bogie axles, which is really the only important matter, they have already despatched fresh axles from America to take their place.

With regard to the specified alterations which necessitated departure from the type of Baldwin engine selected as a pattern, it is thought desirable to attach a copy of a letter from Mr. Rhodes, their engineer here, on the subject. Mr. Thow, our Chief Mechanical Engineer, has also expressed his views, and a copy of his memo. is appended.

We hope to be able to acquaint you upon an early date of the final result of the investigations now being made, and also as to the settlement arrived at with the Baldwin Company.

No one regrets more than we do the failure of the engines, yet we feel sure that the reputation of the Baldwin Company, in which we placed so much reliance at a time of unprecedented pressure, and, indeed, inextricable difficulty for want of engine power, for which we were in no way responsible, will be of too great value to them to allow the Colony to suffer any loss from defects in the locomotives supplied.

While the engines have not met our expectations they are doing good work, the material failures occurring when the passenger engines have been called upon to run long distances at a high rate of speed. As stated in our minute of 7th November, these engines have, for a time, been taken out of fast passenger work, and otherwise profitably employed.

W. M. FEHON, } Railway
CHARLES OLIVER, } Commissioners.

There is ample money in hand on account of the purchase of the Baldwin engines to defray the cost of making good any defects found in them.

W.M.F.
C.O.

[COPY OF ENCLOSURE.]

Sydney, 17 November, 1891.

The Secretary, New South Wales Government Railways,—

Dear Sir,

Referring to your personal request that I would inform you how the engines *ex* Henley differ from those of a similar class in America, I have the honor to report as follows:—

The difference between them is that the former have copper fire-boxes and brass tubes, screw reversing gear, screw engine and tender brakes, and a few other minor details.

The pattern Baldwin engine has only been departed from to keep the engines within a limit of weight, height, and width, and I do not consider any of these departures an element of weakness.

I have, &c.,
WM. RHODES.

The Secretary, Eveleigh, 18 November, 1891.

Referring to your minute of even date, as I have before expressed, I am unable to say that there is any difference between the American engines which are running there and those sent to this country, with the exception that our engines have copper fire-boxes and brass tubes, instead of steel, generally used in America; but that alteration would undoubtedly be in favour of the engine. I am not aware of any alterations made here that could possibly "affect the stability" of the engines, nor, indeed, of any alterations of a material character whatever, beyond adding a few details to make the engines work better; certainly nothing has been done here to my knowledge which would be an "element of weakness" in them.

W. THOW,
Chief Mechanical Engineer.

Office

Office of the Railway Commissioners of New South Wales, Sydney, 24 November, 1891.

SINCE writing our minute of the 18th instant we are in receipt of the attached cable from Messrs. R. W. Cameron & Co., agents for the New South Wales Government in the United States. Some doubts having been raised as to whether the Baldwin passenger engines recently supplied were capable of running at so high a rate of speed as is required in our express service, inquiry was made of Messrs. R. W. Cameron & Co., which resulted in the receipt of the wire just previously referred to.

It will be seen that in America these engines run up to a time-table speed of 50 miles per hour, so they should be quite equal to our express service.

From the cable it would also appear that the engines of this class are highly thought of by leading railway companies.

As regards the opinion expressed in the cable as to cause of failure, it has been already reported as a contributory cause; but the primary cause is the defective material in the axles.

W. M. FEHON, } Railway
CHARLES OLIVER, } Commissioners.

Copy of Telegram from New York, dated 21 November, 1891.

HAVE returns, nine railroads using similar engines, distance 100 to 300 miles; weight of cars, 185 tons, 380 tons, Baltimore-Ohio, Michigan Central and Erie Roads; speed per time-table up to 50 miles per hour. Erie considers them best engines built; just placed order with Baldwin for forty-five; intend equipping their entire roads. Opinion expressed cause of failure bogie axles improperly lubricated or sand heating bearing journals.

Re Repairs, Baldwin Engines.

Office of the Railway Commissioners of N. S. W., Sydney, 5th May, 1892.

I HAVE the honor to forward herewith information as asked for with reference to the cost of repairs of the Baldwin locomotives recently supplied.

I may say I have omitted the cost of repairs in connection with the replacement of the axles which were admittedly defective, and the cost of which was charged against the Baldwin Company, as shown in statement already put in.

12 Passenger Engines.

The cost of repairs and alterations have been as follows, and statements are attached giving details:—

	Total.	Average per engine.
A. Alterations	£113 9 10	£9 9 2
B. Shop repairs (excluding cost of repairs through accident, £79 9s. 10d.)	375 17 4	31 6 5
C. Running repairs	481 2 7	40 1 11

With regard to the first item I may point out that the cost was principally for small extras which the makers could not be called upon to supply, and which we, in conformity with our practice, thought it well to provide; such as fixing hand rails in front of tenders, fixing coal board to tenders, shield plates for fire-room doors, frames for departmental notices in cabs, part costs in connection with testing axles, and for slight alterations to brake-gear and shoes.

With regard to the cost of shop repairs, the heaviest items were in connection with repairs necessitated through errors on the part of employés.

The running repairs, considering the work the engines have done (being seven months at work and running 213,861 miles) are reasonable.

20 Goods Engines.

The cost of repairs to Goods engines have been as follows; details attached:—

	Cost.	Average.
A. Alterations	£340 18 3	£17 0 11
B. Shop repairs (excluding cost of repairs through accidents, amounting to £198 11s. 11d.) ...	51 17 2	2 11 10
C. Running repairs	662 12 11	33 2 8

As before explained, we have ordered a number of small extras aggregating in cost £340 18s. 3d., the work embracing fitting lamps and irons and coal boards, additional water gauges, tender bogie hook (repair) and adding stays and arm of tender brake shaft, fitting hand rails to tenders, 2 foot-boards each engine, shield-plate, fire-door ring, frames for departmental notices in cabs, fitting strainers to manholes of tanks, alterations to brake shoes and gear, additional water carrying capacity for special purpose.

With regard to the shop repairs, the largest items were for repairs through damage done by slight collisions, &c.

The shop repairs are reasonable when compared with the work the engines have done.

I also furnish below statement showing cost of repairs to 10 Dubs engines (436 class) when first run, and prepared in same way as those referring to repairs in connection with the Baldwin engines. The totals are as follows:—

	Cost.	Average.
A. Alterations	£327 12 6	£32 15 3
B. Shop repairs (excluding cost of repairs through accidents)	316 19 7	31 13 11
C. Running repairs	417 7 8	41 14 9

H. McLACHLAN,
Secretary.

Alterations, &c., debited to the Department—12 Passenger Engines.

No. of order.	Date of issue.	Particulars of work.	Date of completion.	Expenditure to the 11th February, 1892.	Expenditure from 11th February, 1892, to 26th March, 1892.	Total expenditure to 27th March, 1892.
				£ s. d.	£ s. d.	£ s. d.
3,427 } 3,481 }	30/10/91	One moiety of cost of testing axles	31/12/91	16 19 3	.....	16 19 3
T. 48	25/9/91	One half of cost of finishing work not completed. Nos. 446, 450, 2, 4, 6, 7	3/12/91	23 10 4	.....	23 10 4
3,230	30/7/91	Fixing hand rails in front of tenders	10/9/91	32 1 3	.....	32 1 3
3,265	14/8/91	Fixing coal boards to tenders	.....	4 14 10	.....	4 14 10
3,360	24/9/91	Shield plates for fire door rings	28/1/92	3 16 0	.....	3 16 0
3,376	2/10/92	Making frames for notices in cabs	.....	0 18 9	.....	0 18 9
3,424	29/10/91	Fitting strainers in manhole of tanks	28/1/92	12 5 0	.....	12 5 0
3,579	27/1/92	Alterations to brake shoes	25/2/92	3 9 5	.....	3 9 5
3,594	1/2/92	,, reversing gear	.....	0 5 4	11 1 3	11 6 7
3,635	25/2/92	,, valve buckles	.....	.....	4 8 5	4 8 5
				98 0 2	15 9 8	113 9 10

Shop Repairs to 12 Passenger Engines.

No. of engine.	Where required.	Details of repairs.	Wages.	Stores.	Charges.	Total.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
446	Eveleigh	Lining engine boxes	16 14 8	6 6 11	4 3 8	27 5 3
447	,,	,, ,,	16 14 8	6 6 11	4 3 8	27 5 3
448	,,	,, ,,	16 14 8	6 6 11	4 3 8	27 5 3
449	,,	Accident repairs in consequence of accident at Clyde. (Crosshead slipper lined up, &c.)	50 3 11	3 19 3	11 0 9	65 3 11
		Lining engine boxes	16 14 8	6 6 11	4 3 8	27 5 3
450	,,	Wheels turned through flats in tires	20 14 9	.....	4 11 4	25 6 1
		Lining engine boxes	16 14 8	6 6 11	4 3 8	27 5 3
		Straightening foot-plate damaged by derailment of engine at Wollongong	10 14 0	1 0 1	2 11 10	14 5 11
		Repairing axles-boxes of tender and fitting steel plates to lower tender	2 13 3	.....	.....	2 13 3
451	,,	Lining engines boxes	16 14 8	6 6 11	4 3 8	27 5 3
452	,,	,, ,,	16 14 8	6 6 11	4 3 8	27 5 3
453	,,	,, ,,	16 14 8	6 6 11	4 3 8	27 5 3
454	Eveleigh Running Shed.	Fitting bogie axles to engine—new bogie axle boxes, new tender axle brasses and liners fitted, all engine axle boxes keeps taken down and repacked	8 8 0	.....	.....	8 8 0
455	Eveleigh	Lining engine box	16 14 8	6 6 11	4 3 8	27 5 3
456	,,	,, ,,	16 14 8	6 6 11	4 3 8	27 5 3
457	,,	Bogie and cow-catcher repaired, damaged in Sydney yard	29 18 10	2 6 2	7 7 3	39 12 3
		Lining engine boxes	16 14 8	6 6 11	4 3 8	27 5 3
			306 14 1	77 1 7	71 11 6	456 7 2
		Less cost of repairs thorough collisions and derailments, and not due to faulty workmanship. No. 450 ..... £14 5 11	60 17 11	4 19 4	13 12 7	79 9 10
		No. 449 ..... 65 3 11				
			245 16 2	72 2 3	57 18 11	376 7 4

Twelve Baldwin Passenger.

Shop Repairs.

	Numbers and Cost of each.												
	446.	447.	448.	449.	450.	451.	452.	453.	454.	455.	456.	457.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Eveleigh Shops	27 5 3	27 5 3	27 5 3	92 9 2	69 10 6	27 5 3	27 5 3	27 5 3	.....	27 5 3	27 5 3	66 17 6	446 19 2
Do Running Shed	.....	.....	.....	.....	.....	.....	.....	.....	8 8 0	.....	.....	.....	8 8 0
Penrith	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bathurst	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nyngan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Picton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Goulburn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Junee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newcastle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Murrurundi	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Armidale	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total £	27 5 3	27 5 3	27 5 3	92 9 2	69 10 6	27 5 3	27 5 3	27 5 3	8 8 0	27 5 3	27 5 3	66 17 6	455 7 2

Running Repairs.

Eveleigh Shops	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do Running Shed	15 18 9	8 1 4	12 1 9	15 16 3	6 1 0	13 4 8	4 0 10	6 5 10	7 4 0	7 2 7	8 19 11	18 1 1	122 18 0
Penrith	1 1 3	.....	1 8 0	.....	3 5 5	7 0 7	1 9 0	.....	1 5 3	3 6 3	12 8 9	3 9 7	34 12 1
Bathurst	17 7 8	19 1 3	14 19 3	8 13 2	20 12 3	.....	13 12 6	4 0 0	13 4 2	12 7 1	.....	21 2 5	144 19 9
Nyngan	10 6 6	14 4 8	.....	4 4 8	.....	.....	0 3 4	13 5 8	.....	1 8 8	.....	0 19 4	44 12 10
Picton	.....	.....	.....	0 4 10	.....	.....	.....	.....	.....	.....	.....	.....	0 4 10
Goulburn	.....	.....	5 2 4	9 5 6	.....	4 19 5	6 12 6	4 10 9	3 19 7	6 13 4	5 11 6	.....	46 14 11
Harden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Junee	.....	.....	.....	.....	.....	.....	8 7 7	5 14 6	.....	.....	16 15 1	.....	30 17 2
Newcastle	5 19 0	.....	4 15 7	.....	8 7 6	7 17 5	.....	2 12 9	3 17 8	4 15 9	.....	7 19 7	46 5 3
Murrurundi	.....	.....	1 4 10	.....	.....	.....	.....	.....	0 18 1	.....	.....	.....	21 2 11
Armidale	.....	.....	.....	.....	.....	.....	.....	.....	7 14 10	.....	.....	.....	7 14 10
Total £	50 13 2	41 7 3	39 11 9	38 4 5	38 6 2	33 2 1	34 5 9	36 9 6	38 3 7	35 13 8	43 13 3	51 12 0	481 2 7

Alterations, &c., debited to the Department.—20 Consolidation Engines.

No. of order.	Date issued.	Particulars of work.	Date of completion.	Expenditure to 11th February, 1892.	Expenditure from 11th February, 1892, to 27th March, 1892.	Total expenditure to 27th March, 1892.
				£ s. d.	£ s. d.	£ s. d.
3,344	22/9/91	Fitting lamps and irons, also coal boards	3/12/91	34 10 10	.....	34 10 10
3,386	6/10/91	Fitting one additional water gauge, and carrying main air-pipe to front	.....	81 6 5	4 7 9	85 14 2
T 43	21/9/91	Repairing tender bogie hook, two diagonal stays, and arm of tender brake-shaft	3/12/91	27 14 4	.....	27 14 4
3,327	16/9/91	Fitting hand-rails to tenders, and making 20 wrenches for oil cups	28/1/92	38 2 3	.....	38 2 3
3,387	30/9/91	Fixing two foot-boards to each engine	3/12/91	22 14 2	.....	22 14 2
3,496	2/12/91	Alterations to bolt in large end of connecting rod	.....	1 10 6	.....	1 10 6
3,350	24/9/91	Shield plates for fire door-rings	28/1/92	6 5 2	.....	6 5 2
3,376	2/10/91	Making frames for notices in cabs	.....	1 11 8	.....	1 11 8
3,424	29/10/91	Strainers in manholes of tanks	28/1/92	20 6 9	.....	20 6 9
3,578	27/1/92	Alterations to engine brake-shoes	25/2/92	2 18 11	4 17 9	7 16 8
3,594	1/2/92	Alterations to reversing gear	.....	.....	18 18 4	18 18 4
3,652	3/3/92	Providing additional water carrying capacity, tender No. 497	.....	.....	75 13 5	75 13 5
			£	237 1 0	103 17 3	340 18 3

Shop Repairs to 20 Consolidation Engines.

No. of engine.	Where repaired.	Details of repairs.	Wages.	Stores.	Charges.	Total.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
483	Bathurst	Repairing damage caused by collision at Kerr's Creek	64 2 6	0 13 0	14 2 11	78 18 7
486	Eveleigh	Firebox examined, and leading tire lined up	10 11 8	1 2 1	2 12 3	14 6 0
488	Eveleigh	Firebox examined, tubes repaired, and stays caulked	11 0 4	1 12 2	2 14 2	15 6 8
492	Bathurst	Extensive repairs caused by engine being in collision	27 2 0	.....	.....	27 2 0
498	Eveleigh	Ash-pan taken down; 230 ferrules taken out at firebox end; 7 tubes taken out and brazed, tubes fitted; all tubes expanded and ferruled both ends; 257 crown stays caulked; seams of copper table plate caulked	16 18 2	1 1 10	4 4 6	22 4 6
501	Eveleigh	Left cylinder repaired, damaged by collision at Eveleigh coal stage	68 0 6	7 10 9	17 0 1	92 11 4
			197 15 4	11 19 10	40 13 11	250 9 1
		Less cost of repairs through collisions and derailments, and not due to faulty workmanship. (No. of engine: 483, £ s. d. 78 18 7; 492, 27 2 0; 501, 92 11 4)	159 5 2	8 3 9	31 3 0	198 11 11
			£	38 10 2	3 16 1	9 10 11	51 17 2

Shop Repairs.

Numbers and Cost of each Engine.

	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Eveleigh Shops	.....	.....	.....	14 6 0	.....	15 6 8	.....	.....	.....	.....	.....	.....	.....	.....	.....	22 4 6	.....	.....	92 11 4	.....	144 8 6
,, R'g Shed	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Penrith	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bathurst	78 18 7	.....	.....	.....	.....	.....	.....	.....	.....	27 2 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	106 0 7
Nyngan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Picton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Goulburn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Junee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newcastle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Murrurundi	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Armidale	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals...£	78 18 7	.....	.....	14 6 0	.....	15 6 8	.....	.....	.....	27 2 0	.....	.....	.....	.....	.....	22 4 6	.....	.....	92 11 4	.....	250 9 1

Running Repairs.

	483	484	485	486	497	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Eveleigh Shops	.....	.....	.....	.....	1 0 4	1 3 0	0 5 6	.....	0 4 0	.....	.....	3 1 6	5 19 8	0 0 4	0 2 8	1 3 8	0 0 8	1 4 4	.....	7 17 1	22 2 9
,, R'g Shed	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Penrith	0 16 0	47 0 10	20 6 9	4 8 0	29 9 4	27 0 1	9 8 7	6 13 11	25 17 6	1 16 4	8 16 8	0 4 3	1 5 6	1 13 8	31 5 5	11 0 6	36 9 0	21 5 6	19 1 4	12 10 3	316 9 7
Bathurst	.....	7 11 0	24 11 6	21 3 7	2 5 7	4 16 0	28 18 10	26 8 5	2 3 0	29 8 2	13 17 8	26 8 7	23 6 7	42 8 11	0 17 8	16 5 11	6 15 7	0 13 0	0 15 9	1 14 0	280 9 9
Nyngan	1 10 0	.....	.....	0 10 0	.....	.....	1 14 0	0 10 8	.....	0 12 8	.....	0 5 4	1 6 4	0 2 8	.....	.....	.....	.....	.....	.....	6 11 8
Picton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Goulburn	.....	.....	.....	.....	.....	.....	.....	10 9 4	.....	.....	.....	0 4 5	8 7 5	.....	.....	.....	.....	.....	.....	.....	19 1 2
Harden	.....	.....	.....	.....	.....	.....	.....	4 0 8	.....	.....	.....	.....	6 19 10	.....	.....	.....	.....	.....	.....	.....	11 0 6
Junee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 17 6	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 17 6
Newcastle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Murrurundi	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Armidale	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals...£	2 6 0	54 11 10	44 18 3	26 1 7	32 15 3	32 19 1	40 8 11	48 3 0	28 4 6	31 17 2	29 11 10	30 4 1	47 5 4	44 5 7	32 5 9	28 10 1	43 5 3	23 2 10	19 17 1	22 1 6	662 12 11

ALTERATIONS Debited to Department—10 Dubs' Engines.

No. of shop order.	Particulars of work.	Cost. Wages.	Stores.	Charges.	Total.	Average per engine.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	
541	Additional work on 10 engines	6 12 1	.....	1 13 0	8 5 1	.....
1132 } 1321 }	Attaching hand-brakes and additional work	249 6 4	208 3 11	62 6 7	519 16 10	.....
2536	Fixing stays in cabs	13 16 4	3 0 11	3 9 1	20 6 4	.....
2624	Alterations to bogies, regulator rods, &c.	58 7 2	8 14 3	14 11 9	81 13 2	.....
2625	Alterations to axle-boxes, fitting new brasses, and raising bogies of tenders.	59 17 4	117 11 4	14 19 4	192 8 0	.....
3470	Alterations to regulators, bell-crank, and crank-pins.	4 2 6	.....	1 0 7	5 3 1	.....
	£	392 1 9	337 10 5	98 0 4	827 12 6	82 15 3

SHOP REPAIRS.—10 Dubs' Engines.—4 Class. (Exclusive of Repairs of Damages caused by Collisions and Derailment.)

No. of engine.	Where repaired.		Wages.	Stores.	Charges.	Total.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
436	Eveleigh	Turning wheels, refitting brasses, &c.	11 11 0	19 18 0	2 17 9	34 6 9
437	,,	,, ,, ,,	11 15 0	19 10 0	2 18 9	34 3 9
438	,,	,, ,, ,,	12 13 0	20 15 0	3 3 3	36 11 3
440	,,	Turning wheels, refitting brasses, &c., and general repairs	58 6 9	19 5 7	14 11 8	92 4 0
441	,,	,, ,, ,,	11 5 0	13 3 5	2 16 3	27 4 8
442	,,	,, ,, ,,	11 11 10	19 18 8	2 18 0	34 8 6
444	,,	,, ,, ,,	11 11 10	15 10 6	2 18 0	30 0 4
445	,,	,, ,, ,,	11 11 10	13 10 6	2 18 0	28 0 4
		£	140 6 3	141 11 8	35 1 8	316 19 7

Ten Dubs Engines.

Shop Repairs.

Where Repaired.	Number and Cost of each, to 31st December, 1890.										Total Cost.	Average Cost per Engine.
	436.	437.	438.	439.	440.	441.	442.	443.	444.	445.		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Eveleigh Shops	34 6 9	34 3 9	36 11 3	.....	92 4 0	27 4 8	34 8 6	.....	30 0 4	28 0 4	316 19 7	31 13 11

Running Repairs.

	436.	437.	438.	439.	440.	441.	442.	443.	444.	445.		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Eveleigh Shops	13 8 6	4 16 10	8 2 0	4 12 1	7 5 8	4 0 2	4 0 2	4 5 2	4 0 2	7 7 9	61 18 6	
Do Running Sheds	16 8 2	10 13 5	18 18 7	26 13 10	25 10 8	28 13 8	15 18 8	28 14 8	27 17 9	26 1 1	225 10 6	
Penrith	1 8 6	7 3 1	5 10 2	5 1 10	1 11 2	.....	.....	.....	.....	0 6 3	21 1 0	
Bathurst	13 10 8	16 13 0	34 0 2	.....	12 11 11	.....	21 10 11	0 9 9	.....	7 6 9	106 3 2	
Nyngan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Picton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goulburn	1 0 6	.....	.....	0 6 6	.....	0 12 9	.....	.....	0 10 9	0 4	2 14 6	
Harden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Junee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Newcastle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Murrurundi	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Armidale	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Total ..... £	45 16 4	39 6 4	66 10 11	36 14 3	46 19 5	33 6 7	41 9 9	33 9 7	32 8 8	41 5 10	417 7 8	41 14 9

Return of Broken Rails on Portion of Western Line.

Government Railways of New South Wales,
Secretary's Office, Sydney, 21st June, 1892.

Sir,

In accordance with the request of your Commission, conveyed in your letter of the 13th instant, I am directed by the Railway Commissioners to forward herein information with reference to the number of broken rails prior to the introduction of the Baldwin engines, and since they have been regularly running on the Western Line, say from 1st November, 1891.

With respect to the section of line between Penrith and Bathurst it will be seen that on the most difficult part of the line, viz., between 34 miles and 114 miles, only one rail has been broken in the three years, and that before the Baldwin engines arrived; whilst between 127 miles and 143 miles three rails were broken before and only one since these engines were introduced, although the road is growing gradually older. With these exceptions, the whole of the breakages, Penrith to Bathurst, have occurred between 114 miles and 127 miles. On this section the rails are chiefly 75lb. iron rails, approaching the period of exhaustion. This portion of the line has been for some time past under extensive renewal, and within a short period the whole of the old rails will be replaced with new steel rails.

The result of the running of the Baldwin engines can be better gauged—so far as broken rails extend—by the experience with the 71½lb. steel rails, between Bathurst and Dubbo, as shown on the returns submitted.

For easy reference I forward attached sketches showing the broken rails for each period, with the mileage, &c.

I have to regret that there has been some little delay in preparing the information, but the returns available did not clearly indicate which were broken rails, and inquiry had to be made in each case to ascertain facts, the returns which it had been usual to submit including rails which showed flaws, &c. It is the practice in the Existing Lines Branch to take out any rail which may show any defect, no matter how slight, in the way of flaw or fracture, and to submit such in a return of broken rails. It may, however, be possible for a flaw or fracture to exist in a rail for months, or even years, and of late rather more flawed rails have been detected than was previously the case. This is largely due to the fact that so much has been done in the way of re-ballasting, re-sleepering, and lifting, and by this means faults which may have been unnoticed or covered up by ballast for some time have been detected after the opening up of the road.

Where the rails have broken between 115 miles 32 chains and 118 miles 75 chains (10 per cent. of the whole), the rails weighed 75 lb. per yard, chairs 27 lb. each in weight, and the ironbark sleepers, in the majority of instances, were closely spaced.

I have, &c.,
H. McLACHLAN,
Secretary.

The Secretary, Royal Commission, Baldwin Engines.

GREAT WESTERN RAILWAY—Statement showing Broken Rails.

Nearest Station.	Distance.	Date broken.	Original weight per yard.	Description—Steel or Iron.	Brand.	Date laid in.	Spacing sleepers.	Remarks.
	m. c.		lb.					
Millthorpe	176 75	19 Dec., 1889	71½	Steel	B. V. & Co.	Feb., 1889	..	Old flaw 8 feet from end.
Orange	190 36	19 ,, 1889	71½	,,	West Cumbld. N.S.W.G. VIII.	1887	..	,, 2 ,, ,,
Locksley	137 30	18 Feb., 1890	75	Iron	Parkgate	1878	..	Flaw in rail.
Dripstone	238 50	9 Mar., 1890	71½	Steel	S.J.G. IX.77	1880	..	Existing flaw.
,,	230 0	6 ,, 1890	71½	,,	Dowlais L.77	1880	..	,,
Locksley	126 40	20 April, 1890	75	Iron	B. V. & Co.	1872	..	,,
Store Creek	222 75	20 ,, 1890	71½	Steel	Dowlais 11.77	1880	..	Broken on edge of punched hole when spiking back.
Wellington	249 20	30 June, 1890	71½	,,	S.J.G. 77	1880	..	Broken where hole had been punched.
Geurie	239 40	9 July, 1890	71½	,,	,,	1880	..	,, ,,
Mary Vale	250 0	10 ,, 1890	71½	,,	Dowlais 2.77	1880	..	Existing flaw.
Tarana	121 50	8 Aug., 1890	75	Iron	Parkgate	1872	..	,,
Blayney	169 63	23 ,, 1890	71½	Steel	B. V. & Co. 11.80	1881	..	A clean break.
,,	175 41	23 ,, 1890	71½	,,	,,	1884	..	Flaw in flange.
Spring Hill	184 30	2 Sept., 1890	71½	,,	Darlington	1886	..	,,
Locksley	129 63	15 ,, 1890	75	Iron	Milton May	1874	..	An old flaw.
Huntley	180 73	23 Oct., 1890	71½	Steel	West Cumberland	1886	..	Broken where punched.
Orange	197 0	25 ,, 1890	71½	,,	Dowlais 77	1880	..	A clean break.
Tarana	118 0	26 ,, 1890	75	Iron	B. V. & W. P.	1871	..	Flaw in rail.
Rydal	114 5	27 Nov., 1890	75	,,	,,	1872	..	Broken in centre; no flaw.
Millthorpe	181 43	7 ,, 1890	71½	Steel	West Cumberland	1886	..	An old flaw.
Blayney	172 2	8 ,, 1890	71½	,,	Darlington	1888	..	,,
Rydal	114 65	1 ,, 1890	75	Iron	Parkgate	1872	..	,,
Dripstone	241 30	14 Dec., 1890	71½	Steel	S.J.C. 77	1880	..	Existing flaw.
Blayney	175 13	18 Jan., 1891	71½	,,	B.V. & Co.	1881	3 0	Clean break, 4 feet from end.
Locksley	125 70	27 ,, 1891	75	Iron	Parkgate	1872	3 0	Old flaw, 4 feet from end.
,,	125 70	14 Feb., 1891	75	,,	,,	1872	3 0	,, 4 feet ,,
,,	125 38	2 April, 1891	75	,,	B.V.W.P.	1886	3 0	Clean break, 3 feet from end.
Millthorpe	181 62	14 May, 1890	71½	Steel	West Cumberland	1885	3 0	,, 2 ft. 2 in. from end.
Apsley	244 57	10 June, 1891	71½	,,	S.J.C. 9.77	1880	3 0	Old flaw, broken in centre.
Mumbil	233 0	13 July, 1891	71½	,,	S.J.C. IX.77	1880	3 0	Existing flaw, 4 ft. 9 in. from end.
Locksley	125 63	21 Aug., 1891	80	,,	Cammell Sheffield toughened steel.	1891	3 0	Old flaw, 5½ inches from end.
Millthorpe	179 60	31 ,, 1891	71½	,,	West Cumberland	1891	3 0	New break, 2 ft. 10 in. from end.
Orange	195 0	9 Sept., 1891	71½	,,	Dowlais X17.7	1880	3 0	Broken in middle.
Bowenfells	93 56	17 ,, 1891	75	Iron	B.V.W.P.	1870	3 0	,, fish-plate hole, 9 inches from end.
Warne	215 0	1 Oct., 1891	71½	Steel	Dowlais X11.77	1880	3 0	,, middle.
Tarana	121 66	20 ,, 1891	75	Iron	Parkgate	1870	3 0	New breaks, 8 feet and 1 ft. 6 in. from end.
Locksley	130 6	21 ,, 1891	75	,,	,,	1874	3 0	Old flaw, 8 ft. 8 in. from end.
Orange	193 0	13 Nov., 1891	71½	Steel	S.J.G. 77	1878	3 0	Existing flaw, 14 inches from end.
Tarana	117 8	10 ,, 1891	75	Iron	L.W. & R.	1875	3 0	Clean break, 2 feet from end.
,,	118 30	1 Dec., 1891	75	,,	Parkgate	1870	3 0	New break, 8 ,, ,,
Orange	196 0	8 ,, 1891	71½	Steel	S.J.G. 77	1886	3 0	Old flaw, 10 ,, ,,
Tarana	117 50	12 ,, 1891	75	Iron	Parkgate	1891	2 4	Clean break, 7 ft. 7 in. from end.
,,	115 32	9 Jan., 1892	75	,,	,,	1876	2 5	,, 7 ft. 6 in. ,,
,,	117 43	16 ,, 1892	75	,,	,,	1879	2 5	,, 8 feet ,,
,,	118 75	10 ,, 1892	75	,,	,,	1880	2 4½	,, 1 ft. 3 in. ,,
Orange	197 0	28 ,, 1892	71½	Steel	Dowlais 77	1880	2 5	,, 4 ft. 7½ in. ,,
Kerr's Creek	297 20	12 Feb., 1892	71½	,,	Dowlais X11	1891	3 1	,, 2 ft. 8 in. ,,
Mumbil	237 0	7 April, 1893	71½	,,	Dowlais X.77	1881	3 1	Old flaw, 8 ft. 6 in. from end.
Brewongle	132 14	21 ,, 1892	75	Iron	Parkgate	1883	2 4	,, 1 ft. 8 in. ,,
Tarana	117 14	27 ,, 1892	75	,,	,,	1892	2 10	Clean break, 3 ft. 4 in. from end.

* A second rail was broken at this place owing to first accident.

Messrs.

Messrs. Kidd and Pollock's Report on Trial of American 10-wheel Passenger Engine.

To the Commissioners of Railways,— Sydney, 21 May, 1892.

Gentlemen,

In compliance with your request we made a series of careful trials on May 15th, with the ten-wheeled Baldwin engine, No. 447, to ascertain accurately the performance of the engine when hauling passenger vehicles up grades of 1–30 and 1–40, and have the honour to submit the following report.

The trials were made on a part of the line between Picton and Hill Top. The train was made up of Pullman sleeping cars and first-class lavatory carriages, and in every case weighed somewhat more than the stipulated loads. The Pullman sleeping cars were carried on six-wheeled trucks or bogies, and all the remaining passenger vehicles on four-wheeled bogies. All these wheels were 3 feet diameter.

The general dimensions of the engine are as follows:—

Diameter of cylinder	21"
Stroke "	24"
Diameter of drivers	61"
Area of fire-grate	27·7 square feet.
" H. S. in fire-box (copper)	105·6
" " " tubes (brass)	1,822·5
Total	1,928·1
Tractive force per lb. of M. E. P. per square inch =	171·0 lb.*
Maximum boiler pressure " " "	160 lb.

Total weight of engine in running order, with ⅔ glass of cold water and sand-boxes full—

	Tons	cwt.	Tons	cwt.
Weight on driving wheels	43	11		
" bogie "	14	16		
Total weight of engine			58	7
Weight of tender empty	13	12		
" 3,000 gallons water	13	8		
" 5 tons coal	5	0		
Maximum weight of tender			32	0
Maximum weight in running order, engine and tender ...			90	7

The weight of the train was ascertained by weighing each vehicle on the previous day on an accurate weighbridge at Eveleigh. An addition varying from 2 tons to 1 ton 15 cwt. was made for the weight of the passengers carried.

The incline of 1–40 on which the trials No. 1, 2, and 5, were made, was 2½ miles long, and there were four curves of 16 chains (1,056 feet) radius on the first mile.

The incline of 1–30 on which the trials 3 and 4 were made, was about 2 miles long, having at the foot an incline of 1–33. The trials were made on the combined length 2¾ miles of these gradients.

The position of these inclines is shown on the accompanying section. The train approached the foot of these gradients at about the speed usual in ordinary running.

The weather was fine with a dry rail, and no slipping was observed throughout the trials.

The full train (179 tons 5 cwt.) was run from Sydney to Campbelltown by one engine, but two engines of the English express type (four wheels coupled with inside cylinders) were required to haul the train from Campbelltown to Picton over the 1–70 gradients between these points. It is noteworthy that the ten-wheeled Baldwin engine then took the same train unassisted over the 1–40 gradients between Picton and Picton Lakes, thus very clearly demonstrating its superior power.

The first trial was made with a load of 179 tons 5 cwt. up a grade of 1–40. The indicated horse power developed and tractive force exerted during the trial being as follows:—

TABLE I.

First test up 1–40, May 15th, 1892.

	Tons	cwt.	qr.
Actual load, exclusive of engine and tender ...	179	5	2
Stipulated load, as per letter to Baldwin Works, September 22, 1890 ...	176	0	0
Excess of actual over stipulated load	3	5	2

No. indicator card.	Mile-post where taken.	Speed in miles per hour.	Boiler pressure.	Initial pressure.	M.E.P.	I.H.P.	Tractive power.	Resistance in lb. per ton of whole train
			lb.		lb.		lb.	
1	64⅛	31·	155	139·5	63·4	996·	10,841	15·79
2	54⅝	22·	155	139·5	95·6	959·	16,347	4·62
3	54⅞	19·36	155	144·	103·4	922·	17,681	9·51
4	55⅛	17·47	150	140·	105.	838·	17,955	10·59
5	55⅝	17·64	150	138·	102·8	826·	17,578	9·18
6	55⅞	17·	147	137·	105·5	817.	18,040	10·9
7	56⅛	15·93	140	134·	102·	740·9	17,442	8·78
8	56⅝	15·79	135	127·5	101·	728·	17,271	8·05

* Allowing a deduction for the area of the piston-rod. Without this deduction, the tractive co efficient is 173·3 lb.

The

The accompanying tables give an analysis of the performance of the engine during the trials. It will be seen that the boiler pressure was better maintained on the 1–30 than on the 1–40 gradient. This is probably attributable wholly to the difference in the condition of the fire. The engine commenced the ascent of the 1–40 gradient after running down hill slowly tender first, and standing for some time at Picton. The fire thus became partially dead, and was not thoroughly ignited in the short distance run before reaching the gradient. In ordinary working this would not occur, as the firemen usually take the opportunity of building up the fire and getting it in good condition for rapid steaming when approaching a heavy gradient.

The engine approached the 1–30 gradient after having run for some miles on slightly-rising gradients, the blast had consequently thoroughly ignited the fire, and the engine maintained steam, and in some cases showed an increase of speed and tractive power towards the summit. Had the engine been running the regular mail or express trains she would have approached the 1–40 gradient under the same condition, and would doubtless have carried a higher pressure, and obtained a higher speed, especially on the trial with a load of 157 tons up 1–40.

The distance run on the trials was 21 miles 10 chains.

The coal used was (Metropolitan) of fair quality, and the total amount burned 91 cwt. 2 qrs. 21 lb. = 82·38 lb. per mile.

TABLE II.

Second test up, 1–40.

	Tons	cwt.	qrs.
Actual load, exclusive of engine and tender	157	12	2
Stipulated load as per letter to the Baldwin Works, September 22, 1890	152	0	0
Excess of actual over stipulated load	5	12	2

No. indicator card.	Mile-post where taken.	Speed in miles per hour.	Boiler pressure.	Initial pressure.	M.E.P.	I.H.P.	Tractive power.	Resistance in lb. per ton of whole train
			lb.	lb.	lb.	lb.	lb.	
9	54¼	23·8	155	141·5	56·8	772	9,712	– 16·8
10	54⅜	21·43	150	139·	79·4	776	13,577	– 1·09
11	54½	19·147	145	134·	91·7	801	15,680	+ 7·22
12	55	18·75	145	135·	94·7	808	16,193	9·3
13	55⅜	18·55	150	138·5	101·12	855	17,291	13·7
14	55⅝	18·75	150	139·	95·4	815	16,313	9·77
15	56¼	19·35	150	138·	98·43	872	16,829	11·859

TABLE III.

Third Test, up 1–33 and 1–30.

	Tons.	cwt.	qr.
Actual load, exclusive of engine and tender	121	19	2
Stipulated load as per letter to Baldwin Works, September 22, 1890	120	0	0
Excess of actual over stipulated load	1	19	2

No. of indicator card.	Mile-post where taken.	Speed in miles per hour.	Boiler pressure.	Initial pressure.	M.E.P.	I.H.P.	Tractive power.	Resistance in lb. per ton of whole train
				Grade, 1-33.				
			lb.	lb.	lb.	lb.	lb.	
16	65⅜	30·3	160	143	58·4	812	9,986	– 20·85
17	66⅛	26·08	160	147	85·55	1017·3	14,629	+ 1·01
18	66⅝	21·95	150	140	92·5	925·6	15,817	6·6
				Grade, 1-30.				
19	66	20·45	155	142	97·85	912·0	16,732	4·12
20	67	17·64	155	144	107·5	864·7	18,382	11·8
21	67⅜	17·45	160	144	106·6	840·8	18,228	11·17
22	67⅝	16·82	155	145	109·7	841·8	18,758	13·6
23	68¼	17·47	155	142	108·4	863·5	18,536	12·6
24	68⅝	18·18	150	136	103·8	860	17,749	8·9

TABLE IV.

Fourth Test up 1–33 and 1–30.

	Tons.	cwt.	qrs.
Actual load, exclusive of engine and tender	144	2	2
Stipulated load as per letter to Baldwin Works, September 22, 1890	144	0	0
Excess of actual over stipulated load	0	2	2

No. of indicator card.	Mile-post where taken.	Speed in miles per hour.	Boiler pressure.	Initial pressure.	M.E.P.	I.H.P.	Tractive Power.	Resistance in lb. per ton of Whole Train.
				Grade, 1–33.				
			lb.	lb.	lb.	lb.	lb.	
25	65⅞	31·57	160	138·5	61	878	10,431	− 23·1
26	66⅛	25·35	155	141·5	89·1	1,029	15,236	− 2·12
27	66⅜	19·56	155	141·0	95·35	850	16,304	+ 1·9
28	66⅝	18·75	155	143·5	104·8	896	17,920	8·8
				Grade, 1–30.				
29	66⅞	16·82	155	144	112	860	19,152	7·4
30	67⅛	15·38	155	145	116	815	19,836	10·3
31	67⅜	15·65	.....	145	113	807	19,323	8·73
32	67⅝	14·87	155	145·5	114·3	774·5	19,545	8·22
33	68⅛	14·81	160	140	112·5	750	19,237	7·7
34	68¼	14·062	150	145·5	113·9	730·3	19,476	8·7
35	68⅜	14·4	155	146	114·9	754·5	19,647	9·32
36	68½	14·7	145	137·5	112·85	760·4	19,297	8·00

TABLE V.

Fifth Test, up 1–40.

	Tons	cwt.	qrs.
Actual load, exclusive of engine and tender	157	12	2
Stipulated load as per letter to Baldwin works, 22 September, 1890	152	0	0
Excess of actual over stipulated load	5	12	2

No. of Indicator Card.	Mile-post where taken.	Speed in miles per hour.	Boiler pressure.	Initial pressure.	M.E.P.	I.H.P.	Tractive power.	Resistance in lbs. per ton of whole train.
					lb.		lb.	
37	54¼	31·00	155	141·5	54·90	776·0	9,387	18·15
38	54⅜	26·86	150	140·0	77·90	954·0	13,320	2·29
39	54	20·93	150	136·0	93·20	889·0	15,937	8·26
40	54⅝	21·17	150	136·5	91·80	866·0	15,697	7·29
41	55⅜	19·56	155	139·0	96·70	862·0	16,535	10·67
42	55⅝	20·22	155	139·5	99·80	920·0	17,065	12·81
43	55⅞	19·78	150	135·0	97·15	870·0	16,612	10·98
44	56 7/16	20·00	145	130·0	97·00	884·6	16,587	10·88
45	56⅝	20·93	140	118·5	88·46	844·0	15,126	4·99

The indicator diagrams were taken by means of a "Crosby" indicator. The L.H. diagrams are from the front end of the cylinder, and the R.H. diagrams from the back. The pipes connecting the cylinder ends and the indicator were of copper 1 in. diameter, reduced to ½ in. where they joined the breeches piece. They were carefully lagged with asbestos and spun yarn. We regret that the position and design of the cylinder necessitated these pipes being so long, viz., about 4 ft. 11 in. at the front end, and 5 ft. 6 in. at the back, and we are of opinion that an allowance of 5 per cent. should be added to the mean pressure indicated on the cards to allow for friction and condensation. In support of our opinion we would refer to some trials reported in the proceedings of the Institute of Mechanical Engineers, England, January, 1890, in which 10 per cent. was considered a fair allowance, and in this case the pipes were only 3 ft. long, as against 5 ft. long.

On the evening previous to the trials we rode on the engine from Picton to Campbelltown, attaining a speed of about 45 miles per hour. The engine ran very steadily and took the curves very smoothly, there being a noticeable absence of shock on entering the curves.

In conclusion we would observe that we consider the engines to be very satisfactory in design and workmanship, while the haulage power and steadiness in running leave nothing to be desired.

We would further observe that the maximum tractive power obtained on the trial of 1–30, viz., 19,836 lb., exceeded the maximum recorded in the trial of the Baltimore and Ohio engine (viz., 19,064 lb.), which is nearly 4 tons heavier, and has larger heating surface and cylinder capacity.

We beg to enclose four packages, containing in all forty-five indicator cards, being the originals taken during each test.

We have, &c.,

HECTOR KIDD, A.M.I.C.E., M.I.M.E.
ROBT. POLLOCK,
President, Engineering Association.

Measurements

Measurements of Platforms showing clearance.

THE following shows the measurement from centre of cylinder to top of platforms, Homebush to Bathurst; also measurement from gauge fixed on cab to outer edge of station verandahs.

	Cylinders. C. of cylinder to top of platform.		Outer edge of gauge to top of platform.		Cab. Edge of gauge to verandah.			Cylinders. C. of Cylinder to top of platform.		Outer edge of gauge to top of platform.		Cab Edge of gauge to verandah	
	C. in.	F. in.	C. in.	F. in.	C. in.	F. in.		C. in.	F. in.	C. in.	F. in.	C. in.	F. in.
Homebush	14½	1	1	1	Clear	...	Hazelbrook	17⅛	...	4	...	Clear	...
Granville	14¼	¼	...	...	...	...	Lawson	15½	...	2	...	,,	...
Parramatta	16¼	...	1½	½	...	1	Wentworth Falls	15⅝	...	3	...	...	1
Parramatta Park	14⅛	1	1	1	Clear	...	Katoomba	17⅛	...	4	...	Clear	...
Westmead	16⅛	...	3½	...	,,	...	Medlow	16⅛	...	3½	...	,,	...
Wentworthville	15⅝	...	3⅛	...	,,	...	Blackheath	17⅛	...	4	...	,,	...
Toongabbie	17⅛	...	4½	...	,,	...	Mount Victoria	14⅛	½	1½	½	,,	...
Seven Hills	15⅛	...	2	...	,,	...	Hartley Vale Sg.	18⅛	...	5	...	,,	...
Blacktown	16⅛	...	3	...	,,	...	Bell	14⅛	¾	1¼	¾	,,	...
Doonside	16⅛	...	3	...	,,	...	Clarence Siding	15⅛	...	2½	...	,,	...
Rooty Hill	16⅛	...	3	...	,,	...	Zigzag B. Points	15⅛	...	2½	...	,,	...
Mount Druitt	16⅛	...	3½	...	,,	...	Eskbank Coal Sg.	Clear	Clear	...	...	,,	...
St. Mary's	16⅛	...	3	...	,,	...	Eskbank	16⅛	...	3	...	,,	...
Parkes Platform	14⅛	1	1	1	,,	...	Lithgow	16⅛	...	3⅛	...	,,	...
Kingswood	14⅛	⅛	1½	⅛	,,	...	Bowenfels	16⅝	...	3⅛	...	,,	...
Penrith	16⅛	...	3	...	3	...	Marrangaroo	18⅛	...	5	...	,,	...
Emu Plains	16⅛	...	3	...	Clear	...	Wallerawang	16⅛	...	3	...	,,	1½
Lucasville	19⅛	...	6	...	,,	...	Rydal	16⅛	...	3	...	,,	...
Glenbrook	15⅛	...	2⅛	...	,,	...	Sodwalls	15⅛	...	2	...	,,	...
Blaxland	16⅛	...	3	...	,,	...	Tarana	17⅛	...	4	...	,,	...
Kurabar	16⅛	...	3	...	,,	...	Locksley	17⅛	...	4	...	,,	...
Valley Heights	16⅝	...	3⅛	...	,,	...	Brewongle	16⅛	...	3⅛	...	,,	...
Springwood	19⅛	...	6	...	,,	...	Raglan	15⅝	...	2⅛	...	,,	...
Faulconbridge	18⅛	...	5⅛	...	,,	...	Kelso	16⅛	...	3½	...	,,	...
Linden	16⅛	...	3	...	,,	...	Bathurst	16⅛	...	3	...	,,	...
Woodford	16⅛	...	3	...	,,	...							

Sir,

When testing the clearance at the Bathurst coal-stage, I find the bottom of the woodwork fouls the gauges over the top of the cab 11¼ inches at west end, and 10⅝ inches there is quite sufficient clearance at the side of cab and cylinders. Bathurst platform on the down line is only 2¼ inches; Mullion Creek platform is only 1½ from outer edge of gauge to top of platform; all the other platforms between Bathurst and Dubbo are all over 3 inches clear. All the verandahs are well clear except Orange, and the cab-gauge touches the facing-boards at the ends of the verandah. This station I will measure again on the return journey at every point. The measurement from rail to top of gauge on cab is 12 feet 6 inches—that shown on sketch 12 feet 3 inches.

J. GREGORY,
29/7/91.

Mr. Stanger.

Sir,

I have tested the clearance of all platforms and verandahs west of Bathurst, both on up and down journey. The platforms that were a little too close on the down journey have been altered; not any of them are now under 16¼ inches from centre of cylinder to top of platform. All the verandahs are well clear except Orange, and when approaching the verandah the gauge caught the facing-boards at each end, owing to them projecting out; the one at the west end knocked the top corner of the gauge down about 1½ inches. The water-pipes are only 1 inch from the outer edge of the gauge.

J. GREGORY,
31/7/91.

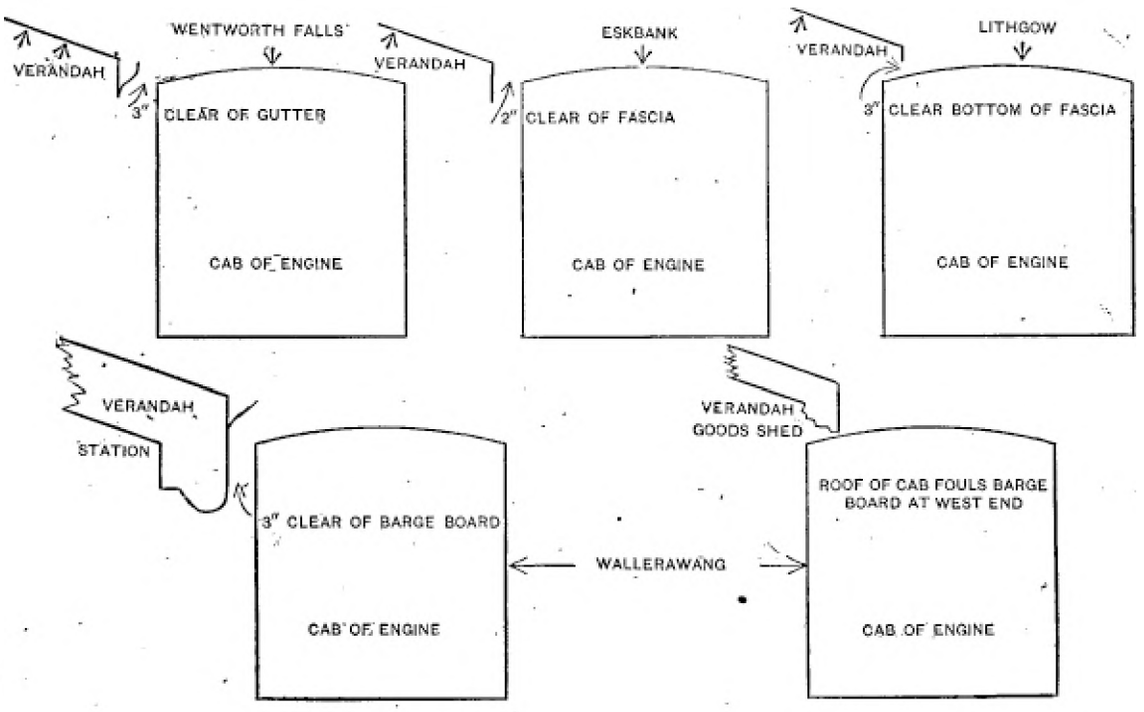
Mr. Stanger,

Eveleigh,

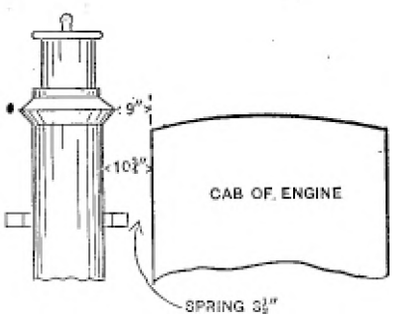
Eveleigh, 9 September, 1891.

No. 455 American engine working special between Emu Plains and Dubbo, to ascertain the clearance for cylinders and cab of engine between all platforms, verandahs, bridges and tunnels, &c.

On Saturday, September 5th, this engine left Redfern at 8·33 a.m. and arrived at Wallerawang 6·20 p.m. There is ample clearance for the cylinders and cab of engine between these two stations on platforms, &c., except Blaxland, Woodford, Lawson, Eskbank, Bowenfels, and the goods platform, Wallerawang. The following stations' verandahs only allow clearance thus :—



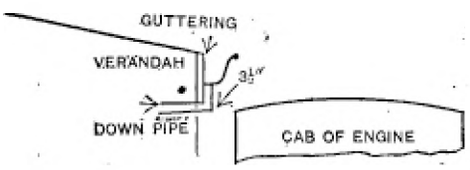
A spring which is attached to the water-column, west end of Lawson, to prevent the jib from swinging, clears the side of engine cab by 3½ inches only.



The pilot will foul the coal-stage (made of old sleepers) when these engines are being turned on the table at Katoomba.

The roads leading into the Eskbank running-shed are not in the centre of the doorways, as the opening between doorposts is 9 feet 10 inches, very little clearance thus being allowed for side of cabs when entering this shed.

Sunday, 6th.—Rydal to Orange. There is ample clearance between cylinders and cab of engine between these two stations on platforms, &c., except Rydal, (up side) Bathurst, Wimbledon, Newbridge, Blayney (Cowra side), Spring Hill, and Bloomfield platforms. Cab of engine clears down-pipes from guttering on Orange verandah 3½ inches only.

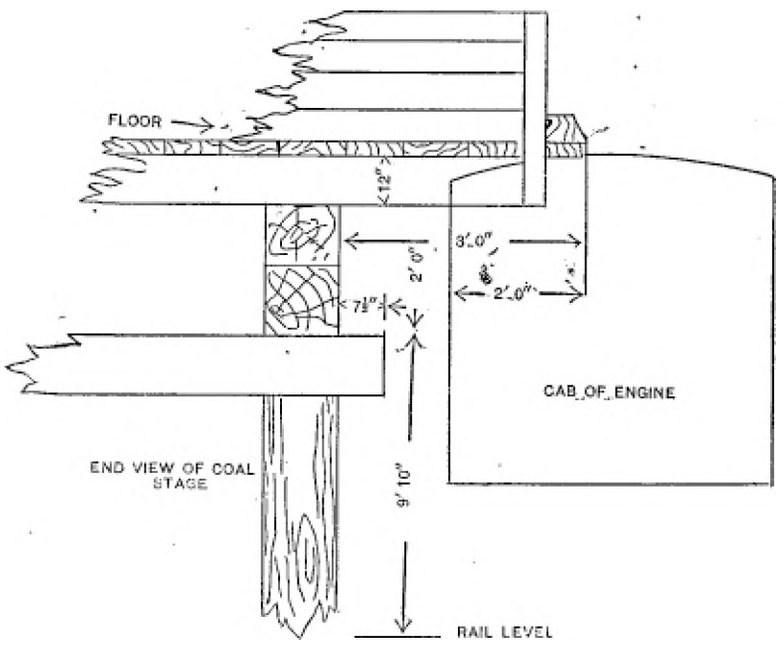


Guttering on Kelso verandah clears cab of engine 1 inch to 2 inches only.

A water-pipe projecting from the face of Tarana platform will require to be let in flush with face of same.

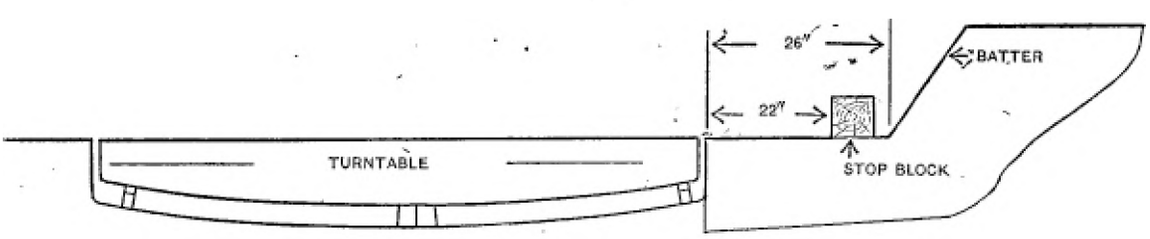
The

The coal-stage at Bathurst fouls cab of engine, thus :—



The sliding-doors on the sand-house, Orange, clear the handle on side of cab by 3 inches.

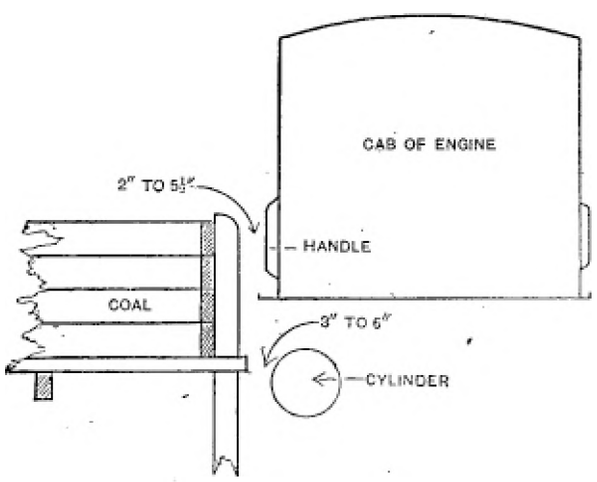
The stop-block at the end of road on the Orange turn-table will foul the pilot when turning these American engines. The batter will also require to be cut away to allow the pilot to pass. Thus :—



Monday, 7th.—Orange to Dubbo.—There is ample clearance for the cylinders and cab of engine between these two stations on platforms, &c., except Keer's Creek platform. On the face of the Wellington platform five water-pipes project. Also at Dubbo they will require to be let in flush with the face of platform.

Most of the end posts on the Wellington coal-stage (near running-shed) have been forced out at the top, caused by the stacking of coal, and foul the handle on the side of cab. These posts are not required, and could be cut off level with the floor of coal-stage. The ends of bolts will require to be cut off on posts at the sand-house coal-stage to give more clearance for cylinders.

The coal-stages at Mount Victoria, Wallerawang, Orange, and Dubbo are of similar construction to the Wellington one, and clear the cab from 2 inches to 5½ inches; cylinders, 3 inches to 6 inches. Thus :—



Eveleigh,

Eveleigh, 14/8/91.

CLEARANCE of Cylinder on Engine 448 between platforms on the Southern Line, Merrylands to Albury.

Name of Platform.	Clearance of Cylinder.	Remarks.
Merrylands	4 in. to 5 in.	
Guildford	2 in. to 4½ in.	
Fairfield	2½ in. to 4 in.	Cab fouls verandah down side.
Canley Vale	3 in. to 4 in.	
Cabramatta	4 in. to 5 in.	
Warwick Farm	9 in. down	Signal-box platform.
Liverpool	2½ in. to 5 in. down; 1 in. to 3 in. up.	
Temporary Junction	9 in.	
Glenfield	4½ in. to 5 in.	
Macquarie Fields	1 in. to 2½ in.	Cylinder struck platform on up run.
Bumberry Junction	9 in.	
Ingleburn	2¾ in. to 4½ in.	
Minto	2½ in. to 3½ in.	
Leumeah Junction	Clear.	
Leumeah	1 in. to 3 in.	Down road is not being used.
Campbelltown	1 in. to 5 in.	Water-pipes project on platform.
Glenlee	5 in.	
North Menangle	7½ in. to 8 in.	
Menangle	2 in. to 4 in. down; ½ in. to 4 in. up.	
Douglas Park	2 in. to 4½ in. old platform; new platform, 3½ in. to 5 in.	
Ballast Siding	.....	Platform of sleepers to be moved back.
Maldon	3½ in. to 4 in.	
Picton	.....	Cylinder fouled platform on down run.
Thirlmere	3½ in. to 5½ in.	
Picton Lakes	4½ in.	
Balmoral	4½ in. to 5½ in.	
Hill Top	4½ in. to 5 in.	
Colo Vale	3½ in. to 4½ in.	Guttering on verandah to be moved.
Rush's	5 in.	
Mittagong	4 in. to 6 in.	
Bowral	3 in. to 4½ in.	
Burradoo	3½ in. to 4 in.	
Bong Bong	6 in.	
Moss Vale	3¾ in. to 5 in.	
Meryla	4 in. to 5 in.	
Exeter	4½ in. to 5 in.	
Bundanoon	5 in.	
Wallondilly	5 in.	Or Karella.
Cable's Siding	4½ in.	
Wingello	3 in. to 5¾ in.	
Barber's Creek	5 in. to 7 in.	
Marulan	1½ in. to 3 in.	
Carrick	5 in. to 5½ in.	
Towrang	4½ in. to 5 in.	
Murray's Flats	3 in.	
North Goulburn	2 in. to 4 in.	
Goulburn	3 in. to 4 in.	
Yarra	2½ in. to 3½ in.	
Breadalbane	5 in.	
Cullerin	5 in.	
Razorback	4 in. to 5 in.	
Fish River	5½ in. to 6 in.	
Gunning	4½ in. to 5 in.	
Oolong	4½ in. to 5 in.	
Jerrawa	2½ in. to 4 in.	
Coolalie	1½ in. to 2 in.	
Yass	2¾ in. to 3½ in.	
Bowning	2¼ in. to 3 in.	
Goondah	3⅜ in. to 4 in.	
Binalong	2½ in. to 4 in.	
Galong	2 in.	
Rocky Ponds	2 in. to 3 in.	
Cunningar	3½ in. to 4 in.	
Harden	3¾ in. to 4 in.	
Murrumburrah	⅜ in. to 6 in.	
Demondrille Junction	3⅜ in. to 6 in.	
Nubba	3 in.	
Wallendbeen	1¼ in. to 3 in.	
Cootamundra	1½ in. to 3 in.	
Mullaly's Siding	.....	No platform.
Frampton	3 in. to 3½ in.	
Ballast Siding	.....	No platform.
Bethungra	2½ in. to 3 in.	
Illabo	3½ in. to 4 in.	
Junee	Down, 4¼ in. to 6⅛ in.; up, 3 in. to 4½ in.	
Harefield	5 in.	
Bomen	2½ in. to 3½ in.	
Wagga	2½ in. to 3 in.	Water-pipes project on platform.
Uranquinty	3 in. to 4 in.	
Ben Accord Siding	.....	No platform.
The Rock	3 in.	
Yerong Creek	3 in. to 4 in.	
Henty	3 in. to 4 in.	
Culcairn	2¾ in. to 5 in.	Guttering on verandah to be moved.
Gerogery	2½ in. to 3 in.	

Name of Platform.	Clearance of Cylinder.	Remarks.
Yamba	1 in. to 2 in.	
Ettamogah	4 in. to 4½ in.	
Albury Racecourse	2½ in.	
Albury	2½ in. to 4 in.	
Emu Plains	5 in. to 5½ in.	
Lucasville	6½ in.	
Glenbrook	5 in. to 5½ in.	
Blaxland	2 in. to 3½ in.	
Karabar	4½ in. to 5½ in.	
Valley Heights	4 in. to 5 in.	
Springwood	5 in. to 7½ in.	
Faulconbridge	5½ in. to 8½ in.	
Numantia	6 in. to 7 in.	
Linden	5 in. to 6½ in.	
Woodford	2½ in. to 5½ in.	
Hazelbrook	5½ in. to 8 in.	
Lawson	3⅝ in. to 4⅞ in.	Cab clears water-column 3½ in. only.
Wentworth Falls	5½ in.	Verandah guttering to be removed.
Leura	4 in. to 4½ in.	
Katoomba	Down 5½ in. to 6½ in.; up, 4 in. to 7 in.	
North's Siding	.....	No platform.
Medlow	5½ in. to 6 in.	
Blackheath	5½ in. to 5⅝ in.	
Mount Victoria	Down, 4½ in. to 5½ in.; up, 5½ in. to 6 in.	
Hartley Vale	5½ in. to 7 in.	
Bell	6 in. to 6½ in.	Clears goods-shed and platform.
Clarence Siding	Down, 5⅞ in. to 6 in.; up, 4 in. to 4½ in.	
Zigzag	Down, 5½ in. to 6 in.; up, 5 in. to 5½ in.	
Esk Bank C. Stage	.....	Clears the stage and coal-shoot.
Esk Bank	Down, 4 in. to 5 in.; up, 3½ in. to 6 in.	Cab clears verandah 2 in.
Lithgow	Down, 5½ in. to 6 in.; up, 4 in. to 4½ in.	Cab clears verandah 3 in.
Bowenfels	Down, 4¾ in. to 5½ in.; up, 3½ in. to 4 in.	
Marrangaroo	6 in. to 7 in.	
Wallerawang	5½ in. to 6 in.	Mudgee side 4 in. to 5 in.
,, Goods Platform	3½ in. to 4 in.	Cab clears barge-board on station verandah 3 in., and fouls same on goods-shed.
Rydal	Down, 4 in.; up, 3 in. to 4 in.	
Sodwalls	8 in. to 9 in.	
Tarana	4 in. to 5 in.	Water-pipe projects from face of platform.
Locksley	4 in. to 5 in.	
Brewongle	4 in. to 4½ in.	
Raglan (new)	Down, 4 in. to 7½ in.; up, 5½ in. to 7½ in.	
,, (old)	4 in. to 4½ in.	
Kelso	4 in. to 5 in.	Guttering on verandah to be moved.
Bathurst	Down, 2 in. to 3 in.; up, 3½ in. to 4½ in.	Cab fouls coal-stage.
Orton Park	4 in. to 4½ in.	
Perth	4 in. to 5½ in.	
George's Plains	5 in. to 6½ in.	
Wimbledon	3 in. to 5½ in.	
Newbridge	3⅝ in. to 4½ in.	
Blayney	4½ in. to 5 in.	
,, (Cowra side)	3½ in. to 5⅜ in.	
Millthorpe	New platform, 4 in. to 5 in.; old, 4 in. to 6½ in.	Fouls goods-stage.
Spring Hill	3⅝ in. to 4½ in.	
Huntley	4½ in. to 5⅜ in.	
Bloomfield	3½ in. to 4 in.	
Orange	5½ in. to 6 in.	Cab clears down-pipe on verandah 3½ in.
,, (Molong side)	5½ in. to 7 in.	Stop-block fouls the pilot on turn-table.
Mullion	4½ in. to 5 in.	
Keer's Creek	3½ in. to 4⅝ in.	
Warne	4¼ in. to 5 in.	
Store Creek	4 in. to 5 in.	
Stuart Town	5 in. to 6 in.	
Mumbil	4½ in. to 5½ in.	
Dripstone	4⅝ in. to 6 in.	
Apsley	4½ in.	
Wellington	4½ in. to 5 in.	Water-pipes project from face of platform.
Mary Vale	4½ in. to 5⅛ in.	
Gemic	4 in. to 4½ in.	
Murrumbidgerie	5 in. to 5¼ in.	
Dubbo	4 in. to 5½ in.	

There is ample clearance for the cabs of these new American engines going through and under all tunnels and bridges on the Western line between Emu Plains and Dubbo, except a brick bridge over the road at mileage 120·78. The road under this bridge is on 16 chain roads; this road is to be lowered, and will then give sufficient clearance.

The doors of running-sheds on this line, Emu Plains to Dubbo, all allow ample clearance for the cab of engine, with the exception of Esk Bank depot. Engine No. 455 returned from Dubbo on 9/9/91.

H. ROBINSON.

E. A. Laughry, Esq.

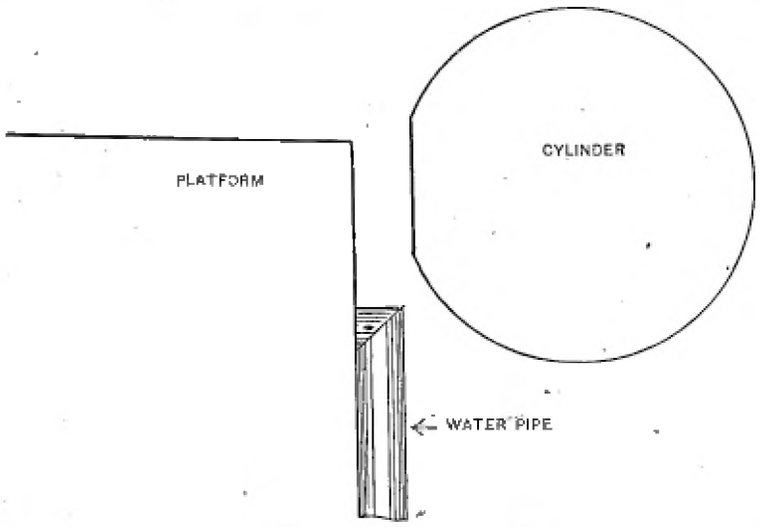
There

There is ample clearance for the cabs of these new American Engines going through and under all tunnels and bridges on the Southern Line from Merrylands to Albury. The doors of running-sheds on this line will allow the cabs ample clearance to enter the shed.

Engine 448 was placed on the running-shed traverser at Goulburn; the table of traverser is long enough to hold the engine; however, on account of the pilot projecting, the bottom of it fouled the hydrants on the water-main, which is used for washing out, &c., &c., consequently the engine could not be stabled in this shed.

It will be observed from the above measurements that the clearance for the cylinder between platforms from Merrylands to Albury, in the majority of platforms, is considerably under four inches. Fairfield was the only station-verandah which fouls the cab; the insulators supporting the telegraph wires which are fixed into the fascia of the Fairfield verandah will have to be removed.

At Campbelltown, Goulburn, and Wagga, two or three water-pipes project from the side of each platform; it will be advisable to have each of the pipes let in flush at the top with the face of the brickwork.



The gutterings on verandahs at Colo Vale and Culcairn are to be moved back to give more clearance for the cab.

The outside coal-stage platform at Goulburn clears the cylinder by ⅛ inch only.

Engine 448 left Redfern 9·5 a.m., Sunday, 9th August, for Albury, and returned 6·35 p.m., Thursday, August 13th.

H. E. ROBINSON.

E. A. Laughry, Esq., Chief Mechanical Engineer.

Eveleigh, 31 July, 1891.

No. 448—New American Express Engine, working train, No. 57, down, 30th July; working train No. 28, up, 30th July, between Sydney and Oatley.—I joined engine 448 at Hurstville on the down run. Driver R. Baker speaks highly of her working between Sydney and Hurstville. However, the reversing-gear works a little stiff, and will require adjusting in the spring-balance. The clearance for the cylinders on the down and up platforms at Penshurst and Oatley is from 3 inches to 3½ inches.

On the up trip, engine 448 left Hurstville with a train of 36 wagons and a six-wheeled brake-van, made up as follows: 29 loaded with mineral, 6 general goods, 1 empty. Two wagons containing mineral were shunted off at Rockdale, and the rest of the train brought on to Eveleigh. From Tempe to Eveleigh the rails were wet owing to rain, and sand was used occasionally. The boiler-pressure ranged from 120lbs. to 135lbs. between Marrickville and Eveleigh.

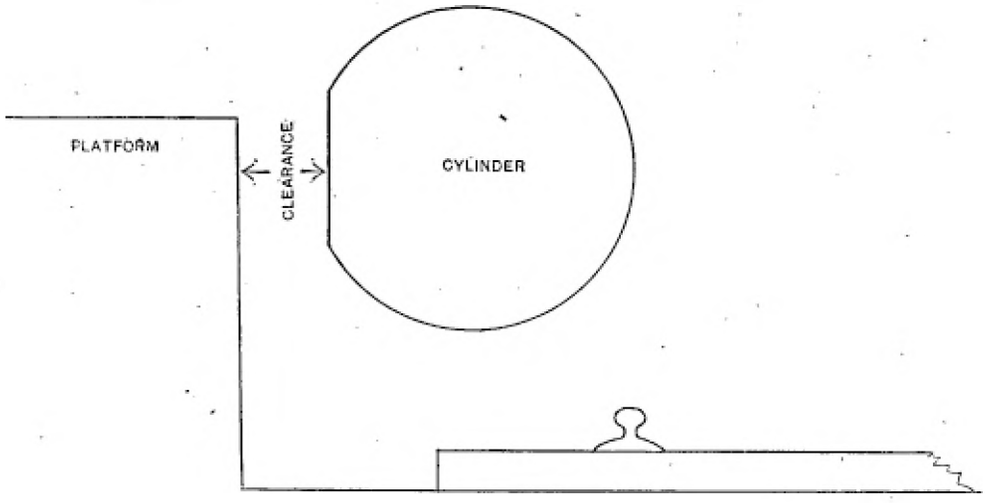
H. E. ROBINSON.

E. A. Laughry, Esq.

Eveleigh, 8 August, 1891.

No. 448—New American Express Engine, working special between Strathfield and Jennings, to ascertain the clearance between cylinders and cab of engine and all platforms, verandahs, bridges and tunnels, etc.

This engine ran to Gosford and returned to Redfern on Friday, July 31st, with the District-Engineer. The clearance between outside of cylinder and platforms varied from 4 inches to 6 inches.



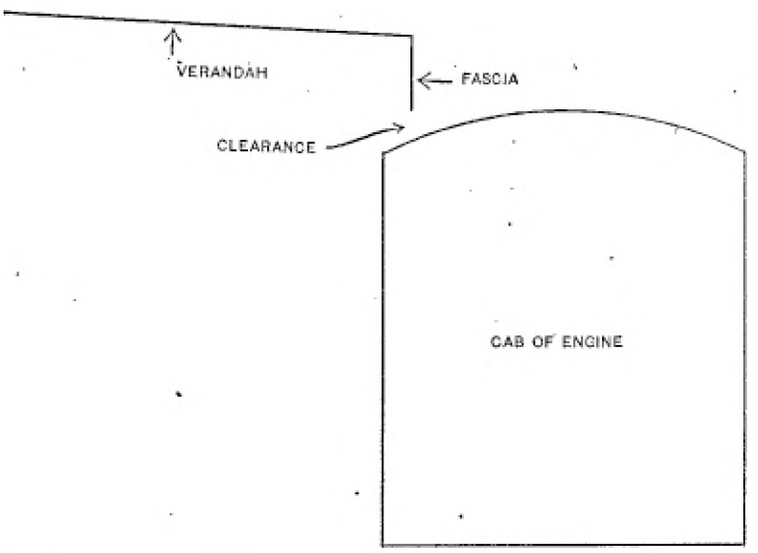
The

The cab clears all verandahs, bridges and tunnels between Strathfield and Gosford, leaving ample room or clearance when the engine oscillates, when running at a high speed, or through a soft place or curve in the road.

The valve-box connected with the water main which is carried over the Parramatta River Bridge on the up road clears the cylinder by 2½ inches. This clearance is sufficient; however, it would be preferable to have this valve-box moved further from the cylinder.

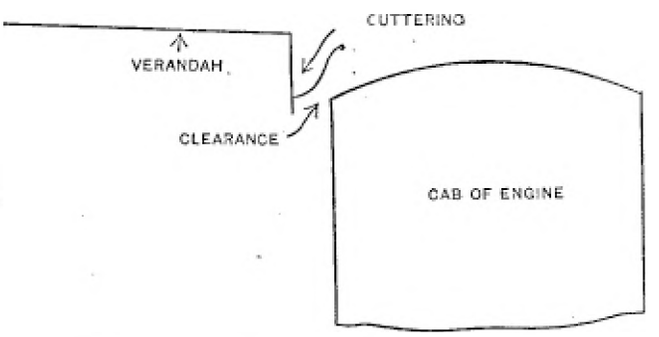
On Saturday, August 1st, engine 449 left Redfern for Jenningas, with the District-Engineer (for Northern lines). The clearance between cylinder and platforms from Gosford to Honeysuckle Point varied from 4 inches to 6 inches.

Newcastle platform varied from 3 inches to 5 inches. All verandahs, bridges and tunnels allow the cab ample clearance, with the exception of the verandah at Cockle Creek, which only allows ⅜ inch clearance between the fascia and roof of the engine-cab.

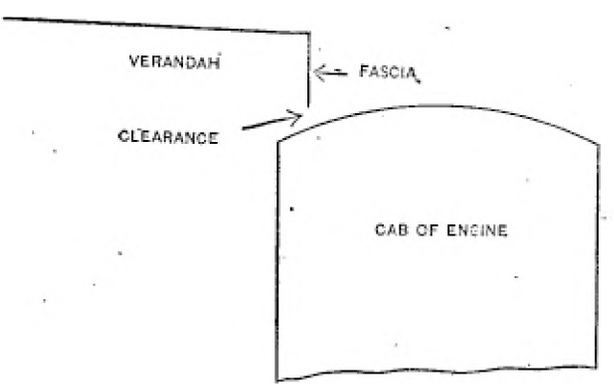


After leaving Gosford, one of the tender-axle box-brasses ran hot, and, on arrival in Newcastle, the brass was removed from the hot box, refitted, and the remaining boxes examined. This necessitated the engine remaining the night here.

Sunday, 2nd August. Newcastle to Murrurundi.—The clearance between cylinder and platforms from Newcastle to Murrurundi varied from 4 inches to 6 inches, with the exception of East Maitland. The clearance at this station varied from 3 inches to 5 inches on the up platform. The platforms at Lochinvar, Allandale, Branxton, Belford, Rix's Creek, Nundah signal-box, and Toowong varied from 3½ inches to 5 inches. All verandahs, bridges, etc., allow ample clearance for the cab, with the exception of East Maitland, the guttering of which completely fouls the side of cab on the down side. The guttering and fascia on the Muswellbrook verandah clears only by 1¼ inch.



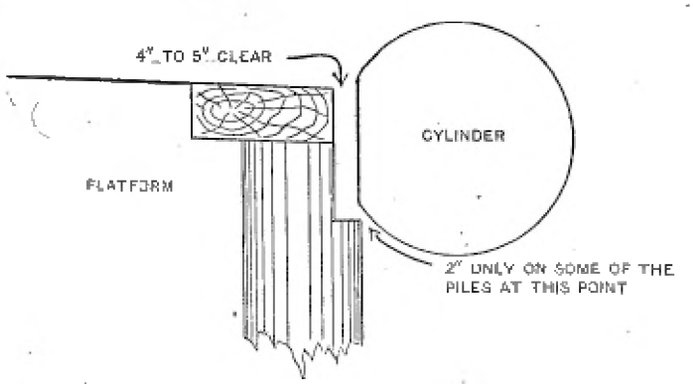
On the up platform at High-street (Maitland) the bottom of verandah only clears the roof of cab by half-an-inch.



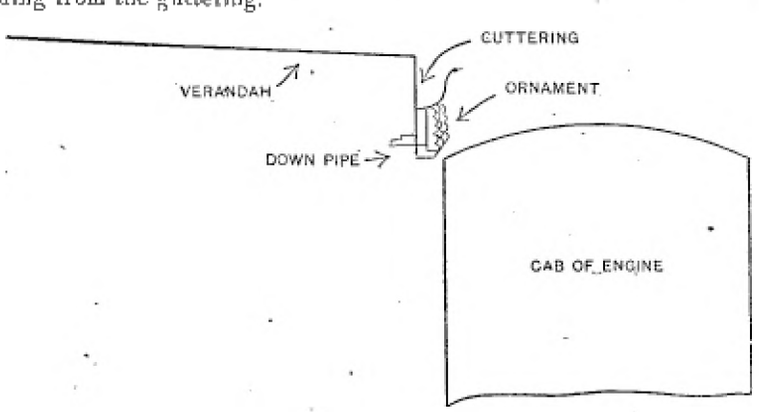
When

When about 20 miles from Newcastle the same tender axle-box ran hot, notwithstanding that every precaution was taken. It heated to such an extent that the tender had to be lifted at Singleton. The journal was slightly cut and the brass very much scored. The journal was filed up, brass refitted, and white metal let into same. This caused a delay of six hours. On examination I found that the lubricators were not up on three of the journals. On the run from Scone to Murrurundi four tender axle-boxes ran a little hot; at the latter station the engine was stabled for the night, one axle brass refitted, white metal put in same, lubricators attended to, oil-cups made and fixed in the lids of each tender axle-box. After these oil-cups were fixed the boxes gave no trouble for the remainder of the journey. It will not be desirable to continue the use of these oil-cups, on account of the quantity of oil they waste; if the boxes are properly packed it will relieve this difficulty.

Monday, 3rd August. Murrurundi to Armidale.—The clearance between cylinder and platforms from Murrurundi to Armidale varied from 4 inches to 5 inches, with the exception of Doughboy Hollow platform, which varied from 2½ inches to 3 inches. (This platform is to be replaced by a new one). The platform at Willow Tree clears the cylinder from 4 inches to 5 inches on the top, but some of the timber piles have not been sufficiently cut away and may be apt to foul the cylinder.

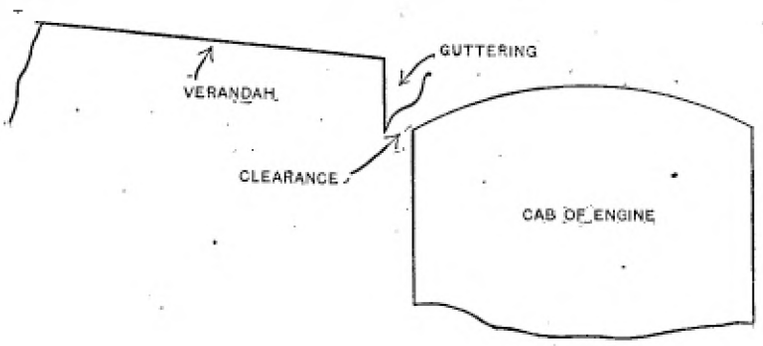


All the verandahs, bridges, and tunnels, &c., allow ample clearance for the cab, with the exception of Werris Creek verandah; the moulding on the side of cab just touches the down-pipes and ornaments covering same leading from the guttering.



The guttering on verandah at Walcha Road platform hardly allows sufficient clearance for the cab on the up end. When approaching Armidale, the engine (448) ran through and smashed Peckes' gates. The driver did not give the gatekeeper sufficient warning, as no notice of this special was given, and the whistle was not blown until within 200 yards of the gates. The pilot (cow-catcher) lifted the gates off the rails, and threw pieces of the gates into the air to the left and right. No damage was done to the engine beyond breaking one head-lamp and a slight strain to the pilot. During the run to Armidale, the boiler primed badly. The engine being stabled here for the night, the boiler was washed out, and the water changed; for the remaining portion of the journey the boiler steamed splendidly.

Tuesday, 4th August. Armidale to Jennings and return.—The clearance between cylinder and platforms from Armidale to Jennings varied from 4 inches to 5 inches, with the exception of the new timber-faced platform at Glencoe, which varied from 3 inches to 4 inches. Glen Innes platform varied from 3½ inches to 4 inches. All verandahs, bridges, &c., allow ample clearance for the cab, with the exception of the verandah guttering at Dundee, which gives the cab 2½ inches clearance.



On

On the return run from Jennings to Armidale the R.H. leading axle-box on engine bogie ran hot. The keep of same was taken down at Armidale, journal examined and found to be in good condition. Keep repacked, this box ran fairly cool for the remainder of the journey.

Wednesday, 5th August. Armidale to Newcastle.—After passing Greta the L.H. pin in the quadrant link-block broke. On examination I found that this pin had previously seized in the block, and had been working so for five or six days; this pin then worked loose in the rocking-shaft, and, for the want of lubrication, seized in same; the pin thus being held fast in the shaft and link-block was sheared and broken off. The broken pin was sent to you for inspection. Engine 426, working, 101, down, pushed the disabled engine to Greta, where she was picked up by engine 419 (which was wired for at Singleton) and towed into Newcastle. The pin was replaced at Newcastle, and the engine reached Eveleigh on Friday, 7th, at 1·30 p.m.

H. E. ROBINSON.

E. A. Laughry, Esq.

Name of Platform.	Clearance of Cylinder.	Remarks.
Strathfield	4 in. to 5½ in.	The following platforms, from Strathfield to Jennings, were measured as the engine passed slowly by each one.
Concord	6 in.	
Rhodes	5 in. to 6½ in.	
Meadow Bank	4 in. to 4½ in.	
Ryde	4 in. to 6 in.	
Eastwood	4 in. to 5 in.	
Carlingford	5½ in. to 6 in.	
Beecroft	3 in. to 3½ in.	
Pennant Hills	4½ in.	
Thornleigh	5½ in. to 6½ in.	
Hornsby	5½ in.	Did not go over North Shore line.
Cotah	4½ in. to 5 in.	
Berowra	5½ in. to 6 in.	
Cowan	5½ in.	
Hawkesbury River	3½ in. to 5½ in.	
Woodabyne	Clears	
Mullet Creek	4½ in. to 8 in.	
Woy Woy	4½ in. to 4½ in.	
Point Clare	3½ in. to 4½ in.	
Gosford	5 in.	
Narara	4½ in. to 5 in.	
Ourimbah	3½ in. to 5 in.	
Tuggerah	3½ in. to 5 in.	
Wyong	5 in. to 7 in.	
Wyee	4 in. to 6 in.	
Morisset	3 in. to 4½ in.	
Dora Creek	4 in. to 5 in.	
Awaba	4 in. to 5 in.	
Fassifern	4 in. to 5 in.	Did not take engine into siding.
Teralba	4 in. to 6 in.	
Cockle Creek	4 in. to 6 in.	Cab almost touches verandah.
Young Wallsend	4½ in.	
Cardiff	4 in. to 5½ in.	
Adamstown	4 in. to 5½ in.	
Broadmeadow	4 in. to 5 in.	
Islington	4 in. to 5½ in	To Newcastle.
Hamilton	4 in. to 5 in.	
Honeysuckle	5 in. to 6 in.	
Newcastle	3 in. to 5 in.	
Waratah	4 in. to 5 in.	Verandah not complete.
Sandgate	4 in. to 5 in.	
Hexham	4 in. to 5 in.	
Tarro	4 in.	
Thornton	4 in.	
Victoria-street	3 in. to 4 in.	
East Maitland	3½ in. to 5 in.	Fouls verandah.
High-street	3½ in. to 5 in.	Verandah too close up platform.
West Maitland	3 in. to 4 in.	
Farley	4 in. to 5 in.	New verandah clears cab 8½ in.
Lochinvar	3½ in. to 5 in.	
Allandale	3¾ in. to 4 in.	
Anvil Creek		No record taken.
Greta	4 in to 5 in.	
Branxton	3½ in. to 4 in.	
Belford	3½ in. to 4 in.	
Whittingham	4 in. to 4½ in.	
Singleton	4 in.	
Rix's Creek	3½ in. to 4 in.	
Numdah	3½ in.	
Glennie's Creek	4 in. to 4½ in.	
Ravensworth	4 in. to 5 in.	
Liddell	4 in.	
Toowong	3 in.	
Grass Tree	4 in.	
Muswellbrook	4 in. to 5 in.	Verandah too close.
Aberdeen	4½ in. to 5 in.	
Scone	4 in. to 5 in.	
Parkville	4 in.	
Wingen	4 in.	
Blandford	5 in. to 5½ in.	
Murrurundi	4½ in. to 5 in.	Verandah not complete.
Temple Court	4 in.	
Doughboy Hollow	2½ in. to 3 in.	Platform to be rebuilt.
Willow Tree	4 in. to 5 in.	Timber piles to be cut down.
Bracefield	4 in. to 5 in.	

Name of Platform.	Clearance of Cylinder.	Remarks
Quirindi	4 in. to 5 in.	
Quipolly	5 in. to 5½ in.	Fouls verandah, &c.
Werris Creek	5 in. to 6 in.	Did not go over the N.W. line.
Terrible Vale	4 in. to 5 in.	
Currabubula	4 in. to 5 in.	
Duri	4 in. to 5 in.	
West Tamworth	5 in. to 6 in.	
Tamworth	5 in. to 5½ in.	
Tintinhull	4½ in.	
Moonbi	4 in. to 5 in.	
Farquharson	4 in.	
Macdonald River	4 in.	
Walcha Road	4 in. to 5 in.	Guttering projects.
Wollun	4 in.	
Kentucky	4 in. to 5 in.	
Uralla	4 in. to 5 in.	
Kelly's Plains	4 in. to 5 in.	
Armidale	4 in. to 5 in.	
Dumaresq	4 in. to 5 in.	
Duval	4 in.	
Black Mountain	4 in. to 5 in.	
Guyra	5 in. to 6 in.	
Llangothlin	5 in. to 6 in.	
Ben Lomond	5 in. to 5 in.	
Glencoe	4 in. to 5 in.	New platform 3 in. to in.
Stonehenge	4 in. to 5 in.	
Glen Innes	3½ in. to 4 in.	
Yarraford	4 in. to 5 in.	
Dundee	5 in. to 6 in.	Guttering on verandah too close.
Deepwater	5 in. to 6 in.	
Bolivia	4 in. to 5 in.	
Sandy Flat	5 in. to 6 in.	
Bluff Rock	6 in. to 7 in.	
Tenterfield	4 in. to 5 in.	
Sunnyside	5 in. to 5½ in.	
Jennings	4 in. to 5 in.	

There is ample clearance for the cab of these new American engines going through and under all the tunnels and bridges on the Northern line. The tunnels varied in clearance from 7½ in. to 16 in.

All doors of running sheds on the Northern line will allow cabs of new American express engines to enter the sheds.

At mileage 364·10 the engine struck something on the line and threw ballast about. Being on a ticket we did not go back to see what it was. The train was pulled up. On examining the engine and car no marks could be found.

The District Engineer sent a ganger back from the next station to inspect about mileage 364·10. I have not been informed of the result.

Standard Profile Measurements to Existing Structures—Passenger Platforms.

P.S.—All measurements from inside of rail, except books 6, 7, and 8, which are from centre of rail.

Name of Station.	Description of Platform.	Measurements.			Cant.		No. and page in Field Book.	Remarks.
		Top.	Bottom.	Height from rail.	In.	Out.		

Great Southern Railway—Granville to Albury.

		ft. in.	ft. in.	ft. in.	in.	in.	Page.	No.	
Granville (up line)	Brick (stone cap.)	2 6¼	2 1⅝	3 1½	...	...	71	2	Dished 1⅞ in.
" "	" "	2 6	2 2⅜	3 0	...	...	71	2	Dished 1½ in.
" (down line)	" "	2 5¾	2 2⅞	2 10⅜	...	...	70	2	Dished 1⅛ in.
" "	" "	2 6¼	2 3¼	2 10⅛	...	...	70	2	Dished 1½ in.
Merrylands	Timber	2 9½	2 5⅞	2 10	...	...	65	2	
Guildford	"	2 6¾	2 11	2 11⅛	...	...	65	2	0 in. x 6 in. piles.
Fairfield	Brick (stone cap.)	2 5¾	2 2¼	2 7⅜	1⅛	...	63	2	
Canley Vale	Timber	2 6¾	3 0	2 8¼	...	...	62	2	6 in. x 6 in. piles.
Cabramatta	"	2 5	2 9½	2 10½	...	...	60	2	6 in. x 6 in. piles.
Warwick Park	Brick	2 8⅜	2 5½	2 9¾	...	...	59	2	
Liverpool	Brick (stone cap.)	2 6⅛	2 3	2 9¾	...	...	58	2	Dished 1⅛ in.
Glenfield	Brick	2 8¼	2 5¼	2 8⅜	...	...	51	2	
Macquarie Fields	"	2 7	2 3	2 10⅛	...	...	50	2	
Ingleburn	"	2 7¼	2 3⅛	2 10¼	...	...	49	2	Dished 1⅛ in.
"	"	2 7½	2 3	2 10⅞	...	...	49	2	
Minto	Timber	2 6½	3 11½	2 10¼	...	...	49	2	6 in. x 6 in. piles
Leumeah	Brick	2 7⅜	2 4½	2 8⅞	...	...	47	2	
Campbelltown	Brick (stone cap.)	2 5	2 2	2 9½	...	...	43	2	Dished 1½ in.
"	Brick	2 7½	2 4	2 9¾	...	...	43	2	

Name of Station.	Description of Platform.	Measurements. Top.	Bottom.	Height from rail.	Gauge. In.	Gauge. Out.	No. and page in Field book.	Remarks.
GREAT SOUTHERN RAILWAY—GRENFELL TO ALBURY—*continued*.								
		ft. in.	ft. in.	ft. in.	in.	in.	Page. No.	
Between North Menangle and Campbelltown.	Timber	2 8	2 10¾	2 7½	1½	...	38 2	8 in. diameter piles.
North Menangle	,,	3 0½	3 2	2 19½	...	...	38 2	6 in. x 6 in. piles.
Menangle	Brick (stone cap.)	2 6	2 2½	2 10½	2	...	35 2	
,,	Timber	2 6½	2 11⅝	2 11½	...	1½	35 2	7 in. x 9 in. piles.
Douglas Park	,,	2 6½	2 11⅜	3 0½	1½	...	32 2	6 in. x 6 in. piles.
Muldon	,,	2 9⅜	2 7½	2 9	...	3½	31 2	6 in. x 6 in. piles.
Picton	Brick (stone cap.)	2 5½	2 1⅞	2 10⅜	...	⅜	28 2	Dished 1⅜ in.
Thirlmere	Masonry	2 8⅜	2 5⅜	2 7½	...	1	25 2	Ashlar cap set off 1½ in.
Picton Lakes	Old sleepers	2 8½	2 10	2 9½	...	3	25 2	
Balmoral	Timber	2 7¼	3 0½	2 9½	...	...	24 2	6 in. x 6 in. piles.
Hill Top	Masonry	2 8½	2 5½	2 9⅝	...	...	24 2	Ashlar cap set off 1½ in.
Colo Vale	,,	2 9½	2 4½	2 9⅝	2	...	23 2	Ashlar cap set off 1½ in.
Rush's	Timber	2 6⅜	2 8½	2 9⅜	...	...	23 2	9 in. x 5 in. piles.
Mittagong	Brick (stone cap.)	2 7	2 4½	2 10½	1½	...	21 2	
Bowral	,, ,,	2 4½	2 1½	2 11	...	...	13 2	
Burradoo	Timber	2 5½	2 10½	2 9	...	...	13 2	6 in. x 6 in. piles.
Bong Bong	,,	2 6	2 11¼	2 10½	...	...	10 2	6 in. x 6 in. piles.
Moss Vale	Brick (stone cap.)	2 3⅜	2 0⅜	2 7⅜	...	...	6 2	Set off 1⅜ in.
Meryla	Masonry	2 8⅜	2 5⅜	2 7⅜	...	...	5 2	Set off 1½ in.
Exeter	Brick (stone cap.)	2 7¼	2 5¼	2 9¾	...	2¼	4 2	Set off 1¼ in.
Bundanoon	Timber	2 6⅛	2 13	2 8½	...	...	2 2	6 in. x 6 in. piles.
Wollondilly	Old sleepers	2 8	2 8	2 7⅜	2¼	...	2 2	
Wingello	Masonry	2 6⅛	2 4	2 9⅞	...	...	1 2	Set off 1⅛ in.
Barber's Creek	Timber	2 9⅝	3 2½	2 9⅜	...	...	163 1	6 in. x 6 in. piles.
Marulan	Brick (stone cap.)	2 8	2 3½	2 9½	1¼	...	161 1	
Carrick	Timber	2 5	2 10⅛	2 8	...	...	157 1	6 in. x 6 in. piles.
Towrang	,,	2 5⅛	2 13½	2 7⅜	...	...	157 1	6 in. x 6 in. piles.
Murray's Flats	Masonry (brick cap.)	2 6⅝	2 5½	2 8¾	...	...	153 1	Set off 1½ in.
North Goulburn	Brickwork	2 7⅝	2 2½	2 9⅜	...	...	153 1	
Goulburn	Brick (stone cap.)	2 7½	2 2½	2 11⅛	...	...	141 1	Dished 1 in.
,,	,, ,,	2 9	2 2⅜	2 10½	...	...	144 1	Dished 1½ in.
Yarra	Brick	2 5½	2 3⅜	2 5⅜	...	...	93 1	
Breadalbane	,,	2 4⅜	2 2¼	2 2⅜	...	1⅛	89 1	
Razorback	Old sleepers	2 8	2 7⅛	2 10¼	4½	...	89 1	
Fish River	Brick	2 4½	2 2	2 6⅞	...	1⅛	87 1	
Gunning	,,	2 4½	2 1¼	2 11	...	...	87 1	
Gunning, Jerrawa	Old sleepers	2 5⅜	3 6	2 8½	...	...	83 1	
Jerrawa	Brick	2 5⅛	2 3¾	3 0¼	...	...	82 1	
Jerrawa, Yass	Old sleepers	2 6⅛	2 8	2 7⅜	...	...	83 1	
Yass	Masonry (brick cap.)	2 6⅜	2 4⅜	2 7	...	...	79 1	
Bowning	Brick	2 6⅛	2 3¼	3 0⅜	...	...	74 1	
Binalong	Masonry	2 5⅜	2 1⅜	2 8⅜	...	1⅜	67 1	
Galong	Brick	2 5⅛	2 2⅛	2 9⅛	...	...	65 1	
Rocky Ponds	,,	2 6¼	2 3⅜	2 4⅜	...	3¼	64 1	Dished 1¼ in.
Cunningar	,,	2 4⅛	2 1⅜	2 8⅛	...	...	62 1	
Harden	Masonry (brick cap.)	2 7⅛	2 1⅜	2 10⅜	...	...	57 1	
Murrumburrah	Timber	2 3⅛	2 9	2 7⅞	2¾	...	4 1	6 in. x 6 in.
Demondrille	Masonry (brick cap.)	2 7⅛	2 6	2 10¼	...	2¼	1 1	Set off 1¼ in.
Nubba	Brick	2 6⅛	2 0⅜	2 9⅛	...	...	45 1	
Wallendbeen	,,	2 5⅜	2 3⅛	2 8⅛	⅝	...	49 1	
Cootamundra	Masonry (wood cap.)	2 4⅛	2 2⅛	2 8⅜	...	...	16 10	Set off ⅛ in.
Frampton	Masonry (brick cap.)	2 4⅝	2 1⅛	2 8⅛	...	...	22 10	
Bethungra	,, ,,	2 7⅛	2 2⅜	3 4⅜	...	...	23 10	
Illabo	,, ,,	2 5⅛	2 2	2 9⅛	...	...	24 10	
Junee Junction	Brick (stone cap.)	2 8	2 3⅜	2 8	...	...	9 8	
,,	Masonry (brick cap.)	2 8⅛	2 1	2 10⅛	...	...	9 8	
,,	Brick (stone cap.)	2 7⅞	2 2⅜	2 7⅛	...	...	9 8	
,,	Masonry (brick cap.)	2 4¼	2 1⅛	2 10¼	...	...	9 8	
,,	Brick (stone cap.)	2 9	2 3	2 8⅛	...	...	9 8	
,,	Masonry (brick cap.)	2 4⅛	2 2⅛	2 9⅜	...	...	9 8	
Harefield	,, ,,	2 5	2 2¼	2 9⅛	⅛	...	32 8	
Bomen	Masonry (brick cap.)	2 4⅛	2 1⅛	2 8¾	...	...	32 8	
Wagga Wagga	Brick	2 5⅛	2 1⅜	2 9⅜	...	...	34 8	
Sandy Creek	Timber	2 6	2 3¼	2 9⅛	...	...	35 8	
The Rock	,,	2 6⅜	2 4	2 9⅛	...	...	36 8	
Yerong Creek	,,	2 6⅜	2 5⅜	2 10⅛	...	...	38 8	
Doodle, Cooma	Masonry	2 6⅛	2 3⅛	2 8⅜	...	...	38 8	
Culcairn	Brick (stone cap.)	2 7⅜	2 2⅛	3 5⅜	...	...	39 8	Dished 1⅜ in.
,,	Timber	2 2⅛	2 0⅛	2 6⅜	...	...	39 8	
Gerogery	,,	2 3⅜	2 2⅜	2 6¼	...	...	40 8	
Yambla	Brick	2 5	2 3½	2 8¼	...	⅛	9 10	
Ettamogah		2 8	2 3½	2 7⅛	...	...	11 10	
Albury Racecourse	Timber	2 5⅞	2 11⅛	2 10¼	...	...	12 10	6 in. x 6 in. piles.
Albury	Brick (stone cap.)	2 7¼	2 7¼	2 9¼	...	...	1 10	Set off 2¼ in.
GREAT SOUTHERN RAILWAY—COOTAMUNDRA TO GUNDAGAI.								
Brawlin	Timber	2 7	2 5⅛	2 7⅞	...	...	30 10	
Muttama	,,	2 9¼	2 5⅝	2 8⅛	...	...	29 10	
Coolac	,,	2 8⅛	2 5	2 8	...	...	29 10	
Gundagai	,,	2 5⅞	2 4⅛	2 6⅜	...	...	25 10	

Name of Station.	Description of Platform.	Measurements. Top.	Bottom.	Height from rail.	Cant. In.	Out.	No. and page in Field Book.	Remarks.
Great Southern Railway—Narrandera to Jerilderie.		ft. in.	ft. in.	ft. in.	in.	in.	Page. No.	
Gillenbah	Old sleepers	2 6½	2 6½	3 6⅜	...	...	15 8	
Cuddell	Masonry (brick cap.)	2 7⅜	2 4½	2 8⅜	...	...	15 8	
Colombo Creek	Timber	2 5	2 3½	2 8½	1½	...	16 8	
Widgiewa	"	2 6⅜	2 10⅜	2 8⅜	...	...	17 8	6 in. x 6 in. piles.
Coonong	"	2 2⅜	1 11¼	2 10½	...	...	17 8	
Bunduro	"	2 2½	2 0½	2 7½	1	...	20 8	
Yathong	"	2 4	2 2⅜	2 1⅜	...	...	19 1	
Jerilderie	Brick	2 5⅜	2 2⅜	2 8⅜	...	...	18 1	
Great Southern Railway—Cooma Branch.								
Bangalore	Brick	2 7	2 2½	2 9⅛	...	...	95 1	Dished 1½ in.
Lake Bathurst	"	2 7	2 4⅜	2 5	1⅜	...	96 1	
Tarago	"	2 6⅛	2 4½	2 8⅜	...	...	98 1	
Lake Bathurst (on Lake)	"	2 8	2 5½	2 9⅜	...	2½	100 1	
Fairy Meadow	"	2 7⅜	2 4⅜	2 9⅜	...	...	101 1	Set off 1½ in.
Bungendore	"	2 6½	2 3½	2 9½	...	...	103 1	
Burbong	Concrete (brick cap.)	2 4⅜	2 1⅜	2 10	½	...	107 1	
Queanbeyan	Brick	2 7¼	2 4	2 9½	...	...	136 1	
Tuggeranong	Timber	2 6½	2 3½	2 10½	...	3⅛	133 1	
Rob Roy	"	2 5⅜	2 4	2 10⅛	...	...	132 1	
Michelago	Brick	2 7½	2 4½	2 9⅜	...	...	129 1	Set off ¼ in.
Colinton	"	2 7	2 3⅜	2 9⅜	...	...	125 1	
Bredbo	"	2 7⅛	2 4⅛	2 9¼	1⅛	...	121 1	
Umeralla	"	2 7⅜	2 4⅜	2 9½	...	1⅛	117 1	
Bunyan	"	2 6⅛	2 4	2 10⅛	⅛	...	116 1	
Cooma	"	2 7¼	2 4⅜	2 9⅛	...	...	110 1	
Great Southern Railway—Demondrille to Blayney.								
Kingsvale	Brick	2 7⅜	2 4½	2 9¼	...	...	6 1	
"	"	2 6¼	2 5	2 9¼	...	...	6 1	Set off 1½ in.
Young	Brick (stone cap.)	2 6⅜	2 6⅛	2 10¾	...	...	12 1	Set off 1 in.
Burrangong	Old sleepers	2 6⅛	2 8⅛	2 10⅛	...	I	10 1	
Burrangong, Monteagle	"	2 8⅜	2 9⅛	3 2¾	...	...	16 1	
Monteagle	Timber	2 7	2 8½	2 11⅛	...	...	17 1	
Bendick Murrell	Brick	2 7⅛	2 5⅜	2 9⅜	...	¾	18 1	
Crowther	Old sleepers	2 6	2 7⅜	7 7⅛	...	...	19 1	
Koorawatha	Timber	2 6	2 3	3 0⅛	...	...	20 1	
Cowra	Brick	2 7⅞	2 5⅛	2 9⅜	...	...	25 1	
Holmwood	Timber	2 6⅛	2 3¼	2 10⅜	⅛	...	44 1	
Holmwood, Woodstock	"	2 4⅛	2 2¼	2 10⅜	1⅜	...	43 1	
Woodstock	"	2 8⅛	2 4	2 11	1½	...	42 1	
Wyalla	"	2 6⅛	2 3½	2 7⅛	...	3¼	40 1	
Garland	Brick	2 8⅛	2 6⅛	3 0⅜	...	...	39 1	
Lyndhurst	"	2 8⅛	2 5⅜	2 11⅛	...	...	37 1	
Maudarama	Timber	2 8¼	2 9⅜	3 4¼	...	¾	36 1	
Carcoar	Brick	2 7⅜	2 4⅛	2 9¾	...	...	33 1	
Blayney	"	2 7⅛	2 5⅜	2 10⅜	...	...	30 1	
South-Western Line—Junee Junction to Hay.								
Old Junee	Masonry (brick cap.)	2 5⅜	2 3⅛	2 9¼	...	...	10 8	
Marrar	Timber	2 4⅜	2 10¼	2 8⅛	...	...	11 8	6 in. x 6 in. piles.
Coolaman	Masonry (brick cap.)	2 7½	2 6½	2 8⅝	...	...	11 8	
Boggy Creek	Old sleepers	2 8½	2 9½	2 7⅜	...	...	12 8	
Devlin's Siding	Timber	2 5½	2 9⅜	3 0	...	...	12 8	
Grong Grong	Masonry (brick cap.)	2 6¼	2 2¾	2 9⅜	...	...	12 8	
Narrandera	Masonry	2 6¼	2 2¼	2 10⅝	...	1⅛	13 8	
Yanko Siding	Old sleepers	2 5⅜	2 11	2 6⅛	...	⅜	29 8	
Whitton	Timber	2 3	2 2⅝	2 8⅛	...	...	29 8	
Darlington	"	2 6	2 3¼	2 6	...	...	28 8	
Beneremba	"	2 4⅜	2 7	2 5	...	...	26 8	
Bringagee	Old sleepers	2 5½	2 6⅜	2 10½	1⅜	...	26 8	
Groongal	"	2 6¼	2 4⅜	2 5½	...	...	25 8	
Carrathool	Timber	2 3⅜	2 3⅜	2 5⅜	...	...	24 8	
South-Western Line—Junee Junction to Hay—*continued*.								
Uardry	Old sleepers	2 11½	3 3½	2 10½	...	...	24 8	
Tnonongo	"	2 9½	3 1½	2 10	...	½	23 8	
Beabula	"	2 6⅛	3 0½	2 9	...	½	23 8	
Hay	Brick	2 5⅜	2 4⅜	2 5½	...	...	20 8	

Name of Station.	Description of Platform.	Measurements. Top.	Bottom.	Height from rail.	Cant. In.	Out.	No. and page, in Field Book.	Remarks.
GREAT NORTHERN RAILWAY.								
		ft. in.	ft. in.	ft. in.	in.	in.	Page. No.	
Wallangarra	Concrete (wood cap.)	2 6	2 3⅜	2 9¼	...	...	138 2	
Sunnyside	Brick	2 6½	2 3½	2 11¼	...	...	133 2	
Tenterfield	,,	2 8	2 5⅛	2 10½	...	...	126 2	
Bluff Rock	Timber	2 10½	2 9⅜	2 8⅜	...	...	125 2	
Sandy Flat	Brick	2 7⅛	2 4⅛	2 8⅞	...	...	124 2	
Bolivia	,,	2 6⅜	2 4	3 4⅜	...	...	123 2	
Deepwater	,,	2 6⅜	2 5⅜	2 10½	...	...	122 2	
Dundee	,,	2 6⅛	2 4⅜	2 10	...	...	118 2	
Yarrowford	,,	2 7½	2 4⅝	2 10½	...	...	116 2	
Glen Innes	Brick (stone cap.)	2 7⅜	2 4½	3 0¼	...	...	113 2	
Stonehenge	Timber	2 5⅛	2 6½	2 5¼	...	...	110 2	
Glencoe	Brick	2 6	2 3	2 11⅛	...	...	107 2	
Ben Lomond	,,	2 6½	2 4	2 9½	...	...	106 2	
Llangothlin	Timber	2 4⅜	2 5⅛	2 9	...	..	140 2	
Guyra	Brick	2 6⅜	2 5¼	2 9⅜	...	...	141 2	Set off ⅛ in.
Black Mountain	Timber	2 6⅜	2 2⅝	2 9¾	...	...	145 2	
Duval	,,	2 8	3 2⅜	2 5⅛	...	..	146 2	
Dumaresq	Brick	2 7¼	2 5⅛	2 9¼	...	...	147 2	
Armidale	Brick (stone cap.)	2 6¼	2 5⅛	2 11⅛	...	...	150 2	
Kelly's Plains	Timber	2 4⅛	2 6⅛	2 7⅜	...	...	1 3	
Uralla	Brick	2 5⅛	2 3⅛	2 8⅛	...	...	5 3	Set off ½ in.
Kentucky	,,	2 6	2 3⅜	2 8⅜	...	1½	7 3	Set off ½ in.
Wollar	Timber	2 5⅝	2 6⅜	2 11¼	...	...	8 3	
Walcha Road	Brick	2 8⅝	2 9⅛	2 8⅛	...	...	9 3	Double set off 1⅝ in., 1½ in.
M'Donald River	Timber	2 4	2 4⅜	2 10½	...	...	13 3	
Farquharson Siding	,,	2 4⅛	2 5	2 9⅜	...	...	16 3	
Moonbi	,,	2 3	2 1⅛	2 11¼	...	...	17 3	
Tintinhull	,,	2 2¾	2 4⅛	2 10⅛	...	...	18 3	
Tamworth	Brick	2 4⅛	2 0⅜	2 6⅞	...	...	21 3	
West Tamworth	,,	2 4½	2 2	2 8⅝	...	...	29 3	
Duri	,,	2 3⅜	2 2	2 1⅛	...	...	31 3	
Currabubula	Masonry (brick cap.)	2 6⅛	2 2	2 9⅛	...	...	32 3	
Werris Creek	Brick	2 3⅜	1 9⅛	2 9⅛	...	...	35 3	Dished 2 in.
,,	,,	2 5	1 11⅛	2 8¼	...	⅜	34 3	Dished 2½ in.
Quipolly	Masonry (brick cap.)	2 5	2 2¼	2 6⅜	...	...	37 3	
Quirindi	Timber	2 4⅜	2 2	2 10	...	...	38 3	
Braefield	,,	2 4	2 3¼	2 2⅜	...	...	43 3	
Willow Tree	,,	2 3⅛	2 2½	2 8½	...	...	44 3	
Doughboy Hollow	Brick	2 5½	2 4⅛	2 2⅜	...	...	47 3	
Temple Court	,,	2 5⅛	2 2⅛	2 5⅜	...	...	51 3	
Murrurundi	Brick (stone cap.)	2 1⅜	2 0	2 4	...	...	56 3	
Blandford	,, ,,	2 5⅛	2 3¼	2 8	...	1⅜	57 3	
Wingen	Brick	2 4⅛	2 2¼	2 9¼	...	...	60 3	
Parkville	,,	2 6⅜	2 4½	2 10⅜	...	...	61 3	
Scone	Brick (stone cap.)	2 5⅛	2 2⅜	2 7⅞	...	...	61 3	
Aberdeen	Brick	2 4⅛	2 2¼	2 10⅜	...	...	66 3	
Muswellbrook	Brick (stone cap.)	2 3⅜	2 1⅜	2 7⅛	...	...	68 3	
Grass Tree	Brick	2 4⅛	2 5⅛	2 4⅛	...	...	74 3	
Liddell	,,	2 6⅜	2 4⅛	2 5⅜	⅛	...	74 3	
Ravensworth	Brick (stone cap.)	2 5⅞	2 3⅞	2 8	...	1¼	75 3	
Glennie's Creek	Brick	2 4⅞	2 5⅛	2 8⅝	...	...	78 3	
Rix's Creek	,,	2 5⅛	2 2⅜	3 0	...	1⅜	79 3	
Singleton	Timber	2 7⅛	2 9⅛	2 10⅝	...	...	80 3	9-in. piles.
Whittingham	Brick	2 4	2 4⅜	2 8⅛	...	...	87 3	
Belford	,,	2 3⅜	2 3⅛	2 9⅜	...	2	89 3	
Branxton	Timber	2 5⅛	2 6⅛	2 10½	...	...	94 3	6 in. x 6 in. piles.
Greta	Brick	2 5⅛	2 5⅜	2 9⅞	1⅛	...	97 3	
Allandale	,,	2 4	2 3⅜	2 10⅛	...	2⅜	99 3	
,,	,,	2 6⅛	2 4⅛	2 10⅜	...	1¼	99 3	
Lochinvar	,,	2 4	2 5⅛	2 8⅛	...	...	101 3	
Lochinvar-Farley	Timber	2 6⅜	2 6⅜	2 9⅜	1½	...	104 3	
Farley	Brick	2 4⅜	2 4⅛	2 7⅜	...	...	106 3	Set off ⅛ in.
West Maitland	Brick (stone cap.)	2 5⅜	2 1⅜	2 9⅜	...	...	108 3	Dished 2 in.
High-street (up line)	Timber	2 4⅛	2 9	2 10⅜	...	1⅜	112 3	8 in. x 8 in. piles 20 ft. 9 in.
,, (down line)	,,	2 5	2 9⅜	2 7⅞	1	...	112 3	8 in. x 8 in. piles 20 ft. 9 in
East Maitland (up line)	Brick	2 7⅜	2 2⅜	2 7⅜	...	2⅛	113 3	Dished 1⅛ in.
,, (down line)	Timber	2 3⅜	2 9⅛	2 10⅛	1⅛	...	113 3	7 in. x 7 in. piles 21 ft. 0 in
,, (up line)	,,	2 6	2 11⅛	2 8⅛	...	2⅛	113 3	6 in. x 6 in. piles 21 ft. 0 in.
,, (Morpeth branch)	,,	2 4⅛	3 0	3 4⅛	...	2⅛	114 3	6 in. x 6 in. piles.
Victoria-street (up line)	Brick	2 7⅛	2 4⅜	3 0⅛	⅜	...	129 3	Dished 1⅜ in. 20 ft. 6 in.
,, (down line)	,,	2 8⅛	2 2	2 7⅜	...	1	129 3	
Victoria-street-Thornton	Timber	2 8	2 5⅝	2 9⅛	...	2⅛	130 3	
Thornton (up line)	Brick	2 4⅛	2 2⅛	3 1⅛	...	...	131 3	20 ft. 4 in.
,, (down line)	,,	2 2⅛	2 2⅜	2 5⅛	...	...	131 3	20 ft. 4 in.
Tarro (down line)	,,	2 7⅛	2 4⅛	2 10⅜	...	...	133 3	
,, (up line)	,,	2 5⅛	2 1⅛	2 11⅜	...	...	133 3	
Hexham (down line)	Timber	2 3⅜	2 5⅛	2 11¼	...	...	136 3	
,, (up line)	Brick	2 5	2 3⅛	2 11	...	...	137 3	
Sandgate (up line)	Brick	2 5⅛	2 1⅜	2 8⅛	...	...	138 3	Dished 2 in. Dished 1⅜ in. 20 ft. 8⅜ in.
,, (down line)	,,	2 6⅛	2 3	2 6⅛	...	...	139 3	
Waratah (up line)	Timber	2 4⅛	2 7	2 7⅛	...	...	139 3	20 ft. 8 in.
,, (down line)	,,	2 3⅛	2 3⅛	2 6¼	...	...	130 3	
,, (up line)	Brick	2 4⅜	2 2¼	2 8⅛	...	...	140 3	Dished 1⅛ in. Dished 1⅛ in. 20 ft. 10¼ in.
,, (down line)	,,	2 5⅛	2 1¼	2 8⅜	...	...	140 3	

Name of Station.	Description of Platform.	Measurements. Top.	Bottom.	Height from rail.	Cant. In.	Cant. Out.	No. and page in Field Book.	Remarks.
GREAT NORTHERN RAILWAY—*continued*.		ft. in.	ft. in.	ft. in.	in.	in.	Page. No.	
Hamilton (up line)	"	2 9¼	2 4½	2 7¼	½	...	145 3	} 20 ft. 6¼ in.
" (down line)	"	2 3½	2 4½	2 7½	...	1½	145 3	
Newcastle	Brick (stone cap.)	2 3¼	2 5	2 7⅞	1	...	18 4	Set off 2 in.
"	" "	2 2½	2 4	2 8½	...	...	19 4	Set off 2 in. } 31 ft. 4½ in.
"	" "	2 3½	2 3½	2 9⅜	...	...	19 4	Set off 2 in. }
Mortuary	Timber	2 7½	3 0¼	3 1⅜	...	2⅜	1 4	7 in. x 7 in. piles.
Honeysuckle Point	Brick (stone cap.)	2 4	2 2	2 7⅛	...	¼	148 3	
" (up line)	" "	2 5½	2 2¾	2 7¾	¼	...	148 3	
Junction	Brick	2 8½	2 6	3 1½	...	2⅛	21 4	
"	"	2 7	2 4¾	2 9½	...	2½	20 4	
Adamstown (up line)	"	2 6⅜	2 4½	2 9½	...	...	21 4	
" (down line)	"	2 5⅜	2 4⅜	2 7¾	...	...	21 4	
Broadmeadow (down line)	Timber	2 6¼	2 4	2 10	...	...	17 4	} 20 ft. 10¼ in.
" (up line)	Brick	2 6½	2 4⅜	2 10¾	...	...	17 4	
Cardiff	Timber	2 5¾	2 4½	2 7¾	...	...	23 4	21 ft. 0½ in.
Cockle Creek	"	2 7	2 5½	2 9⅜	...	1⅜	24 4	
"	"	2 8	2 6¼	2 8¾	1⅞	...	24 4	
Teralba	"	2 7½	2 6	2 6¾	1⅜	...	26 4	
Fassifern	Concrete (wood cap.)	2 7¾	2 4½	2 9⅜	2	...	27 4	
Awaba	Timber	2 7⅜	2 5¾	2 11¼	1¾	...	28 4	
Dora Creek	"	2 5⅞	2 10½	2 9	...	...	30 4	7 in. x 7 in. piles.
Morrisset	Concrete (wood cap.)	2 7½	2 5¼	2 10½	...	⅜	32 4	
Wyee	Timber	2 7⅜	2 5⅞	2 10½	...	...	33 4	
Wyong	"	2 8½	2 3½	2 9	...	1¼	36 4	
Tuggerah Lakes	"	2 6¼	2 3½	2 9⅞	...	...	38 4	
Ourimbah	"	2 7½	2 5⅛	2 8½	...	1	40 4	
Narara	Brick (stone cap.)	2 8	2 5⅛	2 9½	...	...	40 4	
Gosford	Brick	2 7½	2 4⅜	3 0¼	...	...	44 4	} 42 ft. 0⅜ in.
"	"	2 7¼	2 5⅜	3 0¼	...	...	44 4	
Point Clare	Timber	2 9	3 1½	2 10¼	...	...	46 4	6 in. x 6 in. piles.
Woy Woy	"	2 7⅜	2 10	2 11⅛	...	2¼	47 4	6 in. x 6 in. piles.
Mullet Creek	Old sleepers	2 5⅜	2 10⅜	2 11½	...	2½	49 4	
Long Island	Brick	2 6½	2 4½	3 3⅜	...	...	52 4	} 21 ft. 0⅛ in.
"	"	2 6⅜	2 4½	2 9⅞	...	...	52 4	
Hawkesbury River (up line)	Timber	2 7⅞	2 9½	3 0⅞	...	¾	53 4	6 in. x 6 in. piles, 21 ft. 8½ in.
" (down line)	"	2 8½	2 10	3 5½	2⅜	...	53 4	6 in. x 6 in. piles, 21 ft. 3½ in.
Berowra	Brick	2 6	2 5	2 11⅛	...	...	61 4	
Colah	"	2 7⅜	2 4⅜	2 9½	...	1⅛	61 4	
Hornsby	"	2 7¼	2 5⅛	2 8	...	...	63 4	
Thornleigh	"	2 10	2 7½	2 9¾	...	...	87 4	
Pennant Hills	"	2 7¼	2 4½	2 9⅜	...	...	91 4	
Beecroft	"	2 5⅜	2 4	2 9⅞	...	4⅜	93 4	
Carlingford	"	2 9	2 5¼	2 11⅛	...	1⅛	94 4	
Eastwood	Timber	2 7	3 4	3 5⅜	...	...	96 4	5 in. x 5 in. piles.
Ryde	Brick	2 7	2 4¼	2 9⅜	...	1½	99 4	
Meadowbank	"	2 7½	2 4⅞	2 11¼	1⅜	...	100 4	
Rhodes	Timber	2 6⅞	2 3¼	2 10¼	...	...	101 4	
Concord	Brick	2 7½	2 3¼	2 11½	...	2	102 4	
GREAT NORTHERN RAILWAY—ST. LEONARDS BRANCH.								
Wahroonga	Concrete (wood cap.)	2 8⅛	2 5¼	2 9⅜	¾	...	64 4	
Turramurra	" "	2 7⅜	2 5	2 9½	...	...	64 4	
Pymble	Brick	2 7⅛	2 4⅜	2 10⅜	...	...	65 4	
Gordon	Concrete (wood cap.)	2 7⅛	2 4	2 10½	...	...	70 4	
Lindfield	" "	2 7½	2 4¼	2 10⅛	1¼	...	75 4	
Rossville	" "	2 8⅜	2 5¼	2 11⅛	¾	...	77 4	
Chatswood	" "	2 7	2 4⅜	2 10⅛	...	...	80 4	
St. Leonards	Brick	2 7¼	2 4⅜	2 10⅛	...	...	83 4	
NORTH-WESTERN RAILWAY.								
Narrabri	Brick	2 7⅜	2 4⅜	2 10	...	...	85 2	
Tibbereena	Timber	2 7½	2 10⅜	3 4⅜	...	...	88 2	5 in. x 9 in. piles (old sleepers).
Turrawan	"	2 4	2 7¼	2 7⅜	...	...	89 2	5 in. x 9 in. piles (old sleepers).
Baan Baa	"	2 5½	2 8¼	2 11½	...	...	90 2	5 in. x 9 in. piles (old sleepers).
Boggabri	Brick	2 5¼	2 3¼	2 9¼	...	...	92 2	
Emerald Hill	Timber	2 5½	2 7½	3 2¼	...	...	94 2	5 in. x 9 in. piles (old sleepers).
Gunnedah	Brick	2 2⅜	2 1	2 7½	...	...	97 2	
Curlewis	Timber	2 3⅜	2 2½	2 6¼	...	...	101 2	
Breeza	Brick	2 2¾	2 1¾	2 6¾	...	...	102 2	
Gap	Timber	2 3½	2 2⅛	2 4⅓	...	...	105 2	
Wallsend	Brick	2 4	2 4⅛	3 5¼	...	...	143 3	
MORPETH BRANCH.								
Raworth	Brick	2 6½	2 4½	2 10⅜	1⅛	...	118 3	
Morpeth	Brick (stone cap.)	2 5¾	2 2½	2 9	...	...	119 3	
"	Brick	2 7	2 4⅜	3 1	...	...	120 3	
"	Brick (stone cap.)	2 1¾	1 7½	2 10	...	...	124 3	

Name of Station	Description of Platform.	Measurements. Top.	Measurements. Bottom.	Measurements. Height from rail.	Cant. In.	Cant. Out.	No. and page in Field Book.	Remarks.
SOUTH COAST RAILWAY.		ft. in.	ft. in.	ft. in.	in.	in.	Page. No.	
Kiama	Timber	2 7½	2 5½	2 9½	...	...	152 4	
Shellharbour	,,	2 6½	2 8½	3 0½	...	...	147 4	6 in. x 6 in. piles.
Albion Park	Brick	2 8½	2 5½	2 8½	...	1½	145 4	
Yallah	,,	2 8½	2 5	2 10½	...	1½	142 4	
Dapto	,,	2 7½	2 5	2 9½	...	...	140 4	
Kembla Grange	Timber	2 7	2 11½	2 9½	1	...	138 4	6 in. x 6 in. piles.
Unanderra	Brick	2 6½	2 4½	2 11½	1	...	137 4	
Wollongong	Brick (stone cap.)	2 7½	2 6½	2 10½	...	...	134 4	1 in. set off.
Para Meadow	Brick	2 8½	2 5	2 10½	...	...	131 4	
Corrimal	,,	2 8½	2 6½	2 8½	...	...	129 4	
Bellambi	,,	2 9½	2 5½	2 11	...	...	128 4	
Bulli	Timber	2 6½	2 2½	2 11	...	...	126 4	
Robinsville	,,	2 7	2 3½	2 11	...	...	123 4	
Austinmer	Brick	2 7½	2 4½	2 7½	...	...	122 4	
Clifton South	Timber	2 7½	2 3½	2 9½	...	...	119 4	
Clifton	,,	2 7½	2 5½	2 8½	2	...	118 4	
Stanwell Park	,,	2 7	2 11½	2 11	...	1½	116 4	6 in. x 6 in. piles.
Otford	,,	2 8½	2 7½	2 9½	3	...	113 4	
Lilyvale	,,	2 6½	2 10½	3 0½	...	3	111 4	
Helensburgh	Brick	2 8	2 5½	2 9½	...	...	107 4	
Waterfall	,,	2 5½	2 2½	2 10½	...	3½	25 5	
Heathcote (up line)	,,	2 5	2 2½	2 8½	...	...	27 5	20 ft. 10¼ in.
,, (down line)	,,	2 6½	2 3½	2 9½	...	...	27 5	
Loftus Junction (up line)	Timber	2 6½	2 10½	2 11½	1½	...	32 5	6 in. x 6 in. piles, 20 ft. 11½ in.
,, (down line)	,,	2 6½	2 11½	2 9½	...	1½	32 5	6 in. x 6 in. piles, 20 ft. 18¾ in.
Loftus	Brick	2 7½	2 4½	2 9½	...	...	33 5	
,,	Masonry	2 7½	2 4½	2 9	...	...	33 5	
,,	Timber (top on rock)	2 7½	2 1½	2 9½	...	...	33 5	
,,	,,	2 8½	2 6	2 9½	...	...	33 5	
Sutherland (up line)	Brick	2 7½	2 3½	2 8½	...	...	35 5	20 ft. 11 in.
,, (down line)	,,	2 7	2 3½	2 9½	...	...	35 5	
Como (up line)	Timber	2 9	3 0½	2 9	...	...	37 5	6 in. x 6 in. timber, 21 ft. 4½ in.
,, (down line)	,,	2 9½	3 0½	3 9½	...	½	37 5	6 in. x 6 in. timber, 21 ft. 4½ in.
Oatley (up line)	Brick	2 8	2 4½	2 10½	...	...	39 5	21 ft. 0½ in.
,, (down line)	,,	2 7½	2 4½	2 11½	...	...	39 5	
Penshurst (up line)	,,	2 8	2 4½	2 8½	1½	...	40 5	21 ft. 0½ in.
,, (down line)	,,	2 7½	2 4	2 11½	...	2½	40 5	
Hurstville (up line)	,,	2 6½	3 4	2 11	...	...	1 5	
,, (down line)	,,	2 7½	2 4	2 11	...	...	2 5	
Carlton (up line)	Brick (stone cap.)	2 8½	2 5½	2 7½	...	...	5 5	21 ft. 1½ in.
,, (down line)	,, ,,	2 8½	2 5½	2 8½	...	...	5 5	
Kogarah (up line)	Brick	2 7½	2 4½	2 10½	...	...	6 5	20 ft. 11½ in.
,, (down line)	,,	2 7½	2 5½	2 11½	...	...	6 5	
Rockdale (up line)	,,	2 7½	2 4½	2 10	...	...	10 5	20 ft. 11⅜ in.
,, (down line)	,,	2 7½	2 5½	2 8½	...	...	10 5	
Arncliffe (up line)	,,	2 6½	2 4½	2 10½	1	...	13 5	20 ft. 11¼ in.
,, (down line)	,,	2 6½	2 3½	2 9½	...	1¼	13 5	
Tempe (up line)	,,	2 7	2 4½	2 9½	2	...	16 5	20 ft. 11 in.
,, (down line)	,,	2 6	2 3½	2 9½	...	⅝	16 5	
Marrickville (up line)	,,	2 7½	2 5½	2 8½	...	...	17 5	20 ft. 11⅜ in.
,, (down line)	,,	2 7½	2 4½	2 8½	...	...	17 5	
St. Peters (up line)	,,	2 5½	2 3½	2 9½	1⅛	...	20 5	20 ft. 10¾ in.
,, (down line)	,,	2 7½	2 5	2 8½	...	¼	20 5	
Erskineville (up line)	,,	2 5½	2 5	2 8½	...	1	24 5	20 ft. 10¾ in.
,, (down line)	,,	2 7½	2 5⅛	2 10⅛	⅛	...	24 5	
GREAT WESTERN RAILWAY.								
Bourke		2 7½	2 5	2 9½	...	...	1 6	
Mocculla		...	...	...	...	...	2 6	
Byrock		2 7	2 5	2 10½	...	...	3 6	
Glenariff		...	...	...	...	...	3 6	
Coolabah	Timber	2 8½	2 7½	2 8½	...	...	3 6	
Wilga	Old sleepers	2 10	2 10	2 8	...	...	4 6	
Girilambone	Bricks	2 6½	2 3½	2 10	...	...	4 6	
Nyngan	,,	2 7	2 5	2 1½	...	...	5 6	
Mullengudgery	,,	2 4	2 3	2 7	...	...	6 6	
Neverfire	Timber	2 5½	2 5½	2 4½	...	...	6 6	
Trangie	,,	2 8	2 11	3 1	...	1	8 6	6 in. x 6 in. piles.
Narromine	Bricks	2 6	2 8	2 7	...	...	8 6	
Minore	Timber	2 7	2 10	2 8	...	...	10 6	8 in. x 8 in. piles.
Dubbo	Masonry	2 7	2 5½	2 11	...	...	12 6	
Murrumbidgerie	Bricks	2 7	2 5	2 10	...	...	13 6	
Geurie	,,	2 5½	2 3½	2 10	...	...	14 6	
Maryvale	,,	2 6	2 3½	2 7	1	...	14 6	
Wellington	,,	2 6½	2 4½	2 8½	...	...	16 6	
Apsley	Timber	2 5	3 5	3 8	...	...	17 6	6 in. x 6 in. piles.
Springs	Bricks	2 7	2 5½	2 7½	...	...	17 6	
Mumbil	,,	2 5½	2 3½	2 10	...	...	17 6	
Ironbarks	,,	2 6	2 5	2 10½	2	...	18 6	
Store Creek	Timber	2 8	2 10½	2 10	...	...	19 6	6 in. x 6 in. piles.
Warne	Brick	2 6½	2 4½	2 10	...	...	19 6	
Kerr's Creek	Timber	2 7½	3 1	2 9	...	3	20 6	8½ in. x 5½ in. piles.
Mullion Creek	Brick	2 6½	2 3½	3 1½	...	3	21 6	

GREAT WESTERN RAILWAY—*continued.*

Name of Station.	Description of Platform.	Measurements. Top. ft.	Top. in.	Bottom. ft.	Bottom. in.	Height from rail. ft.	Height from rail. in.	Cant. In.	Cant. Out.	No. and page in Field Book. Page.	No.	Remarks
Orange	Brick	2	6¼	2	4	2	9½	1	...	28	6	
Huntley	Timber	2	7	2	10½	2	10½	...	...	28	6	6 in. x 6 in. piles.
Spring Hill	Brick	2	7	2	4	2	11	...	...	29	6	
Millthorpe	"	2	6¾	2	3¾	2	11¼	...	1	30	6	
Blayney	Masonry (brick cap.)	2	6	2	4	2	11¼	...	...	31	6	
Newbridge	Brick	2	5¾	2	3	3	0	1½	...	32	6	
Wimbledon	"	2	6½	2	4½	2	9½	3½	...	33	6	
George's Plains	"	2	6¼	2	3	2	9¼	...	...	34	6	
Perth	Timber	2	5¾	2	5	3	0¼	...	...	35	6	
"	Brick	2	7	2	4½	2	9½	...	...	35	6	
Orton Park	Timber	2	7	2	11¼	2	8¼	...	...	35	6	6 in. x 6 in. piles.
Bathurst	Brick (stone cap.)	2	5¾	2	4	3	0¾	...	...	36	6	
"	"	2	6½	2	4½	3	1½	...	...	36	6	
Kelso	Brick (concrete cap.)	2	5¾	2	3⅝	2	9½	...	...	37	6	
Raglan	Brick	2	6½	2	3½	2	8½	1	...	38	6	
Brewongle	"	2	6¾	2	4¼	2	9¼	...	...	39	6	
Locksley	Timber	2	7½	3	0	2	9½	...	...	42	6	6 in. x 6 in. piles
Turana	Brick	2	6½	2	4½	2	9½	...	...	40	6	
Sodwalls	"	2	6	2	3	2	10	...	1	43	6	
Rydal	Brick (stone cap.)	2	7½	2	4¾	2	8¼	...	...	44	6	
Wallerawang	Stone	2	6¼	2	5	2	11	...	1	44	6	
"	Brick (stone cap.)	2	6	2	1	2	11½	...	...	45	6	
"	Brick	2	9	2	1⅛	3	5½	...	...	45	6	
Marrangaroo	Timber	2	8½	3	0½	2	7½	1⅝	...	7	7	6 in. x 6 in. piles.
Bowenfels	Masonry	2	6⅝	2	3½	2	10½	1½	...	6	7	
Lithgow	Brick	2	6½	2	3½	2	10	...	...	6	7	
"	Timber	2	7¼	2	10½	2	11	...	...	6	7	6 in. x 6 in. piles, 21 ft. 2½ in.
Eskbank	Brick (stone cap.)	2	6	2	2	2	9½	...	...	6	7	Dished 1½ in., 21 ft. 1 in.
"	" "	2	6	2	1½	2	10½	...	...	6	7	Dished 1½ in., 21 ft. 1 in.
"	" "	2	6¾	2	1¼	2	9¼	...	...	5	7	
"	" "	2	5½	2	1⅛	2	8½	...	...	5	7	
Zig Zag	Timber	2	5½	2	8½	2	10¼	1	...	9	7	6 in. x 6 in. piles.
"	"	2	5½	2	11½	2	9½	...	1⅜	9	7	6 in. x 6 in. piles.
Clarence Siding	"	2	5½	2	7¾	2	9½	1½	...	9	7	6 in. x 6 in. piles.
Bell	"	2	5½	2	11	2	10½	...	1	14	7	6 in. x 6 in. piles.
Hartley Vale	"	2	8½	3	0½	2	8¼	...	2	15	7	6 in. x 6 in. piles.
Mount Victoria	Masonry	2	6⅛	2	1	2	9¼	...	1½	16	7	21 ft. 1 in.
"	"	2	6½	2	4⅝	2	11½	1¼	...	17	7	
Blackheath	Brick (stone cap.)	2	6¾	2	4¼	2	9½	...	...	18	7	
Medlow	Timber	2	7	3	7½	2	8½	...	1	19	7	6 in. x 6 in. piles.
Katoomba	"	2	6	3	0	2	10¼	...	2½	20	7	6 in. x 6 in. piles.
Wentworth Falls	"	2	5½	2	10	2	9¼	...	2½	21	7	6 in. x 6 in. piles.
Lawson	Brick (stone cap.)	2	5⅛	2	1½	2	10¼	1⅜	...	22	7	
Hazelbrook	Timber	2	6	2	11¼	2	9½	...	1	23	7	6 in. x 6 in. piles.
Woodford	"	2	6½	2	11	2	8¼	...	½	23	7	6 in. x 6 in. piles.
Linden	"	2	6	2	10½	3	10½	...	...	24	7	6 in. x 6 in. piles.
Numantia	"	2	8	3	0½	2	11¼	...	2	24	7	6 in. x 6 in. piles.
Faulconbridge	"	2	7	2	10¼	2	10	3	...	25	7	6 in. x 6 in. piles.
Springwood	Brick (stone cap.)	2	5¾	2	3¼	2	10	3½	...	25	7	
The Valley	Timber	2	6	2	11½	2	10⅛	...	⅛	26	7	6 in. x 6 in. piles.
Karabar	"	2	6¼	2	11	2	9½	...	...	26	7	6 in. x 6 in. piles.
Blaxland	"	2	5⅛	2	7½	2	11½	1	...	27	7	6 in. x 6 in. piles.
Glenbrook	"	2	4¾	2	9½	2	10½	...	1½	27	7	6 in. x 6 in. piles.
Lucasville	Concrete	2	8½	2	5	2	10¼	...	1⅛	28	7	
Emu Plains	Brick (stone cap.)	2	6¼	2	1	2	8¼	...	...	28	7	Dished 2 in.
Penrith	"	2	6	2	2	2	11⅛	...	...	30	7	
Kingswood	Timber	2	5	2	10	2	9¼	...	...	33	7	6 in. x 6 in. piles, 20 ft. 11½ in.
"	"	2	6	2	10¾	2	9½	...	...	33	7	6 in. x 6 in. piles, 20 ft. 11½ in.
Parkes	"	2	6	2	7⅞	2	10	...	...	33	7	6 in. x 6 in. piles, 20 ft. 11½ in.
"	"	2	5½	2	10½	2	8	...	...	33	7	6 in. x 6 in. piles, 20 ft. 11½ in.
St. Mary's	Brick (stone cap.)	2	6⅜	2	4⅜	2	9¼	...	...	34	7	Set off 2¼ in., 20 ft. 11½ in.
"	"	2	6⅜	2	4¼	2	10¼	...	...	34	7	Set off 2¼ in., 20 ft. 11½ in.
Mount Druitt	Brick	2	6	2	1¼	2	8½	...	...	36	7	Dished 1⅜ in., 21 ft. 0½ in.
"	Brick (stone cap.)	2	6¾	2	6	2	9¼	...	...	36	7	Set off 1⅞ in., 21 ft. 0½ in.
Rooty Hill	"	2	5⅜	2	4⅜	2	11¼	...	1¼	37	7	Set off 2⅜ in., 21 ft. 1 in.
"	Timber	2	5½	2	9½	2	9½	1⅜	...	37	7	6 in. x 6 in. piles, 21 ft. 1 in.
Doonside	Brick (stone cap.)	2	6½	2	4⅜	2	11⅜	2⅜	...	38	7	Set off 2 in., 21 ft. 0 in.
"	" "	2	5¾	2	4½	2	10½	...	⅛	38	7	Set off 2 in., 21 ft. 0 in.
Blacktown	" "	2	6¾	2	1⅜	2	11½	...	⅜	39	7	Dished 1⅜ in., 21 ft. 1 in.
"	" "	2	6½	2	5½	2	10½	...	1¼	39	7	Set off 1⅜ in., 21 ft. 1 in.
Seven Hills	"	2	5¾	2	4⅜	2	11⅜	1	...	1	8	Set off 2 in., 21 ft. 0½ in.
"	"	2	6	2	4½	2	11¼	...	1	1	8	Set off 2 in., 21 ft. 0½ in.
Toongabbie	Timber	2	8½	3	1¼	2	6	⅛	...	2	8	6 in. x 6 in. piles, 21 ft. 2½ in.
"	"	2	4	2	9½	2	10½	...	2½	2	8	6 in. x 6 in. piles, 21 ft. 2½ in.
Wentworthville	Brick	2	5⅛	2	1½	2	9½	...	1⅛	4	8	Dished 1¼ in., 21 ft. 1¼ in.
"	"	2	7⅛	2	5	2	11	1½	...	4	8	Set off 1½ in., 21 ft. 1⅛ in.
Westmead	"	2	6	2	1	2	11¼	1½	...	3	8	Dished 2 in., 21 ft. 2 in.
"	"	2	7⅛	2	5	2	11	...	1⅛	3	8	Set off 1⅛ in., 21 ft. 2 in.
Parramatta Park	Timber	2	5⅛	2	9½	2	8½	...	2½	3	8	6 in. x 6 in. piles, 21 ft. 1⅛ in.
"	"	2	7⅛	2	10½	2	10½	1⅛	...	3	8	6 in. x 6 in. piles, 21 ft. 1⅛ in.
Parramatta	Brick (stone cap.)	2	4½	2	0¾	2	11	3¼	...	6	8	Dished 1¼ in., 20 ft. 11½ in.
"	" "	2	5⅜	2	1	2	10½	...	2⅛	6	8	Dished 1⅛ in., 20 ft. 11½ in.
Harris Park	" "	2	6½	2	1	2	10	1⅞	...	8	8	Dished 1⅞ in., 22 ft. 11½ in.
"	" "	2	6	2	0	2	9½	...	1½	8	8	Dished 2 in., 22 ft. 11½ in.

Name of Station.	Description of Platform.	Measurements. Top.	Bottom.	Height from rail.	Cant. In.	Out.	No. and page in Field Book.	Remarks.
ORANGE TO MOLONG.								
		ft. in.	ft. in.	ft. in.	in.	in.	Page. No.	
Orange Racecourse	Timber	2 5	2 5	2 8½	...	...	22 6	
Amaroo	Brick	2 6½	2 4½	2 8½	...	2	25 6	
Cargo Road	,,	2 6¾	2 3¾	2 9½	...	...	22 6	
Boreniore	,,	2 7½	2 4½	2 9½	...	...	23 6	
Molong	,,	2 7½	2 4½	2 7½	...	...	26 6	
WALLERAWANG TO MUDGEE LINE.								
Wallerawang	Brick (stone cap.)	2 5¼	2 0½	3 0½	...	...	45 6	
Piper's Flat	Brick	2 6	2 3½	2 11½	...	...	46 6	
Ben Bullen	,,	2 7	2 4	2 9¾	...	...	47 6	
Capertee	,,	2 6½	2 3¾	3 0¼	...	...	48 6	
Ilford	,,	2 6¾	2 4	2 9	...	...	1 7	
Rylstone	Timber	2 7¼	2 4½	2 9¾	...	...	2 7	
Lue	Brick	2 5	2 2¾	2 10½	...	...	3 7	
Bumberra	,,	2 5¾	2 3	2 7¼	...	...	4 7	
Mudgee	,, (stone cap.)	2 5	2 3½	2 9	...	...	5 7	
WINDSOR TO RICHMOND LINE.								
Douglas Siding	Timber	2 2½	2 6½	2 9½	...	...	40 7	6 in. x 6 in. piles.
Schofield	Brick	2 6	2 2½	2 8	...	...	40 7	
Riverstone	,, (stone cap.)	2 5½	2 2¾	2 9½	1	...	41 7	
Mulgrave	Timber	2 5	2 9½	2 10½	2	...	43 7	6 in. x 6 in. piles.
Racecourse Platform	,,	2 4½	2 9½	2 7	2½	...	44 7	6 in. x 6 in. piles.
Windsor	Brick (stone cap.)	2 5½	2 1½	2 8½	...	2½	44 7	
Hawkesbury Racecourse	Timber	2 5½	2 11	2 6½	...	2	45 7	6 in. x 6 in. piles.
Clarendon	,,	2 6	2 10½	2 5½	...	1½	46 7	6 in. x 6 in. piles.
Richmond	Brick (stone cap.)	2 5½	2 3	2 9½	...	...	47 7	Dished 1½ in.
SUBURBAN LINE.								
Clyde (up line)	Brick (stone cap.)	2 7⅛	2 3¼	2 10⅜	...	...	72 2	Dished 1⅜ in. } 21 ft. 4⅜ in.
,, (down line)	,, ,,	2 8	2 3½	2 10½	...	...	72 2	Dished 1½ in. }
,, (loop)	,, ,,	2 7½	2 2½	2 10½	...	...	72 2	Dished 1½ in.
Auburn (up line)	Timber	2 5	2 10½	2 11½	...	1½	73 2	6 in. x 6 in. piles.
,, (down line)	,,	2 5½	2 11	2 9	...	...	73 2	6 in. x 6 in. piles.
Rookwood (up line)	Brick (stone cap.)	2 7⅜	2 2¾	2 11½	1½	...	76 2	Dished 1½ in. } 21 ft. 0½ in.
,, (down line)	,, ,,	2 6⅜	2 1½	2 10⅜	...	2¾	76 2	Dished 1⅜ in. }
Necropolis (siding)	,, ,,	2 9⅛	2 7⅜	2 11½	...	..	75 2	2 in. set off.
,, (up line)	,, ,,	2 5⅜	2 2¾	2 11¼	...	...	76 2	} 20ft. 10⅜ in.
,, (down line)	,, ,,	2 8⅛	2 2⅜	2 10⅜	...	...	76 2	Dished 1½ in. }
Flemington (up line)	Timber	2 7	2 11½	2 7⅛	1⅜	...	77 2	6 in. x 6 in. piles } 20 ft. 11⅜ in.
,, (down line)	,,	2 5⅜	2 4¼	2 8	...	2	77 2	6 in. x 6 in. piles }
Homebush (up line)	Brick (stone cap.)	2 6½	2 4½	2 9⅜	...	1⅜	80 2	} 20 ft. 8⅜ in.
,, (down line)	,, ,,	2 5¼	2 2½	2 11⅛	2	...	80 2	}
,, (loop)	,, ,,	2 7½	2 3½	2 9¼	...	1¼	80 2	
Strathfield South (up & west)	,, ,,	2 7⅛	2 5¾	2 10	...	⅛	81 2	} 21 ft. 0⅛ in.
,, ,, (down)	,, ,,	0 7⅜	2 6⅜	2 10⅜	1½	...	81 2	}
,, North (up)	,, ,,	2 6½	2 5⅛	2 8⅜	...	⅞	81 2	} 20 ft. 11⅛ in.
,, ,, (down)	,, ,,	2 6⅝	2 3¼	2 9⅜	2⅜	...	81 2	}

Joint Report by Messrs. H. Richardson, C. H. Stanger, and D. H. Neale, relating to tests with the New American Engines.

New South Wales Government Railways.

To the Secretary to the Railway Commissioners,—

We beg to report that, on the 10th instant, we have, as directed, made a series of trials with the American 10-wheeled passenger and consolidation engines on gradients of 1 in 33, 1 in 40, and 1 in 50, in order to ascertain the loads that can be hauled under ordinary conditions of railway working, and the speeds that can be attained with these loads. To enable us to arrive as near as possible to service conditions no special preparations were made with regard to the engines or vehicles selected. The trials of both passenger and goods engines were made with trains of "D" trucks, loaded with coal, and taken at random from Eskbank Yard, each wagon specially weighed by Mr. Crawford, the Station-master, on the Eskbank weighbridge, in order to ensure accuracy. The coal burnt by the engines was also the first that came to hand, and the gradients were those of a sufficient length and those nearest Eskbank, our starting point for the trials.

The gradient of 1 in 33 between Bell and Clarence has few curves, and those of moderate radius. The gradient of 1 in 40 between Wallerawang and Marrangaroo is nearly wholly situated on reverse curves, one known as the "Horseshoe" being specially long, and of 10-chain radius, and probably this gradient is one of the most unfavourable of the 1 in 40 gradients on the New South Wales Railways. The 1 in 50 gradient between Clarence and Bell is of a fair average character. Each gradient being over a mile long, the speed was in each instance taken on the last mile where the engine would lose any impetus it would have gained on approaching the gradients.

There were present, in addition to the undersigned,—

Mr. Duff, District Superintendent.
Mr. J. Colley, Assistant to the District Steam Shed Foreman, Bathurst.
Mr. D. Stewart, Locomotive Travelling Inspector.
Mr. R. Crawford, Station-master, Eskbank.

The engines selected were—

No. 448, 10-wheeled American passenger, 6 wheels coupled; driver, G. Evans; first fireman, W. W. Green; second fireman, R. Forrest.

No. 487, new American consolidation class, 8 wheels coupled; driver, J. Young; first fireman, C. R. Corbett; second fireman, J. R. Hamilton.

The results obtained are shown in the attached table. We consider that in all cases the loads were hauled without difficulty, except as regards the goods load taken up the 1 in 40 gradient, where the engine commenced to slip on the worst portion of the curve, and nearly came to a stand. By using sand, however, the engine continued to haul the train to the summit; the engine probably could not have started the train from a state of rest. The ordinary goods trains find great difficulty in getting round this particular curve, and travel at this point at a very slow pace. The speed of the goods train on the 1 in 50 gradient more than equalled the traffic requirements, and a slightly higher load could have been hauled.

The speed of the goods train up the 1 in 33 gradient was a fair average, and equals that obtained in regular working, but would have been lower had the gradient contained the numerous and sharp curves found on many of our gradients of 1 in 33.

The passenger engine would probably have attained higher speeds had it been hauling passenger stock instead of goods wagons, which latter are not so well lubricated, and offer more resistance on curves.

H. RICHARDSON.
C. H. STANGER.
D. H. NEALE.

11/4/92

New South Wales Government Railways.

Table showing performances of Baldwin Engines during trials made on 10th April, 1892.

Mileage.	No. of Test.	No. of Engine.	Grade.	Train.		Weight of train, exclusive of engine and tender.	Length of train, exclusive of engine and tender.	Speed over summit—miles per hour.	Mean boiler pressure.
				No. of loaded coal wagons.	No. of bogie brake-vans.				
Passenger—						tons cwt.	ft. in.		lb.
87 to 88	1	448	1 in 33	13	1	163 9	273 8	14·5	162·
102 to 101	2	448	1 in 40	14	1	195 15	291 8	12·5	159·
86 to 85	3	448	1 in 50	18	1	254 2	363 8	14·3	159·
Consolidation—									
87 to 88	4	487	1 in 33	19	2	274 4	421 6	7·5	158·
102 to 101	5	487	1 in 40	25	2	341 16	529 6	4·7	158·
86 to 85	6	487	1 in 50	32	2	433 10	655 6	9·7	158·

April 11, 1892.

H. RICHARDSON.
D. H. NEALE.

Addition to joint report of trials of new American Engines on 10th April, 1892.

I CONSIDER that the performances, especially of the goods engines, has rarely or never been surpassed by Main Line engines in Australia or Europe.

A load of 350 tons, exclusive of engine and tender, is the maximum load hauled up gradients of 1 in 100 in regular service in Great Britain, and on many lines the regular load for this gradient (which on our lines is moderate), is less than the American consolidation engine hauled unassisted up a gradient of 1 in 40, with long ten chain curves.

The train the passenger engine hauled up the 1 in 33 gradient is equal to 7 lavatory carriages in weight. The power of the engine needs no further demonstration, as such a train exceeds the carrying capacity of the majority of fast express trains both in England and America, where such trains are moreover generally assisted over gradients steeper than 1 in 70.

D. H. NEALE, 11/4/92.

Secretary.

The Secretary to The Railway Commissioners.

Addendum to Report on Trials of American Engines on 10th April, 1892, between Wallerawang and Mount Victoria.

23 April, 1892.

HAVING suspected from the behaviour of the engines on the 1–40 grade at Marangaroo that it was somewhat steeper than 1–40, I find now, from a special survey just made under the direction of the Engineer-in-Chief for Existing Lines, that after passing over 50 chains of 10-chain reversed curves without any intermediate straight the engine came to a piece of 1–37·5 five chains in length, and that this doubtless checked the engine and was the cause of the slow average speed up the bank, as the check caused by the extra grade was coincident with the effect of the curvature and the engine slipping. The fact that the engine was able to pull the train up the bank, despite this combination of grade and curvature, speaks volumes for the power of the engines. I annex tracing of the grade.

D. H. NEALE.

A

APPENDIX A.
(See page 104)

N.S.W.R.

WESTERN LINE

DIAGRAM OF GRADES

PENRITH TO BATHURST

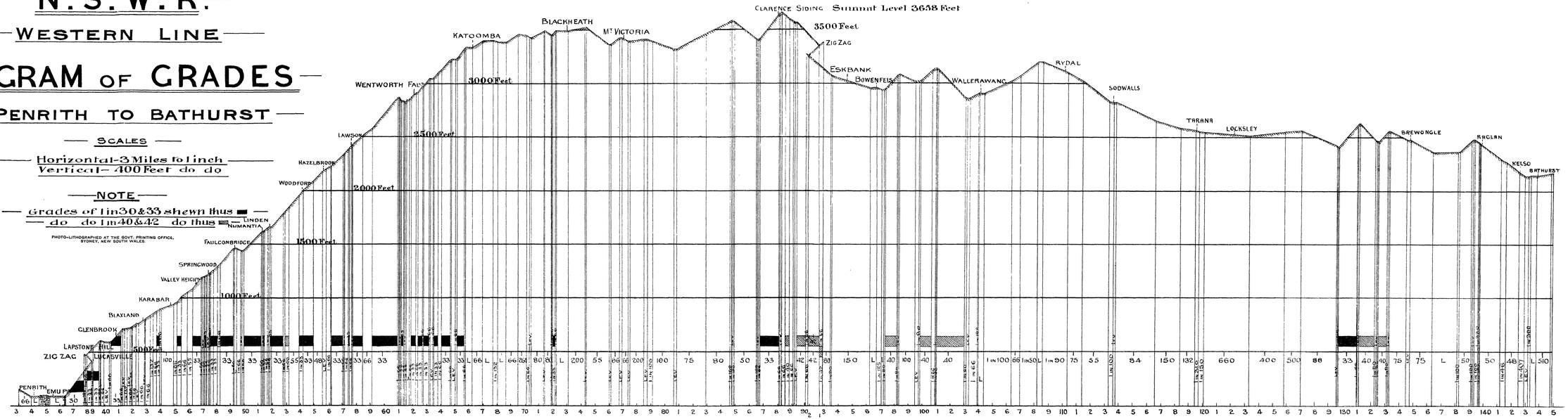
SCALES

Horizontal-3 Miles to 1 inch
Vertical-400 Feet do do

NOTE

Grades of 1 in 30 & 33 shewn thus ■
do do 1 in 40 & 42 do thus ▨

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.



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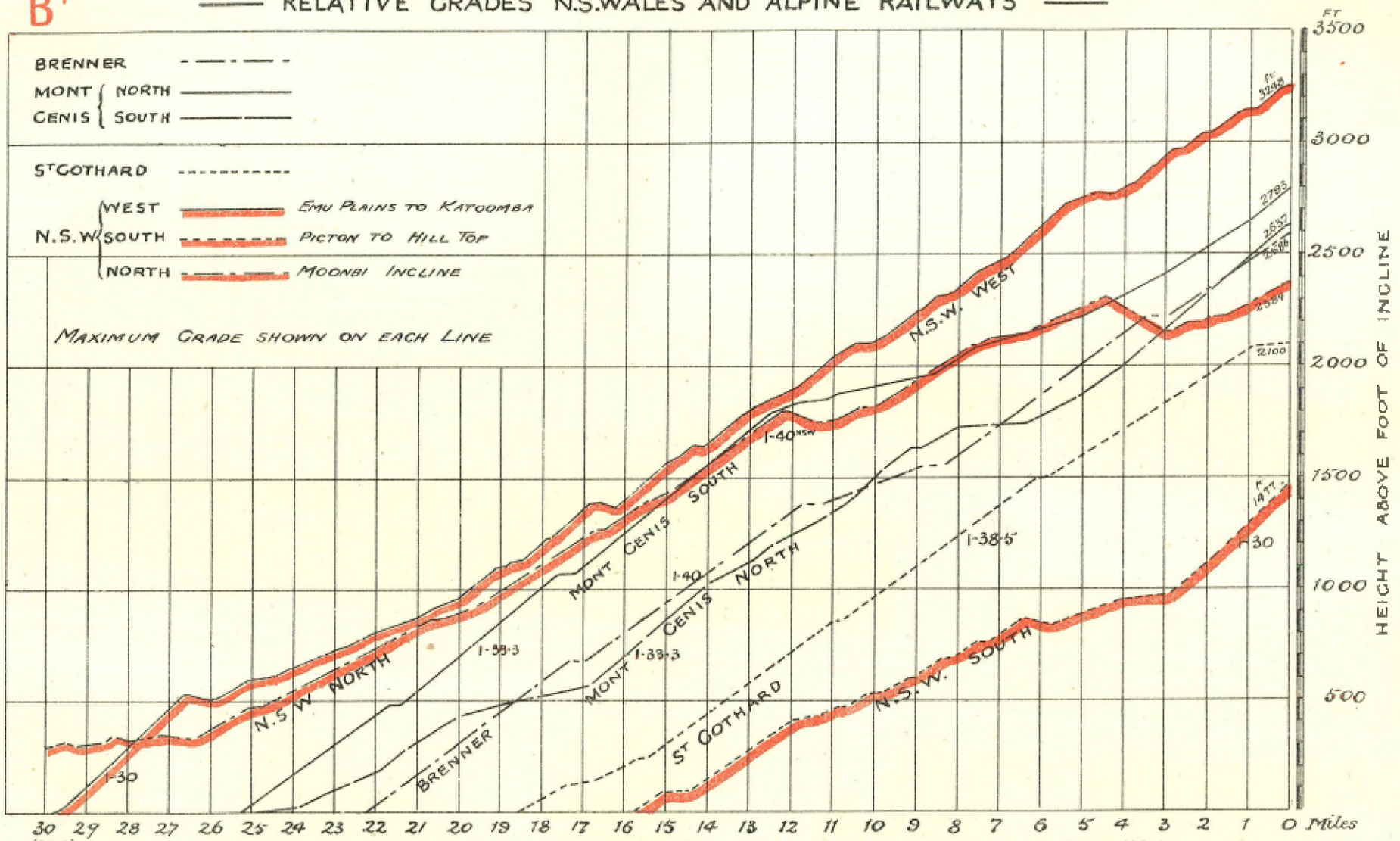
APPENDIX B1
(See Page 204)

B'

RELATIVE GRADES N.S.WALES AND ALPINE RAILWAYS



(Sig 6)

Information re ALPINE RAILWAYS taken from Paper by J. L. VERNON HARCOURT, PROCEEDINGS INSTITUTE CIVIL ENGRS VOL. XCV.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

(*See* p. 204.)

NEW SOUTH WALES GOVERNMENT RAILWAYS.

COMPARATIVE GRADES, CURVES, &c., on N.S.W. and ALPINE RAILWAYS.

Railway.	Portion of Line shown on Diagram.				Portion of Line *not* shown on Diagram.	
	Length of Incline. (Miles.)	Rise. (Feet.)	Maximum Grade Ascending.	Sharpest Curve. (Chains.)	Remarks.	Maximum Grade Ascending.
Brenner	22·25	2,586	1–40	14·16	Rises *Nil.*	——
Mont Cenis, North	24·75	2,637	1–33·3	17·0	Do. *do.*	——
Mont Cenis, South	25·25	2,793	1–33·3	24·0	Do. 13 feet in 3½ miles	1–1,000
St. Gothard	18·5	2,100	1–38·5	14 to 15	Do. 126 feet in 4½ „	1–172
N. S. W. (West)	29·5	3,248	1–30	8	Do. 323 feet in 22 „	1–33
N. S. W. (South)	15·5	1,477	1–30	16	Do. 322 feet in 23 „	1–30
N. S. W. (North)	30·0	2,105	1–40	12	Do. 890 feet in 71 „	1–44
					Falls to Zero from foot of incline in 17 miles ...	1–50

Particulars as to "Alpine Railways" taken from a Paper by Mr. L. F. Vernon Harcourt, Vol. 95, Minutes Institution of Civil Engineers.

C

APPENDIX C.

(See p. 204)

N.S.W.G.R.ys.

DIAGRAM SHEWING RUNNING OF TRAINS BETWEEN PENRITH AND ESKBANK AND VICE VERSA

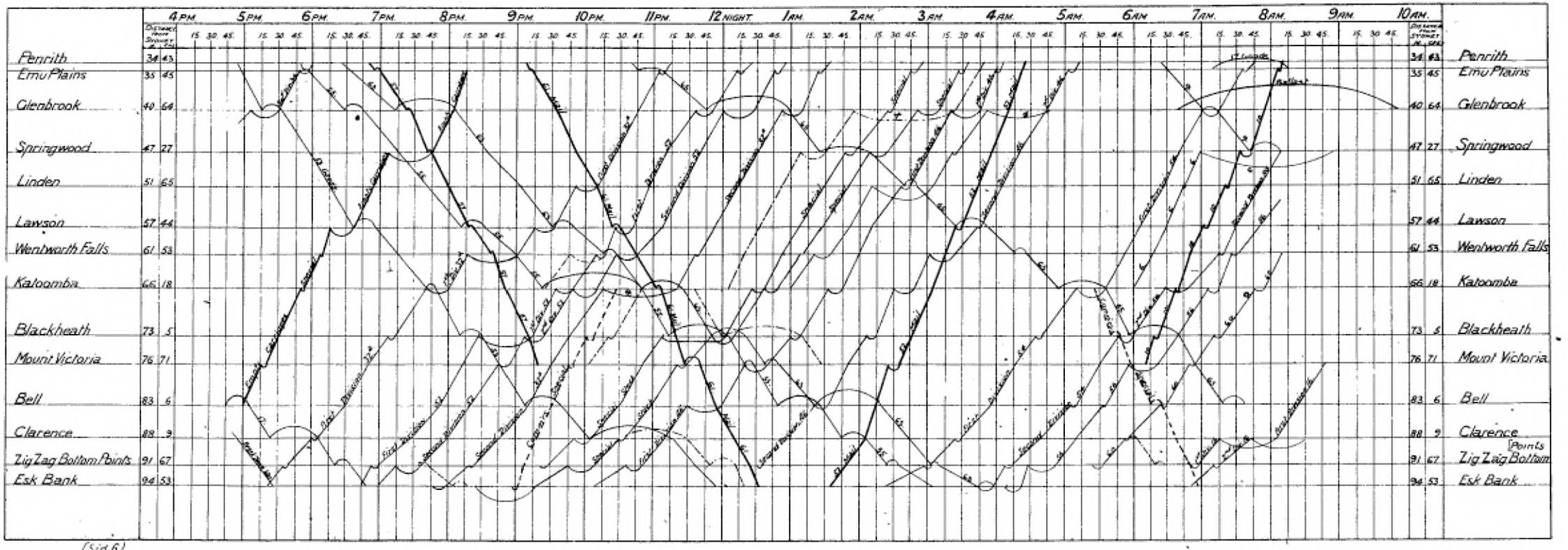
BETWEEN 5 P.M. ON 27TH AND 8 A.M. ON 28TH APRIL 1892.

Passenger Trains thus _____

Goods Trains and Stock Trains thus _____

Light Engines thus ..... —

Commrs Specials thus - - - - - -



(Sig 6)

† Crossing Nos 55, 63 & 61 Down Trains.

‡ Waiting to take forward Live Stock put off by Trains reducing their load at Glenbrook

Φ. Shunting off Coal and picking up Live Stock

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

APPENDIX D1.

(See p. 205)

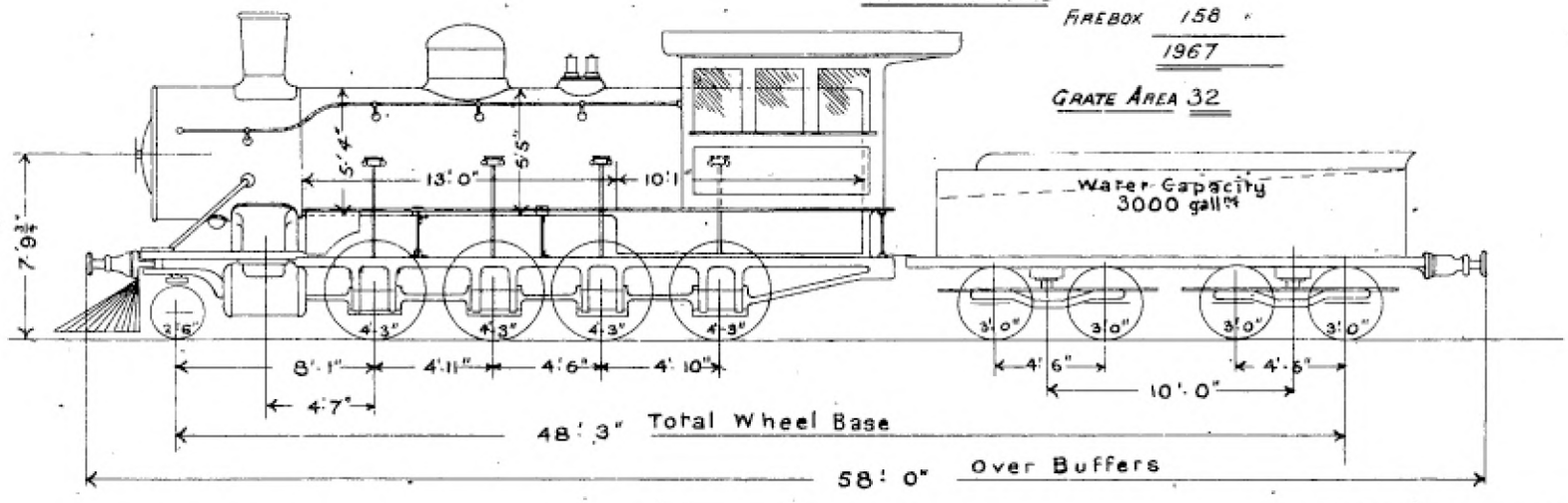
D1

CONSOLIDATION GOODS. — BUILT BY THE BALDWIN COY.

Engines Class J. (483)

HEATING SURFACE — TUBES 1809 °Feet
FIREBOX 158 "
1967

GRATE AREA 32



	EMPTY	RUNNING ORDER
	T. C. Q.	T. C. Q.
Weight Engine	55 · 15 · 3	62 · 12 · 2
" Tender	13 · 12 · 0	32 · 0 · 0
" Total	69 · 7 · 3	94 · 12 · 2

NOTE:- THE TWO MIDDLE PAIRS OF COUPLED WHEELS ARE FLANGELESS

Cylinders 21" × 26" Stroke

Total weight on 4 sets of driving wheels when loaded. 56 · 15 · 3

(Sig. 6)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY NEW SOUTH WALES.

D 2

APPENDIX D2.
(See p 205)

10 WHEELED EXPRESS.— BUILT BY THE BALDWIN COY.

Engines Class O

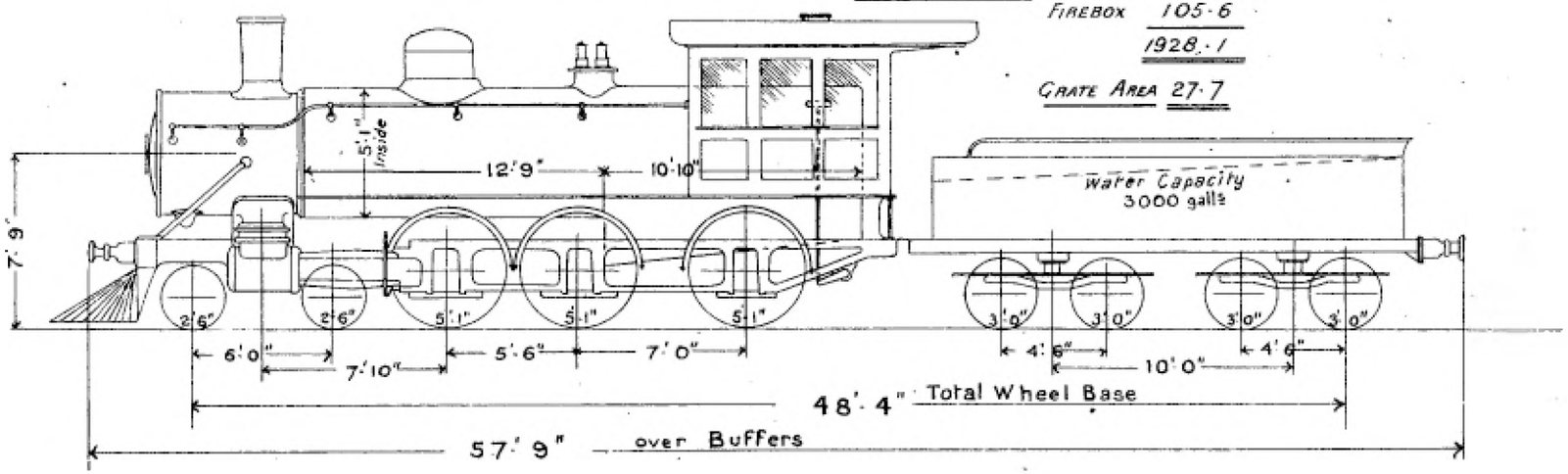
HEATING SURFACE

TUBES 1822·5 "Feet

FIREBOX 105·6

1928·1

GRATE AREA 27·7



NOTE. THE CENTRE PAIR OF COUPLED WHEELS ARE FLANGELESS

Cylinders 21" × 24" Stroke

	EMPTY	RUNNING ORDER
	T C Q	T C Q
Weight Engine	51 · 5 · 0	58 · 7 · 2
" Tender	13 · 12 · 0	32 · 0 · 0
" Total	64 · 17 · 0	90 · 7 · 2

Total weight on 3 sets of driving wheels when loaded 43·11·0 (T C Q)

Sig 6.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

E

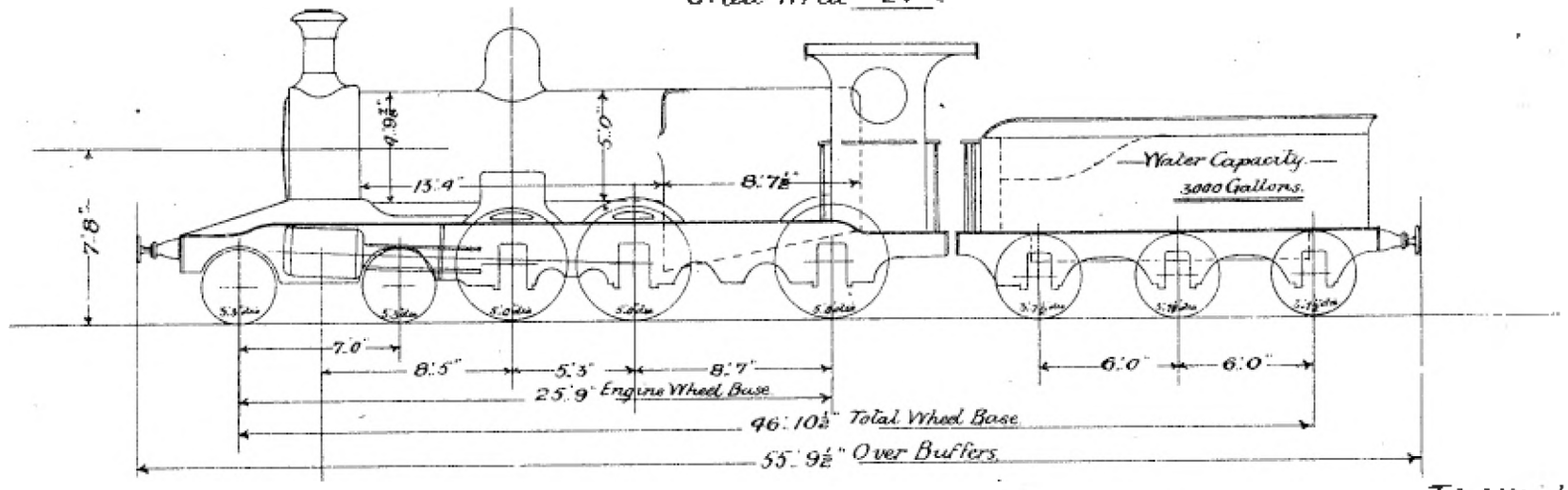
APPENDIX E.

(See p. 207)

10 WHEELED (ENGLISH) EXPRESS, BUILT BY MESSRS BEYER, PEACOCK & Co

Engines Class "P"

Heating Surface { Tubes 1786 sq ft
Fire box 130 "
Total 1916 "
Grate Area 27 "



Weight Empty — 13-19-2 — 12-5-3 — 12-5-1 — 12-1-2 — 5-2-3 — 5-3-0 — 5-1-0 — Total Weight Empty — 65-13-5.

In Steam — 7-4-0 — 7-9-2 — 14-10-3 — 14-3-0 — 12-15-2 — 10-15-0 — 10-13-0 — 10-10-1 — ds. — In Steam — 88-7-0

(Sig 6)—

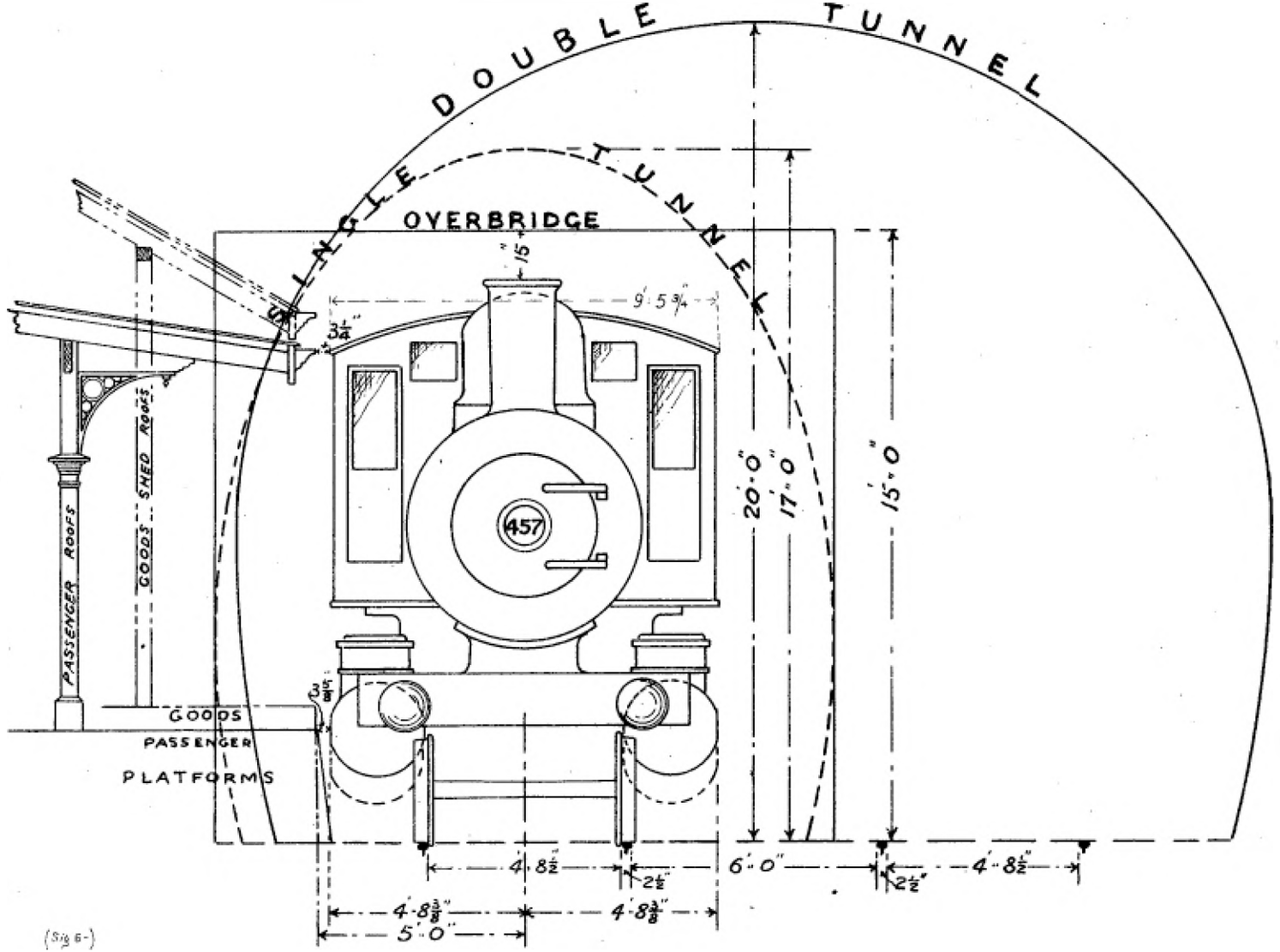
Cylinders — 20" dia x 26" stroke

Coal Capacity — 9½ Tons.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

W. Thow

F1 Diagram, shewing Profile of Baldwin Engines, in Connection with the existing Structures throughout the Railway System.



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Sydney
N.S.W.
11-5-92

F2

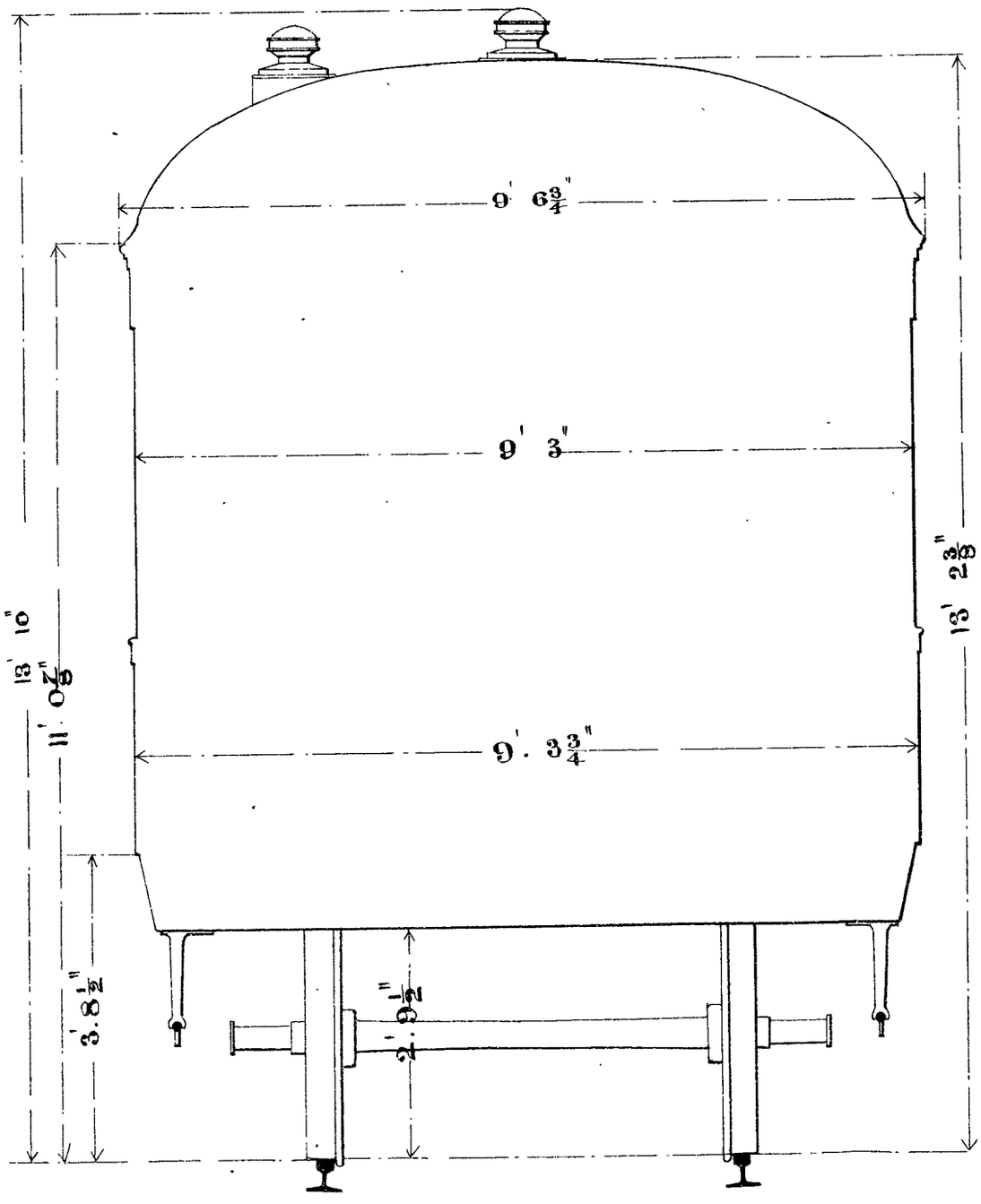


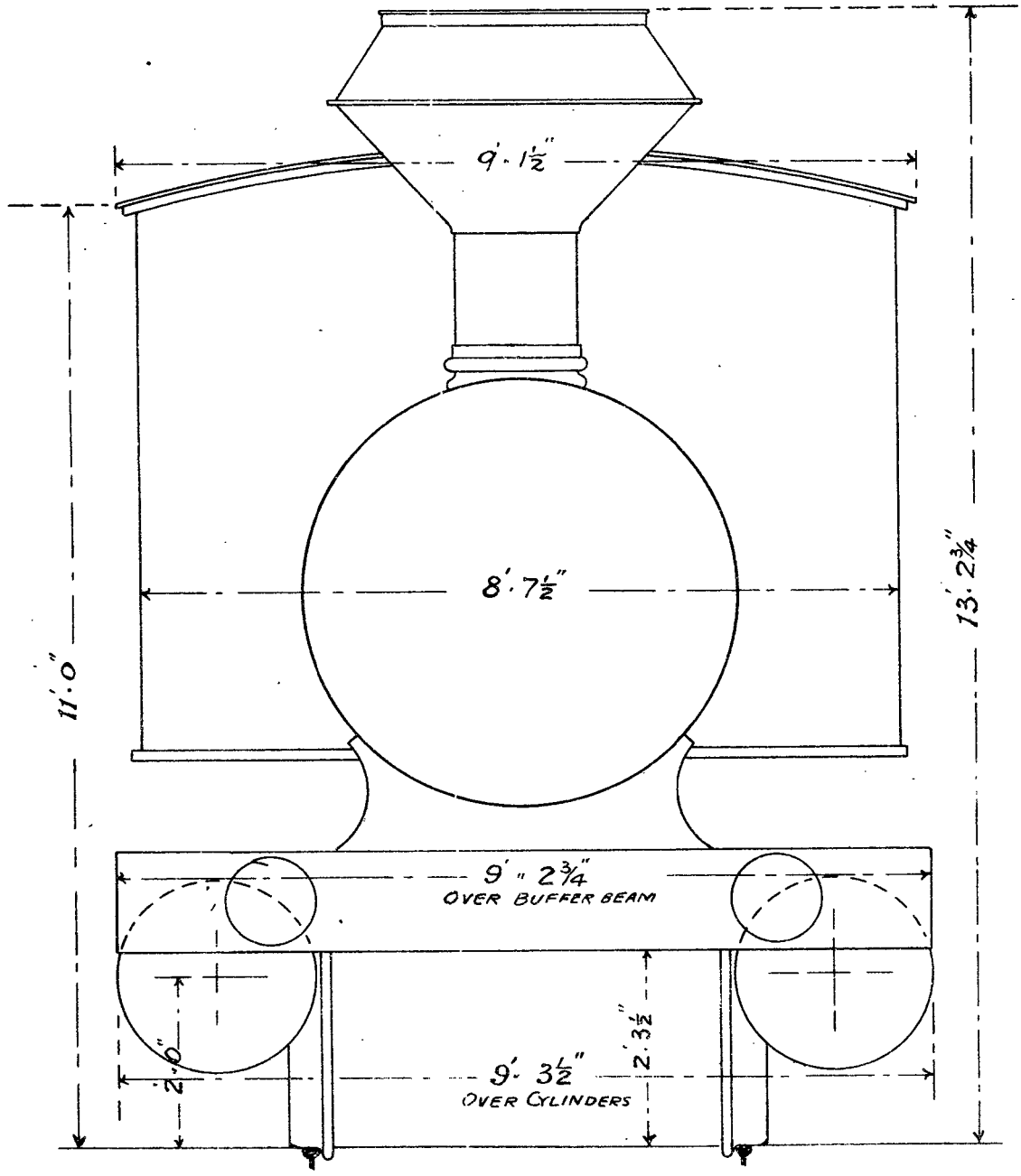
DIAGRAM
SHOWING "MANN CAR"
Ordered prior to the Commissioners taking Office

(Sig 6)

APPENDIX C.
(See p 207)

G

Diagram of Engine No. 132 Class J.
(Running upon some portions of the lines since 1879.)



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APPENDIX H.

(*See* p. 210.)

WEIGHTS OF RAILS AND EXPRESS PASSENGER ENGINES.

WEIGHTS OF RAILS, AMERICAN ROADS, TAKEN FROM POOR'S MANUAL, 1891.

Railway.	Total Weight in working order.				Maximum weight on one axle.		Weights of Rails per yard.		Weight of Steel Rail per yard, per ton on each wheel.		Remarks.	Authority for Weights of Engines.
	Engine.		Engine and Tender.				Iron.	Steel.	Lightest Rail.	Heaviest Rail.		
	tons.	cwt.	tons.	cwt.	tons.	cwt.	lb.	lb.	lb.	lb.		
Central of New Jersey ...	55	6	.....		19	14†	56 and 65	62, 62½, and 70	6·3	7·1	Runs regularly 70 to 90 miles per hour.	*R. R. Gazette*, Feb. 12, 1892.
Baltimore and Ohio	59	8	93	6	15	14	60–80	67	8·5			„ „ Nov. 27, 1891.
New York Central	57	1	89	6	17	16†	none	65 and 80	7·4	9·0	Runs regularly Empire State Express, fastest train in the world.	„ „ Sept. 18 „
Philadelphia and Reading ...	50	0	.....		17	0†	none	56, 58, 60, 64, 68, 70, 88, and 90.	6·6	10·6	Has run 91·7 miles per hour...	„ „ Nov. 13 & 27, 1891
C.C.C. and St. Louis... ...	58	13	92	19	15	6†	mostly steel	67	8·8			„ „ Jan. 1, 1892.
Erie	58	0	92	0	15	0†‡	.....	56–65	7·4	8·7		„ „ June 13, 1890.
Atchison, Topeka, and St. Fé	58	0	.....		15	9†	(3095 miles)	56–65 (4015 miles)	7·2	8·4		„ „ Aug. 15 „
Chesapeake and Ohio ...	59	5	.....		15	6	.....	56, 62, and 75	7·3	9·8		*R. R. Journal*, July „
Master Mechanics	59	8	.....		14	18†	.....	.....	.....	.....		*R. R. Gazette*, Jan. 8, 1892.
L. & N. W. R.	52	0	77	2	15	10	.....	84–90	10·8*	11·6*		*Engineering*, Nov. 13, 1891.
North Eastern	46	13	86	13	17	15	.....	? 90	.....	10·1*	Has attained highest speed (86 miles per hour) ever attained in England.	*R. R. Journal*, May, 1890.
Great Northern	45	3	78	11	17	0	.....	82	.....	9·6*	Runs fastest trains in England last 20 years.	*Engineering*, May 20 „
N.S.W. (10-wheeled Baldwin)	58	7	90	6	15	5½	70 and 75	71, 75, and 80	9·2	10·4		
Eastern of France	54	18	97	1	16	2	.....	69–89¼§	8·5	11·0	Running fast expresses ...	*Engineer*, March 4, 1892.

* As this Engine has the wheels and springs without equalizers, it is liable to have a considerably greater weight on the wheels.

† Average weight on each pair of coupled wheels.

§ The heavier rail has only been used of late years on parts of the line. The Engineer-in-Chief of the Permanent Way reports that 10% additional weight could be carried on the 69-lb. rail.

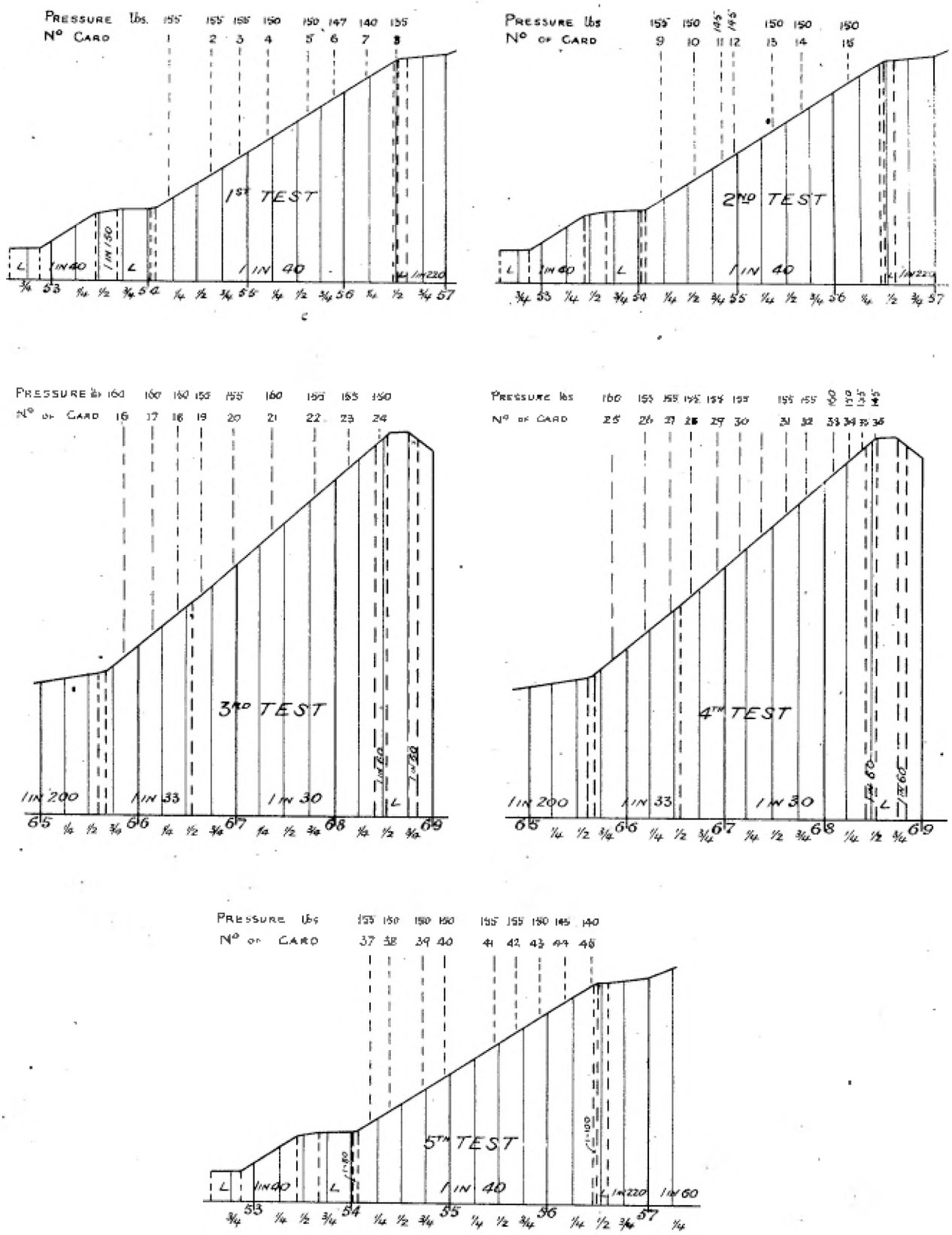
APPENDIX I.

Appendix to report by Messrs Kidd & Pollock

DIAGRAM OF GRADE

SHOWING WHERE INDICATOR CARDS WERE TAKEN

AND CORRESPONDING BOILER PRESSURE



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(CC)

NEW SOUTH WALES RAILWAYS (SOUTHERN MAIN LINE)

Diagram of Grades
PICTON TO MITTAGONG

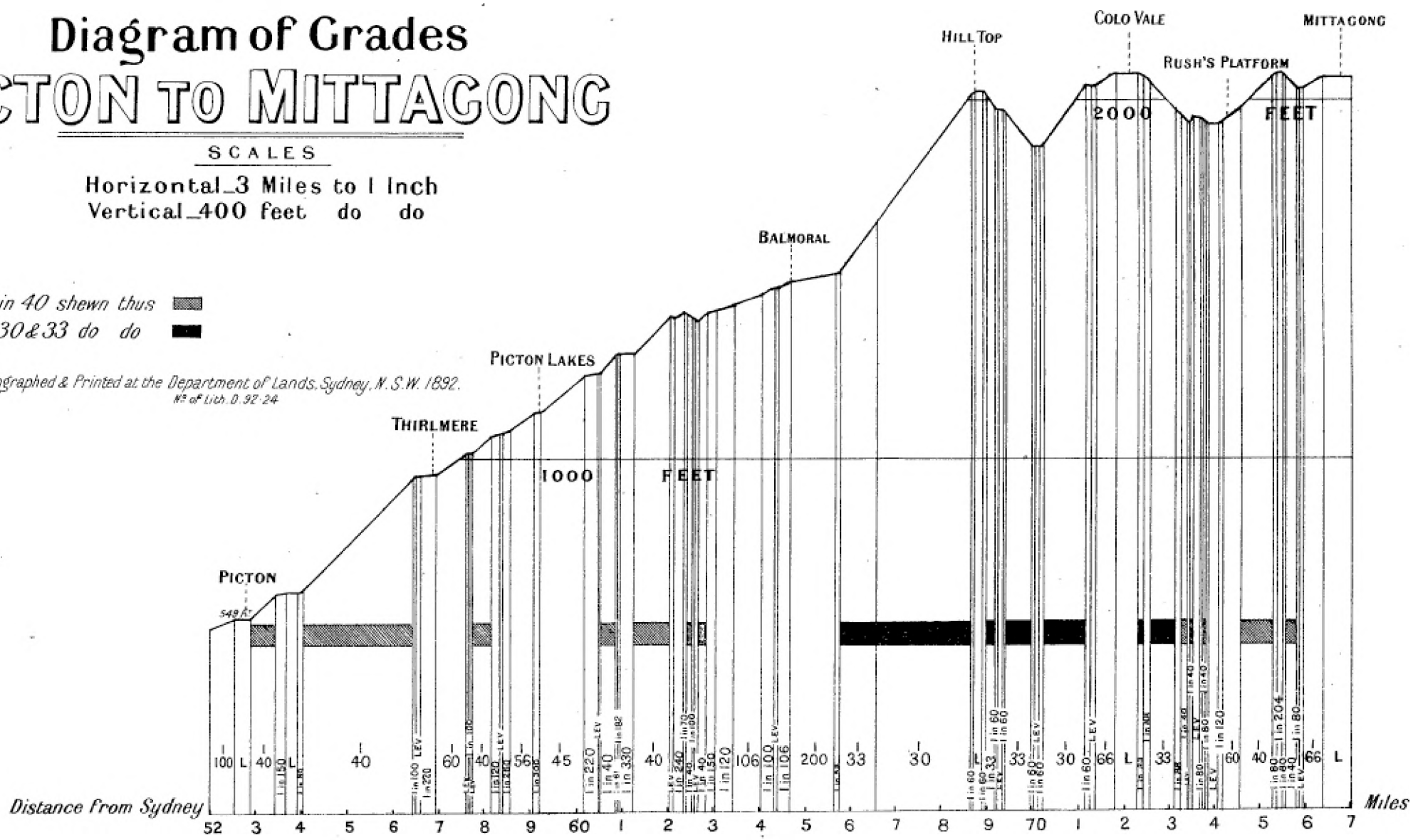
SCALES

Horizontal_3 Miles to 1 Inch
Vertical_400 feet do do

NOTE

Grades 1 in 40 shewn thus ▨
do 1 in 30 & 33 do do ■

Lithographed & Printed at the Department of Lands, Sydney, N.S.W. 1892.
No. of Lith. D. 92.24



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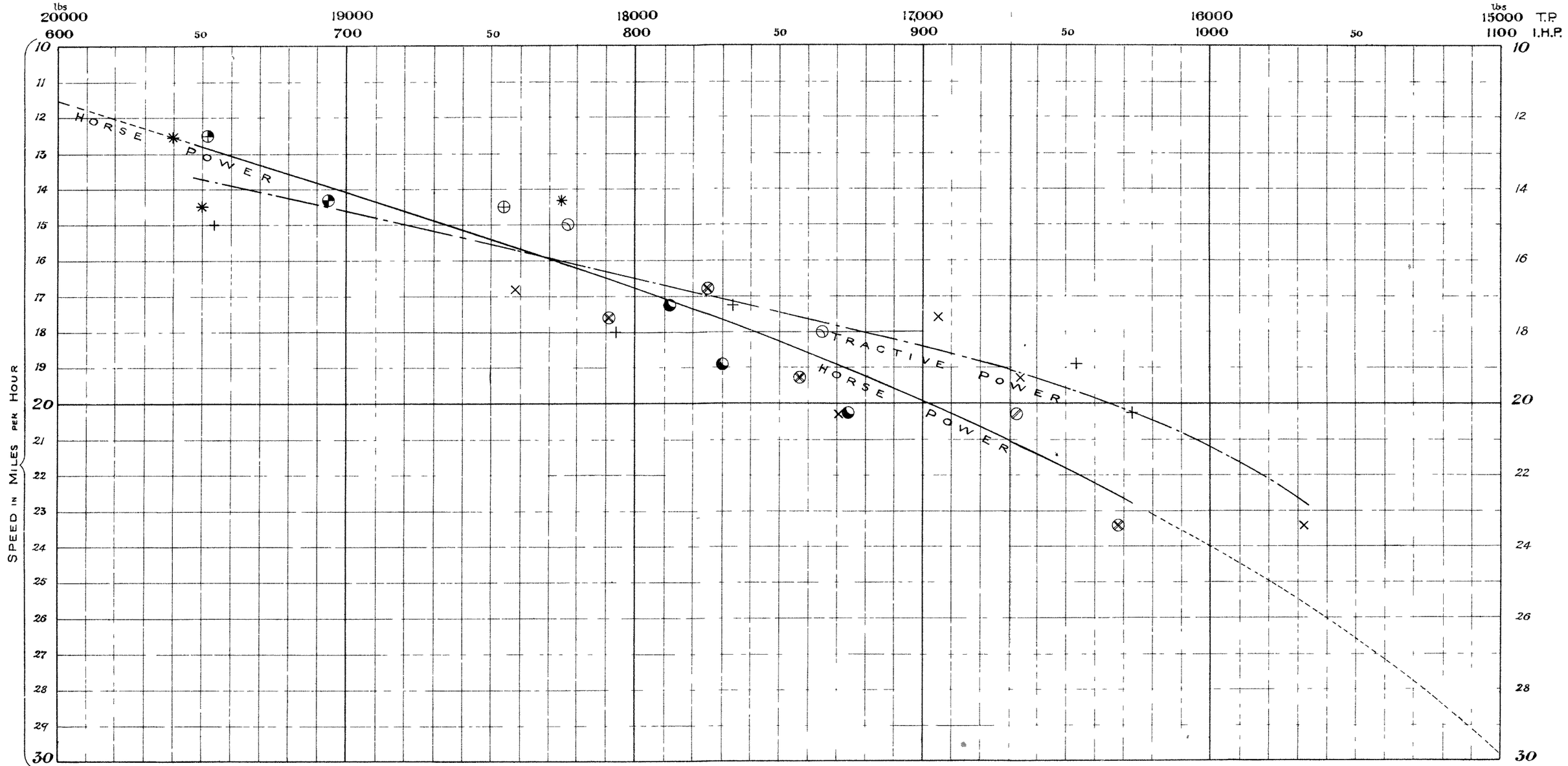
APPENDIX J

— LOCOMOTIVES —

— TRACTIVE POWER & HORSE POWER INDICATED AT VARIOUS SPEEDS —

— 10 Wheeled Baldwin, N.S. Wales & Baltimore & Ohio Railways —



NOTE

RAILWAY		INDICATED HORSE POWER	T.P.
BALTIMORE & OHIO TRIALS	THUS	⊗ UP 1-46·3 ⊘ UP 1-56	×
N.S.W. WALLERAWANG TRIALS	"	⊕ · 1-33, ◐ · 1-40, ◕ · 1-50	✳
" " " PICTON "	"	⊘ · 1-30 ◐ · 1 40	+

(Sig 6

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D. H. Wale

(E 4) Sydney N.S.W. 28 6 92

1892.

NEW SOUTH WALES.

REPORT

OF THE

ROYAL COMMISSION

APPOINTED TO INQUIRE INTO THE

CHARGES AGAINST MR. E. M. G. EDDY,

THE CHIEF COMMISSIONER OF RAILWAYS,

PREFERRED BY MR. W. F. SCHEY, M.L.A.,

In the Legislative Assembly on the 9th March, 1892;

TOGETHER WITH THE

MINUTES OF EVIDENCE

AND

APPENDICES.

APPOINTED 26 APRIL, 1892.

Presented to Parliament by Command.

SYDNEY: CHARLES POTTER, GOVERNMENT PRINTER.

1892.

[10s.] 24—A

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Commission.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, and so forth.

To our trusty and well-beloved—

The Honorable William Owen, our Chief Judge in Equity of our Supreme Court of our Colony of New South Wales, President;

Alexander Kethel, Esquire, a Justice of the Peace of our said Colony; and

John Young, Esquire, a Justice of the Peace of our said Colony.

Greeting:—

Know ye, that we, reposing great trust and confidence in your ability, zeal, industry, discretion, and integrity, do by these presents authorise and appoint you, or any two of you, as hereinafter mentioned, to make a diligent and full inquiry into the truth of the several following allegations and charges made in the Legislative Assembly of our said Colony, on the 9th March, 1892, by William Francis Schey, Esquire, one of the Members of the said Assembly for the Electoral District of Redfern, so far as the said allegations and charges, or any of them, impugn or impeach, or are found to impugn or impeach, the honour or integrity of Edward Miller Gard Eddy, Esquire, the Chief Commissioner, or the honesty or purity of his action in the management and administration of the New South Wales Government Railways, that is to say:—(1) That the appointment of the said Edward Miller Gard Eddy, as Chief Commissioner, was due to "occult reasons" which suited private persons, but were not for the welfare of the country; (2) that without first calling for tenders, and without any necessity on the ground of urgency, the Railway Commissioners ordered £500,000 worth of locomotive engines from England, which orders were given to specially-selected firms, who had always been favoured in the past by the Government of New South Wales: that a certain "ring" or combination of persons or firms, mainly responsible for the appointment of the said Edward Miller Gard Eddy, as Chief Commissioner, had ensured that the said engines should be ordered from them, and that they obtained the order for the same through the said Edward Miller Gard Eddy; that the said Commissioners spent the said sum of £500,000 in the said purpose, not only without calling for tenders, but at a time when iron and other material and coal were at higher prices in England than they had been for years theretofore; (3) that the reports and returns furnished by the Railway Commissioners and placed before Parliament from time to time do not always contain a true statement, and that thereby Members of the said Assembly are frequently misled into believing that the state of affairs is much more satisfactory than it really is; (4) that in the said reports and returns the receipts are unduly inflated by showing as revenue sums which the said Railways do not actually receive; (5) that a large number of the higher officers in the Railway Service have been put out of their positions to make room for personal friends or acquaintances of the said Chief Commissioner, or of one Mr. Findlay, of the London and North-Western Railway; (6) that the Commissioners have frequently supplied false answers to questions asked in the said Assembly, on matters connected with the said Railways; (7) that false and misleading paragraphs relating to the said Railways have been written in the said Commissioners' office and inserted in the newspapers; (8) that moneys voted for the purposes of the said Railways have been misspent by the said Commissioners, and the country robbed; (9) that the affairs of the Railway Department have been maladministered, and a robbery has been perpetrated; (10) that in making contracts with Messrs. Proudfoot and Company, Monie, Angus and Company, MacSweeney, Gulliver and Tait, and a number of other contractors, the said Commissioners have displayed either gross ignorance and incapacity or "something worse"; that in many cases the contracts were "bogus" contracts from their inception; that when it was proposed to make these contracts, 1,100 men were dismissed from the Railway Service, and that from the time of such dismissals the said Commissioners have connived at the "sweating" of the men working on the said Railways for the contractors, and that the said Commissioners knew what was going on; (11) that by means of the said "bogus" contracts, made in connection with the said Railways, the country has been swindled out of thousands of pounds; that the contractors had made contracts which were intentionally "bogus" on their first inception, and thus certain persons have obtained large sums of money at the expense of the country: And we do, by these presents, grant to you, or any two of you, at any meeting or meetings to which all of you shall have been duly summoned, full power and authority to call before you all such persons as you may judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such books, papers, writings, and all other documents as you may deem expedient, and to visit and inspect the same at the offices or places where the same or any of them may be deposited, and to inquire of the premises by all lawful ways and means: And we do give you power at your discretion to procure such clerical and other assistance as you may deem necessary for enabling you duly to execute this our Commission: And it is our will and pleasure that you do hold all your meetings in the execution hereof for the taking of evidence, and for the hearing of what may be alleged in support of or in answer to the said allegations and charges as in open Court, and that you do permit the said William Francis Schey and the said Edward Miller Gard Eddy, respectively, freely to examine and cross-examine all or any witnesses and

persons

persons called and appearing before you as aforesaid: And our further will and pleasure is that you do, within two months after the date of this our Commission, certify to us, in the office of our Colonial Secretary, under your or any two of your hands and seals, what you shall find touching the premises: And we hereby command all Government Officers and other persons whomsoever within our said Colony that they be assistant to you and each of you in the execution of these presents: And we appoint you, the said WILLIAM OWEN, to be President of this our Commission, which said Commission we declare to be a Commission for all purposes of the Act 44 Victoriæ No. 1, intituled "*An Act to regulate the taking of Evidence by Commissioners under the Great Seal.*"

In testimony whereof, we have caused these our Letters to be made patent, and the Great Seal of our said Colony of New South Wales to be hereunto affixed.

Witness our Right Trusty and Right Well-beloved Cousin and Councillor VICTOR ALBERT GEORGE, EARL OF JERSEY, Knight Grand Cross of our Most Distinguished Order of Saint Michael and Saint George, our Governor and Commander-in-Chief of our Colony of New South Wales and its Dependencies, at Government House, Sydney, in New South Wales aforesaid, this twenty-sixth day of April, in the fifty-fifth year of our Reign, and in the year of our Lord one thousand eight hundred and ninety-two.

JERSEY.

By His Excellency's Command,

GEO. R. DIBBS.

Entered on record by me, in REGISTER OF PATENTS, No. 14, pages 452 to 457, this twenty-seventh day of April, one thousand eight hundred and ninety-two.

For the Colonial Secretary and Registrar of Records,

CRITCHETT WALKER,
Principal Under Secretary.

ROYAL COMMISSION to inquire into the truth of the several allegations and charges made by WILLIAM FRANCIS SCHEY, Esq., M.P., against the CHIEF COMMISSIONER of RAILWAYS.

WHEREAS it is necessary to extend the time by which the Commissioners are to make their report in the above matter, now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the said Commissioners are to make such report until the 26th August next.

Given under my hand at Government House, Sydney, this twenty-fourth day of June, one thousand eight hundred and ninety-two.

JERSEY.

By His Excellency's Command,

F. B. SUTTOR.

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THE ROYAL COMMISSION ON RAILWAYS.

REPORT.

To His Excellency the Right Honorable Victor Albert George, Earl of Jersey, a Member of Her Majesty's Most Honorable Privy Council, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

REPORT of the Royal Commission appointed to inquire into the truth of certain charges made in the Legislative Assembly on the 9th March, 1892, by William Francis Schey, so far as such charges impugn or impeach the honor or integrity of Edward Miller Gard Eddy, the Chief Commissioner, or the honesty or purity of his action in the management and administration of the New South Wales Government Railways.

May it please Your Excellency,—

We have the honour to report as follows:—

We have held twenty-one sittings for taking evidence, and have occupied a considerable time in examining the voluminous papers laid before us in connection with subject matter of this inquiry.

We arranged, as far as possible, to take the evidence upon each charge separately, and we report separately on each charge.

CHARGE I.

The Charge:—That the appointment of the said Edward Miller Gard Eddy, as Chief Commissioner, was due to "occult reasons" which suited private persons, but were not for the welfare of the country.

This charge was withdrawn by Mr. Schey under the following circumstances,—

The Commission met for the first time in open Court on Wednesday, the 4th May, and then announced their intended course of procedure, pointing out that Mr. Schey, having brought the charges, would be expected to prove them, and, with the consent of Mr. Schey and Mr. Eddy, Monday, the 9th May, was fixed for taking evidence. We also informed Mr. Schey that, if he required the attendance of any witnesses on that day, or the production of any documents, we would procure them; and expressly stated that on Monday we would expect the parties to proceed with the evidence.

On Monday we found that Mr. Schey had not submitted the names of any witnesses he wished to have summoned, or required the production of any documents, and the whole of the morning was occupied with speeches by Mr. Schey, in which he referred at length to the proceedings and speeches in Parliament in reference to the appointment of this Commission, and to some indemnity to which

he

he considered himself entitled, and then repudiated the charges set out in this Commission, and asked leave to formulate his own charges. On our refusing leave, he applied for an adjournment, which we refused, as we considered that Mr. Schey ought to go into the witness-box and state what evidence he had at the time when he made the charge on the 9th March last. This he declined to do. Under these circumstances we told Mr. Schey that he must either proceed to prove the charge or withdraw it, but that if he began the proof of his charge we would allow him any reasonable adjournments to complete his evidence, if required. Thereupon Mr. Schey withdrew the charge, though we warned him that by so doing we would understand that the charge had been made without any adequate ground for making it. As Mr. Schey admitted that this vague and indefinite charge meant the same thing as was more clearly expressed in the second charge, and as the circumstances of Mr. Eddy's appointment were fully considered by us when dealing with that charge, the withdrawal did not materially affect our inquiry, but we refer to the circumstances under which it was withdrawn as throwing a light on the subsequent proceedings under the second charge.

We append the passage from Mr. Schey's speech of the 9th March, taken from *Hansard*, as he repudiated the charge:

"We find, in connection with the Victorian Railways, most criminal extravagance and negligence, and when we come to investigate the railway service of this colony we shall find the same state of things —criminal negligence, criminal ignorance, and criminal extravagance. I need not refer here to the occult reasons which led to the appointment of the Chief Commissioner. I shall take another opportunity of dealing with those reasons—reasons which were not for the welfare of the country, reasons which suited private persons, and not the State, to appoint the Chief Commissioner."

And as the repudiation extended to all the charges we append in each case the words used in the speech taken from *Hansard*.

CHARGE II.

The Charge:—That without first calling for tenders, and without any necessity on the ground of urgency, the Railway Commissioners ordered £500,000 worth of locomotive engines from England, which orders were given to specially-selected firms, who had always been favoured in the past by the Government of New South Wales; that a certain "ring" or combination of persons or firms, mainly responsible for the appointment of the said Edward Miller Gard Eddy, as Chief Commissioner, had ensured that the said engines should be ordered from them, and that they obtained the order for the same through the said Edward Miller Gard Eddy; that the said Commissioners spent the said sum of £500,000 in the said purpose, not only without calling for tenders, but at a time when iron and other material and coal were at higher prices in England than they had been for years theretofore.

The Speech: Mr. Schey said:—There was no necessity, on the ground of alleged urgency, for ordering £500,000 worth of locomotives in England without any tenders being called for them. Those orders were given to specially-selected firms, which have always been favoured in the past by the Government of this Colony. The ring, of which I have already spoken, and who are mainly responsible for the Chief Commissioner's appointment, made sure that these locomotives would be ordered from them, and they got the order through the Chief Commissioner without tenders being called for in the usual way. I have felt it my duty in discussing this matter before to make certain charges against the Railway Commissioners. I have asked certain questions from time to time, but I am sorry that the Colonial Treasurer has allowed himself to be drawn into giving me evasive answers. I have been told that my charges were vague, indefinite, and intangible. I shall now proceed to put those charges into such a definite, tangible form that nothing of the sort can be said again. First of all, I say that the Commissioners have spent this huge sum upon locomotives without calling for tenders in the usual way, and that this sum of money has been spent at a time when iron and other material and coal were at a higher price in England than they had been for years

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This charge comprises five clauses, which it is advisable to consider separately:—

(*a*) That without first calling for tenders, and without any necessity on the ground of urgency, the Railway Commissioners ordered £500,000 worth of locomotive engines from England.

(*b*) That such orders were given to specially-selected firms, who had always been favoured in the past by the Government of New South Wales.

(*c*) That a certain "ring" or combination of persons or firms was mainly responsible for the appointment of Mr. Eddy.

(*d*) That this ring or combination of persons or firms had ensured that the said engines should be ordered from them, and that they obtained the order for the same through Mr. Eddy.

(*e*) That the Commissioners spent the sum of £500,000 in the said purchase, not only without calling for tenders, but at a time when iron and other material and coal were at higher prices in England than they had been for years theretofore.

Clause (*a.*)—We find that the total cost of engines ordered by the Railway Commissioners is £336,000, and not £500,000.

The Railway Commissioners came into office on the 22nd October, 1888.

The engines ordered by the Commissioners are as follows:—

In 1889, *twenty-five goods engines*. Tenders were invited from Messrs. Beyer, Peacock, & Co., Dubs & Co., the Clyde Locomotive Works, Neilson & Co., and Kitson & Co. The tender of Messrs. Dubs & Co., being the lowest, was accepted.

Six Tank Engines.—These being in all essential parts duplicates of engines in the Colony which had been built by Messrs. Beyer, Peacock, & Co., were ordered from that firm. To ensure the interchangeability of parts, it was considered desirable that these engines should be constructed from the original patterns.

In 1890, *six tank engines*, the same as those ordered in 1889, were ordered from Messrs. Beyer, Peacock, & Co.

Fifteen double-bogie suburban tank engines were ordered from Messrs. Beyer, Peacock, & Co. These engines were urgently needed, and as the price offered in Sydney by their agent was a reasonable price, tenders were not called for. But in every case where tenders were dispensed with, prices were first obtained from Messrs. Beyer and Peacock, and approved by the Commissioners before the order was given.

Fifty Passenger Express Engines.—Tenders were invited from Messrs. Beyer, Peacock, & Co., Dubs & Co., Neilson & Co., and the Clyde Locomotive Works. The tender of Messrs. Beyer, Peacock, & Co., after a reduction of £100 per engine, was accepted, though not the lowest, as they undertook to deliver in May, whereas Messrs. Dubs & Co., whose tender was lowest, could not deliver before August. As these engines were urgently required for the increasing traffic and the early opening of new lines, the delivery in England in May instead of August would enable the Commissioners to use the engines during the busy season. Mr. Eddy also stated that each of these engines would effect a saving at the rate of about £700 or £800 a year, so that a considerable saving would be effected by putting them quickly on the line.

Twenty Mineral Tank Engines.—Tenders were invited from Messrs. Dubs & Co., Beyer, Peacock & Co., and Neilson & Co. The designs of Messrs. Neilson & Co. were not approved, and the tender of Messrs. Dubs & Co., being the lowest, was accepted. The system of limited competition adopted by the Commissioners, that is, obtaining prices from a number of first-class manufacturing firms, whose work has been proved to be of a high quality, and giving the contract to that one whose price and other conditions are most favourable, is approved by the late Railway Commissioner, Mr. C. A. Goodchap, who in his evidence before us states as follows:—"I have no hesitation in saying that it is a wise course to circumscribe the area of competition in such cases, and those locomotive firms who have made engines for any particular railway, and have the patterns and templets, are likely to do the work cheaper and better than any other firm." "The only qualifying remark to that is, the price might be excessive, but so long as the price was reasonable it would be preferable to go to a firm that had previously executed your orders."

Subsequently to this date, 12 passenger engines and 20 goods engines were ordered from America, but as the charge is limited to engines ordered in England, we did not inquire into these matters. There were also 10 passenger "Mogul" engines ordered from Messrs. Dubs & Co. before the Commissioners took office, but delivered subsequently. [*Appendix* A.]

In addition to these locomotives, an order was given to Messrs. Peacock & Co. and Dubs & Co. for forty boilers, and it was contended by Mr. Schey that these boilers ought to have been made at the Eveleigh workshops.

But it was conclusively proved that these workshops are fully employed in effecting repairs to engines and boilers, and that it would have been impossible to manufacture these boilers there, and at the same time effect the necessary repairs to the rolling stock. There is also on record a minute by the Hon. John Sutherland, dated May, 1887, confirmed by the Cabinet, and signed by Sir Henry Parkes, wherein the Government absolutely refused to allow the Government Workshops at Eveleigh to be used for manufacturing locomotives. On the 30th May last, when Mr. Thow was examined, there were twenty-seven boilers waiting outside the workshops for repairs, in addition to those being repaired within.

We have obtained the report of Messrs. Thomas Ferguson, the foreman boiler-maker at the Mort's Dock and Engineering Company's Works, and Thomas Irons, the managing engineer at the Clyde Engineering Works, as to the capacity of the Eveleigh workshops for the manufacture of new boilers and new engines. [*Appendices* B *and* C.] It was also shown by the evidence of Mr. Thow, Mr. Cahill, and Mr. Fernley, that there were neither the materials nor the plans for making new boilers in these workshops; and that it would have taken quite as long to get the materials out from England as to get the boilers, and that the cost of manufacturing them in the Colony would have been much greater than buying them in England.

Two of the Commissioners, Messrs. Young and Kethel, spent two days in going through the Government workshops at Eveleigh, and one day at the works at Newcastle and Hamilton. The space for repairs of boilers at Eveleigh appears too limited, and it would be advantageous to have more space, which could be given by erecting a building, not of a costly character, with a plain roof and posts, without expensive enclosing walls, but a screen on the weather side. This large shed, fitted with the necessary tools and hoisting apparatus, would enable the boiler-makers to work at a much greater advantage.

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The system of storekeeping appears to combine, in a remarkable degree, both efficiency and economy.

We examined the new running-shed at Hamilton. It is not an expensive building, but is a model for the purpose it is required for; the steam and smoke can escape without remaining in the building, and it is well drained and dry, and has the important recommendation that all railway buildings in a new country should have—it is capable of extension without pulling any portion of it down.

The "necessity on the ground of urgency" for ordering these engines is shown by the following facts:—

The Railway Commissioners had before them a report from Mr. Midelton, the then Locomotive Engineer, dated the 1st April, 1889, as to the state of the boilers in the engines on the Northern Line, and strongly recommending an increase in the order which had been sent to Messrs. Dübs and Co. from ten to twenty-five new engines, and they received a memorial as to the condition of the engines on the Northern Line, dated the 31st July, 1889, signed by nineteen drivers and fourteen firemen. [*Appendix* D.]

In the same year the Commissioners, in order to obtain an independent report on the condition of the rolling stock, requested Mr. Thow, then engaged in the Railway Department of South Australia, to make a report. [*Appendix* E.]

In his report, dated the 20th March, 1889, he recommended that fifteen engines be broken up or sold at once, and that eighty-seven engines be allowed to wear themselves out or sold, thus disposing of 102 engines.

The Railway Commissioners also obtained a report from Mr. Price-Williams, C.E., dated the 29th July, 1889 [*Appendix* F], in which he stated that he found the locomotive, carriage, and waggon stock generally in a deplorable condition, and that the number of engines then requiring renewal, would, according to the age test, be 149, and by the mileage test, 116.

The Annual Reports on the Railway for many years preceding the appointment of the present Commissioners had shewn a great deficiency of engine power on the then existing lines; but since that time the Railways of New South Wales had been largely extended and new lines were rapidly approaching completion, requiring additional rolling stock. [*Appendix* G.] This is confirmed by the evidence of Mr. Goodchap when examined before us.

All these considerations demanded prompt action on the part of the Railway Commissioners, and created the "necessity on the ground of urgency" for ordering a large increase of new engines for the efficient working of the Railways.

(*b*) Previously to the appointment of the Commissioners efforts had been made to have engines manufactured in the Colony, and twenty-five engines had been ordered from the Atlas Company and twenty-five from Thomas Wearne, but they had been unable to carry out their contract. Efforts had also been made to form a syndicate of English capitalists for manufacturing engines in the Colony, but that also had failed. [*Appendix* H.] It was therefore necessary to obtain the engines elsewhere. The firms in England from whom tenders were obtained are the principal firms engaged in the manufacture of engines, the firms of Beyer, Peacock, & Co. and Dubs & Co. ranking amongst the largest in the United Kingdom. These firms can only be said to have been specially selected because their workmanship was excellent and had been tested in the Colony, and because

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their price was lowest, and their time of delivery quickest. The superior quality of both material and workmanship in the engines recently supplied by the firms named, their reliability, and the excellent work they are doing, are evidence of the sound judgment displayed by the Commissioners and their officers in having the locomotives made by those firms.

(*c*) When asked during the examination of James Cahill to name the "Ring or combination of persons or firms mainly responsible for the appointment of Mr. Eddy as Chief Commissioner," Mr. Schey named Sir John Fowler, Mr. Whitton, Mr. Burnett, Mr. Thow, Messrs. Beyer and Peacock, Mr. Eddy, Sir Saul Samuel, and Sir Henry Parkes. But subsequently, when examined upon oath, Mr. Schey eliminated all the names except Sir Henry Parkes, Sir Saul Samuel, Sir John Fowler, and Mr. Whitton.

All the papers and correspondence relating to the appointment of Mr. Eddy were laid before us, and Mr. Eddy was examined in reference to his appointment. The only one of those named who was in any way connected with the appointment of Mr. Eddy was Sir Henry Parkes, who was then Premier, but who was not acquainted with Mr. Eddy until after the appointment had been made. Neither Sir John Fowler, nor Mr. Whitton, nor Sir Saul Samuel were consulted or interfered in any way with Mr. Eddy's appointment, nor was he personally acquainted with Mr. Whitton or Sir Saul Samuel, until after he had accepted the appointment. Mr. Eddy also denied having any acquaintance or connection whatsoever with any of the manufacturing firms.

The history of Mr. Eddy's appointment is as follows:—

On the 31st March, 1888, Sir Henry Parkes sent a telegram to the Agent-General—

"Bill before Parliament to place railways under independent Board of management. Wish to engage able and experienced man, thoroughly acquainted with best systems of railway management, as Chairman of Board. Make full inquiries, but no agreement to be made till letter on subject has been received in May. Salary, £2,500; term, seven years."

On the 4th April, 1888, Sir Henry Parkes wrote to the Agent-General,—

"Sir,

"Appended to this letter is a telegram which I sent to you on the 31st ultimo.

"2. The Bill about to be submitted to Parliament creates a Board of Commissioners to manage the railways which are opened to public traffic; and this Board will have nothing to do with the construction or maintenance of railways. The Chief Commissioner will be the responsible functionary in the work of management, the other two members of the Board having no power of themselves to outvote him, even though they may dissent from his views. We therefore require for this important office not only a man of proved integrity, but one of sound capacity for the business of railway management, and of good experience. It would be an additional positive qualification if he were known for tact and success in dealing with workmen.

"3. It occurs to me that Sir John Fowler may probably be able to suggest some gentleman of authority in connection with the great English railways who can afford you valuable advice in your inquiries. From this side you might take into consultation Mr. Alexander Campbell, as one who has a fresh knowledge of matters here, and in whose business sagacity much confidence may be placed.

"4. I am sure I need not impress upon you the importance which I attach to a proper selection being made, as the success of the new system will largely depend upon the character and capacity of the officer at its head.

"The salary which Parliament will be asked to approve of will be £2,500 per annum. I will write to you within a few days explaining fully the terms of engagement."

On

On the 4th May Sir Henry Parkes sent a telegram to the Acting Agent-General:—

"[Confidential.]

"Railway Act just passed, by which a Board of Commissioners appointed to manage Government Railways. Term of office, seven years; only removable by Parliament (see letter 4th April, 1887). Chief Commissioner's salary, £2,500. Wish to engage thoroughly experienced man of energetic character from railway service in England * * * * * Salary fixed by Act; prospect of increase if services satisfactory. * * * * Inform me before finally engaging. Urgent."

Note.—The omissions represented by asterisks referred to another gentleman with whom negotiations were opened and terminated without result.

On receipt of the telegram of the 4th May, Sir Daniel Cooper, who was then Acting Agent-General in London, consulted Major Marindin, R.E. (one of the officers appointed by the Board of Trade in England, as Inspector in connection with Railways), as to the person best fitted to be appointed Chief Commissioner under the Railway Act. Major Marindin recommended Mr. Eddy, and at the request of Sir Daniel Cooper, wrote to him offering the appointment, and thereupon some correspondence ensued between Major Marindin and Mr. Eddy, as to the terms of the appointment, and on Mr. Eddy agreeing to the terms, he had an interview with Sir Daniel Cooper, who communicated Mr. Eddy's acceptance to Sir Henry Parkes, who thereupon replied authorising the appointment. [*Appendix* I.] Such is the short but complete account of Mr. Eddy's appointment as Chief Commissioner.

(*d*) This clause, read with the preceding ones, can only be intended to mean that Mr. Eddy was the creature and the tool of a ring, into whose hands he played by ordering, without tender, engines of the value of £500,000.

This most grave charge having been made by Mr. Schey from his place in Parliament, and (as he reminded us), under protection of the privilege of Parliament, we gave him the greatest possible latitude in explaining what he meant by this charge, and in producing in support of it any evidence of any kind that could in any way have influenced his mind when making this charge; but beyond vague declamation as to "coincidences" and "inferences," and voluminous newspaper paragraphs, we could get nothing. Indeed, it was apparent to us throughout that Mr. Schey was seeking to evade rather than to prove this charge.

Long before Mr. Schey made this speech there had been laid before Parliament all the papers connected with Mr. Eddy's appointment, except the private letters between him and Major Marindin, and certain names had been omitted of persons who were likely to be applicants for the appointment [*Appendix* J.], so that Mr. Schey could hardly plead ignorance of the facts.

We find that this charge is not only proved to be wholly false, but to have been made recklessly, and without any warrant or justification whatsoever.

(*e*.) It appears that during the years 1889 and 1890 the price of material in England was somewhat higher than in previous years, but under the circumstances detailed above in clause (*a*) the Railway Commissioners were compelled to procure the engines, notwithstanding the extra cost.

CHARGES III AND IV.

The Charge :—That the reports and returns furnished by the Railway Commissioners, and placed before Parliament from time to time, do not always contain a true statement, and that thereby Members of the said Assembly are frequently misled into believing that the state of affairs is much more satisfactory than it really is; that in the said reports and returns the receipts are unduly inflated by showing as revenue sums which the said Railways do not actually receive.

The Speech :—We have no certificate that the reports and returns placed before us from time to time contain a true statement of the business of our railways. I know myself, from past experience, that they do not always contain a true statement. I am very much afraid we are frequently misled into believing that the state of affairs is much more satisfactory than it really is. * * * * The receipts are unduly inflated by showing revenue which the railways do not actually receive

It was agreed that these two charges should be taken as one. In support of these charges Mr. Schey referred to the Annual Report of the Railway Commissioners for the year 1890, and objected to certain items under the heading of "List of concessions granted to the staff since the Commissioners took office." The first was, "Fettlers' time to count from the time they were inside the railway-fences and starting for work." The next was, "Gangers allowed one-quarter day's pay for walking their lengths on Sunday, and also supplied with tricycles." The last was, "Wages of workmen more equitably adjusted." Of the incorrectness of these items Mr. Schey offered no evidence, but stated that he had been informed that Mr. Goodchap had supplied tricycles before the Commissioners took office, and that therefore it was not a concession granted since the Commissioners took office. Mr. Schey also referred to the Annual Report of the Commissioners for 1891. His first objection was that on the page showing the net profit of working the lines of railway the interest due on the debt created for railway works ought to have been deducted. This interest is stated and explained in a subsequent page in the same report, where it appears in its proper place, as the interest on these debentures is paid out of the Consolidated Revenue, and not by the Railway Commissioners. We also find on the same page of the report to which objection is taken that it is expressly stated that "the revenue derived from working the lines during the year was £2,974,421, and the expenses amounted to £1,831,371, or 61·57 per cent. of the gross revenue (a decrease of 5·12 since we took office), leaving a net revenue of £1,143,050 towards paying the interest upon capital, or a return of 4·11 per cent. upon the total debenture capital outstanding, and 3·60 per cent. per annum on the total cost of the railways open for traffic." This, Mr. Schey considered, was calculated to mislead Parliament.

He also considered that the receipts were unduly inflated, because the Commissioners included as receipts the work done for other departments of the Government, and for which payment in cash had not been received.

We fail to see how this is an undue inflation of the receipts, as vouchers are given for all such work, and the Railway Commissioners are credited with the cost of the work done by them. This mode of keeping the accounts, and receiving credit for work done obtains in all the other departments, and is the only way by which such work can be properly accounted for.

Further, it appears that in 1891 Parliament voted a sum of £25,000 for payment for unremunerative services. In that year those services amounted to £39,456 14s. 9d., but the Commissioners only took credit for £25,000.

CHARGE V.

The Charge :—That a large number of the higher officers in the railway service have been put out of their positions to make room for personal friends or acquaintances of the said Chief Commissioner, or of one Mr. Findlay, of the London and North-Western Railway.

The Speech :—We find that a large number of higher officers have been put out of positions to make room for personal friends or acquaintances of the Chief Commissioner, or Mr. Findlay, of the London and North-western Railway.

Mr. Schey stated that the persons to whom he referred as having taken the places of officers in the railway service were Mr. Angus, Mr. D. H. Neale, Mr. Elwell, Mr. Thow, Mr. Hall, Mr. Foxlee, Mr. Hodgson, Mr. Corns, Mr. Nichols, Mr. Kneeshaw, and Mr. Wilkin.

None of these gentlemen were friends of Mr. Eddy or of Mr. Findlay (now Sir George Findlay), and the only acquaintance—if it can be called such—was an acquaintance in some instance such as might exist between a subordinate officer and the General Manager of one of the largest railway companies in England. No officer in the railway service was put out of his position to make room for any of them. Mr. Schey mentioned only three instances in support of this charge—Mr. Angus, who, it was alleged, took the place of Mr. Cowdery; Mr. Thow, the place of Mr. Midelton; and Mr. Hall, the place of Mr. Wickham.

The evidence showed that Mr. Angus came out as Assistant Engineer to Mr. Cowdery, and took his place when Mr. Cowdery was superannuated with a pension, as being over 60 years of age, under the Regulations of the Commissioners. Mr. Midelton's services were dispensed with for reasons which, in the opinion of the Railway Commissioners, rendered it undesirable that he should continue to hold the responsible position of Chief Mechanical Engineer, and Mr. Thow was appointed in his place. Mr. Thow had been for twelve and a half years in the service of the Railway Commissioners of South Australia, and had been called upon to report as to the state of the rolling stock in New South Wales previously to his appointment as Chief Mechanical Engineer.

Mr. Wickham never was removed from the service, but remained with an increased salary until his death.

In carrying out the new system inaugurated by the Railway Act it became necessary to add to and strengthen the existing staff of officers, and in some instances to create new appointments, and for this purpose to get men of the greatest ability and experience.

In making selection of these officers the Commissioners, in our opinion, had regard only to their ability and experience, and no objection was taken to any appointment on the ground of any want of these qualifications.

CHARGE VI.

The Charge :—That the Commissioners have frequently supplied false answers to questions asked in the said Assembly, on matters connected with the said Railways.

The Speech :—I have had to charge the Commissioners, and I charge them again, with giving incorrect answers to questions. I will give some specific cases: On one occasion I asked in the House whether a certain officer who was brought out from England, had a passage paid for himself, his wife, his children, and his servant. The answer which the Commissioners put into the hands of the Minister was that the passage was paid for himself, his wife, and his children, but not for the servant. I say that the answer was false, as money was paid for the servant. It ought to be easy to prove whether that was so or not.

Mr.

Mr. Schey was provided with all the Parliamentary proceedings, showing questions and answers supplied by the Railway Commissioners, but the only instance he pointed out of an alleged false answer was one stating that Mr. Hall had not been paid for the passage of a servant when he came out to the Colony. No evidence was given of this alleged falsity of statement, but it was proved that Mr. Hall did not bring out any servant, and that he did not receive any payment for the passage of a servant. The only officer who brought out a domestic servant with his family was Mr. Foxlee, and he produced vouchers to show shat he had paid her passage out of his own means.

With regard to Mr. Schey's statement that a false answer had been given by the Commissioners as to the cost of altering the platforms of some of the suburban stations. The matter had been investigated by the Royal Commission on the Baldwin Engines.

CHARGE VII.

The Charge :—That false and misleading paragraphs relating to the said Railways have been written in the said Commissioners' office and inserted in the newspapers.

The Speech: —I know, from information received from the persons who carried them, that many of the paragraphs were written in the Commissioners' office, word for word, as they appeared in the newspapers. The paragraphs are false and misleading, and in some cases, contradictory.

No alleged instance in support of this Charge was mentioned, and Mr. Eddy, and Mr. McLachlan the Secretary, denied that any paragraphs emanating from the office of the Commissioners were false or misleading.

CHARGES VIII, IX, X, XI.

8. That moneys voted for the purposes of the said railways have been *misspent* by the said Commissioners and the country robbed.

9. That the affairs of the Railway Department have been maladministered, and a *robbery* has been perpetrated.

10. That, in making contracts with Messieurs Proudfoot & Company, Monie Angus & Company, M'Sweeney, Gulliver, and Tait, and a number of other contractors, the said Commissioners have displayed either gross ignorance and incapacity or "something worse." That, in many cases, the contracts were "*bogus*" contracts from their inception. That, when it was proposed to make these contracts, 1,100 men were dismissed from the Railway Service, and that from the time of such dismissals the said Commissioners have connived at the "sweating" of the men working on the said railways for the contractors, and that the said Commissioners knew what was going on.

11. That, by means of the said "bogus" contracts made in connection with the said railways, the country has been swindled out of thousands of pounds. That the contractors have made contracts which were intentionally "bogus" on their first inception, and thus certain persons have obtained large sums of money at the expense of the country.

Speech :—If the Colonial Treasurer does his duty he will not pay a penny piece of this money, and if this Parliament does its duty when this special vote comes before it, it will not vote a penny until there has been an inquiry into the way in which the money already voted has been misspent and the country robbed. . . . . The affairs of the Railway Department have been maladministered to a tremendous extent, and a robbery has been perpetrated. . . . . I adduce also against the Commissioners the contracts entered into between them and the various contractors—Messrs. Proudfoot & Co., Monie, Angus, & Co., M'Sweeney, Gilliver, and Tate, and a number of other contractors. In these contracts, the Commissioners have displayed one or two things—they have either displayed gross ignorance and incapacity, or they have displayed something worse. . . . . Any one who will take the trouble to go into the matter will be convinced that I am speaking the solid truth when I say that these contracts display gross ignorance and incapacity, or something radically worse. In many cases, the contracts were bogus from the very jump. It will be borne in mind that, when it was proposed to make these contracts,

1,100 men were put out of the railway service. . . . . One thousand one hundred men were dismissed, and from that time I charged the Commissioners with conniving at the sweating of the men working on the railways for these contractors. . . . . Gangers have been paid for who have never been employed. I say that by means of bogus contracts the country has been swindled out of thousands of pounds. The contractors have had contracts which were intentionally bogus on their first inception, and certain people have obtained large sums of money at the expense of the country.

These four charges admittedly relate to the same matter, and we took evidence on them together. Mr. Schey was asked to state to the Commission what he referred to in the 8th and 9th charges; he replied that he did not accept the words as his charges, although a statement to the same effect is made in *Hansard*, and when asked to state what was in his mind on 9th March, when he made the charges recorded in *Hansard*, he evaded all direct answers, and his replies were quite irrelevant; the only definite statement made by him was, that "gangers have been paid for who have never been employed," yet he did not know the name of any such ganger, and "was only told that such a thing had occurred"; but not a particle of evidence was adduced in proof of these charges.

Indeed Mr. Schey stated that he knew nothing of his own knowledge, but appears to have based his statement on information.

As Mr. Schey had given his word of honor not to disclose the name of his informant, or to give up the information, which was contained in a written document in the form of a Statutory Declaration, he refused to name his informant, or to give us the declaration. But we obtained the name of the declarant from the Colonial Treasurer to whom the declaration had been previously shown, and ascertained that he was a person of the name of Alexander Archibald Tennant, whom we thereupon summoned as a witness.

On this person not obeying the summons Mr. Schey gave up the declaration. [*Appendix* K].

At this stage Mr. Schey announced his intention, on the advice of his solicitor, of retiring from the proceedings of the Commission, and of taking no part therein except as a witness when summoned by us, but he gave us a list of persons to be examined on these charges.

As Mr. Schey was unable to name any other contractors than those expressly named in the 10th Charge, we confined our inquiries to them.

A list of all contracts between the Railway Commissioners and the contractors named was submitted to us (*Appendix* L), and we fully investigated each contract, and examined all the papers relating to them. In every case in which tenders were called for, we found that the tenders were properly advertised, and that a large number of contractors sent in tenders, and that the lowest tender was, in every instance, accepted, except those hereafter mentioned.

In each case a proper contract was entered into, and the work was carried out according to the schedule of prices.

There were other works carried out by these contractors without tender by day labour under special arrangement, which we deal with hereafter more in detail.

In charges 10 and 11, it is alleged that bogus contracts were made by the Commissioners with Messrs. Proudfoot & Co., Monie, Angus, & Co., M'Sweeney, Gulliver, & Tate, and a number of other contractors; but in the evidence given by Mr. Schey he admitted that he could not swear they were not publicly tendered for,

but

but he did not believe they were. He was asked in what way they were not contracts. He replied, "In several ways, I think. For instance, I was informed that a large quantity of this work, nominally done by contract, would be done by day work at a certain schedule rate; and there were certain provisions by which this schedule rate would be brought into force; and that these contracts were bogus, inasmuch as instead of the work being done at certain prices, it was done by day work, and therefore it was merely a matter of the contractors' men doing the work for which the Commissioners paid the contractors." This we consider quite contradictory in itself, and has no meaning, for if work is done by schedule, as given in evidence, it is a contract to do work at certain prices agreed upon; and if done by day labour, it remains day labour, and the contractors could only do the work one way or the other, so that this evidence of bogus contracts utterly fails.

Speaking of these contracts, Mr. Schey said, in evidence, "I do not believe they were tendered for. When I speak of tendering I speak of tendering in the ordinary sense of public tenders being called."

The evidence of Mr. Eddy, Mr. McLachlan, and all the contractors entirely contradict this, and a list of all the work done by contract was produced by the Commissioners. [*Appendix* M.]

Mr. McLachlan, in reference to tenders, said: "Usually, if it is a contract for construction work, we have conditions and specifications prepared, and they with the plans are on view in the Engineer's office, and intending contractors and tenderers visit the Engineer's office or my office and get information in regard to the contract. Then on the day specified the tenders which have been deposited in a locked box are, at a certain hour, taken out in the presence of the Commissioners, and as each tender is taken from its envelope it is initialled by the Commissioners and scheduled. Two Commissioners, as a rule, are present at the opening of tenders; a schedule of them is made, and they are all given to the Engineer-in-Chief to report upon, who returns them to the Commissioners with any recommendation he may make."

Mr. Eddy said, "To ensure there being nothing underhand possible with our tenders one or two of the Commissioners are always present when the tenders are opened, a list is then made, the tenders are initialed by the Commissioners, and the head of the engineering department is then asked to examine the whole of the tenders and to advise the Commissioners which, in his opinion, ought to be accepted. The Commissioners then sit down as a rule with the officers and decide which tender shall be accepted."

We have examined the tenders and contracts as per list (*Appendix* N), and we find that, with a few exceptions hereafter explained, public tenders were called in the manner described above and let to the lowest tender.

With regard to the relaying and reballasting, we find that public tenders were called for the works in the usual way, and from the evidence of Mr. Eddy (and also as shown by the list of tenders received) "Messrs. Justin M'Sweeney and the late Mr. David Proudfoot were the the two lowest tenderers. In some cases the prices in one tender were higher than they were in the other, and in some cases lower; we deemed it unwise to place the whole of our work in the hands of one firm, and we therefore sent for the two gentlemen named, when an agreement was entered into between the Commissioners and the two contractors that the schedule

rates

rates should be fixed at the lowest prices in each schedule," and certain sections of the railways were apportioned to each contractor, and it is on these terms and conditions that the relaying and reballasting of the lines have been and are now being carried out.

This Schedule is a contract to carry out all the works mentioned therein at the fixed prices agreed upon for each item in the Schedule.

Of that portion of the tenth charge (" that the said Commissioners have displayed gross ignorance and incapacity" or " something worse") Mr. Schey gave no evidence that would justify such a charge—he knew nothing of his own knowledge—but " held certain views on the subject at the time—on the authority of information received from various people "—none of whom were brought to give evidence. We, therefore, consider this portion of the tenth charge to be totally unfounded and a most unwarrantable assertion.

With reference to that part of charge 10 which alleges that 1,100 men were dismissed from the Railway Service, when it was proposed to make these contracts, Mr. Eddy explained that at first a large number of duplication works were put in hand rather hurriedly as there were so many unemployed men about, and the works were urgently required. This work was done at first by a kind of piecework under the supervision of the Railway Commissioners, but later on it was found that it would be far better for the work to pass into the hands of ordinary contractors, and accordingly tenders were called for, and the work was carried on by contract more economically and better than by piecework.

The Commissioners also, when these contracts were taken, dispensed with some men who had been taken on to repair the damage done to the roads by the very heavy rainfall at the end of 1889, and the beginning of 1890.

On this question, Mr. M'Sweeney in his evidence, said about 600 men were dismissed, and that almost the whole of those men got on again.

Mr. Angus said, " It was part of the contract that we had to take over the whole of the men employed on the work, and that we should retain their services for a month—that at the end of the month could weed out the men not required."

We consider that Mr. Eddy gave conclusive evidence that a change from gangwork labour to contract work was desirable, and that as much consideration was given to the men as was practicable.

As to the Commissioners conniving at the " sweating" of the men working for the contractors, Mr. Eddy stated that only once did they examine the pay-sheets of any of the contractors, and that was when a similar statement was made in reference to Messrs. Angus & Co.'s contract, between Ryde and Hornsby. Those pay-sheets disclosed that Messrs. Angus & Co. had 375 men paid at the rate of 7s. a day; 159 men at the rate of 7s. 6d. a day; sixty-four men at the rate of 8s. a day; nineteen men at the rate of 8s. 6d. a day; and seventy-two men at rates varying from 9s. to 17s. a day.

We also examined the pay-sheets of Messrs. Proudfoot & Co., as their payments were specially referred to in Tennant's declaration, and we found that no men were paid less than 7s. a day, and a large number were paid from 7s. 6d. to 8s. a day, and some at a higher rate.

Mr. Eddy stated that with the exception of the men employed by Angus & Co., on the Ryde to Hornsby Line, they were not aware of the rate of payment of any of the men employed by the contractors, and that they had no power or authority to interfere in respect of the rate of wages paid under these contracts. In the schedule rate of wages it is the invariable practice to add a percentage to cover the cost of tools, supervision, and other matters connected with the employment of labour; but with the rate of wages actually paid by the contractors the Railway Commissioners have nothing to do.

With reference to the sworn declaration of Mr. Alexander Archibald Tennant, who was summoned to appear before the Court to give evidence, and who failed to appear, and who afterwards personally requested the Commissioners to allow him to give evidence before them in open Court, which was granted, and who again failed to put in an appearance, we cannot put the slightest reliance upon any statement from such a person, although it would appear from the evidence of Mr. Schey that the sworn declaration of Mr. A. A. Tennant had great influence with him in making the charges against the Commissioners, which forms the subject of this inquiry; but while we looked with grave suspicion upon the assertions proceeding from such a tainted source we none the less made searching inquiries into all the allegations contained in the declaration.

Mr. Suttor, the engineer who was principally engaged in the works impugned, gave very clear evidence as to the way the work was measured by him, and also showed us all his books and notes connected with this contract, which completely refuted all the charges against him made by Tennant. We also thought it advisable to obtain the services of an independent engineer, Mr. B. C. Simpson, M.I.C.E., to investigate the measurements and payments, and all other matters in connection with Messrs. Proudfoot & Co.'s contracts, as follows:—The Mudgee Railway deviation, the Maitland embankment, and the Bullock Island sidings. His instructions were to make such measurements as were necessary to verify the plans and cross-sections from which the measurements have been taken; to examine the plans, certificates, reports, vouchers for day labour, and all other documents relating to the works in question, and submit for our information a detailed analyses of the certificate on which the contractors have been paid.

The measurements and investigation of these contracts by Mr. Simpson necessarily occupied some time, and the result proved that no day-work or other payments could have been made, beyond those allowed in the certificates, as the actual measurements carried out at the contract schedule prices corresponded with the amounts paid to the contractor. Mr. Simpson, concludes his report:—"The facts elicited in my inquiry prove in my opinion that the charges made in Tennant's declaration are as reckless in their character as they are in degree; they bear the impress of emanating from a person unqualified by technical knowledge, or by information for such criticism. Their truth is in no way borne out by the facts, and those of them that are specific and distinct are utterly disproved." [*Appendix* O.]

In examining the monthly measurements and progress payments on account of the contract of duplication, Liverpool to Campbelltown, we found entries for day-work in sheet No. 14, 11th April, 1891, amounting to £5,678 3s. 4d., and in a revised list of day-work for the same the sum of £7,556 18s. 4d., while in a second No. 14 sheet we find the smaller sum of £739 7s. 4d. as total day-work; and in the monthly progress payment on the contract from Granville to Liverpool of 30th May,

May, 1891, a matter of a similar character is shown, and a marginal note as follows:—"The additional cost of excavating to the depth of 30 feet below surface is ascertained from measurements taken on the ground, and the time occupied in executing the work."

It would appear from this that the work in question was done by day labour, and priced according to the schedule rate for day labour, and after completion the different kinds of works done have been measured and a price put to each so that the total amount for measurements should correspond with the total amount of day work. This, we consider, an objectionable practice, as the work in question was actually done by day work, and should have remained so, for to alter it to a price that was not already in the schedule was to disguise it and make it appear in the final certificates that less day work had been done. We do not think, however, that any wrong was intended or done, or that the country thereby suffered loss, but the method is open to abuse, for had the monthly progress payment sheets been withheld, mislaid, or even summarised, as some of them are, such day work could be disguised, and not afterwards seen; and as the Railway Commissioners probably only examine the final certificates, it would not be so likely to come under their notice; we also think it should not be impossible for an engineer to put down in a Schedule all the kinds of work he intends to do when he calls for tenders, and if any day work is necessary it should be paid for as day work.

So far as the Railway Commissioners themselves are concerned, it appears that in April, 1891, they made two minutes as to the employment of day labour—

"Directed in connection with the relaying and reballasting contracts, that no payment at day labour prices for work performed shall be passed without the signatures of the three Commissioners."

Office of Engineer-in-Chief for Existing Lines, 17 April, 1891.

Divisional Engineer,—

Day Labour Relaying Contracts.

I must call your special attention to the question of day labour done by the relaying contracts, as the Commissioners have advised me that they will not pass any day labour accounts, unless they are of such a special nature that no price would be applicable. You must not allow any day labour to be done without your special sanction, or without advising me.

I shall be glad if you will acknowledge the receipt of this.

We find that the sum of £11,113 4s. 5d. was expended in day labour in re-ballasting from Ryde to Hornsby; and the sum of £28,845 1s. 7d., also in day labour, in renewing and reballasting the Suburban Line, and while the stoppage and delay caused by numerous trains are given as the cause, we incline to the opinion that greater economy might have resulted in having the work done by public tender.

From the evidence it appears that no less a sum than £49,133 10s. 11d. was expended on the Northern Line, between Strathfield and Hamilton Junction, and the phenomenal rainfall of 1889–90 was held to be the cause of relaying and reballasting being required; but we cannot help noticing that this railway is newly constructed, and should not have required such costly repairs had the line been substantially made in the first instance.

We examined a number of witnesses at the instance of Mr. Schey and others as to alleged malpractices of the contractors, but the evidence did not establish anything against the contractors, and did not affect the conduct of the Railway Commissioners in any respect.

After

After a careful examination of these charges we find that no instance of robbery or maladministration has been proved, but that on the contrary the evidence shows that the contracts made by the Railway Commissioners are much more stringent in their provisions than they formerly were, and that the Commissioners have taken every reasonable precaution to ensure their due performance.

On the whole the administration of the Railways by the Commissioners, so far as it has come under our observation during this inquiry, has been productive of greater economy and more thorough efficiency in the service.

Having dealt at length with each charge separately, we find, in conclusion,—

(1.) That there is no truth in any of these charges, affecting Mr. Eddy or any of the Railway Commissioners.

(2.) That no shadow of suspicion or doubt rests on the honor or integrity of Mr. Eddy, or on the honesty or purity of his action in the management and administration of the Railways of New South Wales.

We have the honor to be,

Your Excellency's obedient Servants,

WM. OWEN,
PRESIDENT.

ALEX. KETHEL,
Commissioner.

JOHN YOUNG,
Commissioner.

GEO. V. ALLEN,
Secretary.

THE ROYAL COMMISSION ON RAILWAYS.

MINUTES OF EVIDENCE.

WEDNESDAY, 4 MAY, 1892.

[*The Commission met at 11 a.m., in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

1. *President.*] I will hand the Commission under which we are acting to Mr. Allen the Secretary to read. [*The Secretary then read the Commission.*]
2. *President.*] It will be desirable for us to state briefly the course of procedure which we intend to adopt. From the Commission which has just been read it is clear that we have not to make a general inquiry into the management of the railways, but to inquire into certain specific charges brought by Mr. Schey against Mr. Eddy as Chief Commissioner for Railways. We are, therefore, to make an inquiry, in the nature of a judicial inquiry, into the truth of these charges. If it were a general, or merely administrative inquiry the Commissioners might to some extent conduct the inquiry themselves, and call whatever evidence they might consider necessary, but in the present case it is clearly impossible to do so. If they did they would be acting as prosecutors as well as judges. It will, therefore, be necessary for Mr. Schey, who has brought these charges, to submit such evidence in support of them as he may consider necessary, and then Mr. Eddy can call such evidence as he may consider necessary to answer these charges. We propose, as far as possible, to keep each charge separate and distinct, and to take all the evidence on both sides upon such charge before proceeding to the next. This meeting of the Commission has been held merely for the purpose of intimating to the parties the course of procedure we intend to adopt. If the parties are ready to go on with the evidence now, of course we can take it at once; but if the parties wish it, and perhaps it would be the more convenient way; we would adjourn the sittings of this Commission until Monday, or such other day, as the parties may fix for the taking of evidence.
3. *Mr. Schey.*] I beg your Honor's pardon for interrupting the proceedings at this stage, but I wish to intimate that I am deaf, and that I am suffering, as probably the Court will notice, from a severe attack of laryngitis, which prevents me hearing what is going on; and therefore I must beg your Honor and those who have anything to say to make their intimations in such a tone of voice that I shall be able to hear.
4. *President.*] Perhaps, Mr. Schey, if you had any difficulty in hearing the remarks I have just made, you will be able to understand them better from this written copy which I will hand you.
5. *Mr. Schey.*] I thank you.
6. *President.*] You quite understand now what we intend to do.
7. *Mr. Schey.*] Yes, sir.
8. *President.*] You have to bring evidence in support of these charges. What day will be most convenient to you to go on with that evidence?
9. *Mr. Schey.*] Do I understand you to ask me for the names of the witnesses I propose the Commission shall summon at the present moment?
10. *President.*] I first ask you when you will be ready to go on with the evidence?
11. *Mr. Schey.*] I see by your own minute that you propose to adjourn until Monday.
12. *President.*] Will that be convenient?
13. *Mr. Schey.*] Yes. I should like to ask, first of all, whether it is the intention of the Commissioners to admit counsel to this inquiry on behalf of the parties? I desire to intimate that I propose to object, for my own part, to the employment of counsel, and therefore I ask you at this stage whether you propose to admit counsel to represent the railway Commissioners. I shall state my reasons for objecting afterwards.
14. *Mr. Smith.*] As I am appearing here with Mr. Eddy, I may be permitted to say that this question has already been determined by the Commission. You have already determined that this is to be a judicial, and not an administrative, inquiry, and therefore it is one in which, if there should be a finding on any of these charges, *ex officio*, the Attorney-General would necessarily file an information; therefore each party—I do not say that Mr. Eddy has any idea of appearing by counsel or not, because he did not know until this moment how you would determine the matter—but the Commission having determined that this is to be a judicial inquiry it necessarily decides that each party has the right to appear by counsel if they think fit. As the inquiry is to take a judicial form, Mr. Eddy will consider whether he will appear by counsel or personally, but of course it is within his right to have counsel if he thinks proper

proper. I need not mention, your Honor, that there are numerous precedents for this. This Commission is exactly similar to an impeachment. It is a Commission in which Mr. Schey appears as manager, on behalf of the Legislative Assembly, he having made certain charges, and therefore, according to all precedent, the impeachment being of the character of a judicial inquiry, the defendant, who is charged with crimes and misdemeanours—because every one of these charges is such that, either under the Railway Act or under the Common Law, a prosecution would follow; and therefore I say Mr. Eddy has the right, if he thinks fit to avail himself of it, to appear either by counsel or attorney. In other words, counsel or attorney have a statutory right to appear before a judicial Board if they think proper, but if this Commission should say that the assistance of counsel or advocates would not help the parties in the matter, that is to say, that the Board or Commission would themselves conduct the investigations, ask questions, and cross-examine the witnesses; then, if the Board take that upon themselves, it would certainly be more satisfactory to Mr. Eddy, and probably also to Mr. Schey. Were it not for the decision that the Board has already arrived at, and to which we bow, that this is to be a judicial inquiry, and that you will not ask questions or take part in the examination or cross-examination of the witnesses, we should not ask to appear by counsel.

15. *President.*] I should like to hear what you have to say, Mr. Schey, upon this matter.

16. *Mr. Schey.*] I have not had the advantage of hearing the whole of the arguments of the learned gentleman who has just addressed you. I beg to say, however, that I have not employed counsel in the matter, but until this point is decided as to whether counsel shall be admitted or not Mr. Shaw will sit beside me and prompt me in any way. In reference to the decision upon this particular point, I beg to say to your Honor that when it was proposed in the Legislative Assembly to appoint this Commission, I pointed out to the Legislative Assembly and to the Government my inability to employ counsel, and the Minister for Railways (the Honorable John See) observing the difficulty, made a statement in Parliament, for which I presume he had some sufficient authority. I quote from *Hansard*, No. 65, page 7239, dated 30th March, 1892. At the time I was addressing the Legislative Assembly, and the particular point under discussion was the granting of an indemnity, and I made the following remarks. I had just asked the Minister in charge of the debate whether the Government would do what was demanded of them, and he was signally silent. I then asked him in the face of the House whether the Government was prepared to give the indemnity suggested by the honorable and learned Member for Paddington (Mr. John Want, Q.C.), one of the Members for the Legislative Assembly for the electoral district of Paddington. Mr. Want, I may say, had proposed that the Government should grant a certain form of indemnity, upon which I propose to say something further on. Mr. See, the Minister for Railways, in answer to my observations, said: "I am in a position to tell the honorable and learned gentleman that I do not think the Chief Commissioner will employ either a barrister or a solicitor." Now, your Honor, that statement was made in the Legislative Assembly in a premeditated manner. It was not made on the spur of the moment. Two debates had previously taken place—the one a week before the time I now speak of, and the other a month prior to that—and these two debates had taken place wholly—the last one certainly wholly—on the charges which now form the subject of this inquiry. I had raised the point very fully at the previous debate the week before the time of which I am now speaking and several Members of the Assembly supported the matter, some of the Ministers stating in effect that there was a difficulty in regard to this matter. The honorable and learned Attorney-General stated that of course these applications could be made, and it would rest with the Commission to permit or refuse permission to Mr. Eddy to employ counsel. I then went on to say, speaking again on the very same day:—"That is not in any form whatever an answer to my question. I hope that if the inquiry takes place the Commissioner will have a sufficient sense of fair play and of his own importance to think himself quite a match for me, and meet me face to face before the Commission. I desire nothing better." It would appear, therefore, that the Minister for Railways in making this statement had certainly some ground for making it. It is not to be supposed that the matter, being one which had previously occupied considerable attention, and which he particularly, as Minister for Railways, being charged with the department in which the Commissioner is the active administrator, would be likely to pass over, knowing what had occurred in relation to the Railway Department; the more so that correspondence which I propose to put in at a later stage had already passed both between the Chief Commissioner and the Minister for Railways, and myself and the Minister for Railways, in reference to this very matter, and that this very objection was stated in this correspondence. Therefore there is every reason to suppose that this point as to the employment of counsel had certainly been thought of by the Minister for Railways prior to the time when he made this statement in the Assembly. And it is also not to be supposed, your Honor, that a gentleman in the position of a responsible Minister of the Crown, as Mr. See the Minister for Railways is, would make such a statement without having had some communication with the Chief Commissioner upon the matter, or at all events without having some ground upon which to make so significant a statement. At least that appeared to be the case to the Legislative Assembly, and the Members present actively expressed approval of the statement made by the Minister. Now, I desire to say that, relying mainly upon this statement, which I beg to point out to your Honor I have previously endeavoured to obtain both by writing and by speaking in the Assembly. I have on several occasions endeavoured to obtain this statement from the Government; and therefore I conceive that when the responsible Minister in charge of this department made such a statement he must have had some ground to go upon. Assuming therefore that some action had taken place, I was right in deciding not to trouble myself, nor to presume that Mr. Eddy would be represented by counsel. Relying upon the Minister's authority, which, I presume, and still presume, he had for making the statement, I have not instructed counsel; nor did I expect that any application would be made to this Commission for counsel to appear on behalf of Mr. Eddy. Again, your Honor, I beg to point out in reference to this matter that I am utterly unable to employ counsel. I presume it is well known to yourself and your colleagues that I am a man who is utterly unable by reason of his position in the world to employ counsel to go into such a lengthy case, and such an amount of instruction as would be necessary in dealing with this matter; and I also submit to your Honor that this case can be carried on quite as well, if not better—in my opinion better—without the interference of counsel on either side. I would like to say further that the learned gentleman who last addressed you suggested that there was no precedent for the non-employment of counsel in such a matter as this. I beg to point out that there is precedent. A case in point has occurred

occurred only within the last few weeks. I refer to the other Royal Commission now sitting,—to inquire into the Baldwin engines. An application was made to that Commission that Mr. Eddy, the Chief Railway Commissioner—I speak of Mr. Eddy as the head or administrator of the Railway Department, and not in his personal capacity—I say an application was made that he might appear by counsel before the Commission; and that Commission decided, after consultation, that counsel should not be allowed to appear; and I submit respectfully that one of the main grounds for that decision was that the person who occupies before that Commission a position similar to my own before you—Mr. Hoyle, also one of the Members for Redfern—is in a similar position of life to myself, if not in a superior position, and the Commission seeing his inability to instruct and employ counsel declined to allow counsel to appear. I also beg to point out, your Honor, that there is a minute of Cabinet referring to this Commission, which has already been published, and therefore I shall be in order in referring to it. In that minute it is stated that the Cabinet will not reimburse either party for expenses incurred before the Commission; but I beg to point out that in the case of Mr. Eddy, who is opposed to me in this matter, he has a salary of £3,000 per annum. He occupies a high position in society, and the expenses of employing counsel will fall upon him very lightly. Now, I do not for one moment say—I should not have the hardihood—that I myself, unable to employ counsel, will be able by my own unaided efforts, to meet counsel on the other side; and therefore, I submit, it would be distinctly unfair to me, indeed it would place me *ab initio* at a great disadvantage, if counsel be permitted to appear for Mr. Eddy. I beg also, with great respect, to submit that if the other Royal Commission now sitting to inquire into the Baldwin engines is able to take evidence, give its decision, and carry out its inquiry—and I certainly should not be one to cast any doubt upon their ability to do so—but I say if they can do that without the employment of counsel, I submit that this Commission is in as good a position to conduct an inquiry without the intervention of counsel also. Then I beg to point out, your Honor, that there is a portion of the Commission itself, which has been just read, which to me appears to contemplate that counsel should not be employed. I presume that your Honor's copy is the same that I hold, a draft copy furnished to me by the Colonial Secretary's Department, and on page 2 of the Commission, near the bottom of the page, your Honor will find these words:—

> And it is our will and pleasure that you do hold all your meetings in the execution hereof, for the taking of evidence, and for the hearing of what may be alleged in support of, or in answer to, the said allegations and charges as in open Court, and that you do permit the said William Francis Schey and the said Edward Miller Gard Eddy respectively freely to examine and cross-examine all or any witnesses and persons called and appearing before you as aforesaid.

Now I respectively submit your Honor that these words dealing specifically, as they do, with the right of examination and cross-examination of witnesses, which right is conferred equally by the Commission upon Mr. Eddy and myself, appear to contemplate that this examination and cross-examination shall be carried out by the two persons named—that is Mr. Eddy and myself; and it does not contemplate the appointment of counsel on either side; the more so as I think I am correct in stating—your Honor, I trust, will give me every indulgence and remember I am a layman, and therefore may not always be correct in my assumptions—that in most of these cases or instruments there is a phrase inserted by which it is specifically mentioned that a person may appear in person or by counsel. I think the words "or by counsel" are specifically mentioned in a large number of instruments dealing with matters such as those now before the Commission, and the special words as to examination and cross-examination which are embodied in the Commission, and the omission of these words which, I think I am right in saying, are usually used in these instruments—the words "or by counsel"—would certainly give colour to my contention that the employment of counsel was not contemplated by those who prepared the Commission. I may also submit respectfully to your Honor that Mr. Eddy has behind him the whole powers of a large department of the Public Service; he has clerks, secretaries, messengers, and other persons to obey his orders, while I stand entirely alone. I have to do all my own work, get up all my own evidence, and do it unaided; and I respectfully submit that Mr. Eddy, occupying as he does a very high and responsible position, he being the administrator of a large department of the State and receiving a very high salary, must certainly appear to the Commission to be in a favourable position rather than otherwise as compared with myself without the employment of counsel at all. I submit that already from the force of circumstances, which neither of the parties nor the Commission could have any effect upon, Mr. Eddy is placed at considerable advantage, and I submit to your Honor and your colleagues that under all these circumstances counsel should not be permitted. I have before me what must prove to any person a very severe and a very trying ordeal and if counsel be permitted to Mr. Eddy I feel that at once I should be placed in a position which it would be impossible for me to encounter. I feel I should be placed at such a great disadvantage that I could not expect to convince your Honor nor your colleagues of the truth or bona fides of the charges I am called upon to sustain. I, therefore, respectfully submit that under all the circumstances your Honor and your colleagues will not grant permission to Mr. Eddy to appear before you by counsel. I shall have to appear in person without legal assistance.

17. *President.*] There is a clear difference between this inquiry and the inquiry that is now being held in reference to the Baldwin engines. That inquiry, so far as I have been able to ascertain, is an administrative inquiry. We have held that the inquiry before us now is in the nature of a judicial inquiry, and the duty cast upon us is to ascertain the truth of the charges that have been brought against Mr. Eddy. These charges are of a very serious character indeed, and we do not think we can take upon ourselves to say that Mr. Eddy should not appear before us, if he thinks it necessary, by counsel. But as Mr. Schey has stated that he does not intend to appear before the Commission by counsel we strongly recommend Mr. Eddy not to avail himself of his privilege unless he deems it absolutely necessary. The parties now appear with their solicitors, and they have the advantage of legal assistance and legal advice before the Commission, and no doubt they can consult any one they choose outside this Commission; but in conducting the case before the Commission, as Mr. Schey does not appear by counsel, we think it very undesirable that Mr. Eddy should apply to appear by counsel, unless he gives some very strong reasons for it.

18. *Mr. Smith.*] Perhaps I may be allowed to say your Honor that as the Commission has determined to take the charges separately, and dispose of the evidence upon each in its proper order, and I presume the eleven charges will be taken in the regular order given in the Commission?

19. *President.*] Yes.

20 *Mr. Smith.*] Then as the first two charges deal more especially with Mr. Eddy in his personal capacity he will not avail himself of the services of counsel, although he understands it is permitted to him. He

will

will not avail himself, in dealing with the first two charges at any rate, of the services of counsel or advocate, bowing to the decision of the court. But when the other charges come to be dealt with his course to a greater extent will be determined by the nature of the evidence submitted to you. It will be impossible for him to deal with these charges himself, because they relate rather to the conduct of his colleagues and himself, and not to his personal character. Sufficient for the day is the evil thereof, and at the present time Mr. Eddy bows to the suggestion of the Court which, while it admits his right to appear by counsel, recommends him to abstain from exercising it.

21. *President.*] Of course when Mr. Eddy makes application to be heard by counsel on either of the charges we will deal with the application when it arises. At present it is not necessary to say more. One thing I wish to point out, and that is that the Commissioners are not to conduct either the examination or the cross-examination; the parties will have to do that themselves. But of course the Commissioners reserve to themselves the right, in the same way as a judge would have, to ask any question of any witness if they so desire. The evidence in chief, and the cross-examination, however, will have to be conducted by the parties themselves. You said, Mr. Schey, there was some witnesses you wished to have summoned.

22. *Mr. Schey.*] Your Honor, there are no witnesses that I wish to submit the names of for summoning at the present moment.

23. *President.*] If there should be any and if you will inform the Secretary of the Commission he will have the witnesses summoned, and any books or papers or documents which you require if you will inform the Secretary he will procure them for you.

24. *Mr. Schey.*] I thank you. I hardly know whether I am in order in calling it a Court, but before the Court adjourns I desire to give notice that I shall probably have some preliminary objection to urge before your Honor and your colleagues at the next meeting of the Commission. At the present time I am not in a position to say what those objections are as they will depend upon letters which are not now in my possession, but of which I have been advised by telegram. I am not in a position therefore to proceed with the matter now. I understand from the letter addressed to me by the Commission that to-day's meeting is simply a preliminary one and that an adjournment will be granted until Monday. I think it only fair and desirable, however, that I should intimate before any adjournment is granted that I shall probably have some preliminary objections to urge before we proceed with the evidence.

25. *President.*] Then, Mr. Eddy, will Monday be convenient for you to go on with the evidence.

26. *Mr. Eddy.*] Quite.

27. *President.*] Then this Commission stands adjourned until Monday morning at 11 o'clock, when we shall expect the parties to proceed with the evidence.

MONDAY, 9 MAY, 1892.

[*The Commission met at 11 a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

28. *President.*] We are all ready prepared to go on with the inquiry into these several charges, and as I stated before the Commission intend to proceed with each charge separately. The first charge is "That the appointment of the said Edward Miller Gard Eddy as Chief Commissioner was due to 'occult reasons' which suited private persons, but were not for the welfare of the country." Do you call any evidence in support of the first charge Mr. Schey?

29. *Mr. Schey.*] Mr. President, before the Commission adjourned at its last sitting I intimated to your Honor that I intended to raise certain preliminary objections before proceeding to call evidence, and I trust, therefore, your Honor will grant me indulgence while I deal with these matters, and which I may not put in that precise form as if I were a member of the legal profession. In the first place, I deem it necessary to ask that a copy of the correspondence which has already been laid upon the Table of the Legislative Assembly, and printed to the order of the Assembly, may be put in and included in the proceedings of this Commission. I beg, therefore, to hand your Honor a copy of the correspondence which I do not think it necessary to read or deal with in any further way, but I ask you to include it in the proceedings of this Commission.

30. *Mr. Eddy.*] I should like to see those documents (*after examination*). There is no objection.

31. *Mr. Schey.*] I think it necessary now, your Honor, to quote from the Proceedings of the Legislative Assembly, briefly what has taken place with regard to these matters. I may state that when the matter came under the discussion of the Legislative Assembly, I wrote a letter, which is already in the correspondence handed in, asking that an inquiry might be made (a request which I had previously made under several different sets of circumstances), and that, as the charges were made in Parliament by myself, in my place as a Member of the Legislative Assembly, and as part of the Proceedings of such Legislative Assembly, the inquiry might take place before a Select Committee of the House, which I deemed to be a fitting inquiry to be made into such a matter under the circumstances, as I had raised several matters which might be prejudicial to myself if any other course were adopted. Amongst other things I pointed out that I might possibly be subjected to a prosecution, either of a criminal, or of a civil character for damages, by any persons who esteem that in the course of the proceedings, or in anything I might say outside the Legislative Assembly, I said something libellous or reflecting upon their character in such a way as to give them legal remedy. I might say that in answer to my objections the Honorable the Attorney-General and other members of the Government promised, in more or less definite terms, that an indemnity should be granted to myself in regard to any proceedings, or to any costs, or charges, to which I might be subjected in consequence

consequence of any proceedings, or actions done, or statements made, before any inquiry such as was proposed. Quoting from *Hansard* of 24th March, 1892, page 6961, I find that I made the following remarks:—

> I say that not only must I be guaranteed against expenses, but I utterly decline to withdraw myself from the privilege which belongs to me as a Member of this House, and to appear either as a witness, prosecutor, or interrogator, unless I have a guarantee, and I do the Attorney-General the justice to admit that he has given me his assurance on the matter,-that I shall not be subject to any action which might be taken against me.
>
> Mr. Barton.] The honorable member has got that to-night.

Meaning thereby, your Honor, that the Attorney-General, acting at that time on behalf of the Government, had given a guarantee that I should receive an indemnity from all costs, or charges, which might arise out of any action taken against me in consequence of any evidence given, or proceedings taken, before any inquiry. Coming further down to the week following the proceedings I have already quoted—quoting from the proceedings of the Legislative Assembly as recorded in *Hansard*, of 30th March, 1892, page 7,223 you will find that the Attorney-General, the Honorable Edmund Barton, speaking in reply to myself, made use of the following remarks:—

> He also tells us that the Government cannot give him indemnity and protection which will be effectual; but let me tell him that the law gives him the necessary protection—he requires none from the Government. If he requires any from the Government he was told the other night that he should have it.

Now I would direct your Honor's attention to the significant observation made by the Attorney-General, that if I required any protection or indemnity from the Government the Attorney-General had already said I should have it. In the course of the same debate in the same speech by the Attorney-General you will find the following (page 7226):—

> The law affords him (that is myself) an absolute protection; but he says that although the law affords him absolute protection someone might bring an unfounded action against him, and, though he might fail, he might have to pay certain costs because he would have to employ someone to defend him. There are two answers to be given to that. The first is, that already he has had a guarantee from the Government similar to that given in the case of Mr. Rodd.

I do not deem it necessary to refer at too great length to the case of Mr. Rodd, which to some extent is on all fours with the case now before your Honor. Mr. Rodd was a member of the Legislative Assembly some years ago.

32. *President.*] What have we got to do with this question of indemnity by the Government?

33. *Mr. Schey.*] Well, your Honor, I submit that I have a great deal to do with it.

34. *President.*] That is a matter between you and the Government. We are here to inquire into the truth of these charges?

35. *Mr. Schey.*] But I wish to put in some further correspondence which has passed between the Government and myself in reference to this question of indemnity, and upon which I propose to found certain action before this Commission. I might, perhaps, be allowed to read this *Hansard* report as it will explain how the matter stands from my point of view.

36. *President.*] Very well.

37. *Mr. Schey.*] Quoting again from the proceedings of the Legislative Assembly and the same debate, page 7228, the honorable and learned member for Paddington, Mr. Want, was speaking, and he said:—

> I have shown the House that he was absolutely protected, and I would go further than that, and in order to ease the honorable gentleman's mind, to give him peace and quietness while he is undergoing this inquiry, so that his mind shall not be disturbed, and he shall have his brains free, the Government, if he asks for it, ought to give him a written indemnity that they will hold him harmless from any civil proceedings, that they will provide funds for his defence, pay solicitors and counsel for his defence, and pay any damages at law against him.
>
> Mr. Schey.] Will the Government do that?
>
> Mr. Want.] I say the Government ought to do that.
>
> Mr. Schey.] Will the Government?
>
> Mr. Want.] They ought to do so with regard to civil proceedings, and the Attorney-General said the other night that he would give the honorable member ——
>
> Mr. Schey.] There is the Treasurer; he does not say he will.
>
> Mr. Want.] I say I would go to that extent. The honorable member has an absolute indemnity now, but if he feels that he has not or has any doubt about it, I would be with him in asking the Government to give him an indemnity.
>
> Mr. Schey.] Would the Government do it?

There was no answer to that query at that time, but further on in the same debate, quoting from page 7,239, I myself speaking in reply to the debate, said as follows:—

> It has been urged by the honorable and learned member for Paddington that the Government should give me an absolute indemnity for any civil proceedings that might follow in consequence of any evidence given by me for any action taken by me before this Commission; and he said that this indemnity should take the form, supposing any action were commenced against me, of providing a solicitor and a barrister for my defence, and of relieving me of any cost whatever. I then asked the Minister in charge of the debate whether the Government would do so, and he was signally silent. I now ask him in the face of this House whether the Government is prepared to give the indemnity suggested by the honorable and learned member for Paddington.
>
> Mr. See.] I am in a position to tell the honorable and learned gentleman that I do not think the Chief Commissioner would employ either a barrister or a solicitor.
>
> Mr. Schey.] That is not in any form whatever an answer to my question. I hope that if the inquiry takes place the Commissioner will have a sufficient sense of fair play, and of his own importance, to think himself quite a match for me, and meet me face to face before the Commission. I desire nothing better. The question I addressed to the Government was whether they would give me the indemnity which the honorable and learned member for Paddington said he thought they ought to give me, that is, that if any civil proceeding is taken against me in consequence of evidence given or anything done by me before the Royal Commission, they would find a solicitor and barrister to defend my case and indemnify me against all costs, charges, and damages of any kind whatever.
>
> Mr. Barton.] I have given the honorable member an assurance which no pressure or no other consideration justified me in extending. I have given him the assurance that he will be held harmless by the Government against any costs or expense whatever at any action at law taken against him in respect of any evidence or conduct of his before this inquiry.
>
> Mr. Schey.] That assurance has been very tardily given.
>
> Mr. Barton.] It was given on Monday night in the same words.

That brings the matter down, your Honor, to the time when the Legislative Assembly was prorogued. Then I addressed the following letter to the Attorney-General.

38. *Mr. Eddy.*] So as to expedite business I may say that I am prepared to give Mr. Schey an undertaking, and also to this Commission, that I will not bring any civil action at law or in equity against him for anything he may say before this Commission, whether such statement be made on oath or as advocate or counsel in his behalf, and I now give such undertaking to the Court in writing. [*Document handed in.*]

39.

39. *Mr. Schey.*] Do I understand that Mr. Eddy gives an undertaking on his part not to proceed against me in any civil or criminal action which may arise out of these proceedings?
40. *Mr. Eddy.*] I said no civil action at law or in equity. I said nothing about a criminal action.
41. *Mr. Schey.*] Do I understand that Mr. Eddy declines to give the same pledge in regard to any criminal proceeding?
42. *Mr. Eddy.*] There is no power existing which can give you such an undertaking.
43. *President.*] Well, Mr. Schey, what do you say to that?
44. *Mr. Schey.*] I must still press the point, your Honor. I ask whether I am to understand that Mr. Eddy in addition to pledging himself not to take any civil action against me for anything which may be said or done by me during the proceedings of this Commission, also gives an undertaking not to file an information or to take any steps which may lead to a criminal prosecution; I refer to such a thing as a prosecution for criminal libel, or anything of that kind.
45. *Mr. Eddy.*] So far as libel is concerned, Mr. President, I also further undertake that I will not institute any criminal proceeding against Mr. Schey for libel. [*Document handed in.*]
46. *Mr. Schey.*] I understand, your Honor, that these guarantees given by Mr. Eddy are not only on his own behalf but on behalf of his colleagues, the Railway Commissioners, and any person concerned in the Department.
47. *Mr. Eddy.*] I am not empowered to speak for my colleagues. I am only dealing with myself personally.
48. *President.*] You see, Mr. Schey, this inquiry is an inquiry into certain charges brought against Mr. Eddy. He is here not as representing the Railway Commissioners, but simply in his personal capacity to answer these inquiries. He can give no undertaking on behalf of the other Commissioners.
49. *Mr. Schey.*] I beg to call your Honor's attention to this point. The charges which I made, and which led to the appointment of this Commission, were not personal charges against Mr. Eddy, but charges against the railway administration; and your Honor will at once see that Mr. Eddy can easily give a guarantee that, so far as he is concerned, he will not institute any prosecution against me. But the Commissioners are a body corporate with a common seal; Mr. Eddy is only one of that body, and if his two colleagues decide that no undertaking has been made, and they institute any proceeding or action, Mr. Eddy, being only one of three, would be overruled; and this undertaking would be really invalid, and I might find myself subjected to an action, notwithstanding the undertakings just given to the Commission.
50. *Mr. Eddy.*] Mr. President, I think it was clearly understood that the two first charges referred for investigation by this Commission do not involve the reputation of the Commissioners as a body. They are purely matters reflecting upon myself, and I have given those undertakings in good faith; for I understand that the matters before you at the present moment are the first two charges set forth in the Commission.
51. *President.*] We are dealing now, Mr. Schey, with the first charge only, and that is a purely personal matter against Mr. Eddy. The other Commissioners are not in any way mixed up in it.
52. *Mr, Schey.*] Well, your Honor, I felt myself compelled to deal with this question of indemnity, not for the purpose of drawing any such declaration from Mr. Eddy, but as a necessary preliminary to the investigations of the Commission, and I may say, your Honor, that, putting Mr. Eddy on one side altogether, so far as this question of indemnity is concerned, I have already been served with a writ of civil action at the instance of one of the railway contractors, to whom I had occasion to refer in the course of the speech in which these charges are embodied, and the whole of the charges in which, I may point out, are so articulated into other portions, so to speak, that they cannot possibly be separated. I have already been served with a writ of civil action for £10,000, at the instance of Messrs. Proudfoot and Company, and in addition ——
53. *President.*] That is not in connection with this Commission.
54. *Mr. Schey.*] It is in connection with the charges which form the basis of this inquiry.
55. *President.*] Charges made by you elsewhere, but not before the Commission.
56. *Mr. Schey.*] Certainly not; I have made no charges before the Commission.
57. *President.*] We have nothing to do with things outside the Commission.
58. *Mr. Schey.*] No, your Honor, but I desire to proceed to show that I have already been subjected to two notices of action, and that I have already been served with notice that if I repeat outside of the Legislative Assembly certain statements which were made inside, under privilege as a Member of the Assembly, criminal prosecutions will be immediately instituted against me. That is my point.
59. *President.*] Mr. Schey, you have a simple remedy in your own hands, and that is not to make a speech before the Commissioners, but to go into the witness-box and give evidence. Under the Act 44 Vic., No. 1, evidence given by a witness is just as much protected before a Royal Commission as it would be before the Supreme Court, and no action can be brought against you in respect of what you state as a witness, except an action of criminal proceeding for perjury.
60. *Mr. Schey.*] Permit me to say, your Honor, that your Honor has already declared that I am to occupy a different position to that. From my reading of the Act 44 Vic., No. 1, I understand your Honor that the evidence of a witness is privileged, and that no prosecution and no civil action would lay against a witness before a Royal Commission.
61. *President.*] No more than before the Supreme Court; you have exactly the the same privilege as if you were a witness before the Supreme Court.
62. *Mr. Schey.*] But you have already intimated to me, your Honor, that I am to occupy a different position. At the last sitting of the Commission, if I may venture to remind your Honor, you intimated that the Commission would not ask questions—reserving to themselves always the right to do so—or conduct the examination of witnesses, and that the examination of witnesses and the calling of them, in fact, if I may use the term, the making of the case must fall upon myself. Thus, I am to be taken out of my position as witness before the Commission and to become, in fact, a sort of public prosecutor, a position I in no sense desire for myself; and I respectfully submit that what might be the privilege of a witness in the witness-box under oath, answering questions before a Royal Commission, does not necessarily, I submit, subject to your Honor's correction, carry the same privilege and protection to that person when he steps out of the witness-box and becomes himself a questioner and interrogator.
63. *President.*] I may tell you, Mr. Schey, that in my opinion any question asked by you of a witness would be privileged in the same way as any answer given by you as a witness; and if you confine your

appearance before the Commission to giving evidence as a witness, and to asking questions of other witnesses, you will have the same protection that you would have in the Supreme Court if you were a witness there, or a counsel appearing for someone else.

64. *Mr Schey.*] I thank your Honor for the expression of opinion; but I have to point out further that I had to deal with that point when the matter was discussed by the Legislative Assembly, and it was then asserted that the position of the party, or the position of the barrister before the Supreme Court or any criminal jurisdiction, did not preclude a ground of action on the part of any person conceiving himself injured. I raised a point at that time that, as a Member of the Legislative Assembly, and speaking as such member, and, in the course of the proceedings of such Assembly, I was absolutely privileged, and if I afterwards made the same statements or dealt with them in the same way in any other place that absolute privilege was done away with, in fact, that it was voided and gave place to a relative privilege being merely the privilege appertaining to a witness or barrister before the Supreme Court, or a criminal jurisdiction, and that that is not inviolable, but might be set aside. At all events, having mentioned the fact that I have already been subjected to threat of criminal prosecution, and that I have already been served with a writ of civil prosecution, I only ask you to permit me to get in the remainder of the correspondence, so that I may proceed with my case. To return to the letter I was about to read, it is dated 6th April, 1892, and reads as follows. [*Letter read.*] Receiving no reply to that letter, your Honor, I, seventeen days afterwards, addressed the following communication, on April 23, to the Hon. Edmund Barton, Q.C., M.L.A., Attorney-General. [*Letter read.*] Again I received no reply, and on 30th April, seven days later, I despatched another letter, which reads as follows. [*Letter read.*] No replies were made to any of these letters, your Honor, until the night before this Commission sat. At 10 o'clock on that night I received the following telegram from the Attorney-General. It is addressed to William F. Schey, M.L.A.:—

> With reference to your letters, subject of Royal Commission on your charges, I much regret delay which pressure of other urgent matters has occasioned. I have written letter replying, which you will receive by post.—E. Barton, Attorney-General, Grafton.

You will remember that before the Commission adjourned at its last sitting I said I was awaiting certain correspondence which I did not then possess, but which I had been informed by telegram was posted to me. This is the letter to which I then referred. It is the letter from the Attorney-General, and I beg now to put it in as evidence. I received it on Saturday last, and it reads as follows. [*See Appendix.*] I ask your Honor that this correspondence, which I have just read, may be embodied in the proceedings of the Commission. [*Documents handed in.*]

65. *President.*] Some portion of the correspondence, Mr. Schey, you have read from your letter book. You had better have copies prepared, examined by both sides, and put those in instead of the book itself.

66. *Mr. Smith.*] They can be examined by the Secretary for both parties, your Honor.

67. *Mr. Schey.*] I have copies here, your Honor, which the Secretary may examine. I am rather at a loss to know, your Honor, whether I should be in order in asking a question at this stage?

68. *President.*] Certainly; you can ask any question you like.

69. *Mr. Schey.*] Your Honor has kindly indicated to me what is your opinion as to my position before this Commission. You have told me that I am secure in any position I may take before the Commission from any subsequent action.

70. *President.*] No, Mr. Schey. Just listen to what I say. I say you have got here the same indemnity which you would have in the Supreme Court if it was an action before that tribunal. Whether you appear here as a witness or in the character of an advocate may I point out that that indemnity is given, not by the Commissioners, but by the Act of Parliament, 44 Vic., No. 1. We have no power to give any indemnity as a Commission. I am only stating to you the position I think you are in under that Act of Parliament.

71. *Mr. Schey.*] Might I also ask your Honor whether as a matter of law the indemnity which the Hon. the Attorney-General, Mr. Barton, speaks of, would have force only so long as the present Government continues in office, or whether it would have force against any succeeding Government?

72. *President.*] I cannot say anything about Parliamentary matters, I know nothing whatever about them.

73. *Mr. Schey.*] I am submitting it as a matter of law, your Honor, and not as a matter of Parliament.

74. *President.*] It is not a question of law. It is a question of Parliamentary honor, with which I have nothing to do; you, perhaps, know much more about that than I do.

75. *Mr. Schey.*] I have already pointed out briefly, your Honor, the difference there is between the position of witness and the position of advocate, which you have already stated you expect me to occupy; and I desire to make an objection to a remark which fell from the learned gentleman who, at the last sitting of the Commission, was sitting beside Mr. Eddy. I did not hear it at the time, or I should have made my objection then. The learned gentleman submitted to your Honor that I occupy the position of manager for the Legislative Assembly, having made a series of charges, and that, as a matter of fact, those charges were an impeachment, and, as such, the Legislative Assembly was practically impeaching the Chief Commissioner by means of myself as manager.

76. *President.*] I relieve you of that altogether, Mr. Schey; you are not in that capacity before this Commission.

77. *Mr. Schey.*] I thank your Honor. I merely desire to object to that position being asserted for me. I would like to say now, in reference to the subject of witnesses, that it is a matter of extreme difficulty for me to obtain witnesses, who are servants of the Railway Department, and I would very respectfully direct your Honor's attention to what is taking place in other parts in regard to similar matters.

78. *President.*] The Commissioners have power to summon any witness whom they think can throw light upon this subject, and any witness summoned by the Commission will have to attend.

79. *Mr. Schey.*] Quite so.

80. *Mr. Eddy.*] Mr. Schey is inferring that the Railway Commissioners wish to terrorise their staff. No person in the service of the Railway Commissioners need fear to give evidence before this Commission; no ill results will follow if the truth is spoken.

81. *Mr. Schey.*] I am perfectly well aware, your Honor, that any witnesses can be called by this Commission to answer questions on oath; but I wish to point out that witnesses have been put in a similar position before other Royal Commissions, and that they afterwards suffered penalties because it

was stated they were unsatisfactory servants. I will not delay the Court by reading extracts which I have here, but a notorious case has just occurred in Great Britain, where a Select Committee of the House of Commons has instituted an inquiry into certain matters, bearing upon the administration of railways in that country, and several of the witnesses—not one or two, but several—found themselves almost immediately afterwards discharged from their employment—not for anything they had said in evidence before the Commission, but because they were found to be unsatisfactory servants; and I submit to your Honor that the risk is so great to persons undertaking to give evidence before a Royal Commission that although they may be compelled to answer questions, nevertheless, in many cases, they will decline to say what they know, and evade the questions. I point your Honor to the fact that this very thing is evidenced in the inquiry now being made by a sister Commission into the Baldwin engines. It is there found impossible to obtain evidence, because the witnesses feel insecure in their position after they have given it. My point is, your Honor, that the witnesses might be assured by you that no consequences of any kind will fall upon them because of evidence they may give before this Commission.

82. *President.*] In England, Mr. Schey, the railways are private enterprises entirely, the Government having no control whatever over them. Here the railways belong to the Government, and although the Commissioners are a sub-department for the management of the railways, the management of the railways ultimately rests with the decision of the Government, and therefore the action of certain railway companies in England is no criterion of the action of the Railway Commissioners in this Colony. You have already an undertaking from Mr. Eddy that no witness in the railway service here who gives evidence will have anything to fear from the Commissioners so long as he speaks the truth.

83. *Mr. Schey.*] Although, your Honor, I feel dissatisfied that I have not yet received from the Government a document which I maintain they have distinctly promised, still, relying upon the undertaking which has been implied, both before the Assembly and in Mr. Barton's letter already handed to the Commission—relying upon these various assurances, I propose your Honor to waive the question of indemnity, and I should like now to raise before your Honor the point already raised in the correspondence with the Attorney-General. You will see that the foundation of this Commission, the necessity for any inquiry, has arisen from the speech which I myself made in the Legislative Assembly, and in which certain allegations were made into which I apprehend this Commission has been appointed to inquire. I now draw your Honor's attention to the concluding paragraph of the letter that I addressed to the Attorney-General and which I may perhaps re-read:—

"I have perused the draft copy of the Commission sent to me, and I now beg to inform you that, noting that some person has taken upon himself to formulate a series of charges which are embodied in the Commission, I now raise a preliminary objection to such a course of action, as no person whatever, excepting myself, can have any right to formulate charges which I am asked to prove."

I respectfully submit, your Honor, that I have to appear here in the position of advocate. I have to get witnesses, or at least to get your Honor to call them; I have to undertake the examination, and in fact to make the case. Now, your Honor, the attorney for the Chief Commissioner stated before the Commission at its last sitting that the indictments which were contained in my speech to the Legislative Assembly were in the nature of an impeachment; that they impeached, as Mr. Barton in his own letter says, the management of the railways. Being such, surely I cannot be called upon as an advocate to prove charges which are not mine. I submit, your Honor, that this indictment has been drawn up without reference to myself. I have had no hand in drawing up the charges; they have not been submitted to me in any form, nor have I approved of them. A list of charges has been made out in the form of an indictment, and I am now asked to impeach the Chief Commissioner, not on lines drawn by myself, but on lines drawn by some other person; and I submit, your Honor, that in all fairness and justice no person could possibly be supposed to make out an indictment unless he has already scheduled his charges and drawn that indictment himself. I raise this point, your Honor, because the list of charges which I find embodied in the Commission I do not recognise as my own. I hold in my hand the *Hansard* report of the proceedings in the Legislative Assembly. That report contains the speech I delivered, and I ask your Honor, therefore, to permit me before going any further with this inquiry to schedule my charges in my own way. I submit, your Honor, that as accuser, for that is the position in which I am being placed, I certainly should have the right to frame my accusations in my own way; and as I am now to become more than accuser, as I am also to become prosecutor, certainly, with redoubled force, should I have the right to schedule my own charges, and to indicate what I propose to prove before this Commission. A speech before any body of persons whatever is not the same your Honor as an indictment, and a person making any charges, if they were the subject of an action at law, would surely have the right to formulate his own charges and to proceed to prove them in his own way. How much more then must I, who am asked to become prosecutor, have the right to schedule, first of all, what I propose to prove, and then to take my own course of procedure to prove those charges, having scheduled them. I am prepared, your Honor, if necessary—and turning aside for a moment let me say that I am not going to shirk anything that has been said, nor will I allow it to be stated in any way that I am not prepared to go on with the charges I have already made—I am prepared for this purpose to take the report of my speech as it stands in *Hansard*, to go through it, and prove the different things therein stated, point by point, so far as I am able. I submit respectfully that I have two things to do before this Commission—first of all I have to prove my charges, if they be capable of proof, and in the second place I have to prove my *bona fides* in making those charges—that is, I have to show to the satisfaction of the Commission, if I can, that I had just and proper ground for making these allegations, even although they cannot be the subject of what I should term legal proof. I maintain that I have this double function to fulfil before the Commission. If your Honor will allow that point I need not deal with it further; but if your Honor is not prepared to allow it after what I have stated, I feel it necessary to make some further reference to the speech itself, and to show from that speech that I should certainly have this right to schedule my own charges, and that the indictment which is drawn up and embodied in the Commission is not my indictment, but an indictment drawn up by some other person, and one which I am now called upon to prove. I submit, your Honor, that is a position which no person whatever should possibly be called upon to take up.

84. *President.*] We cannot allow you to formulate any charges other than those which are submitted to the Royal Commission. Our only duty here—our only existence as a Royal Commission—is to inquire into

into the charges that have been submitted to us by the Government, and into no other charges. Therefore it is quite impossible for you to formulate before the Royal Commission any charges other than those which have been submitted to us by the Government; but I wish to point out that the charges which have been submitted to us by the Government are in effect the same charges, almost in the same words, as you yourself formulated against Mr. Eddy from your place in the Legislative Assembly. You have put in evidence the correspondence which led up to the appointment of this Commission, and the first letter set out in the correspondence is one written by Mr. Eddy calling the attention of the Government to the charges which were made by you, and asking the Government to appoint a Judge or a Commission to inquire into the truth of those charges. The whole of the subsequent correspondence relates to these charges and to these charges only—that is to the charges made by you on a certain occasion in Parliament, and reported in *Hansard*. Mr. Eddy in his letter sets out an extract from *Hansard*, and I must presume at present that that extract from *Hansard* is correct; it is put in evidence, and no objection has been taken to the words printed from *Hansard*, and I must presume that they are correct, at any rate, for the present. The words in *Hansard* are these:—

> I need not refer here to the occult reasons which led to the appointment of the Chief Commissioner. I shall take another opportunity of dealing with those reasons—reasons which were not for the welfare of the country—reasons which suited private persons, and not the State, to appoint the Chief Commissioner.

These are your own words, taken down by *Hansard*. The charge, as formulated before us, is in these words:—

> That the appointment of the said Edward Miller Gard Eddy as Chief Commissioner was due to "occult" reasons which suited private persons, but were not for the welfare of the country.

That charge is *in totidem verbis*, in the very words used by you from your seat in the Legislative Assembly, and that is the charge which we have to try, and the only charge at present which we have to try; and therefore it would be impossible to allow you to formulate some other charge which is not complained of, which no one knows of, and the only inquiry we can institute is into this charge, which you made from your place in the Legislative Assembly.

85. *Mr. Schey.*] May I point out, your Honor, that as soon as it was known that Mr. Eddy, the Chief Commissioner, had written the letter to which you have referred, I there and then objected to it. I there and then objected from my place in Parliament, moving the adjournment of the Legislative Assembly for the purpose. I there and then objected both to the character of the charge which Mr. Eddy had written and to the form of the inquiry asked for.

86. *President.*] Very well; if there is any doubt as to whether that is a correct transcript from *Hansard*, I will refer to *Hansard* itself.

87. *Mr. Schey.*] I am not asserting that it is not a correct copy, your Honor; I am drawing attention to the fact that I have objected already to Mr. Eddy framing the charge in that way.

88. *President.*] It is not Mr. Eddy who frames the charge, it is you who made it from your place in the Legislative Assembly; you make the charge and I understand that you are complaining that the Attorney-General, or whoever it was prepared the Commission, has not formulated the charge which you made. I have pointed out that the charge you made as reported in *Hansard* is in the very words of the charge submitted to us in the Royal Commission.

89. *Mr. Schey.*] I was not objecting to that your Honor. I was pointing out that I objected to the form in which this inquiry was sought to be initiated by the letter of Mr. Eddy to which you have already referred. I very respectfully submit that all the way through my speech, and the report in *Hansard* abundantly bears me out, I was directing my remarks against the administration of the railways and not against Mr. Eddy personally. I admit, your Honor, that the portions which you have already read bear the construction of a personal charge, but I assure you I did not make them in any way whatever as a personal charge; and the very words in which the extract is couched will show that it was never intended as a personal charge.

90. *President.*] Then what was it intended for Mr. Schey?

91. *Mr. Schey.*] That is only a portion of a speech in which I was dealing with the administration of the railways generally.

92. *President.*] It contains as serious a charge against the Chief Commissioner as you could possibly formulate—a charge not against the management of the railways but against Mr. Eddy personally as Chief Commissioner.

93. *Mr. Schey.*] I submit, your Honor, again that this is only a portion of a speech which was delivered on the question of granting supplies to the Government for the administration of the railways, thus making the matter certainly one of administration, and the speech itself all the way through proves conclusively that what I said was intended as against the administration of the railways. If your Honor will permit me to read them, three extracts will show that with perfect clearness. Quoting from the speech itself, and, your Honor, I have not the slightest intention of cloaking anything which has been said in that speech, but I certainly maintain that what was said in the speech must be taken with its context, with its surroundings, and that the tenor of the speech must be taken into consideration as well as the actual wording of any one particular clause which may be picked out; for this is what I am complaining of that these particular charges have been picked out; the very eyes of the speech have been picked out for a certain purpose, whilst other portions of the speech have been altogether avoided, and that certain charges which I maintain, and which *Hansard* will prove are charges, have been omitted altogether, thereby depriving me of the opportunity of proving them. I stated myself at the time that this very letter which your Honor has quoted from was made public that, as a matter of fact, it was intended to cloak over charges I had made by picking up one which might be couched in incautious language, and by making that one, or any cognate charges, the subject of an inquiry, leaving out of the question altogether other charges which are capable of proof to demonstration, thereby placing me at a disadvantage, in so far as that I am to be permitted to deal only with one or two points, leaving out of the question other points which were raised in the same speech, and of which proof to demonstration actually exists. Now, quoting from *Hansard* of March 9, 1892, page 6288, from the speech which forms the basis of this inquiry, I said this:—

> I consider of course that the view I took was the right one. (I was stating to the Assembly that I had been one of those persons who was not only favourable to the passage of the present Railway Act but favourable to bringing a Chief Commissioner from some other part of the world to fill a vacancy which at that time I was of opinion could not be adequately

adequately filled by any person then in the Colony), but the very best Acts of Parliament may be spoiled by bad administration. If you do not get the proper person to administer them they will become failures. That is what happened in our case. I went on to say, "Mr. Speight, the Victorian Chief Railway Commissioner, was the most capable man no doubt that could be obtained in Great Britain at the time of his appointment. Our Chief Commissioner is by no means so good a man; and just as we have not as good a man to administer the railway system here, so our failure, which is inevitable, will be greater than the failure of the Railway Department of Victoria. We find, in connection with the Victorian Railways, most criminal extravagance and negligence, and when we come to investigate the railway service of this Colony, we shall find the same state of things—criminal negligence, criminal ignorance, and criminal extravagance."

It may be contended that that is a personal matter. I certainly contend that the tenor of these extracts shows that my charge was against the administration of the railways generally, and if the word criminal has been used perhaps not in exactly its proper juxtaposition to the other words, that must be set down to my ignorance of the exact legal meaning attached by the law to the particular term used, because one does not speak from the platform—one does not speak in Parliament—with the exact weighing of every word nor the meaning followed in law. . . . Then I go on to say:—

I may be met, as I have been met before, with the statement that the railway administration seems to be very acceptable to commercial men, and that certain English newspapers have had very kind things to say about our railway administration.

There again the phrase used is "railway administration," and I ask your Honor to note that all the way through the correspondence I use the same term, and that I have not attempted, nor do I admit that I had any reason to attack Mr. Eddy as an individual any further than as the head of the department of which he is Chief Commissioner. My words were directed at Mr. Eddy in his position as Chief Commissioner: I have made that abundantly clear all through my speech. I should like to go a little further, your Honor. I went on to say:—

Are we not making the whole of the country pay for the purpose of affording luxuries for a class in the shape of nice carriages and high speed. That is exactly what is taking place at the present time.

Your Honor will see that is purely a matter of administration. I continued:—

Another point to which I wish to draw attention is that since the Commissioners took office we find the same practice creeping in here as I had to draw attention to in connection with other departments of the Service. Whilst all the higher officers have received large increases of salary, the salaries of men in the lower grades have been reduced. A large number of men have been put off and a large number of boys have been put on in their places. We find the salaries of the higher officers increase all round, but the minimum wage rate for the cleaners has been reduced from 5s. to 2s. 6d. per day. At the same time we find the Locomotive Engineer's salary increased from £800 to £1,200 a year. In some cases the wages of the boys who have been put on in place of the men have been reduced to 1s. 8d. per day. I am willing to admit that increases have been granted to the wage-earning staff. I am not shutting my eyes to that fact, neither am I shutting my eyes to the fact that the increases were such as the Commissioners could not help.

94. *Mr. Eddy.*] Mr. President: I respectfully ask if this is to be permitted. Would it not be much better for Mr. Schey to put in all his speeches in Parliament; why does he not hand in a copy of *Hansard*? We are here, as I understand it, although Mr. Schey says he attaches no importance to calling me a criminal and charging me with about eight or ten criminal offences—any one of which, if true, would, under the Railways Act, lay me open to a money fine of £500 and three years imprisonment. If Mr. Schey thinks there is no importance attaching to these statements, I must appeal to the Commission to say that Mr. Schey's mode of dealing with the case should be checked. I don't think that this Commission has anything whatever to do with Mr. Schey's correspondence with the Attorney-General about some indemnity to protect him from something which he is afraid of when he has nothing to fear if the truth is spoken; and neither has it anything to do with the speeches which Mr. Schey says he has made in Parliament, and to which he does not attach any value, although they contain charges that I am a criminal of the darkest dye. I therefore ask, Mr. President, that Mr. Schey should be requested to proceed with his charges, that he should be put into the box and sworn, and that I be allowed to cross-examine him on these charges.

95. *President.*] I think Mr. Schey you are travelling far beyond the scope of this inquiry. Certain words, as I have pointed out to you, were used by you in the Legislative Assembly, and the truth of those words is what you have to prove now. We are dealing at present only with the first charge in the Commission, and we call upon you either to withdraw that charge or to prove it.

96. *Mr. Schey.*] Then I understand you to overrule the objection I make?

97. *President.*] Most undoubtedly.

98. *Mr. Schey.*] I was trying to show your Honor ——

99. *President.*] I know what you have said; it forms no part of our present inquiry, and we cannot travel outside that.

100. *Mr. Schey.*] Then I understand your decision is that I am to be bound entirely by the charges as formulated in the Royal Commission?

101. *President.*] Yes, certainly.

102. *Mr. Schey.*] And that I am not to be allowed to go outside this in any direction?

103. *President.*] Certainly not.

104. *Mr. Schey.*] I understand that the Commission says that these charges are only to be investigated so far as they affect—I am speaking from memory—the honesty and integrity of the Chief Commissioner?

105. *President.*] Or the honesty and purity of his action in the management and administration of the railways. There are two matters, the one affecting Mr. Eddy personally, that is, as an individual, and the other affecting the honesty and purity of his administration.

106. *Mr. Schey.*] Well, the question would arise in alleging matters of fact whether they are necessarily matters which affect the honesty and purity of administration. For instance, I may be able to show that a certain thing has happened which I contend, and which other people may agree with me in contending, is wrong and is not in the interests of the country. If I can succeed in showing that I presume I shall be permitted so to do. It will not remain for me to show that in every particular Mr. Eddy has taken certain action with a dishonest view. For instance, I have not alleged that Mr. Eddy has made money out of any contracts which have been entered into between the Railway Department and any contractors.

107. *Mr. Eddy.*] Clearly so, in the exact words of the charge.

108. *Mr. Schey.*] I say I have not alleged it.

109. *President.*] I wish you would understand, Mr. Schey, that at the present moment we are dealing only with the first charge. We are not going over all the charges just now; we are dealing only with the first charge in this Commission. I have read the words of that first charge, and I call upon you either to withdraw that charge or to prove it.
110. *Mr. Schey.*] I am asking your Honor what limitations are to be imposed upon me in dealing with that charge? For instance, one of the things ——.
111. *President.*] If you will call evidence on the point we will deal with that evidence as it is produced; we cannot say beforehand what we intend to do and what we do not intend to do. If you call your evidence, and objection is taken to the admissibility of it, we will deal with the objection as it arises, but we cannot say beforehand what we intend to do.
112. *Mr. Schey.*] Under these circumstances I beg to apply for an adjournment of the Commission, because matters have assumed a phase I did not anticipate. I intimated that I had certain objections to raise. Of course, I could not in any way know what your Honor and your colleagues would say to the various points I had to raise, and, therefore, I am not in a position at the present moment to proceed further. I have already intimated my intention to accept the case as it now rests with regard to the indemnity. But I must now ask you to postpone the inquiry to some future day, and in doing so I beg to intimate that I shall call Mr. Eddy as the first witness. I propose to examine Mr. Eddy, and I shall require the whole of the papers, and I lay stress on the word "whole," because in the sister Commission certain papers when produced were found not to be perfect, and a subsequent request had to be made for the remainder; I desire that the whole of the papers relating to Mr. Eddy's appointment, including any correspondence between himself and any persons in England or any persons in this Colony relating thereto, any correspondence which passed between himself and the Government of this Colony prior to his arrival or to his assuming office—in fact, all the papers connected with the appointment of Mr. Eddy to the position of Chief Commissioner—be produced. I shall also require all papers in reference to the appointment of a number of officers who came from England. I give this preliminary notice as I understand you only wish me to go on with the first charge at the present moment. So that there may be no difficulty in getting those papers when they are asked for, I give notice that I shall require all papers having reference to these questions. But, first of all, I propose to call Mr. Eddy as a witness. I require the papers relating to his appointment, and I want an opportunity to go through those papers prior to the next sitting of the Commission.
113. *President.*] When we met here on Wednesday last we stated distinctly that we intended to proceed with the evidence to-day, and before the Commission adjourned I asked you if you wished to summon any witness or to see any documents, in order that you might be prepared to go on with the evidence to-day. Now, it appears, you want to have a further adjournment to look into some papers. Why did not you do all that before we met to-day?
114. *Mr. Schey.*] Your Honor must observe the difficulty I was in with regard to this letter from Mr. Barton, the despatch of which was intimated to me, but which was not in my possession.
115. *President.*] That has nothing to do with this inquiry. We have been wasting time for the last hour and a half.
116. *Mr. Eddy.*] I must object to any postponement, Mr. President. The charges are too serious to be dragging on week after week in the way they have been dragged on, and I must ask that Mr. Schey be put into the witness-box and sworn.
117. *Mr. Schey.*] Do I understand that Mr. Eddy requires me to go into the witness-box now?
118. *Mr. Eddy.*] Yes.
119. *Mr. Schey.*] If so, I feel inclined to raise an objection. Your Honor has called upon me to either withdraw or prove a certain charge. I apply to your Honor for a postponement to enable me to get papers requisite for me to deal with that charge, and to enable me to go on. I shall be prepared, in proper time, to submit myself to Mr. Eddy's examination or cross-examination, but, as I have to make the case, and, as your Honor has said, to be prosecutor also, or advocate in the matter, I must certainly submit that Mr. Eddy cannot require me to go into the box until I have opened my case.
120. *President.*] Mr. Schey, you made the charge which is the first charge, and the only charge we have to consider at present. You made that charge on 10th March. Now, I presume, that in making that charge publicly, from your place in the Legislative Assembly, you must have had some reason for believing it to be true. I cannot imagine that you made a charge of that kind either wholly ignorant whether it was true or not or knowing that it was not true, and, therefore, you ought to be in a position now to give that evidence to the Commission to show how it was that on the 10th March you made that charge against Mr. Eddy. You must, I presume, have had some evidence then in your mind. You must have looked into the question before you made so serious a charge as that in the Assembly, and with that evidence I think you ought to proceed now. If you desire to have further evidence confirmatory of what you then knew, well and good, but at present you ought to give the evidence which was in your mind when you made that charge against Mr. Eddy in the Legislative Assembly.
121. *Mr. Schey.*] I have already intimated, your Honor, that I desire to have papers, which are not yet before me, and which I cannot get without the order of the Commission; and until I get those papers I am not in a position to go on with the charges.
122. *President.*] I told you on Wednesday last that if there were any papers which you wanted to see, or any witnesses you wanted to have summoned, you could get an order from the Court there and then for that purpose. No application has been made to the Commissioners either to examine documents or to have witnesses summoned. We cannot waste time—time is a great deal too precious to be wasted in adjournments. Of course, the Commission will not press you to close your case now, but we think you ought at any rate to give the evidence which we must presume you had in mind at the time you made these charges.
123. *Mr. Schey.*] Do I understand your Honor that you refuse my application for a postponement?
124. *President.*] We do not refuse you a postponement if you are unable to close your case, but you must begin your case now. You made this specific charge on 10th March last. When you made that charge we assume you believed it to be true, and that you believed you had some evidence to prove the truth of it; you can produce that evidence now?
125. *Mr. Schey.*] I am in this position your Honor that I cannot give that evidence now.
126. *President.*] Why not?
127. *Mr. Schey.*] Because I require certain papers.

128. *President.*] Would you mention the papers which you had in your mind at the time you made the charge.
129. *Mr. Schey.*] I require all papers, letters, and telegrams which have reference to the appointment of Mr. Eddy as Chief Commissioner. I may say at once your Honor, that if there is to be a strict legal limitation, and I am not to be allowed to produce what, as a matter of fact, carried conviction to my mind in relation to this matter, it will be impossible for me to go on at all.
130. *President.*] On the contrary, I am calling upon you to produce that evidence; so far from preventing you going on I am calling upon you to open your case.
131. *Mr. Schey.*] If you refuse me a postponement, the only thing I can do is to ask Mr. Eddy to go into the witness-box.
132. *President.* Why do you ask to put Mr. Eddy into the box? The proof of this charge is on your shoulders.
133. *Mr. Schey.*] If I can neither take the evidence of Mr. Eddy nor obtain the papers I have asked for, it is absolutely impossible for me to proceed.
134. *President.*] You can obtain the papers, but what the Commission want to know is what was the information you had in your mind at the time you made that charge on 10th March. You surely can state that; that must be a matter within your own mind. You can go into the box and state what you know. As I said before, if when you have done that you still ask for a postponement for further evidence of course the Commission will grant it.
135. *Mr. Schey.*] I hardly understand yet how I can proceed at this moment. I submit to you with great respect that under the circumstances a postponement might be granted to enable me to make a commencement. I must explain that as a matter of fact, I have a great deal of work in hand independent of this inquiry, that I am not solely a member of the Legislative Assembly, and that during this next week I have an annual conference to prepare for which causes me a very large amount of work, and which happening only once a year, and sitting all day long, keeps me closely at work; and I did not anticipate that your Honor would wish to go any further to-day after dealing with my preliminary objections. But I did anticipate your Honor, that I should be granted leave to schedule my own charges, because even yet I cannot understand how a person can be called upon to prove an indictment which he himself has not drawn up; and I did not anticipate that your Honor would wish to go further, and therefore I did not prepare myself to go further on this occasion.
136. *Mr. Eddy.*] I must protest in the strongest possible terms against any adjournment. As to the burden of work, Mr. Schey's burden in that respect is trivial as compared with mine; yet I am prepared to deal with every charge at this moment. The charges which are hanging over my head have been cabled to all parts of the world, and they are of too grave a character to be played with, as Mr. Schey is playing with them. If he has not a shred of evidence, and I challenge him to produce before this Commission the smallest shred,—I say if he has not the smallest shred of evidence, which I know he has not got, let him have the manliness to say, "I withdraw the charge"; but don't let us have an adjournment for these charges to be hanging over me continually.
137. *President.*] I don't think we ought to grant a postponement at the present. As I have pointed out Mr. Schey can give the evidence which I must assume he had or was aware of at the time he made these charges; and I repeat that if when he has given that evidence he says he wants an adjournment to get further evidence the Commission can then consider his application. At present we think Mr. Schey ought to be in a position to proceed with his first charge to-day.
138. *Mr. Schey.*] I don't understand your Honor in what way you want me to proceed now?
139. *President.*] That is entirely for yourself to determine.
140. *Mr. Schey.*] If you compel me to go on, I must ask Mr. Eddy to go into the box.
141. *Mr. Eddy.*] I have to ask Mr. President that Mr. Schey having made these charges shall be put into the box to prove them. He has made gross criminal charges against me and he should be placed in the box and requested on oath to repeat them.
142. *President.*] You see Mr. Schey it is not fair to a person against whom you have made charges that you should put him in the first instance into the box merely for a fishing inquiry, that is all; it cannot amount to anything more than that. Give some evidence before the Commission of the *bona fides* of your charge and your determination to prove it, and proceed in that way. We must be just to both parties and not merely to one.
143. *Mr. Schey.*] If you will grant a postponement until such time as I can procure certain papers I will then endeavour to go on. I don't know whether your Honor intends to adjourn for lunch.
144. *President.*] We shall adjourn at 1 o'clock and proceed again at 2.
145. *Mr. Schey.*] Very well your Honor I will bring papers and endeavour to go on at that time.
146. *President.*] We will adjourn now until 2 o'clock, but I wish you to distinctly understand that the Commission will proceed to sit from day to day in this inquiry from 11 o'clock in the morning until 4 o'clock in the afternoon, and we expect the parties to be ready with their evidence to go on from day to day.
147. *Mr. Schey.*] Might I very respectfully ask your Honor to reconsider that matter because it would be absolutely impossible for me, I might say, unless by subjecting me to great pains and penalties to go on from day to day; for as I have already explained to your Honor I am a person in employment, I am not my own master, and if this Commission proceeds from day to day it means that I must vacate my employment immediately, because I cannot fulfil the duties which are devolving upon me, and which on next Monday become of so critical a nature that if I be absent no other person can carry on those duties.
148. *President.*] If you can show a good reason for the Commission not sitting from day to day, of course we will consider it. I was not aware that there was any reason such as you have named.
149. *Mr. Schey.*] Well, I presume that will be a matter for debate at the close of this afternoon's sitting.
150. *Mr. Eddy.*] I would point out Mr. President, the great importance of these matters, and the necessity there is, not only in my interest, but in the interest of the country, for these serious charges to be cleared up. The meeting which Mr. Schey has referred to is merely the ordinary annual meeting of railway servants to discuss various matters which might easily be postponed for a month, or even twelve months. The interests of the country are to great to permit of unnecessary delay.
151. *President.*] We will consider this question later in the day.

[*Resuming*

[*Resuming after lunch.*]

152. *Mr. Schey.*] Your Honor, I must again ask that I may be allowed to put Mr. Eddy into the witness-box. I find myself in this difficulty, that I, in my own person, am uniting the function of advocate and witness. Now, I submit that, if I, myself, were to go into the witness box and proceed to give evidence I should then be subjected to cross-examination by Mr. Eddy, and I also submit that if I were represented here by an advocate instead of by myself, I should not be in that position, and the cross-examination could not take place until after I had had an opportunity of making my case as an advocate would have appearing in the same position as myself. In relation to the charge under investigation, I have already submitted that there is a radical difference between the words one chooses in making a speech from the platform or any other public place, and the words in which one would frame a legal indictment, and which he would be called upon to prove; and I may say at once, your Honor, that, so far as I know, unless the evidence be obtained in the way I think it can be obtained, there is no possibility of legally proving the charge as it stands. As a matter of fact, "occult reasons" are secret reasons, and the only persons who can tell secret reasons are those who are in the secret. If I knew these secret reasons, they would be secret no longer, they would cease to be occult, and, therefore ——

153. *Mr. Eddy.*] I must ask you, Mr. President, whether Mr. Schey is in order in continually making those speeches. I would suggest, with all respect to the Commission, that Mr. Schey should take his place in the box, and on oath repeat the statements which for two hours he has been giving to the court without any responsibility attaching to them.

154. *President.*] Mr. Schey, we stated before the course we think you ought to adopt in this case. The charge has been brought by you, and it was made so far back as 10th March last. At the time you made that charge we must assume you had satisfied yourself by some evidence that it was true, otherwise, as an honest man, you would not have made the charge from your place in Parliament. That evidence, we think, you ought to give in the first instance, and that cannot be evidence in the mind of Mr. Eddy, because you cannot have known what was in his mind at the time you made the charge. You can, therefore, give the evidence which satisfied you at that time that the charge you made was true.

155. *Mr. Schey.*] That is to say your Honor you suggest that I should go into the witness-box?

156. *President.*] If you think that that evidence is to be established by what you yourself know you must go into the witness-box and make the statements on oath.

157. *Mr. Schey.*] May I ask your Honor whether if I go into the witness-box and make these statements upon oath I shall then be subjected to cross-examination by Mr. Eddy?

158. *President.*] Most undoubtedly. You go into the box as a witness and, on your evidence as a witness, you are subjected to cross-examination as every other witness would be.

159. *Mr. Schey.*] Then it appears to me this way: If I cannot get the evidence as I want it, it is impossible for me of my own knowledge, as your Honor puts it, to prove the charge as it stands in the Commission: and, therefore, I must intimate that I have no option left but to abandon the charge. I have no desire to abandon it, but under the circumstances if I can only go on my own knowledge and must then be subjected to cross-examination before I can examine any witness—and that is the position now put upon me—I shall not be able to examine a witness before I am myself subjected to cross-examination, a position I would not be in if I were appearing by counsel.

160. *President.*] I beg your pardon you would. Counsel would put you in the box and examine you and after that examination the counsel for Mr. Eddy would cross-examine you. That is the procedure not only in every court but before every Commission and there is no other way.

161. *Mr. Schey.*] Under these circumstances the only thing I can say is that the charge must be abandoned. I have already intimated ——

162. *President.*] Don't misunderstand us Mr. Schey. You may prove your charge if you can by any number of witnesses; you may call fifty witnesses if you can get them; we don't limit you to the evidence of yourself. You can produce any number of witnesses; you can produce any number of documents and put them in evidence; you can prove your charge in your own way. All we say is that at present we think you ought to go into the box and state what you know of the charge. We think you ought to state how it is that you came to make a charge of this kind, what evidence there was in your mind to satisfy you as to the truth of the charge before you made it against a public officer and in a public place.

163. *Mr. Schey.*] I said I was satisfied. I think what I said was correct, and as I am compelled to take the position which your Honor puts upon me the only thing I can say is the charge will have to be abandoned.

164. *Mr. Eddy.*] Mr. President, with all respect I must ask you not to agree to what Mr. Schey asks. He has accused me of one of the gravest charges that can be made against any man, and unless he is prepared to state to this Commission that he made that charge not being in possession of one iota of evidence to prove it, I must ask you to be good enough to have him placed in the witness-box, and on oath to answer a few questions which I wish to put to him.

165. *Mr. Schey.*] I submit that the charge being abandoned there can be no further question about the matter. If I appeared here by advocate and he intimated that the charge was abandoned there would certainly be no possible means of going further into the matter. The charge being abandoned there is an end of the matter, and I submit that I should not be put in such a position.

166. *Mr. Eddy.*] I submit, Mr. President, that the charge which has been made against me is a criminal charge, and Mr. Schey should not be allowed to abandon it. He must be either prepared to state that he never had one iota of justification for making that charge, or, as I said before, he ought on oath to answer certain questions which I desire to put to him.

167. *President.*] Mr. Schey, we think that the mere abandonment of this charge is not sufficient. You must either withdraw the charge or proceed on it.

168. *Mr. Schey.*] If your Honor leaves me no option, but compels me to put it in that form, for the reason I have already stated, I withdraw the charge.

169. *Mr. Eddy.*] I wish to ask the Commission whether they consider that this withdrawal is a sufficiently ample one to wipe out the charge which has been made against me, and which has been cabled all over the world, and I submit that I should still be allowed to go into the box myself and give the actual facts in regard to my appointment. I think the position I hold in the Colony is one of such great importance

that

that, for the credit of the Colony, although this charge has been withdrawn—and there is no telling what reasons may be assigned later on for the withdrawal—I think I should be permitted to state in as concise terms as possible the true circumstances connected with my appointment, an appointment which was not of my own seeking.

170. *President.*] We cannot hear your statement as to the appointment, Mr. Eddy. As we understand the withdrawal of this charge, it means that the charge was made without any adequate ground for making it, and as no evidence whatever has been tendered in support of the charge, so far as Mr. Eddy is concerned, it must be treated as if that charge had never been made at all. Under these circumstances, as the Commission have to inquire into the truth of these charges, we do not think that at present it is desirable that Mr. Eddy should go into the box. What may be done afterwards when we have gone through all these charges is a matter for future consideration; but at the present we think it is wholly unnecessary for Mr. Eddy to go into the box. Were he to do so, after the charge has been withdrawn on the understanding which we have now stated, we could not deal with Mr. Eddy's statement as a statement made in respect of this charge which has been withdrawn, and, of course, Mr. Eddy would be subjected then to cross-examination by Mr. Schey, and the whole matter would have to be gone into again after the charge has been withdrawn. For these reasons we think it is undesirable at the present stage that Mr. Eddy should make any statement. Have you heard what I said, Mr. Schey?

171. *Mr. Schey.*] Yes, your Honor.

172. *President.*] We will now proceed to the second charge. The second charge is: "That without first calling for tenders, and without any necessity on the ground of urgency, the Railway Commissioners ordered £500,000 worth of locomotive engines from England, which orders were given to specially-selected firms who had always been favoured in the past by the Government of New South Wales; that a certain 'ring' or combination of persons or firms mainly responsible for the appointment of the said Edward Miller Gard Eddy as Chief Commissioner had ensured that the said engines should be ordered from them, and that they obtained the order for the same through the said Edward Miller Gard Eddy; that the said Commissioners spent the said sum of £500,000 in the said purchase not only without calling for tenders, but at a time when iron and other material and coal were at higher prices in England than they had been for years theretofore." That is the second charge.

173. *Mr. Schey.*] May I ask that the Secretary for Railways be put into the box and sworn.

174. *President.*] Who is the Secretary for Railways.

175. *Mr. Eddy.*] Mr. McLachlan. I submit, Mr. President, that Mr. Schey should prove his charge. I submit that Mr. Schey having in his place in Parliament stated that such and such things were done, and that he had the papers in his possession to prove it, should, on oath, prove what he then stated. We shall be prepared to produce any evidence in connection with this matter, but I must ask first that Mr. Schey, having stated in his place in Parliament that I had given orders for £500,000 worth of locomotives when they were not necessary, without calling for tenders in the usual way, and that I had done it for the purpose of completing my part of the bargain with a ring of swindlers.—I submit that Mr. Schey having stated that he had the papers in his possession to prove this, he should be put into the witness-box and made to prove his charge. I take it, Mr. President, that your ruling in regard to the first charge will apply equally to this.

176. *President.*] No, Mr. Eddy, because Mr. Schey is now calling a witness to prove the second charge. For anything I know to the contrary, and until I have heard what the witness has to say, I must assume that out of the mouth of this witness Mr. Schey is going to prove his charge. He can do that; he is not bound to prove it by his own evidence only.

177. *Mr. Eddy.*] After your ruling, Mr. President, I do not object further.

178. *Mr. Schey.*] I only desire to say, your Honor, that I consider I am undergoing quite sufficient disadvantage in the solicitor for the Railway Department being permitted to sit here and to prompt Mr. Eddy, without, as I observed him just now, prompting the witness I have just called. I hardly think that is a fair way of conducting the case.

179. *Mr. Eddy.*] No prompting whatever has taken place. All Mr. Smith did was to tell the witness that he would not be allowed to take any paper into the witness-box.

Mr. Hugh McLachlan sworn and examined:—

Mr. H. McLachlan. 9 May, 1892.

180. *Mr. Schey.*] You are Secretary for Railways, Mr. McLachlan? I am Secretary to the Railway Commissioners.

181. Would you kindly explain what the position is? Well, I hardly know what explanation is required. I am practically Secretary to the Railway Commissioners.

182. *Mr. Schey.*] The explanation I want, your Honor, is this: I wish the witness to explain what he means by saying he is Secretary for the Railway Commissioners as distinct from the Secretary for Railways, as I understand that in all official documents the witness is referred to as Secretary for Railways. I observe, for example, that on the Estimates of Expenditure laid before Parliament the position is described as Secretary for Railways, but the witness objects to the term, and now says he is Secretary to the Railway Commissioners. The object of my question is to elicit from witness an explanation as to the difference which he draws between the term Secretary for Railways and that of Secretary for the Railway Commissioners.

183. *Witness.*] I hardly know what is to be understood by the difference spoken of. I may say that the title I now hold, and the title which I always have held, was given to the position in order to distinguish it from the position of Secretary for Railways in other colonies; in Queensland, for instance, where the Secretary for Railways is the Minister for Railways. It is merely a nominal distinction; I do not think there is anything in it.

184. *Mr. Eddy.*] It appears to me that there is an attempt being made to get into an irregular way of conducting the examination—that is, of putting leading questions to the witness in cross-examination. I take it that the simple way would be to put questions to the witness and take his answers.

185-6. *President.*] I think Mr. Schey is entitled to get from this witness in his own way exactly what his position is. I do not think there was any cross-examination in this particular question.

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187. *Mr. Schey* (to Witness).] In stating that your position is that of Secretary to the Railway Commissioners, you do not mean to imply that you are specially attached to the service of the Commissioners as differentiated from the service of the country? My position is that of Secretary to the Railway Commissioners, and therefore I am in their service under the Railway Act.
188. Then do you consider yourself as specially the servant of the Railway Commissioners individually? No; but I consider myself to be in their service as a corporate body appointed under the Railway Act.
189. What I want to get at is this: If a case should arise in which you would have to decide whether you were the servant of the country or the servant of the Railway Commissioners, which party would you consider yourself in the service of? I am personally in the service of the Railway Commissioners, as a corporate body appointed under the Railway Act. This I have already explained.
190. Very well. Now, how long have you occupied your present position? A little over two years. The date of my appointment was September, 1889.
191. You were appointed to your present position by the present Railway Commissioners? Yes.
192. Prior to that time you were known by the appellation Secretary for Railways? That was the title given to the person who held the position.
193. That is the name used at the present time in the Estimates before Parliament, is it not? The word is simply Secretary, so far as I recollect.
194. That is, Secretary under the Estimates for Railways? Yes.
195. What salary had you, Mr. McLachlan, when the Commissioners took office? £500 a year.
196. And what is your salary now? It is now £800.
197. That is since September, 1889? Yes.
198. Will you tell me in what sums the increases in your salary were made? ——
199. *Mr. Eddy.*] I submit, your Honor, that this question has nothing to do with the charge made against me of having fraudulently ordered £500,000 worth of railway stock; besides, it is misleading the Court, as when Mr. McLachlan received £500 a year he was not occupying the position of Secretary.
200. *President.*] It has really nothing to do with the case. I think, Mr. Schey, you are carrying this too far. Mr. McLachlan has not shown that he is a hostile witness. You have put him in the box to give evidence in support of this second charge, and you should proceed to ask what questions you wish upon that.
201. *Mr. Schey.*] You do not rule my question inadmissible, I hope, your Honor?
202. *President.*] Decidedly I do. Until you can show that the witness is a hostile witness, you have no right to cross-examine him, and a hostile witness can be only cross-examined by leave of the Commission.
203. *Mr. Schey.*] Technically, the witness is my witness, no doubt, because I called him. At the same time I submit that in such a case, where the witness under examination is an officer of the department, an officer so bound to the Commissioners, he must necessarily, from the very nature of the circumstances in which he is placed, be hostile to myself.
204. *President.*] But you are only examining the witness now as to his salary. What have we to do with the question of his salary?
205. *Mr. Schey.*] Your Honor, I propose to make this pertinent later on. However, I will not press the question.
206. *President.*] I do not want to interfere, Mr. Schey, with your examination more than necessary, but we cannot sit here the whole day listening to matters which are not relevant at all.
207. *Mr. Schey.*] Very well your Honor, I will void the question. (To Witness): Now, Mr. McLachlan, I want you to tell us how long you have been in the Railway Department? A little over sixteen years.
208. And during most of that time you have been in the Commissioner's office? Yes; most of the time.
209. And having been in the Commissioner's office, you have a general knowledge of what goes on there? Yes; I think I have.
210. And in your present position as Secretary for Railways, you have a knowledge, I suppose, of any orders that are sent out for any stock in connection with the department. Will you kindly produce an account of all the locomotives that have been supplied from the inception of the railways in this country. I believe the documents are legally in your charge as Secretary for Railways? Yes.
211. *Mr. Schey.*] I require your Honor that the record of all such purchases should be produced.
212. *President.*] From what date?
213. *Mr. Schey.*] From the time the railways were commenced, and I will show directly the pertinency of the question I am asking. Part of the charge says that certain locomotives have been ordered from firms specially favoured in the past. Now, in order to show that, I must necessarily have the return of all the locomotives and where they were obtained from. I am therefore asking the witness to give such returns, and I cannot in the absence of all that information deal with the subject on the spur of the moment. I require the witness to produce a list of all the locomotives supplied to the Government of New South Wales, with the prices at which they were supplied, and the firms that supplied them.
214. *President* (to Witness).] Can they be obtained?
215. *Witness.*] Yes, your Honor.
216. *Mr. Schey.*] Can you now, of your own knowledge, say how many locomotive have been ordered since the present Commissioners took office?
217. *Witness.*] Do you mean from all sources. We have ordered a number from America?
218. Yes, from all sources? The total number is 164.
219. That is the total number of locomotives ordered from all sources during that time? Yes.
220. Can you tell me how many were ordered from each source of your own knowledge? Yes; there were thirty-two ordered from the Baldwin Company of America.
221. *Mr. Schey.*] Of course your Honor I accept this information subject to the returns that will be put in hereafter. I do not wish to bind the witness strictly to the terms.
222. *Witness* (continuing).] There were 55 ordered from Messrs. Dübs & Co., of Glasgow, and 77 from Beyer, Peacock, & Co.; that makes 132, and 32 from America, giving a total of 164.
223. Can you specify the prices which have been paid for each engine? Yes; I can give you the prices, but it would save time if I sent you in a written statement of them.
224. Were tenders called for these engines? Not for all of them.
225. Will you tell me how many tenders were called for? The ten passenger Mogul engines were the first lot ordered.

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226. Are these what are termed the Scotch-Yankees? Yes.
227. These ten Mogul passenger engines, were they ordered by the present Railway Commissioners? They were ordered immediately before the Commissioners came into office, but the action of dealing with them was left with the present Railway Commissioners.
228. That is to say the order was ratified by them? No; they were practically taken by the Railway Commissioners.
229. But you say the order was arranged before? It was in train.
230. Who were they ordered from? From Dübs & Co., of Glasgow.
231. Were they ordered after tenders were called? Yes.
232. How were the tenders called? They were called by the Agent-General in England.
233. And were they open tenders, that is to say public tenders? I am not certain whether they were public tenders advertised, or whether certain locomotive builders in England were asked to tender. Of course you know pretty well the men from whom you will obtain such tenders at home.
234. I am not asking you that, I am asking you whether tenders were publicly advertised for in the usual way? I have said that I am not certain on that point.
235. You do not know? I am not certain.
236. Now then, is that number, the ten engines you speak of, included in the fifty-five you mentioned before? Yes.
237. Were tenders called for any more following them? I will give you the next lot, twenty-five goods engines.
238. The next lot were twenty-five goods engines, were tenders called for these? Yes; tenders were called for those.
239. Where were the tenders called? They were called for in England.
240. By the Agent-General I presume? Yes.
241. Were they public tenders? I am not certain, but I think the instruction that was sent from here was particularly to ask for quotations from Beyer, Peacock, & Co., Dübs & Co., the Clyde Locomotive Works, Neilson & Co., and Kittson & Co., of Leeds.
242. Then for these twenty-five engines you say there were some kind of tenders called for? Yes; there are only a limited number of locomotive works at home.
243. I understand you to say that tenders were called for by the Agent-General in England? Yes.
244. I then asked you whether public tenders were called for and you said you did not know; do you know or not whether public tenders were called for these twenty-five engines. I was going to explain.
245. I do not want you to explain, I want you to tell me whether you know this of your own knowledge? I do not know what you mean by public tenders.
246. Were the tenders advertised. I think it is generally understood by all public officers and persons connected with such matters that when public tenders are called for the usual process is to advertise that a certain person wants a certain thing, and that on a certain day the tenders are to be sent in.
247. *President.*] I understood the witness to say that instructions were sent home for certain firms to send in quotations and the names of the firms were mentioned.
248. *Witness.*] Yes, your Honor.
249. *Mr. Schey.*] Then you do not know whether tenders were advertised for these engines? I am not certain.
250. But the instructions that went from here were to ask for prices from certain firms? Yes.
251. Will you give the names of those firms. The firms were Beyer, Peacock, & Co., Dübs & Co., the Clyde Locomotive Works, Neilson & Co., and Kittson & Co.
252–3. Neilson & Co. is the last? Neilson & Co. and Kittson & Co.
254. Was there anything in these instructions that were sent home referring to the name of Sharpe, Stewart, & Co.? Those are the names which I have mentioned.
255. Then Sharpe, Stewart, & Co. were not mentioned? No.
256. You have had, of course, to do with other orders for locomotives besides those you have named in evidence? I do not know. I may say that the matter of locomotive tendering is one I do not know a great deal about. It is generally arranged at home.
257. Do you know if tenders were previously obtained for other lots of engines from Sharpe, Stewart, & Co.? I believe so.
258. I notice that you mentioned Kittson & Co. as one of the firms from whom tenders were received? Yes.
259. Has it been the usual thing to obtain tenders from Kittson & Co.;—they are a Leeds firm, I believe? Yes.
260. Has it been a usual thing to obtain tenders from them? We have had prices for work from them before.
261. *President.*] Mr. Schey, I may tell you we have arranged that a copy of the shorthand reporter's notes of each day shall be given to each of the parties. I tell you this because it may save you taking long notes of the evidence now.
262. *Mr. Schey.*] Thank you, your Honor. (To Witness:) What is the next lot of engines ordered? Six tank engines.
263. Who supplied the twenty-five engines we have spoken of? Messrs. Dübs & Co.
264. They secured the contract? Yes.
265. The next lot then was the six tank engines? Yes.
266. Were tenders called for these? No; there were reasons for not calling for tenders.
267. Tenders were not called for? No.
268. Who supplied these engines? They were obtained from Beyer, Peacock, & Co.
269. What price was paid for them? £2,780 each, I think, was the contract price.
270. Can you tell me what class of engines they were, what was the number of their class? I cannot tell you the number of the class.
271. Will you give me the date of the order? The date of the order was August, 1889.
272. And the date on which they were supplied? Nineteen months was the contract time. I have not the exact date of their delivery.
273. The contract time was about eighteen months? Nineteen months.
274. Then they would be delivered early in 1891? Yes; they ought to have been delivered early in 1891.
275. Have they been delivered? Yes.

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276. Will you give me the dates of delivery? I cannot do so from memory.
277. Is there no record in the department? Certainly.
278. Will you supply that? I can do so.
279. What was the next lot of locomotives ordered? Six tank engines—that is, a further six.
280. Were tenders called for these? Messrs. Beyer, Peacock, & Co. made them. Tenders were not called.
281. Beyer and Peacock were the manufacturers? Yes.
282. Were they identical with the previous lot? They were to be similar to the others.
283. What was the price of them? The price was £2,915 each.
284. Will you give me the date of that order? That was in June, 1890.
285. When were they delivered? I do not recollect from memory the date of delivery.
286. But they have been delivered? Yes; they have been delivered.
287. What was the contract time for that lot? About fourteen months was the contract time.
288. About fourteen months? Yes.
289. Cannot you say, as the custodian of the records of the Railway Department, nearer than "about"? When people make a contract for the delivery of goods, they generally specify the time in which they want them delivered.
290-1. *Mr. Eddy.*] Your Honor, I object to the way in which Mr. Schey is dealing with the witness. It cannot be expected because he is Secretary to the Railway Commissioners that he should walk about with every one of the records of the department in his head. It seems to me a waste of time.
292. *Witness.*] The reason I said "about" was that the time was given as 19th August; that was fourteen months from the time we sent the order.
293. As you are quoting from departmental documents, it is only reasonable to suppose that the time allowed for construction would be mentioned;—you have obtained other information from the documents, such as the number and names of the firms, &c.—surely the time in this case would be mentioned also? I have said in August, 1891; that was about fourteen months after the contract was made.
294. *Mr. Schey.*] I draw your Honor's attention to the fact that the witness now states the time, but previously he said it was about fourteen months.
295. *President.*] So it is.
296. *Mr. Schey.*] Exactly so, your Honor, as it happened; but the use of the word "about" might make a great deal of difference. Now, Mr. McLachlan, what was the next lot of engines ordered? The next lot was fifteen double-bogie suburban tank engines.
297. Were tenders called for these? No; tenders were not called for these. We had a price for them.
298. Who supplied them? Messrs. Beyer, Peacock, & Co.
299. What price was paid for them? £2,925 each.
300. You have stated that you had a price? Yes.
301. Had any other engine been supplied similar to these previously? Not exactly similar, I think—not so powerful for working the suburban traffic.
302. Not exactly similar engines had been supplied previously, so far as you know? Not so powerful; no.
303. Well, then, there were some engines previously supplied which were very nearly like these? We had no engines so powerful, or which would do the class of work so effectively.
304. I am not asking that. Kindly answer the question I am putting to you. You had no engines supplied by Beyer, Peacock, & Co. previous to this time exactly similar to those you have been speaking of? We had tank engines from them, but not exactly similar to these.
305. I want to know whether you had any engines exactly similar?
306. *President.*] He has said he had not.
307. *Mr. Schey.*] Very well, I am content with that. (To Witness):- But I understand you to say you had some other engines that were nearly similar? We had other tank engines, but, as I have said, not so powerful or so effective.
308. You say that you had some engines not exactly similar, but that you had some other engines which you mean to say were nearly similar? We had some suburban tank engines, but these were more effective and stronger. As to the engineering differences between the two ——
309. I am not going into the engineering differences—I am asking you if you had any other engines nearly similar to these? I cannot say of my own knowledge.
310. When was that order given? In August, 1890.
311. What time was allowed for the delivery of these engines? I have not got the dates.
312. You cannot say? No.
313. Are they delivered? Yes.
314. All of them? I think they are all delivered.
315. What was the next order given? Fifty passenger engines.
316. What was the number of their class? They were what are called express engines.
317. Can you give me the number of their class? No; I do not know the number of the class.
318. Were tenders called for them? Certain firms were asked to tender.
319. Then public tenders were not called—that is to say, these engines were not advertised as open for public tender? I do not think they were.
320. But I presume, in this case, as in previous cases, you have mentioned instructions were sent home to call for tenders from certain firms? To ask certain firms for quotations.
321. And were the certain firms in this case identical with the certain firms mentioned in other cases? In this case the firms communicated with were Beyer, Peacock, & Co., Dubs & Co., and Neilson & Co.
322. And who got the order? Beyer, Peacock, & Co.
323. At what price per engine? £3,650 each.
324. What price did the other firms spoken of offer to supply the same engines at? Dubs & Co.'s price would be £3,460.
325. And Neilson & Co.? I do not think the price was quoted to us, but Neilson's design was not recommended.
326. Neilson & Co. gave no price so far as you know? They gave a price, but their design was not recommended. [*Witness here referred to his notes.*] I find that Neilson did give a price, namely, £3,550.
327. Then I understand you to say that Neilson's design was not approved of? Yes; it was not recommended.

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328. That is, I suppose, by the Agent-General? Well, the recommendation came from Mr. Thow, our Locomotive Engineer, who was in England at the time and knew our requirements.
329. Mr. Thow, I believe, is the Chief Mechanical Engineer, is he not? Yes.
330. That is the office that used to be termed the Locomotive Engineer? Yes.
331. Can you give me the reasons for the change of terms? I do not think I am called upon to give reasons.
332. I wish to know if you know why the appellation was changed?
333. *Mr. Eddy.*] I fail to see what the question has to do with the matter in hand, which is a distinct charge against myself of fraudulently expending a large sum of public money.
334. *President.*] It seems to me that the question is irrelevant. What have we to do with the change of name?
335. *Mr. Schey.*] The witness had only to answer the question, yes or no, your Honor.
336. *President.*] We rule that it is irrelevant.
337. *Mr. Schey.*] Very well, your Honor, I will allow the question to go. Now, Mr. McLachlan, on whose design were these engines ordered? They were ordered in accordance with the design of Mr. Thow, consulting with our advisers at home, according to the usual practice.
338. I did not ask you about the usual practice. Kindly tell me what I ask you—Whose design were these fifty-eight engines made to, that is those by Beyer and Peacock for passenger service? Mr. Thow.
339. With certain advice? I take it he would consult our advisers at home. I am not certain, but I expect that he would.
340. Mr. Thow drew the designs for these engines? Mr. Thow was largely responsible for them.
341. And he had certain advisers acting with him in designing these engines? Yes.
342. Who was associated with him in designing these engines? I cannot give any names.
343. You cannot say? No.
344. But he had some advice from persons whom you say you do not know in the work of designing them? Well, I take it he consulted someone.
345. *Mr Eddy.*] I must protest against the manner in which Mr. Schey is conducting the examination. He is trying to make the witness responsible for statements he cannot possibly make with certainty. If he was not in England he cannot possibly know what Mr. Thow did, and is not in a position to speak as to the instruction Mr. Thow had from the Commissioners themselves.
346. *Mr. Schey.*] I am simply trying to extract from the witness information which he is in possession of. I may say that I intend to call Mr. Thow as a witness here, and we shall then be able to obtain evidence as to the mechanical differences in the construction of these engines.
347. *President.*] I will point out that we have nothing to do with the mechanism of these engines or their suitability for the work they had to do. The only question is whether they were obtained without tenders being called.
348. *Mr. Schey.*] I submit, your Honor, that I have not asked any questions dealing with mechanical details at present.
349. *President.*] I think it would be better to pass over that matter about consulting the engineer at home at this stage.
350. *Mr. Schey.*] But your Honor, I may point out that in this specific charge you call upon me to deal with the doings of a certain ring which is mentioned in the charge, and I submit very respectfully to your Honor that evidence with regard to persons who have been the means of advising the purchase of certain engines, may be perfectly pertinent to the charge I am called upon to deal with.
351. *President.*] The questions you have been putting to the witness were with regard to the designs of these engines.
352. *Mr. Schey.*] No, your Honor, my question was as to who had been associated with Mr. Thow in designing them.
353. *President.*] Associated with him as to designs! We have nothing to do with designs. Where is there anything stated in the charge about the designs of the engines?
354. *Mr. Schey.*] Your Honor will permit me to say. If these persons, or any other persons, had given their influence, or had given their assistance towards making the designs go in certain directions for a certain purpose the names of those persons, who have so assisted or used their influence, must, I take it, be pertinent to this inquiry without going into the question of design at all. However, I will waive the question. I have no desire to go into that.
355. *President.*] Very well, Mr. Schey, we will not press that point further.
356. *Mr. Schey.*] Will you kindly explain, Mr. McLachlan, what you mean when you say that Neilson & Co.'s design was not approved of in the face of the fact that Mr. Thow designed the engines for which tenders were called? I am simply quoting from the cable message we had at the time that Neilson's design was not approved of.
357. That is not what I asked you. You have stated in evidence that Neilson's design was not approved of. You have also stated in evidence that Mr. Thow designed the engines upon which these firms were asked to give a price. Now, if these firms were asked to give a price on specifications and designs drawn by Mr. Thow, how can you say that Neilson's design was not approved of, seeing that Mr. Thow himself drew the design? There may be some little technicality which Mr. Thow would best be able to answer. But that was the purport of the cable we had from him, that Neilson's design was not approved of.
358. Then what was the position? If Mr. Thow designed the engines, and tenders were asked for from three firms, that would be one way of doing it. If on the other hand each firm tendered on their own design, and of the number one or two were recommended and one was rejected then in that case it would not be correct to say that Mr. Thow designed the engine? They are always certain parts in connection with an engine which individual manufactures may make a specialty of—Beyer, Peacock, & Co. I believe do.
359. Then Mr. Thow reported against Neilson & Co., for the reason that the designs furnished with the tender were not to be recommended? He could not recommend Neilson's design.
360. Then I am right in saying that Neilson & Co. put in a design which Mr. Thow refused to recommend? Neilson & Co. had all general particulars from Mr. Thow.
361. *President.*] You can get all this information from Mr. Thow himself.
362. *Mr. Schey.*] Very well, your Honor. (To witness): Then at the same time two prices were received, namely, from Dübs & Co. and Beyer, Peacock, & Co? Three prices were received. 363.

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363. I have already discarded one, as you say the designs were not approved of. There were two prices left? Yes.
364. That is Beyer, Peacock, & Co. and Dübbs & Co.? Yes.
365. And there was a difference of nearly £200 per engine on the whole of the fifty engines between the two prices, was there not? About £100 I think it was I gave you.
366. You gave me the prices Beyer and Peacock £3,650 and Dübs & Co. £3,460. There would be a difference of £190 in each engine? Yes, about that, I have not worked it out.
367. There would be a difference between the two prices of £9,500 in the two lots? I have not worked it out.
368. As a matter of fact there is £190 difference on each engine of the fifty? Yes.
369. And that makes a difference of £9,500 on the whole lot? Yes.
370. And these two prices were sent forward, the other being rejected because of the design? Yes.
371. And Beyer, Peacock, & Co. got the contract at the higher price? They got the order.
372. At the high price? Yes.
373. What was the next lot of engines? Twenty mineral tank engines.
374. Were tenders called for these? We had prices from different firms.
375. Kindly answer the question;—were tenders called for these engines? Not that I am aware of. I presume the contractors were asked to give a price. We had prices.
376. That is in the same way as the previous case—instructions being sent for certain firms to be asked to furnish prices? Yes.
377. What firms were asked to give prices in this instance? I believe it was limited to Dübs & Co. and Beyer, Peacock, & Co.
378. What price did these two firms offer to supply these engines at? Dübs & Co.'s price at home was £2,250.
379. That is free-on-board in London? Yes; or rather Glasgow, it would be.
380. And Beyer and Peacock? Their price was £2,400.
381. Who got the job? Dübs & Co.
382. What is the date of the order? It would be the end of October, 1890.
383. Have those engines been supplied? Yes; I think we have received all of those engines.
384. Have you the time there in which they were to be supplied? No; the delivery was to commence in July, 1891, and I think they were to be delivered at the rate of five a month after that.
385. Who designed those engines? Mr. Thow.
386. Now what is the next lot? The next lot is twelve ten-wheeled passenger engines from the Baldwin Company of America.
387. Were these engines tendered for? Of course we got a price from the Baldwin Company.
388. *President.*] Are these the Baldwin engines? Yes, your Honor.
389. *Mr. Schey.*] You did not advertise for tenders for these engines? No.
390. Was any other firm asked to tender? No; these are a speciality of the Baldwin firm.
391. Is there no other firm in the world that makes these engines? Not under the conditions we wanted them at the time.
392. Then no other firm was asked to give a price? They were ordered from the Baldwin Company.
393. I am not asking you that. I am asking you whether any other firm of manufacturers was asked to give a price for these ten engines? No.
394. What price was paid for them? I think the price was 15,000 dollars per engine—a little over £3,000 each.
395. And who recommended these engines to be procured? The Commissioners procured these engines.
396. They decided to procure them? Yes.
397. Can you tell me what the Commissioners had before them when they decided to procure these engines? They had the report of officers and a good deal of information from America. I do not know whether I should answer for the Commissioners altogether. I know they had reports from responsible officers in addition to information from other sources in America.
398. Was the price ascertained before the order was despatched? Certainly.
399. How was it ascertained? Through the local agent, by cable.
400. The agents are Towns & Co., I believe? Yes.
401. And it was through them that the order was sent? Negotiations were conducted through them.
402. And the price was cabled out before the order was given? Yes; we had the price, I think, before the order was given.
403. You obtained it by cable? Yes; we knew the price, certainly.
404. On whose specification was it obtained, and was that sent to America? We asked for similar engines to some that were already built by the Baldwin Company.
405. You asked, in fact, what it would cost to supply engines like such-and-such another a class of engine? Yes; and we got a price from them in that way.
406. And having got a price by cable the engines were ordered? Yes; after some negotiations.
407. When were they ordered? September, 1890, was the date, I think.
408. And when were they supplied; extending over how many months? They all came out at once. They arrived in Sydney in July, 1891.
409. What was the next lot of engines ordered? The next were twenty consolidation goods engines.
410. Were tenders called for those? No; they were obtained from the Baldwin Company.
411. They were obtained without tender from the Baldwin Company? Yes.
412. At what price? $17,750·00.
413. What was the date of that order? December, 1890.
414. And when were they supplied? I think they arrived in September, 1891. I am speaking from memory, but I think that was about the date.
415. Did they all arrive together, too? Yes; they all arrived together.
416. And in this case also no other firm was asked to give a price? We obtained them direct from the firm. It was a speciality of the Baldwin Company.
417. In this case did you obtain the price before the order was given? I think we did.
418. Cannot you say for certainty; are you not the custodian of the records containing all this information? Yes; I think we did get a price before the order was given.

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419. Are you not quoting from departmental documents, and cannot you be positive on the point? I am quoting from documents, but I have not all the facts here.
420. You believe a price was obtained for these engines in a similar way to the last lot, and that no other price was obtained? Yes. So far as I am aware, the Commissioners had the whole of the facts before them, together with the price, before they ordered the engines.
421. What was the next lot of engines you got? That comprises the whole lot; I have given you the total number ordered.
422. I would like to ask that the documents that you have been quoting from may be handed in, and form part of the record of these proceedings? I can hand a copy of it in.
423. *President.*] What is the document called?
424. *Witness.*] "Locomotives ordered and received since Railway Commissioners took office."
425. *Mr. Schey.*] I should like to have it put in at once?
426. *Mr. Eddy.*] Mr. Smith has gone to see if he can get a copy, your Honor.
427. *Mr. Schey.*] But I would like to have that copy which the witness has been reading from?
428. *Witness.*] This copy contains some notes in writing also, as to the position of the official papers; but I can let it go in. [*The document was then marked as an exhibit.*]
429. *Mr. Schey.*] Then what you want to say is this, that since the present Commissioners took office there has been 164 engines ordered from all sources? Yes.
430. And that in all cases no tenders have been called for any of them beyond what you have stated that in certain instances, certain firms whom you have specified have been asked to furnish quotations? I should call that tendering, seeing that you go to most of the responsible builders in England.
431. I do not care what you call it, I am simply asking the question.
432. *President.*] You need not go over this evidence again, Mr. Schey, as it is all being taken down by the shorthand writer.
433. *Mr. Schey.*] Now, Mr. McLachlan, I believe you prepare the answers to questions that are asked in the Legislative Assembly for the Legislative Council concerning railway matters? I have a good deal to do with the preparation of answers to questions.
434. There have been questions asked from time to time relative to the supply of locomotives? Yes.
435. Would you kindly produce the questions and answers as they have been asked in Parliament?
436. *President.*] I think Mr. Schey you are travelling to another charge which says, "That the reports and returns furnished by the Railway Commissioners and placed before Parliament from time to time do not always contain a true statement," &c. We are not going into that now.
437. *Mr. Schey.*] No, your Honor. I have no intention of going into that charge. What I want to get out in evidence are certain questions that have been asked concerning locomotives, and certain replies that have been returned thereto.
438. *President.*] What have we to do with that in this inquiry—how is it pertinent? You see we cannot let you travel over all sorts of fancy matters. You must be kept strictly to the charge in question. You cannot travel outside of it. If you can show that this question is pertinent to the charge you may ask it.
439. *Mr. Schey.*] I estimate it pertinent, your Honor, but if there is any objection to it I will not put it. (To Witness): Now we have dealt with locomotives, strictly speaking, for railways. Have there not been locomotives ordered for the tramways? We call them motors.
440. Call them what you like. However, there have been certain engines ordered for the tramways? Yes.
441. Kindly give me what information you can concerning them? We have ordered two lots since the Commissioners took office.
442. Can you tell me who they were ordered from? We ordered one lot of Vale & Co., Auburn, and another lot I think was ordered from the Baldwin Co., who had made all previous motors since we started the tramways.
443. Can you tell me how many motors were ordered from Vale & Co.? Twelve, I think.
444. And how many from the Baldwin Co.? I believe fifteen.
445. Were tenders called in either case? Yes; I think we got tenders for those made by Vale & Co.
446. Will you kindly produce the tenders and copy of the advertisement calling for tenders? I will supply information regarding all these matters if desired.
447. Now, in relation to those engines obtained from the Baldwin Company, were any tenders called for those? No.
448. They were ordered direct? They were ordered in the same way that other motors we have on the tram-lines have been ordered.
449. *Mr. Schey.*] I was not asking that. I submit, your Honor, that the witness is giving his evidence in a way that favours the other side.
450. *President.*] How does this evidence favour the other side? He says that the motors were obtained from this Company in the same way as other engines that were ordered for the trams.
451. *Mr. Schey* (to Witness).] At all events they were ordered without tenders being called from this Company? Yes.
452. At what price? I am speaking from memory. I think about £1,200 each. But I can get the exact prices in detail.
453. Now, can you tell me what number of locomotives were supplied to the order of this Government for the four years preceding the taking of office by the present Commissioners? I do not recollect the number, but I can get you all the facts.
454. You will prepare that information? Yes. [*Mr. Eddy here handed the paper to the witness referring to the rolling stock.*]
455. *Witness.*] I have a statement here showing that 160 were ordered in five years.
456. *President.*] That is the five years preceding the appointment of the present Commission? That is so, your Honor.
457. *Mr. Schey.*] Does that statement also show where they were obtained from? No.
458. Will you obtain that information for me also? Yes.
459. There have been a number of papers, have there not, laid upon the table of the Legislative Assembly from the Railway Department relating to the various engines and tenders connected with them?

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them? That is rather a wide question. If you will give me an idea of what papers you refer to, I may be able to tell you.
460. I want all the papers presented from time to time to Parliament by the Railway Department referring to the supply of locomotives.
461. *Mr. Eddy.*] I would submit that it is for Mr. Schey to put in these papers. They have been placed before Parliament, and whatever he wishes to put before the Commission should be done by himself.
462. *President.*] Do you mean papers not in possession of the Commissioners?
463. *Mr. Schey.*] I mean, your Honor, all papers presented to Parliament in connection with the subject.
464. *Mr. Eddy.*] If he wishes to produce any particular papers before this Commission, there are printed papers which have been before Parliament, and which he can produce with the greatest ease.
465. *President.*] You can get these papers from the Parliamentary offices, Mr. Schey.
466. *Mr. Schey.*] Will it be necessary for me to produce witnesses from Parliament House, or if I obtain the documents can I produce them myself, and put them in.
467. *President.*] Well, subject to any objection that may be taken to them, you can do that so far as I can see at present.
468. *Mr. Schey* (to Witness).] Can you tell me how many locomotives there were belonging to this Government when the Commissioners took office? I think we had 428.
469. And how many tram motors? About 88 tram motors.
470. Now, can you tell me how many engines there were awaiting repairs at the time the Commissioners took office? I cannot.
471. Can you obtain that information? I think it can be given.
472. And you can give me the number of engines, and the estimated cost of repairs? We have not the estimated cost of repairs.
473. Now that the work has been done, I suppose you will be able to give me the actual costs? I do not think the accounts are sufficiently clear to show that against the individual engines.
474. *President.*] What have we to do with the cost of repairing engines—how does it come into this inquiry.
475. *Mr. Schey.*] I think it is exactly pertinent to the matter in hand your Honor.
476. *President.*] In what way.
477. *Mr. Schey.*] In a variety of ways your Honor. I am only assuming a case; but supposing, as a matter of argument, that it could be shown that these engines might be repaired at a certain cost, and that instead of their being repaired they were stowed away somewhere, and left without the necessary repairs.
478. *President.*] That is not the question you were asking. You were asking the witness the actual cost of repairs. It has nothing to do with the case.
479. *Mr. Schey* (to Witness).] Can you tell me how many engines there were awaiting repairs on the 31st March, 1892? I can get you the information.
480. You cannot tell me now? No; I cannot tell you now.
481. Can you give me a statement showing the number of engines proportionate to miles of railway that there are upon the various railways in this Colony and other countries.
482. *Mr. Eddy.*] I am really at a loss to see how that question has any bearing on the charge against me as one of a ring of swindlers.
483. *President.*] That point is not reached yet Mr. Eddy. The first part of the inquiry is that engines were ordered without tenders being called and without any necessity on the ground of urgency.
484. *Mr Eddy.*] I submit, sir, that Mr. Schey has not yet asked a question pertinent to that point. If he had asked the witness as to the necessity on the ground of urgency he could have given evidence on the subject, instead of which Mr. Schey entered into the general question on the cost of repairs.
485. *President.*] That we have ruled as inadmissible. But the question Mr. Schey is now asking is,—how many engines were awaiting repair on the 31st of March, 1892?
486. *Mr. Eddy.*] And I submit that that has no bearing on this question. Then as to the question with regard to the number of engines proportionately to miles of railway, I have been in common with railways where you have twenty times as many engines proportionately as you have here.
487. *President.*] That is rather as to the weight of the evidence than as to its admissibility. I think you can go into that evidence, Mr. Schey.
488. *Mr. Schey.*] My point is that engines have been ordered which were not required, and I wish to illustrate this by a comparison between the proportion of engines to miles of railway in this and other countries;—now, Mr. McLachlan, I wish to know if you can show me the difference between the number of engines on the railways in this Colony and other countries? I daresay I could compile the information from books on the subject. I cannot give it to you of my own knowledge.
489. *President.*] You can refer to books of reference; but I do not see that this witness could give as his evidence what some one else has said in a printed book.
490. *Witness.*] So far as the mileage of railways is concerned that has no bearing upon the number of locomotives required. The question is rather how much work each engine has to do.
491. *President.*] If the witness knows of his own knowledge matters of the kind in connection with other countries, he can say that; but he cannot say what some one else has said in a book
492. *Mr. Schey.*] I think, your Honor, that until I get possession of the various papers I have asked for I shall not be prepared to go any further with my examination.
493. *President.*] Very well, Mr. Schey, as it is now 4 o'clock the Commission will adjourn until 11 o'clock to-morrow.

TUESDAY,

TUESDAY, 10 *MAY*, 1892.

[*The Commission met at* 11 *a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

JOHN YOUNG, Esq., J.P. | ALEXANDER KETHEL, Esq., J.P.

494. *Mr. Schey.*] Before proceeding with the examination of witnesses, your Honor, I have to intimate that it has become necessary to make an application to you as to the sittings of the Commission. I beg to hand to you, as a matter of intimation, a publication in which a notification appears as to the conduct of the business of an association by which I am employed.

495. *Mr. Eddy.*] I beg to object to this unless it is made on oath or stated by affidavit.

496. *President.*] I must first hear what Mr. Schey has to say. I do not know what the nature of his application is at present.

497. *Mr. Eddy.*] He is proceeding to read from a paper Mr. President.

498. *President.*] Yes, but he has not yet stated what the nature of the application is.

499. *Mr. Schey.*] Your Honor, the application relates purely and solely to the sittings of the Commission, and has nothing to do with the subject matter of this inquiry. I have already intimated to your Honor that I am employed by the Railway and Tramway Association—as a matter of fact, I am secretary and treasurer to the Railway and Tramway Employees' Association, and the rule of that Association is that I should attend at their office from 9 o'clock in the morning to 5 in the afternoon, but in view of the powers of this Commission and the necessity of this sitting, the Association granted me permission to attend here whenever the Commission might choose to direct my attendance. It now becomes necessary for me to draw your Honor's attention to the fact that the annual conference or meeting of delegates of this Association is about to take place in Sydney, and that the date has been fixed, with which I have had nothing whatever to do; in fact, the date is fixed by rule, and is the same each year. The meeting consists of delegates drawn from all parts of the Railway Service, and the notice states that the annual general meeting will be held in No. 17 room of the Temperance Hall, Pitt-street, Sydney, on Monday, 16th May next, commencing at 10 a.m., and the meeting is to sit for three days. As I have said, I am in no way responsible for the conference sitting at this particular time, but, as I am secretary for the Association, it is impossible for that meeting to take place without my presence, as I am the custodian of all the business and papers of the Association. In fact, my presence becomes more absolutely necessary now, if possible, from the fact that I am just about to leave the service of the Association. I should also point out that a large number of accounts and returns in connection with the business of the Association have to be prepared for discussion at this meeting, and, as permanent secretary of the Association, I have to prepare all these documents. I was not prepared for this Commission to sit from day to day, especially for so long a time as four hours each day. I have now to ask your Honor to be good enough to so arrange the sittings of the Commission as that I may be able to attend the conference of the Association. I have to crave your indulgence to that extent. I was instructed to bring the matter before your Honor, so that if your Honor could not see your way to grant me this concession in view of my peculiar position, some endeavour might be made to arrange for the meeting of the conference to take place on a future day.

500. *President.*] On what date do you say the conference is to be held?

501. *Mr. Schey.*] It will commence at 10 o'clock on Monday morning next, and will probably last for three days, sitting from 10 to 5 each day.

502. *Mr. Eddy.*] I would respectfully point out that this inquiry must be of infinitely greater importance to the country than that a few of our Railway employees should meet to discuss questions which might as well be relegated six months hence as next week. It is highly desirable, I think, that this very important business should not be delayed.

503. *President.*] We will consider this point Mr. Schey, and give you our answer at 2 o'clock.

Mr. Hugh McLachlan further examined:—

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504. *Mr. Schey.*] You are already sworn, I believe? Yes, I am sworn.

505. Do you produce the papers asked for yesterday? I cannot produce all of them. I did not get a copy of the evidence until just as I was leaving the office, and, as I did not take a note of the requests made during my examination yesterday, it would take me some little time to get the papers. I have a paper here showing the number of engines supplied by different firms since the railways started. I can produce that.

506. *President.*] Is that from the very commencement of the railway system? That is from the very commencement your Honor.

507. *Mr. Schey.*] And the other papers you would produce later on? Yes.

508. *Mr. Schey.*] I beg your Honor to observe that as these documents are not in my hands, and as my previous application to be permitted to get them prior to this inquiry taking place was of no avail, it will be necessary for me to recall Mr. McLachlan subsequently.

509. *President.*] Certainly you can do that, although it is somewhat inconvenient. You see if you had asked for these papers on Wednesday last you would have had them to consider in the meantime, but you did not do so. However, Mr. McLachlan will produce these papers, and, when he does so, you can recall him as your witness.

510. *Mr. Schey.*] Now, Mr. McLachlan, will you tell me how many miles of railway were opened during the five years before the present Railway Commissioners took office? I can tell you without trouble, but not from memory.

511. Then you will produce the documents showing it. It is printed in the Annual Report of the Commission.

512. Will you tell me how many miles of railway have been opened since the Chief Commissioner arrived in the Colony? I will send you the information in one statement.

513.

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513. Will you tell me the date when the first engines ordered by the present Board of Commissioners were put into traffic? Yes; I could give you that, but of course I cannot speak from memory as to the particular date.
514. *President.*] It would be much better, Mr. Schey, if you would put down in writing the information you wish to obtain, and then hand the documents to Mr. McLachlan. He would then know exactly what to get. It is impossible for him to carry in his memory all the questions you are asking him now.
515. *Mr. Schey.*] It is a matter of great labour, considering the short time I have in which to prepare the questions.
516. *President.*] It would not take you five minutes to make a note of the questions you are asking now.
517. *Mr. Schey.*] Perhaps it would be as well for me to repeat what I said yesterday, that I want all the information relating to the locomotive engines, the date of their supply, when they came into traffic, the reports of railway officers upon any supply, and all papers relating to such transactions in the Railway Department, and to officers brought from England.
518. *Mr. Eddy.*] I submit, your Honor, the case before this Commission is that I, on my own personal authority, and without any grounds of urgency, placed orders for £500,000 worth of locomotives in England, at the instigation of a certain "ring," and without calling for tenders. I submit that the question of officers brought from England, the dates on which the engines began to run upon the line, and all questions of that sort, are totally irrelevant to this inquiry.
519. *President.*] Can we say that now? One of the questions raised in the charge under consideration is that the engines were ordered without any necessity on the ground of urgency. In order to determine the question whether there was or was not any urgency, I suppose one must ascertain what number of engines were in use, and what number would likely be required, and so on. I do not think I can stop Mr. Schey giving evidence upon that point.
520. *Mr. Eddy.*] I submit, sir, that he is not giving evidence. I submit that he made this charge against me, and should produce the evidence on which he made the charge. The fishing inquiry which he is upon at the present moment is not, I submit, dealt with under the terms of this Commission—that is, to inquire into the purity of my administration and my honor. Mr. Schey has deliberately charged me with doing certain things, and he is simply asking you now to order to be produced every paper in the department, practically. Broadly speaking, he says, "Let me have everything about so and so, and I will go through these papers to see if I can get something to bolster up this charge, which I made deliberately, stating that I had papers in my possession to prove it." Let Mr. Schey produce his papers and evidence, and on oath state his charge. He is afraid, on oath, to state his charge. It is simply a fishing inquiry from our own office.
521. *Mr. Schey.*] Will your Honor permit me to submit, as against Mr. Eddy's contention ——
522. *President.*] We think, Mr. Schey, that you ought to specify what papers you require. We do not think you ought to ask *in globo* for all the papers connected with the railways from their inception up to the present time. If you will specify what papers or class of papers you require, then the Commission will deal with it.
523. *Mr. Schey.*] Your Honor, if I were to specify the whole of the papers connected with the Railway Department from its inception up to now, it would be a large matter indeed; but I beg to point out that I am doing nothing of the kind. Your Honor has laid upon me the onus of producing proof of everything contained in these charges, and I was assured before the initiation of this inquiry, and since, that I should have every paper I considered requisite. I have now to say that I consider the papers I have spoken of are requisite to the making of my case, and I trust that you will order them to be produced.
524. *President.*] Then, Mr. Schey, will you put down in writing the papers you require, and submit the list to the Commission. We will then deal with it.
525. *Mr. Schey.*] May I ask your Honor, as a further direction, whether the list of papers should relate to this particular charge, or to the whole of the charges?
526. *President.*] To this charge solely. We are now dealing only with the second of the charges.
527. Mr. Schey having prepared a list of the papers he required to be produced, the list was handed to the President.
528. *President.* [*After reading the document, and consultation with his brother Commissioners.*] I think this list ought to be shown to Mr. Eddy.
529. *Mr. Eddy.*] I am here practically to answer very grave charges against myself, and I do not see why I should be called upon to produce papers that do not appertain to myself. For instance, take the first on this list: "To produce all quarterly and annual reports of the present Railway Commissioners." I do not see why I should be called upon to produce these, seeing that they are public documents.
530. *President.*] You personally are not called upon to produce any documents—it is for the department to produce.
531. *Mr. Eddy.*] Then take the fifth on the list "All reports of the Commissioners conferences since the present Railway Commissioners took office." I would point out that we have a number of confidential meetings with our officials, and they in their turn with their subordinate officers. These meetings are necessarily of a private character, such as can have no bearing on an inquiry of this kind, and I do not think such documents should be made public; but we will produce all the documents that are in our possession. A statement was made yesterday inferring that we had purposely kept back certain papers. All I can say is, we will do our best to produce all these that are asked for. They include a number of Parliamentary papers which Mr. Schey could himself obtain, but after what you have said, your Honor, I will not make any further remark upon it.
532. *President.*] We will consider this list, and give you our answer after we have made up our minds, Mr. Schey.
533. *Mr. Schey.*] If you will allow me, your Honor, I should like to suggest in connection with Mr. Eddy's remark about confidential documents; that there is no such thing as private documents on public business.
534. *Mr. Eddy.*] There is nothing in the papers I have referred to, sir, bearing upon the question now before you, that is my honor and integrity. That I can give you all assurance of.

[*Examination continued.*]

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535. *Mr. Schey.*] Can you tell me whether any particular period in the administration of the Railway Commissioners has been marked by a very large increase of traffic; and, if so, can you specify such a period? Yes, we have had a very large increase of traffic since the present Railway Commissioners took office. In fact, the increase has been fairly regular up to a quite recent date. In one year we had a very heavy increase.
536. Which was that? The year 1891 was a good year.
537. Will you tell me whether you remember the great strike that occurred in 1890? Yes; it commenced about August, 1890.
538. That is about the third quarter of the year? Yes.
539. During that time was there any special difficulty in obtaining the necessary coal for the railway? Yes; we had some little difficulty.
540. Is it not a fact that during that portion of the year a large quantity of the traffic was not carried—that is to say, a large quantity of the traffic which might in the ordinary course of events have been expected to go over the railways—that there was a block in fact, as a result of the labour strike? It did, to some extent, cause a block of traffic for a few months.
541. Did not the Commissioners complain of a falling off of traffic to the extent of £15,000 in one fortnight? For one fortnight the traffic was affected very largely.
542. That is to say, in consequence of the labour struggles referred to a quantity of the ordinary railway traffic was kept back? It did affect to some extent the state of the traffic.
543. Do you consider a reduction of £16,000 in one fortnight a slight reduction? I do not know that it was £16,000.
544. I am asking do you consider that amount would be a slight reduction? It would be a reduction of 12 per cent. on the week's traffic.
545. What do you estimate the ordinary traffic at that period of the year for one week? In August or September we get about £60,000 a week.
546. And this traffic which stood back afterwards flowed on to the railway? Yes; we got some of the traffic that had been kept back.
547. A large quantity of the wool traffic was blocked up country, I believe? I believe there was some wool delayed.
548. That would be brought to Sydney afterwards? Yes.
549. That is to say, the labour strike did not interfere with the supply of wool.
550. *Mr. Eddy.*] What has this to do with the charge against my honour and integrity. It seems to me that Mr. Schey is simply playing with the Commission.
551. *Mr. Schey.*] I submit, your Honor, that I am conducting the case, and must be allowed to conduct it in my own way.
552. *President.*] At the same time you must adhere to the charge you are called upon to prove, and not travel over extraneous ground.
553. *Mr. Schey.*] I have no intention of doing so. The interruption it is evident to me was made for the purpose of showing the witness the point I am trying to get at, and by that means to prevent me getting out the evidence I consider pertinent to the case. What I have to show is, that these engines were ordered without necessity on the ground of urgency.
554. *President.*] You can go on, Mr. Schey.
555. *Mr. Schey* (to Witness).] Then, as a matter of fact, this traffic which had been blocked in consequence of the strike did pass over the railway? Yes; we got a heavier traffic.
556. It was reported by the Railway Commissioners that a much larger traffic had taken place than before? Yes.
557. How many of the new locomotives had been delivered in December, 1890? I cannot say from memory. I may say, as a matter of fact, the strike had no effect upon them.
558. Can you tell me the total value of the locomotives imported by the present Railway Commissioners? The total value of the locomotives imported from England, exclusive of freight, was £365,000, as far as I can recollect.
559. I think you said yesterday that 164 locomotives had been supplied? I did not say that number had come from England.
560. I did not ask you as to whether they came from England.
561. *Mr. Eddy.*] I submit that this inquiry is with regard to £500,000 worth of locomotives imported from England, and that is the question to be inquired into by this Commission.
562. *Mr. Schey.*] I would point out, your Honor, that Mr. Eddy's interruption is directing the witness' attention to the evidence I am trying to get from him. I want the total value of the engines imported, because the sum specified is £500,000.
563. *Mr. Eddy.*] That is for engines imported from England alone.
564. *Mr. Schey.*] The charge does not say so.
565. *President.*] It does, certainly. The charge is that "£500,000 worth of locomotive engines were ordered from England."
566. *Mr. Schey.*] I was not aware that those words were included. (To Witness.) Taking from England, then you say the total value of locomotives imported was £365,000? Yes; that is about the value—that is the value to the manufacturers.
567. That it exclusive of any material for the construction of engines? That is the total value of the engines.
568. It does not include any boilers ordered separately? It does not include separate parts.
569. Nothing but the engines? No.
570. Now, having before you the prices at which locomotives have been supplied in the past, and since the present Railway Commissioners took office, will you tell me how the prices of the engines imported by the Railway Commissioners compare with the prices of those imported prior to their taking office? Well, if you take the prices from the time when the railways were started, it would be unfair to you, I think.
571. I am not asking that. Take the five years which you yourself specified in your previous evidence, before the present Commissioners took office, and the four years since the present Commissioners took office. I cannot give a nearer comparison than that, I think. Were the engines which have been purchased

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purchased by the present Railway Commissioners supplied at a higher price than those which were purchased during the five years previously? Well taking a fair practical test, that is the price per ton, the price paid by the Commissioners compares very favourably—in fact it is less than the price paid for some years previously.
571. That is at per ton? Yes, I think that is the only fair comparison you can make.
572. As a matter of fact, does not the number of tons in an engine depend largely upon the weight of material used in the construction? Certainly.
573. And there might be more tons of metal in an engine as compared with some other engine without it being really better. What I want to get at is this,—Supposing a firm were paid for making them at so much per ton, would not that be a temptation to put as much metal into the locomotive as they could? I do not know. If you go to a reputable firm and give them a specification it would be governed by the design.
574. If a person got £10 per ton for every locomotive he turns out would not that be a temptation for him to put in as many additional tons of metal as possible? Well, I do not think they would make a locomotive of 1,000 tons for example.
575. I do not suppose they would. What I am asking you is this,—If persons were paid by the ton for manufacturing these locomotives would it not be a temptation to them to put as many tons into the job as possible? I do not think an honest firm would do it.
576. You mean to say that every person supplying on such a tender would be honest? I did not say that. But as a matter of fact the Commissioners did not order by the ton. I simply wish to show in answer to your question that a comparison of the prices in that way was the fairest. I do not see how it affects the case.
577. Is it not a fact that there are very many different kinds of engines made, and different material used in their construction? To some extent, yes.
578. By which the weight would be materially altered? The design of the engine would be different.
579. I am not going upon that, I am dealing with the frame of the apparatus that carries the design—that could be constructed in two ways, in totally different ways in fact? Certainly.
580. Now then as a matter of fact the prices of the engines which have been ordered by the present Railway Commissioners were considerably higher than the prices of those supplied during the previous five years? No. As I said before they compared very favourably; in fact they were lower.
581. I am asking you the different prices of particular engines—were they higher or lower during the time of the present Railway Commissioners as compared with the five years previously? An eighty-ton engine will usually cost more than a forty-ton engine. We have been getting a heavier class of engine.
582. Engine for engine, taking them individually, were they, as supplied to the present Railway Commissioners, more costly than those supplied in the previous five years? I think they were slightly, because we got a bigger class of engine. For instance, the "Ophir" would cost more than one of the Manly boats.
583. Turning to your previous evidence I find that one lot of engines cost £2,780 each? Yes.
584. Were any engines supplied during the previous five years at so high a price as that? I cannot say from memory.
585. Another lot was supplied at £2,915 each. Were any others supplied at so high a price as that? I really cannot say from memory.
586. The Baldwin engines you quoted one lot at £3,000 and another lot, I think, at 17,500 dollars. Were any engines during the previous five years purchased at such a price as that? I do not recollect. I can see no comparison taking them engine for engine, as those imported during the present Commissioners' term of office had been much heavier.
587. *Mr. Schey.*] I think, your Honor, that until I have obtained the papers I have asked for I cannot proceed any further with Mr. McLachlan's examination.
588. *Mr. Eddy* (to Witness).] You were questioned yesterday by Mr. Schey in reference to your salary for some reason or other. Are you now performing the combined duties that were previously performed separately by the Secretary, Assistant Secretary, and Chief Clerk? Yes, practically.
589. And their joint salaries were? The Secretary had £1,000 per annum, the Assistant Secretary £650, and the Chief Clerk £500, making a total of £2,150.
590. And you have been performing the duties of these offices to commence with at £700 a year and at the present time £800? Yes.
591. You have been questioned with regard to the locomotives which have been imported from time to time, and a comparison has been drawn between the engines supplied before and after the present Commissioners took office. Is it not a fact that these heavy engines in nearly every case are doing the work of two? Yes, that is a fact.
592. The southern express, for example. It is practically every night worked by one engine through to Junee instead of by two? Yes.
593. Therefore, if you do give £500 or £600 additional on £2,600, you get a very good investment with such results? I should think so.
594. The price per ton as referred to is a short way at which we arrive at the conclusion as to whether we are paying highly or otherwise for an engine? Yes.
595. And as a matter of fact, comparing the engines purchased before the Commissioners took office and since, the price per ton comes out less for the engines which the Commissioners have purchased than for those which were purchased previously? Yes, at per ton.
596. Have you a return of the prices? I have a return showing the cost of locomotives imported from 1881 to 1887, and also since the Commissioners have taken office.
597. Now a charge has been laid against me that I have placed orders with certain combinations of persons or firms in England for locomotive engines at an expenditure of £500,000;—what is the total amount of money that will be paid to manufacturers of locomotives in England since the Commissioners have taken office? I have mentioned a sum, £365,000, exclusive of freight.
598. How much does the freight amount to? We estimate it at about £50,000.
599. Does that sum include the cost of the ten engines referred to here, and orders for which were sent to England prior to the Commissioners taking office? Yes.
600. If you deduct the cost of these engines what will be the amount of money that the Commissioners have paid into the pockets of the manufacturers at home? It will amount to £336,000.

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601. And not the £500,000 which I am charged with having expended? No.
602. Now, with regard to the placing the orders for these engines;—do not the whole of the negotiations pass through the Minister for Railways and the Agent-General, and were they not approved of by the Minister in every case? Yes; they passed through in the ordinary way from the hands of the Under Secretfry to the Treasurer.
603. In a printed paper that has been placed before you, you will see that it is a common thing for the Minister to express his approval of the transactions? Yes.
604. Was not the same practice always followed? Yes, I believe so.
605. With regard to the ordering of all these engines, I am charged with personally ordering them:—have they not all been ordered under the authority of the three Commissioners, and not by myself individually? Yes; the three Commissioners have always signed the papers for orders. At any rate they were always ordered by the three Commissioners.
606. And then you have passed them through the Treasury to the Minister? Originally the orders went to the Minister for Public Works who had control of the railways, and afterwards to the Treasurer for him to forward to the Agent-General.
607. And the replies came back through the same sources? Yes.
608. Not directly to the Commissioners? No.
609. Have you not a most intimate knowledge of the whole of the business conducted by the Railway Commissioners? Yes, I think so.
610. Do you know of any act of mine that would lead anyone to think I had used my position for the benefit of a ring or combination of persons or firms? Certainly not.
611. Who opens the correspondence of the department? I open all the correspondence when I am there.
612. And the correspondence in regard to questions of this sort not only comes openly to the Commissioners, but passes through the Agent-General, the Minister for the Department, and the Under-Secretary to yourself? Yes.
613. Now, Mr. Schey in Parliament used these words, between the night of the 9th March and the morning of the 10th March: "The ring of which I have already spoken——"
614. *President.*] I do not think we have anything to do with any speech in Parliament except in so far as it is embodied in the charge.
615. *Mr. Eddy.*] Very well, your Honor. (To witness:) If Mr. Schey said in Parliament that I was appointed at the instigation of a certain ring for the purpose of obtaining orders and making sure that the locomotives would be ordered from them, and that they got orders through the Chief Commissioner, and then subsequently that when a large order is transmitted to these firms by the following post and after the order has been received a cheque for the commission goes to the person by whom it was sent. If Mr. Schey has used these words, so far as you know they are devoid of truth? They are not true.
616. You have never seen any cheque in the shape of a bribe or for other improper purpose sent to me since I have held my present office? No, sir.
617. I have nothing more to ask the witness.
618. *Mr. Schey.*] Mr. Eddy has asked you a question if I used certain words. Do you know that I used such words? Well, I understand that *Hansard* is sworn to——
619. You understand from *Hansard* that I used the words that are imputed to me by Mr. Eddy? Yes.
620. Can you find them in *Hansard?* I do not quite know where.
621. *Mr. Schey.*] I beg to hand in a copy of the report and proceedings of the Legislative Assembly, dated 9th and 10th March, 1892, and I will ask the witness——
622. *President.*] You cannot put that in.
623. *Mr. Eddy.*] I ask the witness a hypothetical question only.
624. *Mr. Schey.*] I am glad to notice that Mr. Eddy considers it a hypothetical question.
625. *Mr. Eddy.*] I wish to prevent any confusion arising on this point, your Honor. The date I gave applied only to one portion of the questions I put to the witness. I put a hypothetical case from two individual speeches.
626. *President.*] You can put a hypothetical question from *Hansard* just as well as you can in any other way. If there is any question as to whether the words alleged to have been used are in *Hansard* or not, if you refer to the passage you can settle the matter at once.
627. *Mr. Eddy.*] On the 9th and 10th of March there is a statement on which this Commission is founded with regard to the expenditure of £500,000. Then on the 29th September, 1891 ——
628. *Mr. Schey.*] May I ask that Mr. Eddy be permitted to read what he alleges is in *Hansard.*
629. *Mr. Eddy.*] I would rather put you in the box, and make you answer as to the truth of the words.
630. *Mr. Schey.*] I am compelled at this stage to raise an objection, your Honor. This inquiry is founded on a speech made by me on the 10th March, and Mr. Eddy now desires to put in a portion of a speech delivered some months previously, in order to show by the two extracts that I said a certain thing which I did not say in the speech which forms the basis of this Commission. I therefore raise the objection that it should not be admitted.
631. *Mr. Eddy.*] I take it that this Commission is appointed to make inquiry as to my honor and integrity.
632. *President.*] No; as to certain charges which are set forth in the Commission.
633. *Mr. Eddy.*] With all respect I submit that it is in regard to charges that a certain ring or combination of persons were responsible for my appointment to ensure that engines should be ordered from them.
634. *President.*] That is quoting from the speech delivered on the 10th of March, but you were going beyond that and quoting from a speech of September, 1891.
635. *Mr. Eddy.*] It is also stated that these firms ensured that orders should be given by some arrangement previously made to that end, and that "they obtained the order for the same through the said Edward Miller Gard Eddy." Mr. Schey also said that "when a large order was transmitted to these firms ——"
636. *Mr. Schey.*] I must point out, your Honor, that Mr. Eddy is now proceeding to quote from the very part I am objecting to.
637. *President.*] The complaint made by you, Mr. Eddy, was in respect of a speech made on the 10th March; you are quite entitled to deal with the speech made on that date, and ask any questions in connection

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connection with it, but you are now proceeding to go beyond that and quote from a speech made in September, 1891, with which this Commission has nothing whatever to do.
638. *Mr. Eddy.*] But, sir, I contend that if I had some arrangement made, as suggested, beforehand, it must have been of a corrupt nature; and I would point out that I did not take this action because this was the first time Mr. Schey had attacked me. I had put up with this sort of thing time after time, and treated it with contempt. Even with this particular speech of his I followed my usual custom, and did not read one word of it until I saw one or two leading articles on the subject, and then I thought it must be very bad, and I read it. Then I thought the time had come when something should be done. He charges me here that by some reason or other I had been induced to secure orders for certain firms—the motive, of course, must be a corrupt one—and that they ensured getting the orders, and that they got orders.
639. *President.*] That is the matter referred to in the speech of the 10th March; but as I have pointed out, you are asking to go into a matter contained in another speech, that of September, 1891, and that is not in the Commission at all—we have nothing at all to do with it.
640. *Mr. Eddy.*] Then may I ask, sir, that you will confine Mr. Schey to the statements made, and the papers in his possession. He is to be allowed all kinds of papers in the department by means of which he aims at bolstering up a case. I am only here defending myself.
641. *President.*] We have nothing to do with that, Mr. Eddy. The simple question is that you are referring to matters that do not come before the Commission at all, and we rule that you cannot go into those matters.

[*Examination continued.*]

642. *Mr. Schey.*] In answer to Mr. Eddy, Mr. McLachlan, you said that the gentleman who was Secretary for Railways before yourself had a salary of £1,000 a year? Yes.
643. Can you show the Railway Estimates laid before Parliament giving that appropriation ——?
644. *President.*] We cannot go into that, Mr. Schey. You must not waste the time of the Commission by going into these irrelevant matters.
645. *Mr. Schey.*] You Honor, Mr. Eddy has asked a question bearing on that point.
646. *President.*] I cannot help that. If you had raised an objection to the question at the time I should not have allowed it.
647. *Mr. Schey* (to Witness).] You have stated, in answer to Mr. Eddy, that these locomotives which have been imported since the present Commissioners took office were capable of doing the work of two of the other engines? I have said that they are doing the work done by two engines previously.
648. Then you are not prepared to say they are capable of doing the work of two engines? I say they are doing it.
649. What was the maximum number of vehicles that could be drawn by the engines supplied prior to the importation of those you are now speaking of? I would prefer not to give evidence on that point. I understand that you are going to call the Locomotive Engineer, and he can best supply you with technical information of that kind.
650. You do not know? I think it was twelve. The classes have been altogether altered. It depends upon the grade and everything else.
651. *Mr. Eddy.*] I object to this altogether, your Honor. The charge you are considering is directed personally against me, and has nothing to do with what particular engines can draw.
652. *President.*] I do not know that we can stop the examination at this point. It certainly seems to have very slight connection with the charge, but I suppose the object is to show that the engines which have been recently imported are not doing as good work as the old ones.
653. *Mr. Eddy.*] Well, your Honor, I submit that that has nothing to do with the inquiry before this Commission.
654. *President.*] It has a scintilla of connection, and therefore we will not shut the evidence out. You may depend upon it, Mr. Eddy, that evidence which, when the Commissioners come to consider it, has not much bearing on the case, will have very little weight with them.
655. *Mr. Eddy.*] I might as well be called to give evidence on a surgical operation as to ask this witness technical questions with regard to locomotive engines.
656. *Mr. Schey.*] Now, Mr. McLachlan, are you prepared to say that there were no engines capable of taking a maximum number of fourteen prior to the delivery of the engines imported by the present Railway Commissioners? What do you mean by that?
657. I mean under the same conditions as you spoke of the twelve? My knowledge is derived from the statements of the officers. I may say that I know very little of the practical working of the engines. They tell me, for instance, with regard to the last engines we got for the southern express, that previously it almost invariably took two to draw the same train, and practically we know they are doing better work than any we have had before.
658. Are you prepared to swear that there were not previously any engines in the service capable of taking the maximum number of fourteen trains? I have said that I do not know much of the practical working of the engines.
659. Will you tell me what is the load these engines ordered by the Commissioners are capable of taking? As I told you before, I know very little of their practical working.
660. Did you not tell Mr. Eddy that they were capable of taking double the load of the engines previously supplied? I said they were doing the work that two engines used to do.
661. Then how can you say you do not know what they can do? I asked you first as to the maximum power of the old engines as compared with the new, and then I asked you if you knew what loads the new engines were capable of carrying, and you say you do not know; yet in answer to Mr. Eddy you said they were capable of doing double the work of the old engines.
662. *President.*] I think, Mr. Schey, you are carrying this line of examination too far—it has practically nothing to do with the inquiry before us. You cannot carry this examination any further.
663. *Mr. Schey.*] Very well, your Honor, I will proceed to another question. You spoke of communications passing between the Agent-General in England and the Minister for Railways, Mr. McLachlan, do you produce those communications? They are not in my possession.
664. You also said that the practice followed in ordering these engines was in accordance with the practice previously followed? Yes.
665. I believe you were in the office of the department sometime before you occupied your present position,

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position, and at the time when certain engines were delivered, just prior to the appointment of the present Commissioners? You are now referring to the Vulcan engines, I presume.
666. You were there when certain engines were delivered? Yes.
667. Are you aware whether a recommendation was submitted to the Minister for Works at that time, Mr. Lyne, to order the engines we are speaking of now, without tenders being called? No; I am not aware. I know that in this case you refer to—that is, the Vulcan engines—tenders were invited.
668. I am asking you this question—was any recommendation presented to Mr. Goodchap, the late Commissioner for Railways, or to Mr. Lyne, at that time Minister for Works, to order a considerable number of engines without calling for tenders? Recommendations may have been made, from the Chief Engineer and others, but I do not recollect it.
669. Do you remember that subsequently, when the late Mr. Sutherland came into office as Minister for Works, he had tenders called? I know that tenders were called, but do not recollect the particular circumstances attending it.
670. Then, although you have assurred this Commission, in answer to a question from Mr. Eddy, that the previous practice was followed by the present Commissioners in ordering locomotives, you are aware that tenders were called in a certain case immediately prior to the appointment of the Commissioners? You are giving one particular instance now. Allow me to explain. There were several lots of engines. For instance, we got tenders prior to the last mentioned from Beyer, Peacock, & Co. Recommendation was made by our engineer that we should get quotations from Beyer, Peacock, & Co., Dubs & Co., and the Vulcan Company, and the tender of Beyer, Peacock, & Co., was accepted. Before that, we got some passenger engines from Dubs & Co. When the engineer was at home he recommended that an order should be given for eight, the Minister approved, and an order was afterwards given for more. The recommendation in many cases was that we should perhaps ask certain firms for quotations, or perhaps call for tenders, or else order them direct from certain firms. The Minister approved or otherwise, and in that way it went through the same course as now—there were no secret measures or means adopted in connection with the locomotives ordered by the Commissioners. Everything was done in the usual course, and the same mode of procedure followed.
671. *Mr. Schey.*] I congratulate you on the amount of knowledge you have discovered, and which a little time ago you did not seem to possess.
672. *President.*] He has said exactly the same as he said before.
673. *Mr. Schey.*] You now remember that tenders were called for, because the Minister declined to order them without tenders being called? I have said I do not recollect.
674. Now, this lot of engines that were ordered prior to the Commissioners taking office were what are called Scotch Yankees? Yes. Allow me to explain again. Negotiations were in progress before the Commissioners came into office. Mr. Midelton represented that a number of engines were in a bad state of repair, and he recommended that the Baldwin Company should be given an order for ten engines at once, but it was decided afterwards to call for tenders.
675. Then, as a matter of fact, the Commissioners were only responsible to a small extent for the ordering of these ten engines? The letter and plans had gone home, but they pressed the matter when they came into office.
676. Will you tell me whether tenders were called for these engines? I think tenders were called; in fact, I know they were.
677. Mr. Eddy has asked you a question as to the opening of the correspondence in your department? Yes.
678. Are you prepared to say that you open all Mr. Eddy's correspondence? If a letter were marked confidential I should not, of course.
679. Supposing there were certain indications on the correspondence, showing that it was intended for the personal attention of the person addressed? Unless the letters were marked private, even if they were addressed "E. M. G. Eddy, Esq.," I should open them.
680. Do you open those marked private? No.
681. Then, as to your knowledge of Mr. Eddy's appointment, and the circumstances surrounding it, your knowledge must be ——
682. *Mr. Eddy.*] I submit, Mr. President, that Mr. Schey yesterday did publicly, before you, withdraw his charge about my appointment.
683. *President.*] Yes; but you, in your cross-examination, asked a question about your appointment.
684. *Mr. Eddy.*] Nothing about my appointment. This witness knew nothing about my appointment. I asked him nothing about that; it was about cheques.
685. The President asked the shorthand writer to refer to his notes. [*Note of Mr. Eddy's question translated as follows:* "Do you know of any act of mine that would lead anyone to think that I had used my position for the benefit of a ring?"]
686. *President.*] You are entitled to ask the question, Mr. Schey.
687. *Mr. Schey.*] The question is a very simple one; it is this: Your knowledge of Mr. Eddy's appointment, and the circumstances surrounding it, was very limited? Yes; very limited. It was a matter transacted by the Government.
688. *Mr. Eddy.*] I have nothing further to ask the witness.
689. *President.*] Who is your next witness, Mr. Schey?
690. *Mr. Schey.* I desire to call Mr. Eddy, your Honor.
691. *Mr. Smith.*] Mr. Eddy objects.
692. *President.*] We see no reason why Mr. Eddy should not go into the box the same as any other witness. If Mr. Schey thinks, after having established his case, so far as he has established it, that further evidence can be given by Mr. Eddy, he is entitled to put Mr. Eddy into the witness-box. If Mr. Eddy objects, as he has not been summoned, it will only put the Commission to the necessity of issuing a summons calling upon him to appear.
693. *Mr. Smith.*] If your Honor will permit me, it is solely a legal point. If these charges are true, then Mr. Eddy is liable to be prosecuted under the Railway Act for a misdemeanour, and I think I am right in saying that where a person is charged with a criminal offence he may have the right to give evidence upon his own part; but the plaintiff has no right to put him in the witness-box.
694. *Mr. Schey.*] I understood, your Honor, that Mr. Eddy was not to appear by counsel.
695. *Mr. Eddy.*] I did not understand that, your Honor; but simply to give this man courage I adopted a certain course at the commencement of this inquiry. When, however, it is necessary for a legal point to be stated the case is different.

696.

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696. *President.*] I have heard the argument, Mr. Eddy, and I do not think there is anything in it so far.
697. *Mr. Eddy.*] I ask, sir, that Mr. Schey should be put in the box to answer certain questions that I shall put to him.
698. *President.*] You cannot dictate to Mr. Schey as to the way in which he is to prove his case. It is impossible to proceed in that way, putting one person into the box instead of another. Mr. Schey must conduct his case in his own way, subject to any objections the Commission may take as to the line of examination he adopts.

[*Mr. Eddy then entered the witness-box.*]

699–700. *Mr. Smith.*] During the time Mr. Eddy is in the witness-box, with your Honor's permission I will represent him here, to take objection to any questions that may not be fairly asked. Otherwise the position will be this; that Mr. Eddy, in a case in which a criminal charge has been brought against him, will have no one to take objections on his behalf, as he cannot do so himself while he is in the witness-box.
701. *Mr. Schey.*] In answer to the solicitor for the department, may I ask am I not in the same case?
702. *President.*] In which case?
703. *Mr. Schey.*] If Mr. Eddy has no person here, unless he is represented by Mr. Smith to take objections to any questions that may be asked, I beg to point out to your Honor that I have no one to represent me, and that I shall have no one to raise objections to any questions that may be asked me. Therefore, Mr. Eddy would be in precisely the same position as myself.
704. *Mr. Eddy.*] Your Honor, I am charged by Mr. Schey with a criminal offence, and I therefore for that reason require some little guidance in the matter, although my actions are as pure as any man's in New South Wales. Mr. Schey's position is altogether different. He has wantonly charged me with a serious offence, and I have given him an indemnity against everything but a prosecution for perjury. Therefore, he does not want the protection that I require. But I leave myself completely in the hands of the Commission. I am sure that you will see that justice is done me.
705. *President.*] We think that Mr. Eddy while he is in the witness-box may be allowed to be represented by his solicitor. Of course, when Mr. Schey goes into the witness-box, if he does, he will be entitled to the same protection; that is to say, he can have his own solicitor here to represent him while he is in the witness-box.
706. *Mr. Schey.*] I have already pointed out, your Honor, that I am not in a position to take such a course.
707. *President.*] We have nothing to do with that.
708. *Mr. Schey.*] It seems to me, your Honor, that I am placed in a very unfair position with regard to Mr. Eddy. Your Honor will see at once that whatever was said forming the basis of these charges was said under the privilege of Parliament, and ——
709. *President.*] We cannot have that matter opened again Mr. Schey. We have dealt with that already. As I have said, if you wish to be represented by a solicitor if you go into the witness-box, you are at liberty to avail yourself of that privilege.
710. *Mr. Schey.*] Is it fair that I should be put to that expense your Honor? ——
711. *President.*] You will not be put to any expense that you do not voluntarily incur yourself. We will now proceed if you please.
712. *Mr. Schey.*] You are sworn, Mr. Eddy? Yes.
713. Will you kindly tell me what position you occupied in the London and North-Western Railway Company's service?
714. *Mr. Smith.*] I object to that question your Honor. If Mr. Schey was proceeding on the first charge, which has been abandoned, it might be pertinent, but it has, I submit, nothing to do with the second charge.
715. *President.* I understand that the question is merely in the nature of a preliminary question. It might be to ascertain the position Mr. Eddy occupied before coming out here, as to his efficiency.
716. *Mr. Smith.*] He may have been in any position. So far as I can see it has nothing to do with this second charge.
717. *President.* It is not as to the present charge simply. It may relate to Mr. Eddy's competency. It seems to me to be simply a sort of preliminary question generally put to witnesses, such as "what are you" for instance.
718. *Mr. Smith.*] It is an entirely leading question, I submit. For all I know he was never in that employ.
719. *President.*] Then why cannot you allow him to answer the question. You can ask the question Mr. Schey.
720. *Mr. Schey.*] Will you tell me what your last position was with the London and North-western Railway Company? Do you want to arrive at the last position I held in England before I came to New South Wales?
721. I think my question was very plain, I asked you what position you last occupied in connection with the London and North-western Railway Company? My position in the London and North-western Railway Company which is the largest Railway Company in Great Britain, was to take the general supervision of the outdoor working of the whole of the goods and passenger trains of that line.
722. And where were you stationed at that time? My headquarters were in London.
723. And your salary? I decline to answer the question.
724. *President.*] You cannot go into minute questions of that kind Mr. Schey. You may ask the witness what his relative position was, but you cannot go into the question of his salary before he came out here. You must adhere to this charge.
725. *Mr. Schey.*] When you left the London and North-western Company, under what circumstances did you leave? At the unanimous request of the Board of the Caledonian Company for me to go down to Glasgow to help them under great difficulties, the General Manager's health had broken down, and I assisted them in the position of Assistant General Manager.
726. You passed from the London and North-Western to the Caledonian Company? Directly, and for a short time had to carry out some of my own duties at Glasgow, in connection with the London and North-western Company.
727. *Mr. Schey.*] Is there not a strong connection between the London and North-western Railway Company and the Caledonian Company in Scotland? There is a close connection.

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728. In fact such a close connection that they run over each other's lines, and the officials are very close to one another in many ways? You make an assertion.
728½. I am asking a question.
729. *President.*] You cannot go any further with that question; it is wholly outside this inquiry. I am giving you as much latitude as I can, Mr. Schey, but there must be some limitation.
730. *Mr. Schey.*] Where is the London office of the Caledonian Company, Mr. Eddy?
731. *Mr. Smith.*] Is this Commission to be loaded with these geographical questions?
732. *President.*] We are of opinion that this evidence must cease. You cannot go any farther into the question of Mr. Eddy's prior position.
733. *Mr. Schey.*] If your will allow me liberty for one moment I will show you the relevancy of the matter.
734. *President.*] Mr. Schey, the only possible relevancy it could have would be in reference to the first charge, which was abandoned or discharged by you yesterday.
735. *Mr. Schey.*] Very well, you Honor. I will ask the witness another question which you will perhaps allow me to put. (To Witness): Is the office in the same building as that of the Agent-General of this Colony.
736. *Mr. Smith.*] Pardon me, I object.
737. *President.*] That is an admissable question.
738. *Witness.*] It is.
739. *Mr. Schey.*] And that address is ——? It is in Victoria-street. No. 5, Westminster Chambers, I think. I suppose it is sufficient for your purpose if I state it is in the same building as the Agent-General's.
740. Consequently you have been frequently in the same building with the Agent-General of this Colony, that is during your connection with the Caledonian Company? In reply to you inference I will answer you in another way. I was never in the office of the Agent-General for New South Wales until I was invited to go there in regard to my present appointment.
741. I will put it plainer. In the course of your duties in connection with the Caledonian Company you were frequently in the same building as the Agent-General, the office of your company being situated there? When I was in London on parliamentary work for the company I was daily in the office provided for the purpose.
742. In the same building? Yes.
743. How long were you in the service of the Caledonian Company?
744. *President.*] We have already held that you cannot go any further into the question as to Mr. Eddy's previous appointment.
745. *Mr. Schey.*] May I ask your Honor if a record is being kept of these objections.
746. *President.*] I presume the shorthand writer is taking a note of everything. It is his duty to do so.
747. *Mr. Schey.*] Well, I submit, your Honor, that these limitations are interfering very materially with my chance of proving my allegations.
748. *President.*] Not in the slightest. If your questions had the slightest pertinence to any of these charges we would be only too glad to listen to them; but the Commission will not listen to evidence which is wholly outside the matters they have to inquire into.
749. *Mr. Schey.*] Will you kindly tell me on what occasion you first made the acquaintance of Sir Saul Samuel? On my visit to England a few months ago.
750. Up to that time you had never seen or conversed with Sir Saul Samuel? I did not converse with him, and am not aware of ever having seen him anywhere in the world.
751. On what occasion were you first in the office of the Agent-General of this Colony? The first occasion was to see Sir Daniel Cooper in regard to my appointment as Chief Commissioner of New South Wales Railways.
752. Will you kindly give the date? I believe it was about the 5th June, 1888.
753. And on that occasion you attended by invitation? I did.
754. And might I ask what took place between you on that occasion—I do not want to know any private communication? My dear sir, there was no private communication—everything was open and above board. He put a business question to me, and I gave him a business answer. He asked me if I would accept the position of Chief Commissioner for New South Wales, and I told him I would do so on certain terms, those terms being that at the commencement I should receive a salary of £3,500 a year, leaving the question of increase open, or £3,000 for the first two years, and £4,000 a year for the remaining term of my office.
755. Those were not the terms under which you ultimately came here, were they? Yes; they were. It was not stipulated in the agreement, in which only £3,000 a year could be inserted, but the increase of the salary was to be left to the justice of the Government and Parliament, and Sir Daniel Cooper, in sending my agreement to the Government, drew special attention to that condition.
756. And at that interview did you make any stipulations that your name should not transpire unless you were finally appointed? Most certainly I objected to have my name mentioned in conjunction with any other name, and I stipulated also that if the appointment was not accepted by me my name should not transpire, as my position in England would not admit of my appearing to be in communication with regard to appointments for any other post.
757. Then we may take it that your name was in the mind of Sir Henry Parkes at the time when he said that a gentleman in England had been spoken of, but that he could not give the name unless the gentleman got the appointment? I did not know Sir Henry Parkes, and as I could not know what was passing in his mind at the time, I cannot answer your question.
758. Do you know Sir John Fowler, Consulting Engineer in England for this Colony? I do.
759. How long have you known him? I have known him by reputation since I was a boy. I came into personal contact with him about a year or two before I left England in connection with giving evidence before Parliamentary Committees of the House of Lords and the House of Commons.
760. And did you know he was Consulting Engineer for this Colony? I did not know anything about Sir John Fowler or New South Wales until my appointment was settled.
761. You have since become aware of the fact? Most certainly.
762. And Sir John Fowler is one of the persons, is he not, who consults about the supplies of locomotive material for these Colonies? He is our Inspecting and Consulting Engineer in England. 763.

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763. And he associates in that connection with Sir Saul Samuel, the Agent-General, or whoever may be Agent-General? He has to do his business in connection with the Agent-General.
764. How long has Sir John Fowler held that position? For many years, except for a temporary period, in which he did not do the work, but from the time of his commencing to the present time must be a period of, I think, fifteen or twenty years.
765. Long before your appointment? Yes; many years.
766. Had you any conversation or interview with Sir John Fowler on any occasion, concerning this appointment? I had no conversation or communication of any kind with Sir John Fowler on the question of my appointment until after I accepted the appointment.
767. And there was no reference or recommendation or document of that character bearing Sir John Fowler's name, amongst the papers which were submitted concerning your appointment to this Colony? I had no papers or recommendations or document of any kind regarding my appointment. My fitness for the appointment was ascertained from people beyond even your reproach. I was simply asked, "Will you accept the appointment?" I said, "No." Subsequently I was asked again if other terms would induce me to leave England, which I did not wish to do, and I then named my own terms. Therefore it did not require any recommendation or document, or anything else.
768. Do you object to state the names of those persons you have just referred to as giving this recommendation, and other matters? I do. Mr. President, am I not being tried on the number one count at the present moment?
769. *President.*] We think you cannot carry this line of examination any further, Mr. Schey. We have nothing whatever to do with Mr. Eddy's appointment in this inquiry. The first charge being abandoned.
770. *Mr. Schey.*] Is it a fact, Mr. Eddy, that during the period of your service in this Colony, you received an offer from some railway company in Great Britain to return at a salary supposed to be £4,000 per annum? I have had an offer from one of the largest companies at Home to return at a salary which would be to my advantage, as compared with the value of money here. I decline to answer any further questions on that subject. It was a private communication, and how it got into the papers and became public property, much to my annoyance, I am at a loss to understand. I decline to answer any further questions.
771. *Mr. Schey.*] The privacy of the communication may be gauged from the fact that I obtained my information from the public press. How it was communicated to the press is another matter.
772. *President.*] We have nothing to do with that in the present inquiry, Mr. Schey.
773. *Mr. Schey.*] May I ask, Mr. Eddy, what was the amount of salary offered to you?
774. *Witness.*] I decline to answer any question regarding it.
775. *Mr. Schey.*] I beg to show the relevancy of the question is this—that Mr. Eddy had an offer of £4,000 per annum made to him to return to Great Britain, while he was receiving only £3,000 a year here, and having in view the different value of money in the two places, and the wide difference in salary, I want to know the reason that induced Mr. Eddy to refuse so tempting an offer and stay in this Colony at a much inferior salary?
776. *Witness.*] The reason is this, Mr. Schey, that there is such a question as honor.
777. *President.*] We are clearly of opinion that the question cannot be put.
778. *Mr. Schey.*] At all events, we have had it from you, Mr. Eddy, that such an offer was made to you? You have not. I have made my statement in regard to the matter.
779. *Mr. Schey.*] I understood you to say that an offer had been made to you?
780. *Witness.*] I have stated all I intend to say on the subject.
781. *President.*] We have decided, Mr. Schey, that you cannot go into this line of examination at all, and we exclude all evidence upon the point.
782. *Mr. Schey.*] Very well, your Honor; but may I ask the witness why he communicated the fact of this offer to the press.
783. *Mr. Eddy.*] I did not. The information was cabled from England, much to my annoyance.
784. *President.*] As to this list of documents which you want to see, Mr. Schey, we will direct that the documents you have asked for should be produced, with certain exceptions. You ask for "all reports or returns of any kind from any officer of the Railway Department, or any other person, bearing upon, or having any reference to above subjects." We think these should be public reports only, and not private reports; then we think you ought not to be in possession of reports of officers' conferences since the present Commissioners took office. Those are confidential and private, and ought not to be seen; but all the other documents we will allow you to have.
785. *Mr. Schey.*] I can only say, your Honor, that I esteem that these documents which are objected to contain material evidence which I require. If you rule that I cannot have them I shall have to abide by it; but at the same time I must say I am deprived of certain evidence on the subject. (To Witness): Now, Mr. Eddy, will you tell me, please, what was the first intimation you received of there being a vacancy for the Chief Commissionership of the New South Wales railways?
786. *Mr. Smith.*] What has this question to do with the charge before the Commission, your Honor?
787. *President.*] We have already three times at least ruled that that line of examination is inadmissible; it has nothing whatever to do with the charge we are now trying.
788. *Mr. Schey.*] Will you tell me, Mr. Eddy, whether after your appointment as Chief Commissioner of the New South Wales Railways, a banquet was tendered to you in London prior to your departure for Australia?
789. *Mr. Smith.*] Really, Mr. President, I must again ask you if this question is relevant?
790. *President.*] It is the same line of examination, and we have already ruled that this line of examination is inadmissible.
791. *Mr. Schey.*] I want to ask this witness, your Honor, the names of the persons who were present at that banquet, because I consider that the names of the persons present have some relevancy to a portion of this charge; and I desire to show that certain remarks were made by those persons which I maintain are pertinent to the question at issue. For instance, I wish to ask the witness if it is not a fact that certain manufacturers' agents were present at this banquet?
792. *President.*] Suppose they were?
793. *Mr. Schey.*] Well, your Honor, that is what I want to ascertain; and I want to ascertain further whether one of those manufacturers' agents made the remark that perhaps when Mr. Eddy arrived in New South Wales he would be able to do something for them, viz., the manufacturers. I want to obtain

that

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that evidence, your Honor, and I submit that such evidence is pertinent to the issue. Of course, I must bow to your decision in the matter; but I beg to submit that I am not unnecessarily asking questions.
794. *President.*] We are all of opinion that this evidence is not admissible.
795. *Mr. Schey.*] You decline to allow me to ask the question?
796. *President.*] Yes.
797. *Mr. Schey.*] May I ask whether Mr. Eddy has any objection to answer such questions?
798. *President.*] We have nothing whatever to do with Mr. Eddy's objections one way or the other. The Commissioners themselves rule that the evidence is not admissible because it has no bearing upon the charge we have to consider.
799. *Mr. Schey.*] I am rather at a loss, your Honor, to know exactly how I am to proceed with these limitations. May I be permitted to ask the witness whether prior to the time he left London for this Colony, he met Mr. McMillan, our late Colonial Treasurer?
800. *President.*] Is that for the purpose of establishing a conspiracy between Mr. Eddy and Mr. McMillan; or what is the purpose?
801. *Mr. Schey.*] It should not be my province to state that there was a conspiracy—I do not take upon myself to state that.
802. *President.*] Who is the Mr. McMillan you refer to?
803. *Mr. Schey.*] Mr. McMillan, the partner in McArthur & Co., of Sydney, and the late Colonial Treasurer for New South Wales.
804. *President.*] Do McArthur & Co. supply engines?
805. *Mr. Schey.*] Not to my knowledge, your Honor.
806. *President.*] We rule that this evidence also is inadmissible.
807. *Mr. Schey.*] May I be permitted to ask the witness, your Honor, whether, on a subsequent occasion, he travelled with Mr. McMillan on a visit to New Zealand?
808. *President.*] That evidence also would be inadmissible.
809. *Mr. Schey.*] I trust you will have all these questions taken down in the minutes of evidence.
810. *President.*] I presume the questions have been taken down by the shorthand-writer, but we shall make no order in reference to them.
811. *Mr. Schey.*] I believe, Mr. Eddy, that some time last year you paid a visit to England, did you not? Yes.
812. And prior to leaving Sydney, upon that visit to England, a banquet was tendered to you in the Town Hall, Sydney? Yes.
813. At which the Mayor of Sydney presided? Yes.
814. And Sir Henry Parkes, then Premier of the Colony, also attended that banquet? Yes.
815. And made a speech complimentary to yourself thereat? Yes.
816. And in the course of that speech did he make use of the following words ——
817. *Mr. Smith.*] I object to this evidence, your Honor. If Sir Henry Parkes is required to give any evidence, or make any statement, he can be brought here; but I object to any evidence being made, either against or for Mr. Eddy, by some other person. Mr. Eddy can be asked as to what he did; but, as I said before, I object to any evidence being given, either for or against Mr. Eddy, by some other person, whether at the banquet or not. I object to this evidence also, because it has no relevancy whatever to the second charge.
818. *Mr. Schey.*] I trust your Honor will not allow these flimsy objections.
819. *President.*] They are not flimsy objections, they are objections to the relevancy of the evidence. We are not sitting here to receive irrelevant evidence, but only to receive evidence pertinent to the charge we have to determine.
820. *Mr. Schey.*] Will you permit me to show what I desire to maintain?
821. *President.*] Yes; I will allow you to do that. [*Mr. Schey having stated his argument.*] Do you, or do you not, contend that Sir Henry Parkes is a member of this ring you speak of?
822. *Mr. Schey.*] I propose to produce evidence, later on, your Honor, that Sir Henry Parkes had some communication with certain persons who may be termed a combination, or to whom the term "ring" might be applied; but I do not charge Sir Henry Parkes, here and now, with being a conspirator.
823. *President.*] Then, we have nothing whatever to do with Sir Henry Parkes being a member of any combination such as you speak of. We are only hearing a charge against Mr. Eddy, and, therefore, the evidence you are now tendering is wholly irrelevant.
824. *Mr. Schey.*] Mr. Eddy, some time after your arrival here, I believe that Mr. Thow, who was engineer of the Locomotive Department on the South Australian Railways, was brought here to make a report upon the state of the rolling stock of this Colony. Is that so? He was.
825. Will you tell me by whose means he was brought here? At the request of the Railway Commissioners.
826. Then Mr. Thow came here at the request of the Railway Commissioners? I have said so.
827. And Sir Henry Parkes did not suggest to the Railway Commissioners that Mr. Thow should be so brought? Sir Henry Parkes has never once during the period he was in power suggested, or interfered, in the slightest degree with the Railway Commissioners. He has most loyally abided by the Railway Act in its integrity.
828. *Mr. Schey.*] I must ask you now, your Honor, in view of the answer just given, to pardon me a slight digression. I admit that what I want to ask the witness is not relevant to the inquiry, but I want to show the credibility of his answer by asking another question. I think I shall be entitled to ask a question which will show ——
829. *President.*] Mr. Schey, you put Mr. Eddy into the box, he is your witness, and you cannot discredit your own witness.
830. *Mr. Schey.*] Tell me this, Mr. Eddy: some short time after Mr. Thow was engaged to make a report on the rolling stock of this Colony was he not appointed Locomotive Engineer to the New South Wales Railways? He was.
831. And that appointment was made by the Commissioners? Certainly.
832. Prior to Mr. Thow's coming here to make this report, at the request of the Railway Commissioners, what was the last occasion on which you saw him? Will you put your question again?
833. Prior to the time that Mr. Thow arrived in Sydney for the purpose of conducting the inquiry at the instance

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instance of the Commissioners, what was the last time you saw him, I mean to converse with him? I cannot say positively that I had ever seen him. When I landed in Australia, at Adelaide, he might have been one of the railway officers who then met me, but I am not certain. If he did not meet me on that occasion, I had never seen him or spoken to him.
834. But, Mr. Eddy, Mr. Thow was not a railway officer in New South Wales when you arrived? I said when I arrived in Adelaide.
835. Then you are not conscious of having met Mr. Thow in Adelaide? I don't remember that I did. As I said, I do not recollect whether Mr. Thow was one of those who met me on my arrival in Adelaide.
836. And you had never seen him in England prior to that time? Never.
837. And as a matter of fact Mr. Thow was a perfect stranger to you? Perfect.
838. At the time Mr. Thow was appointed Locomotive Engineer in New South Wales, were not certain questions raised as to his fitness for the position? By whom?
839. Well, in Parliament for instance? I am not aware.
840. *President.*] What have we to do with Mr. Thow's qualifications?
841. *Mr Schey.*] I want to go into Mr. Thow's relations directly. I mean his relations to certain other persons, and I want to ascertain from this witness—
842. *President.*] You are asking now what his qualifications are.
843. *Mr. Schey.*] Yes, but merely for the purposes of a subsequent question
844. *President.*] But it has nothing to do with a subsequent question, or if it has, the subsequent question will be irrelevant.
845. *Mr. Schey.*] Will your Honor permit me to ask the witness if he ever declared or made a statement to the effect that Mr. Thow was the ablest locomotive engineer in Australia? I believe we have made that statement.
846. And that statement was made at the time or immediately after his appointment? Yes, I think so.
847. On what evidence did you make the statement?
848. *President:* Really, Mr. Schey, this is carrying things a great deal too far; it has nothing whatever to do with this charge. Would you be good enough to refer to the charge which you are seeking to prove—you seem to have forgotten it altogether.
849. *Mr. Schey.*] Yes, your Honor, the second charge states, "That a certain 'ring' or combination of persons or firms mainly responsible for the appointment of the said Edward Miller Gard Eddy, as Chief Commissioner, had ensured that the said engines should be ordered from them." Now, I want to deal with this combination which is spoken of in the charge, and, in dealing with that, I want to ascertain the relation of Mr. Thow to certain persons, and the relation of Mr. Thow to Mr. Eddy, and of Mr. Eddy to these other persons. That is what I want to get at. I understand I have to establish the fact that there was a combination or "ring," because if I cannot establish that, then I cannot establish the action of any person, and as it is laid upon me to establish this fact that there was a "ring" or combination, I want to ascertain from the witness the relations of different persons whom I suppose, and have reason to believe, are concerned in this particular combination. This is what I am trying to do.
850. *President.*] I can only say that you are not doing it. The questions you have asked have nothing whatever to do with that point.
851. *Mr Schey.*] When Mr. Thow was appointed locomotive engineer, Mr. Eddy, certain recommendations, I presume, were made to the Commissioners on his behalf? None.
852. None whatever? No.
853. Was he recommended for the appointment? ——
854. *Mr. Smith:* Has this anything to do with the charge, your Honor?
855. *President.*] I won't stop it so far.
856. *Witness.*] We knew from the Railway Commissioners in South Australia that Mr. Thow had conducted the affairs of the Locomotive Department there in the most satisfactory way. For that reason we asked those gentlemen to allow Mr. Thow to make a special report upon our rolling stock. The way he conducted that work, the knowledge he exhibited, and the straightforward way in which he did his business, impressed us so much that when we decided to make a change with our locomotive engineer we came to the conclusion that there was no abler man in Australia at that moment for us to appoint to the position, and for that reason we accepted the responsibility of appointing Mr. Thow.
857. *Mr. Schey.*] At the time you made the appointment—mind I am speaking of the Commissioners—were you aware that Mr. Thow had any relations of any kind with Sir John Fowler, that he had ever been in his employ, or in the employ of Messrs. Beyer and Peacock, locomotive manufacturers? We made no inquiries of the kind, and no representations were made from any of these persons to us regarding Mr. Thow.
858. You are not an engineer, Mr. Eddy? I am not an engineer.
859. Neither of your colleagues is an engineer I understand? No.
860. Then, Mr. Eddy, considering the fact that you had no recommendation of any kind, that you had no references and no knowledge of Mr. Thow, on what grounds did you arrive at the conclusion that Mr. Thow was the ablest locomotive engineer in Australia, seeing that none of the Commissioners were engineers to judge of his qualifications? A general training of many years in connection with railway management, just in the same way as the first Lord of the Admiralty is a civilian. It does not require one to be an engineer to be able to judge of the capabilities of a man to be an engineer, when you have spent more than a quarter of a century in dealing with railway work.
861. How long were you in office as Chief Commissioner before you sent for Mr. Thow to make this inquiry? We had been in office a little over three months when we gave Mr. Thow his instructions. We came into office on the 22nd of October, and his instructions are dated 30th January.
862. And how long was it after that until he was appointed locomotive engineer? He was appointed locomotive engineer to the best of my recollection about the end of April or the beginning of May.
863. That would be about six months after you took office?
864. Who was Mr. Thow's predecessor in office as locomotive engineer? Mr. Midelton.
865. Why did you dispense with Mr. Midelton? Because we were not satisfied with his ability to carry on our work.
866. Is it not a fact that Mr. Midelton was well known as an engineer recommending American types of engines? I would rather not discuss Mr. Midelton's abilities. I must ask you, Mr. President, whether it is relevant to the inquiry to discuss the merits of Mr. Midelton?

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867. Is it not a fact that Mr. Midelton had the reputation of being——
868. *President.*] We consider that this question of the fitness of Mr. Midelton is one altogether beside the inquiry.
869. *Mr. Schey.*] Your Honor, I am not going to ask as to Mr. Midelton's fitness for office, I am only going to ask the witness whether it was known to him that Mr. Midelton was a person who had an anti-Beyer and Peacock tendency. I only want to get at his qualifications in this respect. My point is that Mr. Midelton is a person well known as being against the persons who were supplying engines to the Commissioners, and these persons, in my view, are those who have very successfully managed to obtain a large share of the orders for locomotives. You will see the relevancy of it at once, your Honor. (To the Witness): Is it not within your knowledge, Mr. Eddy, that Mr. Midelton was known as a person whose recommendations were adverse to the Beyer and Peacock engines? The only knowledge I had of Mr. Midelton was from what appeared in engineering papers as to the manner in which he had gained his position in the New South Wales railways. That is the only reputation I know.
870. Will you kindly answer the question I have put to you? I must ask your Honor again if this is not quite outside the inquiry? I have no desire to say anything hard of Mr. Midelton, but if I am pressed I shall have to express my opinion.
871. *President.*] It is a question that you can answer with a "yes" or "no," Mr. Eddy.
872. *Witness.*] My answer is that I do not know it.
873. *Mr. Schey.*] Is it within your knowledge that certain tests of locomotives were made a short time prior to your own arrival in the Colony with which Mr. Midelton was very specially identified? Do you refer ——
874. *President.*] How can Mr. Eddy speak of things which took place before he arrived in the Colony?
875. *Mr. Schey.*] I submit, your Honor, that Mr. Midelton's doings while he was in office must have had something to do with Mr. Eddy's determination to put him out of office.
876. *President.*] How can Mr. Eddy tell what took place before he arrived? You can give the information you want, if it is relevant, by the proper witnesses and in the proper way.
877. *Mr. Schey.*] I only asked Mr. Eddy whether these facts are within his own knowledge?
878. *President.*] They cannot be within his own knowledge if he was not here.
879. *Mr. Schey.*] Well, Mr. Eddy, while Mr. Midelton was in office under the administration of the present Commissioners did he not recommend American types of engines, either built in the Colony or in England, as opposed to engines which had been supplied by Messrs. Beyer and Peacock? The only recommendation I remember was to increase an order that had already been sent home prior to our taking office—the ten engines already referred to in evidence. Mr. Midelton represented to us that the state of the stock was so bad that it would be wise to increase that order. That is the only recommendation I remember.
880. Will you tell me, Mr. Eddy, whether Mr. Midelton did not advocate or recommend the building of locomotives at the railway works at Eveleigh, instead of importing them from certain firms in England? I cannot speak to that, but we did not attach any value to his recommendations.
881. At the time of your arrival in the Colony is it not within your knowledge that the late Minister for Works, the Honorable John Sutherland, who was also Minister in charge of the Railway Department at the time you took control—is it not within your knowledge that Mr. Sutherland had made arrangements for building a number of locomotives at the railway workshops at Eveleigh? It was not within my knowledge.
882. Is it not within your knowledge now? No. There were fifty engines ordered to be built in the Colony, but by two outside firms; and those arrangements fell through because of the inability of those firms to carry out their contracts.
883. And, so far as you know, there had been no offer made at the time you arrived in the Colony to have locomotives manufactured at the Eveleigh workshops? I cannot speak of what occurred in the Colony before I arrived.
884. Do you know of any plans being drawn for the purpose I speak of? I said I cannot speak of things that happened in the Colony before I arrived.
885. I am speaking of the time subsequent to your arrival? Subsequent to my arrival no such scheme to my knowledge was submitted to the Commissioners; in fact, the works are not large enough to carry out the repairs.
886. Did you not, before leaving England, express an opinion that you hoped within a short time after your arrival in Australia to be able to do as the London and North Western Company do at Crewe, viz., build all the locomotives required at the Government workshops at Eveleigh? I may have said so, but what this has to do with the inquiry I cannot see. If I did make such a statement, it simply proves the negative that I was not a member of any ring. Nothing would afford me greater pleasure than to see engines built in the Colony if it were possible to do it at anything like a reasonable price.
887. Did you not, prior to leaving England, express the opinion that you hoped such would be done at an early date after your arrival? I have given you my answer.
888. I don't think you have. I ask you whether you made any such statement? I might have expressed the opinion I have now expressed, but as to everything I said years ago, surely I am not compelled to answer that.
889. Do you remember being interviewed in London prior to your departure by the reporter of one of the Sydney papers, the *Daily Telegraph*? Yes.
890. Did you not make such a statement to him? I think I did; I may have done so just as I have done now.
891. Did you not, subsequent to your arrival, make a change in that opinion? No.
892. You did not? No.
893. Did you not make a proposal to the late Minister for Railways for the formation of locomotive works in the Colony? On the 14th May, 1889, we intimated to the Minister for Railways that we were anxious to see locomotives built in the Colony, and, as certain contracts which had been let here had fallen through, we recommended that advertisements should be placed in the newspapers in England and in the colonies inviting tenders for the establishment of such works. I place the whole of the papers before the Commission. [*Documents handed in.*]
894. These locomotive works were not to be Government works? No.

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895. They were not to be under the administration of the Government at all? No.
896. The first representation made, on the 14th May, 1889, was by yourselves, was it not? It was made by myself on behalf of the Commissioners.
897. The copy of the papers does not say so? I beg your pardon, the copy of the papers says, "the Railway Commissioners are anxious, &c."
898. I admit that, but I ask you whether, as a matter of fact, the first letter, dated 14th May, and addressed to the Hon. Wm. McMillan, the Minister for Railways at the time, was not signed "I am, &c., E. M. G. Eddy, Chief Commissioner?"
899. *President.*] The letter speaks for itself. Put the letter in, and it will speak for itself.
900. *Mr. Schey.*] I will put the whole of the correspondence in, your Honor.
901. *President.*] It is all printed, and you had better put it in evidence.
902. *Mr. Schey.*] I will do so, your Honor, but I first of all desire to ask a number of questions upon the correspondence. Now, Mr. Eddy, you will find on page 3 a further letter signed by the three Commissioners? Yes.
903. In the meantime certain communications had taken place with England, had they not? The proposal dated 15th August, 1889, had been made to the Colonial Secretary containing certain suggestions in regard to the establishment of locomotive works.
904. *President.*] Works—where? In New South Wales. That communication had been referred to the Railway Commissioners for their report, and on the 7th November we gave our views to the Government on the subject. It was on that communication that the Government took action in regard to the original proposal of 14th May, and decided not to accept the offer of this company but to throw the whole question open to the world.
905. *Mr. Schey.*] The letter which you addressed to the Minister, on 14th May, was the initiative of these proceedings. I ask you whether you yourself or the Commissioners initiated the proposal for these locomotive works? On 14th May we initiated the proposal, and we endeavoured to get large works established here.
906. You took the initiative? Yes, certainly.
907. Allow me to direct your attention to the next letter, which is from A. Greenwood, Esq., to the Colonial Secretary—the letter is dated "Albion Works, Leeds, 15th August, 1889," is it not? Yes.
908. Does not that letter also take the initiative in a proposal for the establishment of locomotive works? Yes.
909. It does not refer to any correspondence received or any knowledge obtained as to a proposal of a similar kind made in the Colony? No proposal had been put forward.
910. Has it struck you, Mr. Eddy, that the proposals embodied in your letter of 14th May and in the letter of Mr. Greenwood to the Colonial Secretary, dated 15th August, are singularly identical one with the other? I don't think they are identical at all. We made a proposal that engines should be built in the Colony. The proposal made in the second letter you refer to was to obtain from the Government a monopoly for the building of locomotive engines, carriages, and waggons. It was a proposal that the Government should give all kinds of concessions, one being a lot of land. The Railway Commissioners reported that they could not advise the Government to adopt the proposal to give a monopoly of the supply of locomotives, carriages, and waggons, but that there were other firms here, and there ought to be competition, while the question of a free grant of land could be best determined by the Government themselves.
911. *Mr. Schey.*] I don't propose, your Honor, to go at any length into this matter, the papers having been put in evidence, the Commissioners can judge the matter for themselves. (To the witness): If you refer to the letter from Mr. Greenwood to the Minister for Railways you will find a postscript stating that "the writer (Mr. A. Greenwood) is also Chairman of the Colonial Ammunition Company, Limited, who have recently concluded a contract with the Victorian Government through their Managing Director, Captain Whitney, for the establishment of a cartridge factory in Melbourne, and your Government has agreed to take part of this from them." The postscript proceeds to say "he hopes" (that is, Captain Whitney,) "that the proposed locomotive company may be successfully carried out in your Colonies, and that it may take its place prominently in the development of the industries and mineral resources of New South Wales." Have you at any time seen Captain Whitney? Not that I am aware of; I don't know Captain Whitney; I don't know Mr. Arthur Greenwood.
912. Has he been granted free passes over the railways of this Colony? I don't know that he has; I don't interfere in these questions. We lay down hard principles in regard to free passes, and we are not consulted about the individual issue in such cases.
913. Will you procure that information for me, or must I get it through another witness; what I desire to know is whether Captain Whitney received a free pass, or more than one, over the railways of this Colony?
914. *Mr. Smith.*] I should like to know in what way this bears upon the second charge? It appears to me Mr. President that it is travelling entirely beyond the question. Mr. Schey is raising another point altogether.
915. *President.*] What has the issue of these free passes to do with this inquiry?
916. *Mr. Schey.*] I am not called upon to suggest motives for these things, your Honor, but it might possibly be that Captain Whitney was specially favoured in getting a free pass, seeing that free passes are not available for all persons who visit Sydney; therefore, if Captain Whitney, or any other special person, obtains a free pass, and my point is that he obtained more than one, it might show that some preference was given to him, and there might be some reason for this preference in view of the negotiations which were being entered into.
917. *President.*] What has Captain Whitney to do with this question about the locomotives?
918. *Mr. Schey.*] Simply that Captain Whitney is plainly identified in the letter from Greenwood and Batley with the proposed syndicate for building locomotives.
919. *President,*] Where does that appear?
920. *Mr. Schey.*] In the postscript to the letter of 15th August, 1889. It is quite certain that that letter was sent to the Government and at the same time Captain Whitney ——
921. *President.*] I think Mr. Schey if you read the postscript carefully you will see that the "he" quoted refers to the writer of the letter, and the letter is signed by A. Greenwood. It does not appear to me to have any reference to Captain Whitney.

922.

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922. *Mr. Schey.*] It is reasonable to suppose, your Honor, that Captain Whitney would not come out about the same time as this letter without being accredited in some way to those to whom the letter is addressed.
923. *President.*] We cannot indulge in all these suppositions. If you can give the facts, well and good, but it is no use making statements without tendering evidence in support of them.
924. *Witness.*] I am being tried, Mr. President, for placing orders in England, but now I am being asked about the building of locomotives in the Colony.
925. *President.*] If Mr. Schey wishes to ask you to disprove his own charge, of course, he may do so.
926. *Mr. Schey.*] Can you tell me, Mr. Eddy, whether one of the persons who was to come out in connection with this proposal was Mr. Dugald Drummond? Yes: he was to be the managing director.
927. And Mr. Dugald Drummond at the time the negotiations commenced was Chief Mechanical Engineer, or whatever the title may be, for the Caledonian Railway Co.? He was.
928. As a matter of fact, when you were in the service of the Caledonian Railway Co. was not Mr. Drummond one of your colleagues? I knew him as a colleague, and as being an able engineer.
929. And naturally your duties brought you in frequent communication with Mr. Drummond, and you were on friendly terms? If you wish to infer that I am influenced by private friendship or anything of that sort in my public duties, I say distinctly I never am.
930. I have not asked you that; I merely ask you whether Mr. Drummond and yourself were on friendly terms? I am not prepared to say the terms I was on with Mr. Drummond.
931. And at that time, Mr. Eddy, Mr. Henry Hudson, of Sydney, had some interviews with you, had he not, concerning these proposed locomotive works? Mr. Hudson was anxious to see works established in Sydney, and was anxious to combine locomotive building with his carriage and waggon works.
932. Were you aware that Mr. Hudson had already works of an engineering kind? My answer has indicated that.
933. Just at this time Mr. Hudson had certain interviews with you concerning this matter? Yes.
934. And shortly after that we find a tender, which is signed by Mr. Dugald Drummond, managing director, Mr. A. Greenwood, of Greenwood and Batley (the person who has already written to the Colonial Secretary), and Mr. Henry Hudson, who, I presume, is the same Henry Hudson? Yes.
935. And Mr. J. E. Pepper;—it is the tender for the establishment of these locomotive works? Yes.
936. Would you mind saying what instructions or accreditments you gave to Mr. Henry Hudson in relation to these negotiations? I think, but I will not be certain, because I cannot carry every little incident in my mind, but I am under the impression that I gave Mr. Hudson a letter of introduction to Mr. Drummond, saying that he was very highly esteemed in Sydney for his honorable dealing in business, and that we, the Commissioners, would much like to see an arrangement made for the establishment of locomotive works—a combination between the money and skill of the old country and what existed here.
937. Did you give him any other letters? I am not aware that I did, but I will not speak positively, for I cannot carry everything of that sort in my mind.
938. You will positively aver that he had not a letter from you to Sir John Fowler? Most certainly; at any rate I, do not remember such a thing, and I do not see why I should give him one to Sir John Fowler but Mr. Hudson can speak more fully upon this matter himself if necessary.
939. The negotiations were afterwards abandoned, were they not? Unfortunately for the colonies, yes.
940. And one of the reasons for the abandonment was, was it not, that Mr. Drummond, for some reason, would not come out here? I have never yet learnt the real reasons for that falling through. I have not had any communication with Mr. Drummond from that time to the present. It was a regret to us that the negotiations fell through.
941. Is it within your knowledge, Mr. Eddy, that the Minister for Railways at that time, the Hon. Bruce Smith, alleged, as one of the reasons for the breakdown of this arrangement, that Mr. Drummond, who was to come out here as managing director of the company, refused to come, and desired to substitute his son; and that that was not agreeable, and, therefore, the arrangement fell through? I cannot speak for what Mr. Bruce Smith said. You must call him to give that evidence himself; I cannot speak for him.
942. I notice, Mr. Eddy, in your first letter in relation to this matter, addressed to the Minister for Railways on the 14th May, this sentence:—"There is no proper machinery in the Colony for the manufacture of engines, and no persons skilled in the work." You wrote that, of course, with a full knowledge of the possessions of the Colony, both as to men and machinery? Yes.
943. And you considered it to be perfectly correct? Yes; and still do.
944. You still consider that to be perfectly true? Certainly.
945. Now, will you kindly turn to page 5 of the papers. At the bottom of the page there is a list of machinery which the company propose to import? Yes.
946. Will you kindly go over that list and point out to me what it contains in the way of machinery that is not already in the Colony——
947. *President.*] What have we to do with the machinery that can or cannot be made in the Colony. In what way does it bear upon this inquiry?
948. *Mr. Schey.*] Well, your Honor, here is a proposal to bring out a quantity of machinery for the manufacture of locomotives. Part of the proposal is to fetch out certain machinery, and, as a basis for that action there is the statement that there is no proper machinery in the Colony, and, therefore, presumably, none of the machinery mentioned, nor any men capable of manufacturing locomotives. I want to show that that is not correct.
949. *President.*] The only way in which this evidence, as to the establishment of locomotives works in this Colony, can be of any weight whatever in this inquiry is in showing that Mr. Eddy was most anxious that the locomotives should be made in the Colony instead of being imported from England, and so far it appears to us rather in disproof than proof of your charge.
950. *Mr. Schey.*] It might be, your Honor, that Mr. Eddy desired to have the locomotives made by private persons instead of at the locomotive works belonging to the Crown.
951. *President.*] That is a matter we have nothing to do with. The only combination or "ring," as it is called, spoken of in this inquiry is some combination or "ring" in England, and not in this Colony.
952. *Mr. Schey.*] But, your Honor, here is a proposal for the transference of certain persons and machinery from England to this Colony. Your Honor sees the point I desire to make.
953. *President.*] To establish works in this Colony?

954.

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954. *Mr. Schey.*] Yes. I will proceed, your Honor, by asking Mr. Eddy whether he is aware of the capacity and fittings in the railway workshops at Eveleigh? Yes.
955. Can you tell me what amount of money the establishment of these works cost; I mean in round figures? No, I cannot.
956. Would you be surprised to hear that the railway workshops at Eveleigh cost over half a million? I know they cost more than that, and I should like to have the spending of the money again to save a lot of it.
957. *President.*] What are these works for? They are used for repairing locomotives.
958. Are they fully ample for that purpose? Well, our locomotive engineer some months ago asked us to extend the works to enable him to keep pace with the repairs, but in consequence of the pressure for money, we decided that the works should stand as they are for the present.
959. *Mr. Schey.*] Is it not a fact that there is in connection with these works all the machinery necessary for manufacturing locomotives? If we had no repairs to carry out in these shops, or only one half the present amount of repairs, we could be building locomotives; but the place is so full of repairs that, as I have just said in reply to the President, we are unable to keep pace with them.
960. Is it also not a fact that there are works in other places presumably which you in your capacity as Chief Commissioner would be acquainted with—is it not a fact that other works with less capacity, costing less money and containing less machinery, are turning out more work than is being done at the Eveleigh workshops at the present moment? If the Railway Commissioners could have the expending of the money which has been spent at Eveleigh, they would be able for the same expenditure to turn out a vastly increased amount of work; but we have to deal with the works in the ill-arranged way in which they are.
961. Is it a fact that there is a quantity of machinery stored at Eveleigh, imported for the purpose of manufacturing or repairing locomotives, which has never yet been unpacked? I can get the information, if it is really relevant to the inquiry. I have not got in my mind what is in the stores at Eveleigh. We have to keep a lot of things in store, because it takes a long time to send to England and get them out. We have to keep duplicates there.
962. Now, Mr. Eddy, are you not administering the railways under the Government Railway Act of 1888? Yes; slightly amended.
963. Will you kindly quote to me any section in that Act which empowers the Commissioners to enter into any contracts for the establishment of any syndicate to build locomotives; can you show me in what way that power is given to the Commissioners? Had the Commissioners considered that they had in their own body the power to establish the works we should not have addressed the Government on the subject. You see we merely suggest to the Government to establish these works.
964. Then I take it you do not contend that there is any clause in the Act by which the Commissioners have this power?
965. *Mr. Smith.*] I must submit, Mr. President, that the whole of this evidence now being gone into has really nothing whatever to do with the charge. The Commission has already decided that it is not relevant to the inquiry upon the second charge.
966. *Mr. Schey.*] I submit, your Honor, that you have not decided that.
967. *Mr. Smith.*] No doubt, the witness does not object to it, but I submit that the time of the Commission should not be taken up with these irrelevant matters. I refer to this question of the establishment of locomotive works in this Colony.
968. *President.*] Mr. Schey has passed beyond that. He is now asking a question about an Act of Parliament.
969. *Mr. Schey.*] I am referring to the Government Railways Act of 1888, the Act under which Mr. Eddy administers the railways.
970. *President.*] What is the good of asking the witness that question. If you point out the section to the Commission they will deal with it. It is no question to ask a witness about an Act of Parliament, or a section in an Act of Parliament. If you produce the Act, and point out the section you refer to, the Commission will deal with it.
971. *Mr. Schey.*] I am not asking the witness as to the application of any section of the Act. I am merely asking him to point out which section of the Act gives him or his colleagues power to initiate these locomotive works.
972. *President.*] There is nothing in the evidence before us that the Commissioners even did that. They suggested their proposal to the Government, which is a very different matter. They proposed that certain things should be done, but they did not seek to do them themselves.
973. *Mr. Schey.*] That is my point, your Honor, that they did not seek to do these things themselves in the works which were at their command, and which were amply stocked.
974. *President.*] That is not the point, Mr. Schey. I say that in this correspondence, the Commissioners do not propose of themselves to establish these works, they merely propose that the Government should take steps to have it done, which is a very different thing.
975. *Mr. Schey.*] Yes, your Honor, but allow me to point out, not that the Government should take steps but that some other persons should be allowed to take steps.
976. *President.*] That is through the Government, and not of their own initiative.
977. *Mr. Schey.*] Very well, your Honor, I will not press the matter. I now put in a copy of the papers which I have been referring to. [*Documents put in.*] I suppose it is not necessary under the circumstances to put in the Railway Act, to which I have referred?
978. *President.*] No, that is an Act of Parliament.
979. *Mr. Schey.*] Have you at any time, Mr. Eddy, since you have been in office, imported or indented from any firms in England material for the construction of parts of locomotives? To make my question plainer, have you ever indented for any boiler-plates to be imported from England? If you ask me whether the Railway Commissioners have done so, and it is relevant to this inquiry, a return shall be prepared showing what boiler-plates have been imported. I may say that boiler-plates are being continually imported for the purpose of repairs.
980. Have you at any time, since you took office, indented for forty locomotive boilers? Yes; we have indented for forty locomotive boilers.
981. And they were indented for shortly after your arrival? They were indented for at the end of June, 1889.

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982. It was understood, I believe, that they were required as a matter of urgency? As a matter of very great urgency, and for the public safety.
983. Now, is it not a fact that for a considerable time after their arrival those boilers lay unused? Some of them were not used, because in the meantime we had been compelled to repair old boilers which they were intended to replace, and which they would have replaced had they been here earlier.
984. Is it not a fact that at the time you indented for the forty boilers, the material for making those boilers, or at least a portion of them, had been lying at Eveleigh for some time? No.
985. Is it not a fact? No; there were boiler-plates, but they would not answer for a boiler of a different size.
986. Is it not a fact that special machinery had been put up at the Eveleigh workshops for the manufacture of these very boilers? I have answered before that the works at Eveleigh were going on at full pressure to repair the engines that were running on the lines.
987. Yes; but I am referring to a time in the early part of 1889, prior to the furnishing of these boilers, and I ask you whether it is not a fact that hydraulic machinery of a special pattern was erected at Eveleigh for the express purpose of making boilers? The machinery at Eveleigh was working at full pressure at the time these boilers were being indented for. If I might be permitted, Mr. President, I should like to read to you a report upon this question of boilers, it was a question of public safety at that time. We were in a most anxious state regarding boiler explosions, and our Locomotive Engineer, on the 1st April, 1889, that is immediately preceding the date when these boilers were indented for, because we had not the plans here for them, reported as follows. [*Report read. See Appendix.*] That was from Mr. Thomas Midelton, our engineer at that time. On the 31st July we had a most serious memorial from the engine-drivers in the north. It is very unusual for engine-drivers to send in a memorial of that kind, and this was signed by a large number of men. [*Document read. See Appendix.*] It is a most unusual thing for engine-drivers to speak like that, but it affords an illustration of the condition we found the locomotive stock in when we took office, and of the anxiety in the minds of our officers and our own at the time.
988. *Mr. Schey.*] That document is put in, your Honor. Now, Mr. Eddy, referring again to the time when these forty boilers were ordered, is it not a fact that two boilers had already been made by this special machinery erected for the purpose, from material already imported? We always try to get on with boilers; we work as hard as we can.
989. But at that time? I cannot speak as to what was going on in the boiler-shop at that time.
990. Is it a fact that instead of continuing to make further boilers, this machinery was stopped, and the forty boilers were indented from England? All I can say is this, that our boiler-shop on the last occasion when we visited it was so crowded that the men could hardly get about their work properly.
991. How long ago is that? Two or three weeks.
992. That would have no relevancy to the early part of 1889? Mr. Thow tells us that the shops have been pressed to their utmost extent all through his term of office, and, as I said before, he has urged us to increase the size of the shops to enable him to keep pace with the work. He had as much to do then as he has to do now.
993. Since you yourself have brought up this matter, will you tell me whether a boiler inspection was not initiated before your arrival in the Colony? Well, I should think that everybody possessing boilers would inspect them, but the business had been most seriously neglected.
994. But steps had been taken before your arrival, and, as a matter of fact, boiler inspection was proceeding as fast as possible? I should say that boiler inspection had not gone on one-fourth as fast as it should have done prior to our taking office.
995. But had it not gone on as fast as possible under the circumstances? As fast as possible ought to have been an inspection at the proper time.
996. Do you know whether any of the boiler-plates already referred to as being imported for the purpose of manufacturing boilers are still lying unused at Eveleigh? I know there are boiler-plates unsuitable for the boilers we wished to have constructed, but as I said I can get you these particulars if you desire it.
997. Those plates have been lying there for a number of years? There are a number of things which have been lying there for many years. They are of no value to us, and there are boiler-plates of little value, for they are not fitted for the size of boiler we want making.
998. Is it a fact that after the forty boilers were imported a number of them remained unused for some considerable time? I have already answered the question.
999. Do you say they have? I have already answered the question.
1000. Will you tell us the reason why they so remained? I have already told you the reason why.
1001. Is it a fact that part of these boilers remained unused because that, when they were ordered, the proper fittings were not ordered with them, and that you had to wait for the mountings to be indented from England or to take the mountings from old boilers and put them upon the new ones? I believe the fittings were not indented for, in the same way perhaps that the Pullman cars are not painted in America; we want to do as much work here as we can.
1002. Yes; but in ordering boilers for instant service, to get over a great danger to public life, would not everything required to put those boilers into service at once be ordered with them?—Would the boilers be first ordered, and then after they arrived, there being this great urgency, would you order the necessary mountings? Not having indented for them personally, I cannot answer the question.
1003. Who was the first person who met you on the platform at Sydney when you arrived? There was a crowd.
1004. I am quite aware that there was a crowd, but I ask you who was the first person who pushed forward out of the crowd and grasped your hand in welcome to Sydney? I have no distinct idea; there was such confusion that I cannot remember.
1005. Do you remember meeting on that occasion Mr. John Whitton, the late Engineer-in-Chief for Railways? I do not know whether I met him on the platform at Redfern, but at any rate I met him soon after I arrived. The exact time I met him I cannot say.
1006. You are not prepared to declare that he was not the first person who met you on your arrival? I have told you all that I can recollect.
1007. Then you are not prepared to swear that Mr. Whitton was not the first person who met you when you

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you got out of the train at Redfern? I am not prepared to say anything different to what I have already said.
1008. As you said you very soon became acquainted with Mr. Whitton? Certainly.
1009. And after your arrival in the Colony you frequently visited him, did you not? I frequently saw Mr. Whitton on business.
1010. But did you not visit him at his residence? I did.
1011. And were you aware that Mr. Whitton was brother-in-law to Sir John Fowler? I was aware.
1012. And that Sir John Fowler was Consulting Engineer-in-Chief and Mr. Whitton Engineer-in-Chief for the New South Wales Railways? I knew that after I accepted my appointment.
1013. You did not know it before you arrived in New South Wales? I did know it before I arrived in New South Wales.
1014. Did you ever meet Mr. Whitton in London? I did not know of his existence even when I accepted the appointment of Chief Commissioner of the New South Wales Railways.
1015. Then it is news to you that Mr. Whitton was in England a few years ago? No; I knew that Mr. Whitton came from England to start with.
1016. You have no recollection at the time you arrived in Sydney whether Mr. Whitton pushed in front of Mr. Goodchap, the late Commissioner for Railways, for the purpose of getting at you first? I have answered the question.
1017. You do not remember that? I have answered the question.
1018. Did Mr. Whitton tender you any advice in relation to contracts for locomotives? No.
1019. Not of any kind? Not of any kind.
1020. Nor at any time? Nor at any time.
1021. Did he tender you any advice to dismiss any particular persons in the service? Not at any time.
1022. He made no reference whatever to Mr. Midelton, who was at that time Locomotive Engineer?
1023. *Mr. Smith.*] I do not like to stop any of these questions, Mr. President, but it is perfectly clear that what Mr. Schey is now asking is not relevant to the second charge though it may have some bearing upon one of the latter charges referred to the Commission. Clearly it has nothing to do with the present charge. I have not a copy of the Commission before me but I am inclined to think there is a later charge.
1024. *President.*] There is a later charge dealing with the dismissal of officers.
1025. *Mr. Smith.*] No. 5 is one of them, and there is also something about dismissing men in No. 10. It is quite clear, in any case, that this question has no relation whatever to the charge you are now investigating.
1026. *Mr. Schey.*] I submit, your Honor, in answer to the objection that I am not dealing with the dismissal of any person because of his dismissal, or the substitution of any other person as a person, but I am seeking to show that this person was so dismissed, if he were dismissed, on the advice of Mr. Whitton, for the purpose of putting in a person who was favourable to a certain firm of manufacturers, Mr. Midelton being unfavourable to that firm. You will see, your Honor, that the question therefore is relevant.
1027. *President.*] I think you can ask the question, Mr. Schey.
1028. *Mr. Schey.*] I ask you, Mr. Eddy, whether Mr. Whitton at any time tendered you any advice concerning Mr. Midelton? He did not.
1029. I think, your Honor, that is all I have to ask Mr. Eddy at the present moment, though I expect to have to recall him at a later stage.
1030. *President.*] When that arises we will deal with it. Who is your next witness?
1031. *Mr. Schey.*] Mr. Thow. Before Mr. Eddy leaves the box, your Honor, I should like to put a further question to him. I should like to ask him whether, in his position as Commissioner for Railways, he took note of the prices ruling for various kinds of materials? It all depends what materials you refer to.
1032. I am speaking of such materials as enter into the manufacture of locomotives—iron, coal, steel, and copper? We take advantage of a low market if that is what you want to know. We have a lot of copper now in hand which we bought at £37 a ton, an extraordinary price. We have also on one or two occasions of late, through having the advantage of what is going on in the market, made some very advantageous bargains for the Colony. But as to locomotive engines, when you want those you have to put up with the rate of prices of the materials. You cannot, if you urgently need locomotives, wait for a year or two for a fall in prices.
1033. The question is asked in order to elicit from you whether the price of raw material, such as coal, and iron in particular, were high or low about the commencement of 1890, and for the first two months of that year? I do not trouble about the price of coal or anything of that sort, but as I told you that, as regards the large questions of copper, rails, &c., we take advantage of a low market.

Mr. William Thow sworn and examined:—

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1034. *President.*] What is your name? William Thow.
1035. *Mr. Schey.*] I believe you are at the present time Chief Mechanical Engineer on the New South Wales Railways? Yes.
1036. And you previously were Locomotive Engineer, or in some office with a similar title, on the South Australian Railways? Yes.
1037. I believe prior to that time you were connected with railways in Egypt? Yes, under Sir John Fowler. You must understand that I was not connected with the Egyptian Government.
1038. Were you at any time in Sir John Fowler's office? Yes; I was with him for some years.
1039. Can you give us the dates roughly from year to year;—I do not want particular dates? I was with him for about five and a half years altogether.
1040. Extending from what time? From about the end of 1870.
1041. And you were during that time in his office? I was.
1042. In what capacity may I ask? As his mechanical assistant.
1043. That is an engineering capacity? Certainly.
1044. And your duty at that time was? Generally I was employed upon the inspection of rolling stock.
1045. That is for any governments or persons for whom Sir John Fowler was consulting or inspecting engineer? Yes.

1046.

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1046. You were one of his mechanical inspectors? Yes.
1047. Mainly for rolling stock? Yes.
1048. When you left that office where did you go to? South Australia.
1049. I understood you to say that after leaving Sir John Fowler's office you went to Egypt? I went with Sir John Fowler to Egypt as his assistant. I may explain that Sir John Fowler went out to Egypt at the end of every year, and I simply went with him as his assistant.
1050. Then it was only a temporary visit to Egypt? Quite so.
1051. You were not engaged at any time upon the Egyptian railways? No; merely with Sir John Fowler.
1052. You passed directly from the office of Sir John Fowler to the service of the South Australian Government? Yes.
1053. I presume, therefore, that Sir John Fowler assisted you in procuring that appointment, that he recommended you? So far as giving me a letter of recommendation, but no further.
1054. How long were you in South Australia? Twelve and a half years.
1055. Prior to leaving England did you ever visit the works of Messrs. Beyer and Peacock? Yes.
1056. And they are situated at? Gorton, Manchester.
1057. Had you any other connection besides visiting the works of Messrs. Beyer and Peacock in any way? In what respect?
1058. Were you ever employed by them? No.
1059. Were you ever about the works in any way inspecting materials which were being constructed by them? I have already told you I was at their works inspecting material.
1060. You did not tell me you were at their works—you did not say you were engaged inspecting material? Well, I was inspecting material for the Egyptian Government there.
1061. Therefore, you were frequently in the works of Messrs. Beyer and Peacock? Yes.
1062. And you have a very high opinion of Messrs. Beyer and Peacock as engine builders? I have.
1063. While you were in South Australia you frequently recommended their manufactures for the South Australian railways? I did; when their tenders were suitable.
1064. Just so; but as a matter of fact you considered their tenders so suitable that you recommended them on frequent occasions? No. I did not consider their tenders suitable on all occasions because I recommended the acceptance of other tenders.
1065. But as a matter of fact a number of tenders of Messrs. Beyer and Peacock for the supply of locomotives for the South Australian Railways were accepted and were carried out? Yes, they were.
1066. And they were so done on your recommendation as the responsible officer? Not exactly so.
1067. Mainly so? Not exactly so; the tenders were generally recommended by the inspecting engineers in London.
1068. Who were they? At that time, or rather while I was in South Australia, there were two: the first was Mr. Jetter, and the second Mr. Milebank.
1069. Sir John Fowler then had nothing whatever to do with inspecting material for the South Australian Railways? Nothing whatever.
1070. And never had? He never had.
1071. I also believe, Mr. Thow, that you have a very considerable opinion against American locomotives? I like English locomotives better.
1072. As a matter of fact you have had to report on sundry occasions against the adoption of either American designs or American engines? No; I have not that I am aware of; I do not think I have had any reports to make of the character you describe.
1073. Did you not in 1883, when in South Australia, make a very strong report on a certain proposal—of course I am speaking from memory now—to employ American locomotives on that railway? I did not.
1074. You made no report of that character? Not against the employment of locomotives from America in South Australia.
1075. But criticising the performance of them? I had to report upon engines which had already been delivered from America.
1076. And you condemned them? I did not condemn them, I gave my views about them.
1077. But your views were not favourable? No; I did not think they could be considered favourable to them.
1078. Did you ever take part in any controversy or correspondence in any mechanical newspapers, in which you expressed opinions adverse to these engines? Yes.
1079. And favourable, as a matter of fact, to engines produced on the other side of the water? I simply told what I knew about the engines at that time.
1080. You saw many points to admire in the manufactures of Messrs. Beyer and Peacock? I saw many points to admire in the manufactures of various makers of English engines.
1081. But from time to time have you not found more points to admire in the manufactures of this particular firm than in any others? I do not think so.
1082. And you do not think Messrs. Beyer and Peacock are better manufacturers than anyone else? Oh, yes I do.
1083. Then how do you reconcile the two statements? I think Messrs. Beyer and Peacock have a very high reputation as locomotive manufacturers.
1084. I am not asking about their reputation—I am asking your opinion? My opinion is that they have a high character as manufacturers of locomotives.
1085. You think they have a deservedly high position in the locomotive world? I do.
1086. Will you tell me, Mr. Thow, on what occasion and under what circumstances you first came to New South Wales? I came here because a position was offered to me by the Railway Commissioners.
1087. Was that the first occasion you came to the Colony? Not the very first occasion. The first occasion I came to this Colony was upon matters of pleasure; I did not know whether you were going back to that history.
1088. You afterwards came to the Colony on business? I came on business on one occasion.
1089. What was the first occasion on which you came to this Colony on business? I came here to inspect the rolling-stock of the Colony and to report to the present Railway Commissioners my opinion of it.
1090. You came here to inspect the rolling stock, and to make a report thereon to the order of the Railway Commissioners of New South Wales? Not to the order of the Railway Commissioners, but at the request of the Railway Commissioners. Do you understand? 1091.

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1091. You were invited to come here and make a report, and the report was to their order, of course? No; it was not made to their order.
1092. At their request. I am not using the words in the way you seem to imply. When I say to the order of the Railway Commissioners I mean they required a report and you produced it? I wish the word to be distinct to you and to every other person.
1093. Undoubtedly it is advisable to be distinct? I say I reported at the request of the Railway Commissioners.
1094. You were paid for it, I presume? I was.
1095. Then you were employed in the ordinary way? Just in the same way as any other professional gentleman would be employed to do work for the Railway Commissioners, or anyone else.
1096. The transaction was not a friendly deal at all—it was an ordinary matter of business? I should be sorry to give my time, as a matter of friendly deal on such a question to any parties.
1097. Undoubtedly. I should not suspect you of such a thing for a moment. How long were you employed in making that report? I think about a month.
1098. Did you then return to South Australia? I did.
1099. And what was the next occasion or the next communication that you received from New South Wales? I received a letter from the Railway Commissioners of New South Wales conveyed through the Railway Commissioners in South Australia, asking me if I would accept the position of Locomotive Engineer in this Colony.
1100. Which you accepted? Yes.
1101. And you finally came here. How long was it after you made your report before you were offered this position? I should think about two months.
1102. You were back in Adelaide about two months? I was.
1103. When you received the letter offering you the appointment did you start immediately for New South Wales? No; I do not think so.
1104. Will you tell me how long, approximately, it was after you received the letter, that you started for Sydney? About three or four weeks.
1105. Was the letter a definite one, appointing you there and then? No; it was a request.
1106. How long after that was it before you received the definite appointment? I cannot tell you.
1107. About? Not very long. It was a matter of correspondence, and time was required for the letters to pass to and fro.
1108. How did you get your final intimation? By letter.
1109. Did you not receive a telegram? I am not aware of it. I cannot recollect that I received any telegram.
1110. As soon as you received your appointment did you proceed to Sydney? No; I do not think so.
1111. You stayed for some time? I stayed until I was released by the Commissioners in South Australia.
1112. That would follow in the ordinary course; but did you receive from the Railway Commissioners, or from any other person in New South Wales, a telegram on any day concerning your appointment, or requiring your immediate attendance, or telling you in any way that the matter was settled? I have no recollection of any such telegram.
1113. You are not prepared to say that no telegram of the kind was sent to you? I think I should have remembered it if I received such a telegram.
1114. But you are not prepared to say that you did not receive it? ——
1115. *President.*] What have we to do with this telegram, whether he did or did not receive it. It is merely wasting the time of the Commission, and nothing else.
1116. *Mr. Schey.*] Well, Mr. Thow, when you came here to report, who was the Locomotive Engineer in New South Wales? You mean when I came on the first occasion.
1117. When you came here to report? Mr. Midelton.
1118. And on the previous occasion when you came for pleasure? I fancy it was Mr. Scott.
1119. Did you at any time on your previous visits interview Mr. Scott? I saw him, of course.
1120. Did you on any occasion talk matters of business with him? I cannot remember; I am not confident. It is impossible for me to recollect.
1121. Did you ever make any suggestion to Mr. Scott that you should come to New South Wales as his successor? Never.
1122. And Mr. Scott never made any such suggestion to you? Not that I know of.
1123. Neither openly nor covertly? Not that I know of.
1124. Will you give the same answer as regards your late assistant in South Australia? I cannot speak of what offer might have been made to my late assistant.
1125. But to your own knowledge did Mr. Roberts, your successor, ever apply to Mr. Scott, or intimate to him ——
1126. *President.*] You are carrying this examination a great deal too far, Mr. Schey. It is absolutely and utterly irrelevant, and has nothing to do with the matter we have to consider. It is merely wasting the time of the Commission.
1127. *Mr. Schey.*] If your Honor will permit me I shall proceed to show the revelancy of it.
1128. *President.*] You cannot show it; it is absolutely irrelevant, and we rule that the evidence is inadmissible.
1129. *Mr. Schey.*] Allow me to point out, your Honor, that you are calling upon me to deal with a combination of persons alluded to in the Commission as a "ring." One part of my argument is that a certain person who has been named—and I really must complain of being compelled to disclose my case before I call my witnesses—was obnoxious to this combination, and had to be got rid of, and some other person substituted in his place who might be more agreeable. You will therefore see, your Honor, that the questions I am asking are quite relevant, because it might be possible—I am only putting a hypothetical case—that either Mr. Thow or Mr. Roberts, by reason of something which need not be explained, might be more acceptable to those persons who are spoken of as a combination than the person whom Mr. Thow superseded; and if that were so, your Honor, the evidence now sought to be brought out would, I contend, with very great respect, be perfectly relevant to the issue before the Commission.
1130. *President.*] Mr. Roberts was never appointed here; we have nothing to do with his appointment. I have allowed you to ask these questions of Mr. Thow, because I thought through some ingenious argument you could give some plausible colour to this part of your case. But so far as Mr. Roberts is concerned these questions have no relevancy whatever.

1131.

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1131. *Mr. Schey.*] I was only asking the witness, your Honor, whether, of his own knowledge, Mr. Roberts ever made application to be employed in New South Wales. (To the Witness): Do I understand you to say no, Mr Thow? Am I to answer the question, your Honor?
1132. *President.*] I have ruled that the evidence is inadmissable.
1133. *Mr. Schey.*] Tell me this, Mr. Thow, did you ever call yourself, or allow yourself to be styled, I mean by your own action, the ablest locomotive engineer in Australia? No.
1134. Do you know whether that term has been applied to you? Personally, I do not know that it has.
1135. Do you arrogate to yourself such a title? I do not.
1136. We have had it in evidence that certain engines were ordered—I do not think I need deal with this at length—from Messrs. Beyer and Peacock;—you will be able to identify them because the order was given at the time you were in England;—do you remember the lot of engines I refer to? Yes.
1137. When that order was given were three firms asked to give a price? Yes.
1138. Those firms were? Beyer and Peacock, Dübs & Co., and Neilsen & Co.
1139. I suppose the prices quoted by these three firms were referred to yourself, were they not? To the Agent-General, I think.
1140. Did the Agent-General refer them to you? Yes.
1141. And who was associated with you in conferring upon these tenders? No one, except the Agent-General.
1142. Then if any person has stated that two other persons were associated with you in considering those prices that would not be correct? It certainly would not be correct.
1143. Then I presume you advised the Agent-General, as an engineer, as to the acceptance of one of these tenders? Oh no, I did not. The Agent-General did not accept the tenders.
1144. But you tendered him certain advice in relation to these prices? To whom?
1145. That is what I am going to ask you? If you will make your question definite I will endeavour to answer it.
1146. Did you tender any advice in reference to these prices? I sent telegrams to the Railway Commissioners respecting the prices.
1147. The Railway Commissioners here? Yes.
1148. And I suppose the text of the prices was also sent to the Railway Commissioners by the Agent-General? By myself in a cablegram which I sent.
1149. Then practically the reception and acceptance of the tenders lay between yourself and the Railway Commissioners? The acceptance of all tenders lies with the Railway Commissioners.
1150. You had a recommendation which was sent to the Commissioners? My cablegram explained the prices and the features of the contract, such as the dates of delivery, and so on.
1151. Now, Mr. Thow, did you design those engines? Yes.
1152. You designed them yourself? Yes, with the makers.
1153. With the makers? Yes, because I had no draftsmen to assist me in England.
1154. We may take it then you visited each of these works and consulted with the various makers, and that you drew designs or had designs drawn? I gave them particulars of the engines which, in my opinion, were required.
1155. And you made up a kind of specifications I presume? Yes, I made a specification.
1156. And the specification submitted to these firms was the same in each case? Certainly not. The specifications which were submitted were different of course for the different engines.
1157. I am speaking of one lot of engines for which these three firms gave a price. The designs and specifications were identical, I suppose? Yes, the particulars given to the firm were identical.
1158. Then of course you obtained a price? Prices were sent in.
1159. On your specifications? On particulars which I gave.
1160. Which were identical to each firm? Yes, identical to each firm.
1161. And in sending word out to the Railway Commissioners did you recommend any one of those tenders for acceptance? Yes, I daresay I did.
1162. Can you remember which? Yes. There were two lots of engines.
1163. Kindly keep to the one lot, Mr. Thow; I am speaking of one lot. I will give you a further description if you do not exactly understand which I am referring to? I have not had any description of the lot you mean.
1164. It was a lot of fifty express passenger engines? Yes, that was one lot.
1165. That is the lot I am referring to now. I understand.
1166. Now in reference to this lot of fifty engines, did you make any recommendation? Yes, I did.
1167. Whose engines did you recommend? I recommended Messrs. Beyer and Peacock's.
1168. And the designs in each case were the same? The particulars were the same; the particulars which I gave to the different makers who were asked to tender were the same.
1169. Did you make a remark against either of the persons giving a price? I said I did not recommend Neilsen's design.
1170. That is what I want to get at. You did not recommend Neilsen's design? No.
1171. But if the specifications were drawn by yourself, and they were identical in each case, would not the designs be the same? No; they were not the same.
1172. Why not? I will explain why. I visited these different works and gave them particulars of the engines which I thought were required for the New South Wales Railways, and I asked them if they had ever made any similar engines at any time. Messrs. Beyer and Peacock, and Dübs & Co. had not made any similar engines, but Neilsen & Co. had made engines which were somewhat similar. When I received Neilsen's design, I found that they had departed more widely from my particulars of what I thought we really required, than had either of the other firms, simply because they wish to work in some of their former arrangements.
1173. Then, as a matter of fact, you did not design these engines? As a matter of fact, I am responsible for the design of the engines, because I gave the particulars. You must understand that to design a locomotive requires a very long time; it even requires two or three months in a drawing office which is well supplied with draftsmen, such as those connected with these large works. For one person to design an engine in all its details would require nine or ten months, and such a period of time I had not on my hands. I was obliged to enter into this business within as many days.

1174.

Mr. W. Thow. 10 May, 1892.

1174. Then, as a matter of fact, when you left the Colony you had no knowledge of these engines being required? When I left the Colony, I had no knowledge of engines being required from such firms as Beyer and Peacock, or Dübs & Co. of Glasgow.
1175. When you left the Colony, you had no knowledge that fifty locomotives would be ordered immediately after you left? No; but I knew we wanted locomotives.
1176. But you had no knowledge that an order was about to be given? The order was not given before I left the Colony.
1177. The first intimation you received about these locomotives was by cable? Certainly not.
1178. Was it by letter from the Railway Commissioners then? You must understand that for some time before I went home, the Railway Commissioners and the Government had made arrangements for the building of a number of locomotives in the Colony.
1179. They had made arrangements? Yes; but some difficulty occurred in the carrying out of that intention. The syndicate in England, which had undertaken to carry out the work, did not commence their operations at the time promised, and I went home for the purpose of seeing the members of that syndicate, and to assist them in obtaining their material and making their arrangements, so that they might begin the manufacture of locomotives in this Colony as early as possible. That was what took me home. When I got home I found that the members of the syndicate were at variance with each other. Then I had an order to supply the locomotives which were wanted in the Colony; I had to look elsewhere and see what other arrangements were possible, and with the sanction of the Agent-General, and ultimately at the direction of the Railway Commissioners, contracts were entered into with Beyer and Peacock, and Dübs & Co., in place of those engines which the syndicate had undertaken to build in the Colony.
1180. Then when you went to England you went at the instruction of the Railway Commissioners? I did.
1181. You went to England at the instruction of the Railway Commissioners, for the purpose of interviewing the members of the syndicate which proposed to build locomotive works in this Colony? I said for the purpose of assisting the members of the syndicate.
1182. But if you had to assist them, had you not to interview them? I had to see them.
1183. You went there to give them assistance? I went there to see the Managing Director of that syndicate.
1184. Who was that? Mr. Drummond.
1185. *President.*] Before the Commission adjourns, Mr. Schey, I want to say something in reference to your application that the Commission should not sit on the 16th, 17th, and 18th. We have carefully considered your application, and we find that it will be impossible to accede to it. We consider that the inquiry before us is not only of the greatest importance to Mr. Eddy himself, but it is a matter of great importance to the Colony; because, if these charges of yours are established against Mr. Eddy, it is quite clear that Mr. Eddy ought not to be in the position he holds now, and therefore, with charges of that kind hanging over Mr. Eddy, affecting him and affecting the Colony, we think we ought to go on with the enquiry without an hour's delay. There is further this to be considered, that the time set forth in our Commission is only two months; of that a fortnight has already elapsed, and judging from the present proceedings it is quite possible that the whole of the remaining six weeks may be taken up with the rest of this inquiry. Therefore, we have determined to go on with the inquiry from day to day, from 11 o'clock in the morning until 4 o'clock in the afternoon.
1186. *Mr. Schey.*] I can only intimate in reply to your Honor's remarks, that the Commission is putting me to very serious inconvenience indeed.
1187. *President.*] I am sorry that it will put you to inconvenience, Mr. Schey, but there are other people to be considered in the matter beside yourself.

WEDNESDAY, 11 MAY, 1892.

[*The Commission met at 11 a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT.)

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

1188. *President.*] Our attention has been called this morning to an article in the *Daily Telegraph* commenting upon the proceedings of this Commission. We think that while these matters are *sub judice* it is not proper on the part of the newspapers to comment upon them. Technically, no doubt, the first charge has been disposed of; but under the second charge a great deal of the matter of the first charge is recapitulated, so that in reality the matter on which the newspaper has commented is still *sub judice*, and the Commissioners have not expressed any opinion in reference to this first charge. We think, therefore, that while this matter is before the Commission, and still *sub judice*, the newspapers ought to make no public comment on the proceedings of the Commission.
1189. *Mr. Schey.*] I desire to say a few words to your Honor which, I regret very much to say, are very unpleasant for me to say to you, and, I am afraid, will also be very unpleasant for you to hear. With regard to the decision of the Commission which was communicated to me yesterday by yourself, that it had been determined to sit from day to day, and on each day, I understand, from 11 o'clock in the morning to 4 o'clock in the afternoon, I beg to state that I am not in any way prepared to go at such speed with the case which I have in my charge, unless the time of the sitting each day be materially shortened; and, even then, I submit that the number of sittings each week, in view of all the circumstances, is too great. It will have been apparent to your Honor, as it must have been apparent to everyone who has attended the sittings of this Commission, that I have up to the present time conducted the case under what I might term exceptional difficulties. As a matter of fact, your Honor knows perfectly well that I referred, on the first day's sitting of the Commission, to the fact that I was suffering from a severe attack of laryngitis. I may add, your Honor, and I am prepared to put a medical man into the witness-box if necessary to prove the correctness of my statement, that over twelve months ago, and long before this matter had been thought of or I had thought of being connected with it in this way, I was ordered by my medical adviser to go away for

for six months, and to refrain from using my voice, and have nothing to say even in the ordinary avocations of life, as I was in danger of wholly losing the power of speech. I did not do so, but I was compelled on two occasions to be away from my business in consequence. For three years running I was under the care of doctors for my throat, and, I am happy to say, that I partially recovered my voice. Until three weeks ago I had no anticipation of a return of the complaint However, it has returned, and, consequently, it has been a matter of very great difficulty indeed for me to proceed as rapidly as I have already done. In the next place, I submit that I have repeatedly asked before for the production of a quantity of documents, not one of which I have been able to obtain, and for some of those I asked from the first day's sitting of the Commission. Further than that, I would point out that I had no chance of seeing the minutes of the first day's proceedings until after I returned home last night, so that naturally I have not had time to do more than cursorily glance at the proceedings up to the present time. I am, therefore, placed at considerable disadvantage unless I can be in a position to read and consider the evidence given before the Commission, in order that I may be able to prepare the questions I am required to ask for the purposes of this inquiry. And, it appears to me, your Honor, utterly impossible, under the circumstances, for me to proceed at the rate of speed at which the Commission is now sitting. I would point out that I am not a suitor before this Commission; I am not suing anyone for any benefit, and have nothing to gain from the result of the Commission, whatever it may be. Nor am I here in the position of a criminal. I am not cited before this Commission or Court to answer for any offence that I have committed—at least, I apprehend not.

1190. *President.*] Of course not. There has been no suggestion of such a thing.

1191. *Mr. Schey.*] I have observed, your Honor, an intention on the part of some persons—of course I do not refer to your Honor—to place me in such a position. As a matter of fact, however, my position is simply that of a man assuming a public duty, to the performance of which he has been urged on information of certain things which he believes to have occurred, and who is now called upon to justify the position he has taken up, and the statements he has made. I submit, therefore, that I am entitled to exactly the same consideration as would be extended to any other person proceeding under similar circumstances. It appears to me that had I been a man holding a high position in society, such as a bank manager, or any other person of high social standing, I should not be compelled to go on at such a rate.

1192. *President.*] I cannot allow that remark to be made here, Mr. Schey. The Commission does not recognise the position of any one before it, no matter whether they be rich or poor. There is not the slightest justification for such a remark. We pointed out the reason why we wished to proceed, and it is unnecessary to repeat that reason; but we cannot allow you to make such a remark as that which you have just made here. It is wholly unjustifiable.

1193. *Mr. Schey.*] I do not, your Honor, nor did I mean to say anything relating to the present Commission or its members. I was merely making a remark as to the sittings of other commissions which have been held in the past. I would point out that if I were in the position of a suitor, or a criminal, I should have a better opportunity of going on than I have at the present moment. If I were a suitor I should have engaged legal advice, and while I was attending to the duties of the Court the servants of my legal adviser would be obtaining papers and other information necessary to the prosecution of my suit; and the same would happen were I in the other position I have spoken of. As it is, in my present position, I have no counsel, nor, I submit, have I any right to be asked to expend a single penny on a matter that concerns the public, even if I were a millionaire. That being so, the whole expense and work connected with this inquiry, so far as I am concerned, in this case falls upon myself. In the case of the other side, that is not so. Mr. Eddy has the whole of the resources of a large department at his hand. He has the paid solicitor of the Railway Department, who, I understand, receives a salary of £1,500, to act as his advocate, and that, too, in defiance of a declaration made by the Government that Mr. Eddy should not have any solicitors paid by the Government or engaged by the Crown, in any capacity, to attend before this Commission. Then, in addition to that, if he requires any papers or documents he is in a position to despatch a dozen or twenty clerks in different directions to get what he requires. In my case, the whole of the onus falls upon myself. There is another thing which I would like to point out in this connection. Of course, I bow to your Honor's decision in this matter; but as to the occupation I am engaged in being so trifling that it should not be allowed to interfere with the sittings of this Commission, I would submit that the world cannot stop still because Mr. Eddy requires to expedite any particular business on his own account. Then, again, the position I have referred to before your Honor is not the only one I occupy. I am also engaged as a journalist, and happen to be the editor of a paper. It may be that the paper is a small one, but still the copyright of that paper must go on, and will not stop to suit 'Mr. Eddy's convenience, or that of any other person. If the sittings of the Commission are to proceed at the rate, and be of the length as the present, it will be seen that I must choose between abandoning altogether the work I have to do outside, or else abandon the inquiry; but, owing to the state of my health, as I have already pointed out, I cannot at the present time fulfil even the conditions which the Commission has laid upon me, to say nothing of the ordinary avocations of life. Under these circumstances—and I beg you to understand that I have not the slightest intention to reflect in any way upon your Honor—I think it will be unfair and injurious to me if I am compelled to go on as the Commission has ordered. I beg to point out that there is another Royal Commission in existence at the present time, which sits only four days in the week, and then, I understand, only in the after part of the day—that is, from half-past 2 o'clock; and the majority of Royal Commissions that have sat in the past have only sat three days in the week, sitting, then, only a portion of each day. I would further submit that there is a very great difference, again, between the other Royal Commission and this one, as regards myself. In the case of that Commission to which I have referred, the gentleman upon whom is placed a somewhat similar responsibility to myself, has merely to deal with facts that have happened within a very brief state of time—in fact, the whole of the subject-matter is compressed into a very brief space of time, and the whole evidence is confined to matters of fact, or of opinion, which can be obtained on the spur of the moment from any of the witnesses who may be examined; whereas, in my case, the investigations I have to make extend over a number of years. The papers that I have to produce are many and voluminous, and have to be hunted out by myself from the "Parliamentary Records," and other places, the mere labour of hunting through which is a very large undertaking indeed. Although I have, at very great trouble to myself, procured a sufficient amount of matter for the examination of to-day, I really do not feel myself in a position to go on to-morrow. I do not think I shall be able to prepare for it; nor do I think, for the reasons that I have stated, that I should be asked to do so. I beg to point out that a very large mass, indeed,

indeed, of what I consider to be material necessary for this inquiry—I am not in a position to declare as to its relevancy—that is a matter for your Honor to decide—which I desire to put forward, but which has been struck out and disallowed by your Honor, and, consequently, the matter has proceeded with greater rapidity than I anticipated. I beg to suggest, therefore, your Honor, that the sittings of the Commission should not go on for more than three days in the week, if it is intended to sit as long as at present; and, even then, I do not see how I am to proceed unless I have the minutes of evidence furnished from day to day. The secretary, certainly, gave me a copy of the previous day's evidence this morning; but, in the very nature of things, I have not been able to use it, as it consists of forty-one type-written sheets of evidence. I have had no opportunity of reading it, or of getting at any of the documents that I require for the proper conduct of the case, because on these documents I propose to found a quantity of the evidence which I shall have to call. I do not see how I shall be able to go on, therefore, unless I have time to peruse the evidence, and prepare all necessary questions upon which to found my case. I very much regret, indeed, having to make such a statement, but, with all respect to the Commission and your Honor, upon whom I desire to cast no reflections whatever, I must say that I cannot go on as ordered; and, if compelled to do so, I shall be forced into the position of having to decline to go into the matter under any circumstances whatever.

1194. *President.*] When the Commission stated that they intended to sit from day to day, and from 11 o'clock until 4, the only matter which was before the Commission was an application on the part of Mr. Schey to adjourn the Commission during the sitting of some Conference with which Mr. Schey was connected. We have never refused to give to Mr. Schey any adjournment that he might consider necessary, provided that the adjournment is a reasonable one, and I have never refused Mr. Schey an opportunity of seeing any documents which he might have required. On the contrary, when the Commission first sat, on Wednesday last, we informed Mr. Schey that if he would prepare a list of the witnesses that he required to have summoned, and a list of the documents that he wanted to see, the Commission would take care that the witnesses were immediately summoned and all documents were produced for him to consider. The same was said to him again on Monday last, so that Mr. Schey cannot complain of the Commissioners refusing him an opportunity to procure witnesses for his case, and to consider his case. We still say we think it necessary to go on with this Commission without any unnecessary delay. If Mr. Schey makes any application to us for an adjournment, and we consider it right, that adjournment will be granted to Mr. Schey, and every opportunity will be given to him to prepare his evidence and examine any documents he may consider necessary; but if Mr. Schey informs us that he is unwell, or that he has not had an opportunity of seeing the papers he refers to, of course the Commission will accede to a request for an adjournment without the slightest hesitation. It seems to me a waste of time to say such a thing; but to-day we expect that Mr. Schey will go on with his examination of Mr. Thow, and then if he makes an application, or at any subsequent time makes an application for an adjournment, of course the Commission will consider that application.

Examination of Mr. Thow continued :—

Mr. W. Thow. 11 May, 1892.

1195. *Mr. Schey.*] I think, Mr. Thow, that yesterday we had got to the point where you selected certain firms in England for the manufacture of certain locomotives, and that afterwards certain prices were named, and in the end Messrs. Beyer, Peacock, & Co. obtained the work to do? Yes; I think that is the history of it.

1196. Now, will you tell me what were the prices tendered by Dubs & Co. and Beyer, Peacock, & Co. respectively for the lot of engines to which I am now referring? Which lot are you referring to?

1197. The lot of fifty passenger express engines for which you told me yesterday you invited three manufacturers, namely, Messrs. Beyer, Peacock, & Co., Dubs & Co., and Neilson, to give quotations and you did not recommend Neilson's tender, because you did not approve of his design, thus leaving two firms, Messrs. Beyer and Peacock and Dubs & Co., who were still giving prices for the fifty engines? Beyer, Peacock, & Co.'s price, delivered at Liverpool, was £3,300 in the first instance, but they afterwards reduced it to £3,200. Dubs' price for delivery in Glasgow was £3,010.

1198. Have you identified the lot of engines to which I am particularly referring? I am speaking of the lot of fifty engines.

1199. The fifty express passenger engines? Yes.

1200. Have there been more than one lot of fifty engines since you have been in this Colony? In answering your question I was not referring to separate lots of engines. Those I am referring to are fifty express passenger engines.

1201. There where three prices obtained? Yes; I have given you two; the other price was Neilson's, for delivery at Glasgow, at £3,100.

1202. Then you assert that the price of Beyer, Peacock, & Co.'s engines, delivered f.o.b. at Liverpool, was £3 200? Yes.

1203. And that the other, Dubs & Co.'s, price was £3,010? Yes, those were the two prices. I may say that there were certain additions in the contract which increased Beyer, Peacock, & Co.'s prices slightly—very slightly, in fact, but I know there were some additions.

1204. What was the price of Beyer, Peacock, & Co.'s engines as delivered? For delivery and erection, and and after running 1,000 miles in steam, £3,742 7s.

1205. Then, Mr. Thow, if any person has given in evidence that the price of Beyer, Peacock, & Co.'s engine war £3,650 they would have been under the final amount paid for them and over the first amount? As I advised you, there were some slight additions, which made a difference in the two sums mentioned.

1206. What I want to get at is this: the contract price of Beyers and Peacock was £3,740—that was with the mechanical additions? Yes, delivered in steam in Sydney.

1207. What was the contract price of Dubs & Co.'s engines under similar conditions? £3,460.

1208. Then the difference between the two contract prices would be about £190 per engine? Yes, about that.

1209. And on the fifty engines the difference would amount to £9,500? Yes.

1210. Which was afterwards increased by the additions of which you have spoken;—do you know a Mr. R. H. Burnett? I know him.

1211. Are you aware whether he was ever in this Colony? He was in this Colony at one time.

1212. Do you know where he is now? Yes.

1213. Where is he now? He is with Beyer, Peacock, & Co., in Manchester.

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1214-15. What positiondoes he hold at Beyer, Peacock, & Co.'s? I fancy he has more to do with the correspondence than anything else. He is not mixed up with the mechanical matters.
1216. He is an engineer, is he not? Yes.
1217. And he is engaged at Messrs. Beyer, Peacock, & Co.'s establishment, in Manchester? Yes.
1218. You have said he was in this Colony previously? Yes.
1219. What position did he occupy here? That of Locomotive Engineer.
1220. Do you know where he was before he came to this Colony? I think, immediately before he came to this Colony, he was in Messrs. Beyer, Peacock, & Co.'s employ. Previous to that, he was underground engineer for the Metropolitan Railway Company, in London. I do not know what his previous position was. I have only known him from the time he was on the Metropolitan Railway in London.
1221. You know nothing about the circumstances under which he came to the colonies at all? No.
1222. *President.*] When did he come to this Colony? I think he must have come about the year 1877 or 1878; but that I am not sure of, your Honor.
1223-4. *Mr. Schey.*] Do you know if Mr. Burnett was at any time in Sir John Fowler's employ? I am certain he was not.
1225. Nor had any connection with him? He had no connection with him at all that I know of.
1226. However, you know he was at Beyer, Peacock, & Co.'s? Yes; previous to coming out here.
1227. And, being at Beyer, Peacock, & Co.'s, he would have more or less knowledge ——
1228. *Mr. Eddy.*] I do not want to interrupt unnecessarily, your Honor; but it does appear to me that the questions which Mr. Schey is putting to the witness are altogether irrelevant to this inquiry. I am charged here with certain corrupt practices in my official capacity; and now we have a question raised about the history of some gentleman whom I have never seen in all my life, and know nothing whatever about. In what manner this can relate to the grave charge against me I am at a loss to understand. If Mr. Schey's voice is as bad as he has stated, it is to be regretted that he does not take advantage of his present indisposition to abstain from asking unnecessary questions.
1229. *President.*] I do not think we can stop the evidence at present. It is showing that some gentleman who was connected with the Railway Department here had been employed, and now is employed, by the firm of Beyer, Peacock, & Co., Manchester. How this evidence can be connected with the present charge I cannot at present determine; but I cannot prevent the evidence being given.
1230. *Mr. Schey* (to Witness).] Of course, there is a considerable amount of connection between the firm of Beyer, Peacock, & Co. and Sir John Fowler? Not that I am aware of. I know of no other connection than such as is quite proper for an engineer in Sir John Fowler's position to hold with a firm of repute like Beyer, Peacock, & Co.
1231. I did not ask for your opinion as to the propriety of the connection. As a matter of fact, do not they execute a considerable amount of work for persons acting through or under the instructions of Sir John Fowler? I do not think they do.
1232. When you were in Sir John Fowler's office, were you not engaged at Beyer, Peacock, & Co.'s inspecting work for Sir John Fowler? I was there for some time, and also in other work; for instance, at Fowler's in Leeds—which firm is in no way related to Sir John Fowler—and Messrs. Manning and Waddell, of Leeds.
1233. Do you know whether Sir John Fowler is connected with Manning, Waddell, & Co.? I know of no such relationship?
1234-5. You do not know? I do not know Sir John's relations.
1236. Of course, it is to be supposed that both Sir John Fowler and Beyer, Peacock, & Co. would execute a large number of orders with which you had no connection? Decidedly.
1237. Do you know that many orders with which Sir John Fowler has had something to do have been executed by Beyer, Peacock, & Co.? No; I believe he gives orders to Beyer, Peacock, & Co. when he finds that circumstances, such as the price, date of delivery, or style of manufacture, will warrant him in doing so.
1238. He does give them orders? Certainly; and other people give them orders besides Sir John Fowler.
1239. I believe you are a member of the Institute of Civil Engineers, Mr. Thow? Yes.
1230. How long have you been so? I have been a member since November, 1890.
1241-2. And were you an associate member before that? No.
1243. You were a full member at once? Yes.
1244. You are not a civil engineer, I believe? Not by profession.
1245. I believe that there are certain regulations bearing on the admission to membership of the Institute of Civil Engineers? Certainly.
1246. For instance, in such a case the person signing the recommendations on behalf of a candidate for membership, and recommending him for admission, must state that he knows him to be an engineer in practice, or something to that effect? Certainly.
1247. Will you kindly tell me the names of your recommendees in connection with your appointment as a member of the institute in question? I do not think I can remember them all.
1248. Will you tell me the names of those you can remember? There are some friends of my own. I should like very much to refer to the paper which shows the names of those who recommended me before answering that question.
1249. Can you put in that paper? Yes.
1250. Well, I will ask you to be good enough to hand the paper to the Secretary when you can do so? Certainly.
1251-2. Now, Mr. Thow, the report you have made on the condition of the rolling stock of New South Wales was made in 1889, I believe? In the beginning of that year.
1253. Did you at that time report that a large number of engines were urgently required? No; I do not think I did.
1254. I ask you whether you did not embody in your report a recommendation that a large number of engines were urgently required in the immediate future? I do not think I recommended that a large number should be obtained. What I was specially dealing with was the stock I found on the railway at the time I made my report. It had nothing to do with a recommendation to obtain an additional number of engines.

1255.

Mr. W. Thow. 11 May, 1892.

1255. Did you make no recommendation at that time? I will give you the sum and substance of the report which I have here. I said that fifteen engines ought, in my opinion, to be broken up or sold at once; that eighty-seven engines ought to be allowed to wear themselves out or be sold; that 132 engines ought to be altered into more useful machines, but not repeated; and that 195 engines, contained in classes 93, 158, 205, and 255, ought to be adopted as standard machines, and slightly modified as opportunity occurred.
1256. As a matter of fact, you condemned a large portion of the stock as it then existed? I did not condemn it; I gave the Commissioners advice as to what should be done with it.
1257-8. At all events, that advice was condemnation of the engines as they stood? That is for you to decide.
1259. Is it not a fact that a number of these condemned engines are running at the present time? A number of the engines that I said should be allowed to wear themselves out are running at the present time. They are wearing themselves out.
1260. And the fifteen engines you recommended to be broken up for scrap—were they broken up? I think some of them have been broken up or sold.
1261. And those which have not been broken up or sold? They have probably stopped running at the present time.
1262. How many types of engines did you find when you arrived in New South Wales? I think it is given in this report. Taking all the small differences mentioned, I think there were about forty-two different types, but they were classified under some twenty-seven numbers.
1263-4. Did you recommend any new classes? These are my recommendations in the report ——
1265. I do not desire you to read the recommendations, because the document can be put in. I am now merely asking you if you made any recommendations as to new type; and if so, of how many standard engines? I find I recommended four types of engines similar to the four existing types, but slightly modified; that is increased boiler capacity.
1266. I do not want to know the mechanical details:—you recommended that four classes as standard should be obtained? No, I did not make any such recommendation. I will give them as they stand in the report.
1267. I do not think that is necessary? You must not dictate to me as to how I shall give my evidence. I am not giving my evidence to you, but to the people of this colony; and I intend that it shall be as clear as possible.
1268. *Mr. Schey.*] Your Honor, if the witness takes a correct view of the position that he is not giving his evidence to me, I submit that my position is voided, and that I might as well close up.
1269. *President.*] The witness is entitled to answer the questions in his own way.
1270. *Witness.*] I recommend here that the future express engines of 255-class be modified. That the future mail and express engines be a new type, similar to class 305, one of the existing class. That the future tank suburban engine be either a new and more powerful type, or 158-class modified. That the future ordinary goods engine be 205-class. That the future heavy coal and shunting engine be either the existing 17 and 48 classes converted into tank-engines, or 93-class repeated as a tank-engine.
1271-2. Then, as a matter of fact, you recommended five new classes of engines, or modifications of existing type? Precisely so.
1273. The parts would not be interchangeable with the old type? Yes; to some extent they would. For instance, the axle-boxes and the connecting and coupling rods, and in most cases the boilers, were all interchangeable with the existing types.
1274. But still, counting in the same way as the forty-two different classes you have given us, this would make five new classes? Yes; but I also told you that there were twenty-seven real classes, but that if all the smaller differences were taken into account the number of classes reached forty-two.
1275. Have these types you recommended been supplied? No.
1276-7. Have any of them? Yes; there is a new suburban tank engine which is of a more powerful class than any we have had here before.
1278. That is the type mentioned in your report? Yes; it is mentioned clearly in the report.
1279. Have any other of the types recommended been supplied? One recommendation has been carried out, and that is that class 93 has been repeated as a tank engine.
1280. Then the other recommendations have not been carried out? No, they are not yet carried out.
1281. How many types of engines have been introduced since you took office as distinguished from all the types in existence before that? Four.
1282-3. Does that include the two types of American engine? Yes.
1284. And you speak now of the four types in the same connection as you spoke of the twenty-seven, or as you spoke of the forty-two? In connection with the twenty-seven types. I say there are four new types.
1285. Counting in the same way as you said there were forty-two, how many new types have you? I should say six.
1286. You do not think there are any more? I do not think so.
1287. How many engines were there under repair about the time you took office? I think there were seventy-six. [*Referring to report.*] Yes, the number is seventy-six.
1288-9. How many engines were there under repair on the 30th June, 1889? I have given you the number to the 31st March, 1889.
1290. That would be about the time you took office, would it not? It was a little earlier; but that I may say is the date to which our exact records go back.
1291. *Mr. Schey.*] Might I ask to be supplied with the Railway Commissioners' Report for 1889?
1292. *President.*] I am given to understand, Mr. Schey, that that is among the papers being collected, and that they will be brought here this morning.
1293-4. *Mr. Schey* (to Witness).] How many locomotive engines were there in possession of the Railway Department when the yearly report was made up for 1889? I think about 429.
1295. How many were there when the following year's report was made up—that is, for 1890? I shall have to refer to the documents to be able to tell that.
1296. I hold in my hand a copy of the Railway Commissioners' report for the year ending 30th June, 1890. This report states that there were 439 engines at that date. You, therefore, say that is correct. I presume it is made up from the returns? I have no doubt that it is correct.
1297-8. Can you tell me how many engines were under repair at that date [*copy of report handed to Witness*);—I am now referring to page 16 of the report [*Appendix*]? Yes.

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1299. Was that return supplied to the Commissioners by yourself? It would be supplied by my office no doubt.
1300-1. You are responsible for that return as the responsible head of your department? Yes.
1302. How many engines were under repair at the date given by this table? There were 102 under or awaiting repairs. Let me advise you that the figures you asked for just now were the number of engines under repair, and I gave you that as seventy-six in March, 1889.
1303. Yes. Then by the table in the report with which we are now dealing there were 102 engines in the shops awaiting repair on the 30th March, 1890? Yes, at all stations.
1304. All over the line? Yes.
1305. And that number were out of service? Yes.
1306. And that number was one-fourth, approximately, of the whole of the engines in the possession of the Commissioners, was it not? A little under one-fourth, I think.
1307. There were ten new engines which had been just delivered at that time, were there not? Yes.
1308. Technically, or I should rather say colloquially, known as "Scotch Yankees"? Yes.
1309. And subtracting those engines which were under repair would form one-fourth of the whole of the engines in the possession of the Government at that time? A little under one-fourth.
1310. Then the number of engines under repair increased largely from 1889 to 1890?—I am not able to tell you that.
1311. Well, you have just told me that there were seventy-six at the previous date, and have since repeated it from the document? I did not say under repair, I said "under or awaiting repair."
1312. I am afraid that is rather a disingenuous distinction, Mr. Thow? You made the distinction yourself. I took the trouble to correct you not five minutes ago, and told you the number of engines you referred to which were under repair.
1313. I took it that you would understand what I meant by the expression I used? It is very difficult sometimes to understand your expressions.
1314. Then give us the number of engines under repair and awaiting repair on the 31st March, 1890? There were seventy-six under repair, and sixteen waiting for repair.
1315. Will you now tell me how many engines there were under repair and awaiting repair on the 31st March, 1892? I have not got that information, but I can get it for you.
1316. Now, Mr. Thow, will you please tell me when the first lot of engines were delivered in Sydney after you took office? The ten passenger engines, built by Dübs & Co., came to the colony just prior to and after I took office.
1317. Will you tell me about what month that was? I came here on the 3rd September, 1889. I see now that I was mistaken in what I said before. The whole of the ten Dübs engines arrived in the colony after I took office. They were the first lot.
1318. And they arrived here about when? They arrived here between March and June, 1890.
1319. Now, what was the next lot of engines that arrived in the colony? There were twenty-five goods engines by Dübs & Co., which arrived between March and August, 1891.
1320. And other lots of engines subsequently arrived—I do not want the list of them, but just the bare fact? Yes. I must correct what I said just now with regard to the second lot of engines. I see that an intervening lot of engines, six in number, by Beyer & Peacock, arrived between February and March, 1891.
1321. Those were six tank engines? Yes, and then a second lot, that is, of tank engines, arrived in July and August, 1891.
1322. Referring to these two lots of tank engines, I understand you to say that there were two lots of six each, and that they were precisely similar? Yes, they were precisely alike. These are the engines I referred to a short time ago as being a repetition of 93-class, which is the tender-engine obtained on my recommendation with the tanks added.
1323. I do not want to go into the mechanical details—that is no part of my case. But you say that these two lots of six each were precisely similar? Yes.
1324. Were they supplied at similar prices? There was a little difference in the price, I think.
1325. What was the price of the first lot? Do you want the price delivered here, all complete and running in steam?
1326. When we ask the price of an engine we mean the price of an engine to you—what is it worth on the books? The first lot complete cost £2,830 0s. 9½d. each engine, the second £2,960 18s.
1327. That is about £100 difference on each engine? Yes.
1328. Can you account for that considerable difference, seeing that the engines were precisely similar? Yes, they were ordered at different times. I think more than a year elapsed between the two orders, and in the meantime the price of material had very considerably advanced.
1329. You say more than a year elapsed between the two orders? It was a considerable time I know. It may not have been quite a year, but a considerable time elapsed between the two orders.
1330. And these two lots of engines were obtained at different times and prices? Yes.
1331. They were supplied by Beyer & Peacock? Yes.
1332. And no tenders were called for them? No.
1333. You have now given the dates of the delivery of these engines, that is, between March and June, 1890, February and March, 1891, and March and August, 1891—these were the first three lots of engines delivered since you have been in office as locomotive engineer? I think so.
1334. There were no other lots delivered? I do not remember any others.
1335. Now, referring to the difference in the cost of these two lots of engines, had the price of material in England anything to do with the difference in price to you? I think it had. I think that was the only reason. Of course when the price of material advances it often happens that the cost of freight advances also.
1336. I suppose you are the technical adviser of the Government so far as the preliminary recommendations for obtaining engines are concerned? I have no doubt the Commissioners would ask my opinion respecting the locomotives, if that is what you mean.
1337. What I mean is that you as the responsible head of the locomotive department would have something to say about the number of engines required to do the traffic? Yes.
1338. Also, as the responsible head of a great department in which a large amount of money is spent, you would have a general knowledge of the range of prices where the goods were obtained? I should know whether the market was going up or down.

1339.

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1339. Can you tell us how the price generally of raw material, such as iron and steel, used in the construction of locomotives ranged in the years 1889, 1890, and 1891? I can only tell you, so far as the dates you speak of, that it was very high.
1340. And, therefore, the prices of those engines which have been delivered since you have been in office, do not they range at a higher price than those previously obtained? I do not think so.
1341. I mean taking engine for engine? That is a very improper way of looking at it. You do not get a very powerful engine for the same price as you get a less powerful one.
1342. That goes without saying;—you do not get a racehorse at the same price as a hack? You must have some datum to go upon. We take the price per ton.
1343. Have we not paid more for these engines than the previous lot? Certainly; because they are larger and more powerful engines.
1344. You paid more? Decidedly we have paid more.
1345. What was the maximum load for any engine that was in existence at the time you made your report? That is a very general question. An engine would take different loads over different parts of the line.
1346. Take it over any part of the line. I do not want to go into mechanical details. You say certain engines can take ten, others twelve, or twenty, or whatever you like to name. Make a computation in that way? I can give you here the different loads which the engines will take over different parts of the line.
1347. I do not want you to go over all the classes. Take a special section, say Penrith to Mount Victoria? I have not got the load table with me for that particular section. I can give it on the southern line.
1348. Can you give it from Picton to Goulburn? Yes.
1349. I would like you to put in evidence the load section between Penrith and Mount Victoria; will you do so? Certainly I will.
1350. Now, tell me what were the most powerful engines you had in the Colony at the time you made your report? Do you mean as passenger or goods engines?
1351. As goods engines; take both? Very well; I will give you the passenger engines. The most powerful we had at that time was what is known as the 304-class, and the load that is allowed to that engine—I believe it was the same then as it is now—is what we know as five and a-quarter carriages, or 105 tons, on the section from Picton to Mittagong, which includes the heaviest part of the line.
1352. Will you give me the same information as regards the engines known as the "Scotch Yankees"? Those are engines imported after I entered the Service.
1353. I mean the first lot, for which I understand you were in no way responsible. I am not trying to fence the responsibility? I do not suppose you are; but I wish to understand your question clearly.
1354 I am referring to the ten engines built by Dübs & Co., and delivered first after you assumed office? They take a quarter carriage, or 5 tons, more than the 304 class; they take 110 tons.
1355. That is in passenger traffic? Yes.
1356. Will you give me now the load which these new engines take over the same section? Yes. I gave you the loads for the mail service. The last Manchester engines are those you are speaking of, I think?
1357. Take the fifty constructed by Beyer, Peacock, & Co.? They take for the mail service 165 tons.
1358. And how many carriages? Eight and a-quarter.
1359. You have said that the last figures given for these fifty Beyer and Peacock engines were for a similar service to that you quoted for the 304 class? Yes.
1360. That is, running with the same train, over the same line, and under the same conditions exactly. The 304 class were the engines previously employed to run in that service? I do not think so. You asked the power of the engine, and I told you. I did not say that the engine was employed on that service.
1361. Well, employed on that service, what would it take? If you want to know the power of the engines that did this service before these engines came into operation, we shall have to refer to another class—255 or 261.
1362. Prior to your obtaining these last new Manchester engines, the traffic for this section was not run by the most powerful engines you had? It was not.
1363. Then there were engines in the possession of the Government that would have carried a heavier load, and done the express service better, than those which were employed? I have not said so. There were more powerful engines, but they were not suitable engines for that traffic.
1364. Will you tell me what, under similar conditions, would be the load of the ten Dübs' engines? Five and a-half carriages, or 110 tons.
1365. Will you give me the same information as regards the goods stock—that is, the load of the most powerful engine that was in existence when you reported on the rolling-stock—for this same section? That section of the line for goods working is divided into four parts, because you can understand that the grade alters so materially that the load has to be reduced to accommodate the grades.
1366. Take the first section, from Picton to Thirlmere? On slow goods trains it would take twenty-two waggons behind it.
1367. That is the maximum in all cases allowed? Yes; about 220 tons.
1368. *Mr. Reddy.*] What engine was that? The 205 class; that is the most powerful goods engine we have. That engine was not employed on fast goods trains.
1369. *Mr. Sahey.*] Now, then, give us the most powerful engine for the fast goods train? That was the 304 class, taking seventeen vehicles on the slow goods train, and on the fast goods fifteen vehicles.
1370. Averaging about 10 tons per vehicle? Yes, about that.
1371. Now, will you give me the goods load which the first lot of the Dübs' engines was capable of drawing—those that were first delivered after you took office? I have already given you that load.
1372. You gave me the passenger load. I am asking you now about the goods load? You mean the class first delivered?
1373. Yes? They took one waggon more; that is, eighteen for the slow goods, and sixteen for the fast goods.
1374. The difference in the load being caused by the difference in the speed it was necessary to make up? Yes.
1375. Can you give me the goods load for the new engines that have been imported on your recommendation? They are not working the goods train.
1376. Then you have not imported any fresh goods engines? Oh yes, we have imported fresh goods engines; but you are confusing them with the last Manchester engines, of which there were fifty.

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1377. I want to compare the most powerful goods engines that were in existence when you took office with those which are now in existence? ——
1378. *Mr. Eddy.*] I must ask, Mr. President, if this is pertinent to the inquiry, and the questions before you? Mr. Schey appears to be fishing for information for another purpose. The engines he is referring to are the Baldwin engines, concerning which there is another inquiry by a royal commission pending.
1379. *Mr. Schey.*] I am talking about the English engines, your Honor.
1380. *President.*] We have nothing to do with the Baldwin engines at all.
1381. *Mr. Schey.*] Your Honor, I don't want to know anything about the Baldwin engines. I am dealing with English goods engines imported since Mr. Thow has been in office.
1382. *Witness.*] We have imported twenty-five goods engines since I have been in office, and they are all of the same class as the class 205 that were in existence before I took office. They take the same load as those I have already given you, which is twenty-two waggons on slow goods trains.
1383. They were the next lot ordered after the ten which came from Dübs & Co., of Glasgow? Yes.
1384. And what was the total price paid for these particular engines? The price was £2,916 1s. 5d. each.
1385. Then, if any one has stated that the capacity of the new engines is double that of the old engines, that would not be correct? What does that refer to?
1386. I ask you the question, if any one has said—and I am referring to the first of the two classes of passenger engines that we have just been comparing—that the new engines are capable of taking double the load of the old ones that would, according to you, be incorrect? I have already shown you that the new passenger engines are taking more than double the load of the engines that were employed on the same work previously.
1387. Are there any engines now in the service that will take fourteen, or a maximum of 140 tons? You are mixing up the passenger loads with the goods engines.
1388. No; I am asking you if there are any engines that will take a maximum load of 140 tons over this particular road? I do not know of any, except the Baldwin engines, and those new Manchester passenger engines that will take 140 tons unassisted over this particular road.
1389. But, as a matter of fact, these new engines are drawing heavier loads than those that were drawn before. Has it ever been brought under your notice that the heavier loads are likely to be a source of danger? In what respect?
1390. *President.*] I do not think you can go into that, Mr. Schey.
1391. *Mr. Schey* (to Witness).] Do you not think that the loads which the old engines were capable of drawing were sufficiently large for the safe and practical working of the line? I do not think that the loads which have been taken over the line are larger than those which were taken over the line before. But the loads then were taken by two engines instead of one, therefore there can be no greater risk.
1392. That is not what I am asking. Do you not think we had engines in the service prior to those imported on your recommendation that were capable of taking a maximum load large enough for the safe and practical working of the line? No, and I am pointing out that we took the same number of waggons in the load then as now, only that then we employed two engines on the road, and now we draw the same number of waggons with one. It is the same with the passenger stock. The trains are not much larger now than they were some years ago; but then we had to employ two engines to take those trains, whereas we now do it with one.
1393. But that double engine working is a practice that has been frequently protested against, is it not?——
1394. *Mr. Eddy.*] I must really protest against this evidence, Mr. President. What can it possibly have to do with the charge against me?
1395. *President.*] It is not upon that point, Mr. Eddy. A part of the charge is that these engines were ordered without necessity, on the ground of urgency. It is only in that sense that the evidence has any relevancy or bearing upon the case.
1396. *Mr. Schey* (to Witness).] Have you at any time received a protest from any of the employees against double running—that is, making up a double train with as many trunks as two engines will draw? I am not aware of any protest; but I can assure that it has been the practice for many years on these railways to run the trains in that way.
1397. Do you remember an accident that took place some time ago on the Zigzag? What Zigzag?
1398. The big Zigzag, near Lithgow—did not a deputation wait upon you in relation to this matter? ——
1399. *President.*] You are carrying this too far, Mr. Schey. We have nothing to do with the matter you are now referring to.
1400. *Mr. Schey* (continuing his examination of the witness).] Can you give me any information as to the proportion of locomotives employed on the railways in Victoria, South Australia, and Queensland, as well as this Colony? I can get the information.
1401. Will you be good enough to supply such a return? Yes; I will do that.
1402. Was there not an indent sent to England for boilers—forty locomotive boilers? Yes.
1403. Were you at that time in the service of New South Wales? I was.
1404. Was it on your recommendation that such an order was sent? It was.
1405. Who supplied them? Beyer, Peacock &, Co. supplied some, and Dübs & Co. the rest.
1406. Do you remember how many each maker supplied? I cannot at the present time give you the numbers.
1407. Were tenders called for these boilers? I think so.
1408. What price was given for them? I cannot give you the figures at present.
1409. What would be the average price of such boilers? They varied from £800 to £1,050.
1410. They were nearly all of the larger type, were they not? Yes; most of them were.
1411. Then the approximate value of the forty would be £40,000? Somewhere about that.
1412. You say tenders were called for them? Well, it is some time ago; I do not remember.
1413. These boilers were ordered as a matter of special urgency, I believe? They were.
1414. Have you any papers relating to them? No, I have not.
1415. I understand you made the recommendation for the purchase of these boilers as a matter of special urgency for the public safety? They were ordered because engines really necessary for the working of the traffic required to have old boilers taken out and new ones put in.
1416. Then it is not a fact that it was on account of extreme urgency and the danger to public life that caused the boilers to be imported? I can only tell you that my anxiety was to keep engines at work, so that we might cope with the traffic.

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1417. There is a wide difference between keeping engines at work to run the traffic and importing boilers as a matter of special urgency, because of the danger to life and limb which Mr. Eddy spoke of in connection with this matter? I should think if old boilers required to be removed, and ought to be removed, because they were unsafe, that would imply danger to the public.
1418. At what time were these boilers delivered in the colony? I cannot give you the date just now. I have not the papers with me.
1419. Were the specifications made up by yourself? Yes; all the particulars that were forwarded were formulated by myself.
1420. They were ordered by the Railway Commissioners? Yes.
1421. Can you give be about the date they were ordered? No, I cannot give you the particulars without referring to the papers.
1422. Will you supply them? Yes.
1423. How long after these boilers arrived was it before they were put into service? I should think some of them were put into use a short time after their arrival.
1424. In putting in these papers, will you supply also the dates when these boilers were put into service? Yes.
1425. Is it a fact that those boilers, after being imported, had to stand for some considerable time at Eveleigh for want of mountings? No. It is a fact that some of them stood for some time after their arrival, simply because we had no engines ready for the boilers, as some of the engines were running with boilers of the old class, which were not sufficiently worn-out to remove and put the new ones in.
1426. Is it not a fact that when these boilers were ordered no mountings were ordered with them? It is not necessary to do so.
1427. I am not asking you that. Is it not a fact that no mountings were ordered with them? It is a fact, and it has never been my practice to order them.
1428. Was not an indent subsequently sent to England for them? Yes, when I was out of the colony.
1429. You take no responsibility for that? No. My practice has been to take the mountings off the old boilers and apply them to the new boilers, and that is what I intended to do in this case. The mountings do not wear out the same as the other parts; they will last out two or three boilers.
1430. As a matter of fact, that course was pursued with some of the boilers that were used first after their arrival in the colony? I believe so.
1431. Was there not certain hydraulic machinery erected at Eveleigh expressly for the manufacture of boilers? No. There is hydraulic machinery at Eveleigh for doing boiler-work, whatever it may be, whether for repairs or making boilers; but I may tell you that the repairs have been so heavy that we have not been able to make boilers at Eveleigh.
1432. Have none been made? None have been completed since I came to the colony; and if any have been made, there have been very few of them indeed. I am not prepared to say that there have not been two or three boilers made at the Eveleigh works; but, as I have said, all the machinery has hitherto been employed on the repairs and maintenance of existing boilers.
1433. That machinery, at all events, is expressly suitable for making boilers? As I have said, it is suitable for making or repairing.
1434. You are not prepared to say that no boilers were made by that machinery? None have been finished since I have been in the colony. I think one or two are at present in hand, but are not completed yet.
1435. Have you any knowledge of boiler-plates being procured previous to your arrival for the purpose of making boilers? I don't know for what purpose they were obtained—whether for making boilers or supplying contractors outside. I cannot say.
1436. However, a considerable number had been imported? Yes.
1437. At the time you inspected the rolling stock I suppose these boiler-plates came under your notice? I think it very likely.
1438. Would there be sufficient to make forty boilers? Oh, no. Beside what you are asking me now, I may point out that these boiler-plates which were imported are only suitable for particular boilers. You cannot take a portion of a plate and apply it to any particular boiler. That means a great deal of extravagance and waste.
1439. *President.*] Were these boiler-plates that you speak of all for one class of boiler, or for different classes of boilers? My impression is that the boiler-plates Mr. Schey refers to were imported for colonial contractors, who had contracts for two different classes of engines.
1440. *Mr. Schey.*] Are you prepared to say that these boiler-plates were not imported for the express purpose of making the forty boilers required to replace old ones, and which forty were afterwards ordered from England? I do not think they were; but before I could say, I should have to look up the indent. My opinion is that they were not imported for the purpose you state.
1441. Are you not aware that two of those very boilers were actually made from these very plates, and put into a class of engines for which the forty boilers were afterwards ordered? I should not be at all astonished to learn that the plates in store, and which were of no use for the purpose for which they had been obtained, had been taken out and used in an extravagant way to make repairs to the two boilers you speak of; but to follow out that system would be, as I say, a most extravagant thing to do.
1442. And you say that the repairs have been so exceedingly heavy that there is no hope whatever of manufacturing at Eveleigh? Yes; no hope whatever.
1443. That is to say, at the present time? Yes. I do not see how we could manufacture new boilers with any great speed.
1444. Is it a fact that the men at the Eveleigh workshops are working only five days a week? At the present time that is so.
1445. It has been so for some little time past? Yes.
1446. How many less is the number of men employed in the Eveleigh workshops now than six months ago? I do not think the mechanics are fewer than they were six months ago.
1447. Do you say no fewer? I will not say no fewer; but I will say that there are not many less.
1448. Will you swear that there are not 200 less workmen engaged than there were two years ago?
1449. *President.*] What have we to do with that?
1450. *Mr. Schey.*] I want to show that the works are not working up to their capacity, your Honor.

1451.

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1451. *President.*] We have nothing to do with that. If you can show that at the time the engines were ordered there was no necessity to send home for them, well and good; but the number of men at the present time employed at the Eveleigh workshops could throw no light upon that, and has nothing to do with this inquiry.
1452. *Mr. Schey.*] I am putting these questions, your Honor, to show that the witness varies in his statement, or that one part of his evidence is inconsistent with another. For example, he tells you that the Eveleigh workmen are only working five days in the week, and yet he says that the shops are working up to their full capacity. I submit that these contradictory statements have a bearing on the character of the witness' evidence in other respects.
1453. *President.*] You want to impugn the veracity of your witness.
1454. *Mr. Schey.*] You may call him my witness, your Honor. Technically he is, no doubt; but you must remember, and everyone must know, that all the departmental officers are hostile to myself. I am compelled to call them; but it must be obvious, from Mr. Eddy's attitude and the points he has taken, that ——
1455. *Mr. Eddy.*] Your Honor, I ——
1456. *President.*] I do not want to hear you, Mr. Eddy; we rule that the evidence is inadmissible.
1457. *Mr. Schey.*] Mr. Thow, concerning those forty boilers of which we were speaking, are there any of them now in stock? I do not think so; I think they have all been used.
1458. Can you tell me when the last one was put in a locomotive? I cannot.
1459. But you are certain they were all used? So far as I know, they are all issued to locomotives.
1460. But, as the head of a department, would you not know what there was in stock? I am not aware of every detail, but I think I am right in saying that all these boilers have been applied to locomotives some time ago.
1461. Is it long since that the last one was put into a locomotive? I am not able to tell you when the last one was put in. It is certainly since June last.
1462. Then, if any one has written—say twelve months ago—that some of these boilers were lying at Eveleigh with the grass growing over them, you would not be in a position to say that that statement was incorrect? If he wrote twelve months ago he would be quite correct in saying that the boilers were not employed, because, as I have said, it was since June last that we applied the last one.
1463. They were supplied about when? I am not able to tell you the dates when they were supplied, but I will get the information for you.
1464. Nor the date of the order? I have undertaken to give you the information. You shall have it all supplied.
1465. Have you seen a copy of the paper relating to indent for locomotive boilers? I do not think I have seen a copy.
1466. *Mr. Schey.*] I should like to ask your Honor if the secretary is in possession of a copy of this document?
1467. *President.*] What is the document? [*Document handed in.*] That has not been before the Commission yet.
1468. *Mr. Schey.*] Although it is a parliamentary paper, it is a reprint of a document from the Railway Department.
1469. *Mr. Eddy.*] Mr. President, I would wish to call attention to the waste of time on this question, a question which is not referred to this Commission in any way. The charge is that, without first calling for tenders, the Railway Commissioners ordered £500,000 worth of locomotive engines; and I would ask you in what way these questions as to boilers, which we wanted to repair our engines, have to do with the subject of the charge?
1470. *President.*] I think, Mr. Eddy, the charge goes further. As I pointed out before, the charge is not merely that the Railway Commissioners ordered the locomotives without tendering, but that they did so without any necessity on the ground of urgency; and I understand that the evidence which Mr. Schey is producing on this point is for the purpose of showing that there was not, at the time these locomotives were ordered, any urgency for them. I suppose he intends to argue that the fact of there being boilers and boiler-plates here, showed that there was no necessity to order engines from England. That is the only way in which I can understand this evidence at present; and if that is so, the evidence is clearly admissible. It is an argument, as it is commonly put in the courts of law, rather against the weight of the evidence than its admissibility.
1471. *Mr. Schey.*] Will you kindly look at this paper, Mr. Thow? [*Document handed to witness.*] It is a parliamentary paper, is it not? Yes.
1472. The information contained relates to indent for locomotive boilers? Yes.
1473. And, therefore, would be information laid on the table of Parliament from the Railway Department? I do not know; I cannot say where Parliament gets its information from. I am not able to say.
1474. The information would be drawn from the Railway Department, would it not? I should fancy so, but I am not able to give any evidence on that point.
1475. There are six different lots of boilers mentioned there, are there not? Yes.
1476. And they are marked A, B, C, D, E, F? Yes.
1477. The numbers after each letter being 10, 6, 2, 12, 6, and 4? Yes.
1478. And the paper goes on to say, does it not, that four of these items are to be obtained from Messrs. Beyer and Peacock? Yes.
1479. Will you give the letters opposite the four lots of boilers to be obtained from Messrs. Beyer and Peacock? The letters are A, B, C, D, and the figures 10, 6, 2, and 12.
1480. That is thirty? Yes.
1481. Thirty of these boilers are to be obtained from Messrs. Beyer and Peacock? Yes.
1482. Leaving E and F, 6 and 4, to be obtained from Dübs & Co.? Yes.
1483. The paper states that the boilers are to be obtained from these two sources? Yes.
1484. There is nothing whatever upon the paper concerning tenders? No.
1485. It reads that items so-and-so are to be obtained? Yes. Would you like to know the reason for that?
1486. No, I have not asked you that; simply answer my questions.
1487. *President.*] We should like to know the reason, Mr. Thow? These boilers, your Honor, were duplicates

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duplicates of boilers which were in engines ordered from these particular firms, and we had no drawings of these boilers in the department. Without drawings it was quite impossible to show the firm the shape and size of the boiler we required; it was perfectly impossible for us to advertise to people who did not know what the work was for the supply of similar articles, but the makers of the engines had no difficulty whatever, because they could reproduce the same details they had supplied on a former occasion.

1488. *Mr. Schey.*] I understand you to say, Mr. Thow, that you had no drawings of these boilers? No such drawings as I could use for the purposes of reproduction.

1489. Then you would imply ——? Allow me to finish, Mr. Schey. I was going on to say that I ought to make some exceptions. There were one or two classes of boilers of which we had drawings, but there were certainly some of which we had no drawings at all.

1490. Then you would imply that the previous boilers, of which these were duplicates, were supplied without drawings? Oh dear no; the makers had made drawings for them, no doubt.

1491. Is it not usual to make drawings in the department? Only for those things we want.

1492. But, as a matter of fact, in the case of ordering engines and boilers, are not drawings made by the department? They ought to be, but they have not been previously.

1493. Is it not usual that when these things are supplied, if they are supplied by makers, that a set of drawings, and in some cases templets, are supplied? I never knew of templets being supplied.

1494. But you know of drawings being supplied? In some cases.

1495. It is rather a usual practice, is it not? No, I cannot say that it is; I think it is rather unusual.

1496. You say there were no drawings of these in the Department? I say there were drawings of some of these boilers, but not of all of them.

1497. You positively assert that there were not sufficient drawings to enable you to call for tenders for these boilers? I do.

1498. And also that it was utterly impossible for such boilers to be made here? No, Mr. Schey, I never said anything of the kind; I never said it was impossible for boilers to be made here.

1499. But I ask you whether it was impossible? I don't think it was impossible; I think they could be made here under certain conditions.

1500. *Mr. Schey.*] I think that is all I have to ask Mr. Thow at present, your Honor; but I desire to say that there is certain information about the running of these different engines over certain sections of the railway, which I desire, and upon which it may be necessary for me to re-examine Mr. Thow.

1501. *Mr. Eddy.*] Can you tell me, Mr. Thow, whether Beyer and Peacock, and Dübs & Co., have a high reputation for good workmanship? Yes, they have a very high reputation indeed.

1502. Did they not build a large number of locomotives for New South Wales before the Commissioners took office? Yes; a very considerable number.

1503. Can you give us the number? Yes; Beyer and Peacock have supplied 195 engines prior to the Commissioners taking office, and Dübs & Co. have supplied sixty-seven.

1504. *Mr. Schey.*] Is that locomotives or boilers? Locomotives.

1505. *Mr. Eddy.*] Is it not the great object in the administration of the Locomotive Department to get as much interchangeability of parts as possible, so as to admit of the working expenses being kept down, and of replacements being made without undue delay? Unquestionably that is one of the most important parts of locomotive administration. It is most important that interchangeability, and the limitation of types should be carried as far as possible.

1506. In several cases, in the printed papers which have been laid before the Commission, it appears that engines were ordered from Messrs. Beyer and Peacock without calling for tenders. Can you give any reason for that? Yes; the great reason was the urgency for engines; the necessity which existed at that time for engines to carry on the traffic of the country. I should like to refer to this paper. I am speaking, of course, from my own knowledge of the case, and I am confining myself in the remarks I am going to make to the matters which led me to urge upon the Railway Commissioners to order engines within a very short time of my coming to the colony.

1507. *President.*] What is the matter you are referring to? It is called "Locomotives ordered and received since Railway Commissioners took office." I arrived in the Colony on the 3rd May, 1889, and on the 9th of May of the same year, the Railway Commissioners, at my request, and on my representations, asked that quotations should be obtained from Messrs. Beyer and Peacock for the supply of twenty-five goods engines. Then, on the 30th May, of the same year, another application was made that tenders be obtained from Beyer and Peacock for the supply of six engines. Now, the reason for taking such immediate action after my arrival in the colony, was simply that I foresaw that unless we got more engines, and as quickly as possible, we should not be able to carry on the work of the country; and the whole of our experience goes to prove the very same thing. For instance, apart from my particular information, I should like to read a letter which was addressed to me by a considerable number of engine-men ——

1508. *Mr. Eddy.*] I may point out, Mr. President, that that has already been put in evidence.

1509. *President.*] That is in reference to the state of the boilers?

1510. *Mr. Eddy.*] Yes, sir.

1511. *Witness.*] There is no doubt whatever that these engine-men took a most unusual course in urging the necessity for a greater number of engines in the way they did in that letter.

1512. *President.*] Then it was from your own investigation of the state of the locomotives, and not the letter from the engine-drivers, that you were satisfied as to the urgency of ordering engines without delay—is that so? On the first occasion that engines were ordered after I came here, it was certainly on my own observation; but subsequently I had this letter, and subsequently I had a number of reports from my officers telling the same thing, that unless we got a large number of engines in the Colony, we could not expect to meet the demands of traffic when traffic became busy. There is a collection of papers here from officers of the Department, which indicates ——

1513. *President.*] Only one has been put in at present, and that is the petition from the engine-drivers.

1514. *Mr. Eddy.*] That is so.

1515. *President.*] Any other documents there are ought to be put in evidence.

1516. *Witness.*] Perhaps I may hand this document in as evidence, your Honor. It contains a great number of reports from my officers respecting the deficiency of locomotives.

1517. *Mr. Eddy.*] Mr. Thow, I was anxious for you to give to the Commission the reason for sending to

particular

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particular firms for prices for these locomotives. We will personally put before the Commission our reasons for ordering the locomotives; but I wish to ask you to state why, instead of calling for tenders, a requisition was sent Home in connection with twenty-five good engines. That was in May, 1889? I thought I had made that clear. The reason for sending for these twenty-five goods engines from Messrs. Beyer and Peacock was simply this: that the engines were repetitions of those we have had before, with slight modifications.

1518. *President.*] From the same firm? Yes.

1519. *Mr. Eddy.*] And it was to expedite matters that it was done? Certainly it would be expediting matters very considerably.

1520. But when the Agent-General sent out the prices for these engines, did the Railway Commissioners place the order with Beyer and Peacock without hesitation? They did not.

1521. Did they not cable back saying they considered the price too high? Yes, that was done.

1522. And we received a reply to what effect? That Messrs. Beyer and Peacock could not see their way to reduce the cost.

1523. And, then, although the need was so great, the Commissioners considered the price too high, and what course did they adopt? They asked that tenders might be called from various makers.

1524. And prices were obtained from five firms? Yes.

1525. Then, with regard to the tank engines, the same reasons will apply, I take it, because they had built engines of the same type? We asked for tenders for tank engines from the same firm to ensure interchangeability? Yes; they had built tender engines of exactly the same type, and all the alterations we asked them to make was to change these tender engines into tank engines, which is a very simple matter; and they supplied first an order for six, and then a second number for six in the following year.

1526. *President.*] That was from Beyer and Peacock? Yes.

1527. *Mr. Eddy.*] Perhaps I may be permitted to go to the last lot of engines. Can you tell us, Mr. Thow, what was the result of calling for those tenders? Did Messrs. Beyer and Peacock secure the order for the twenty-five goods engines? No; the order was given to Dübs & Co., notwithstanding the fact that Beyer and Peacock had made them before.

1528. We have had a good deal of evidence from you, Mr. Thow, in regard to the fifty passenger engines which were designed by you when you were in England, and the difference in the price between Beyer and Peacock's and Dübs'; can you say if the stress of the Department for engines was very great? Yes, it was very great.

1529. That being so, I presume that if we could get prompter delivery from one firm than from another, it was very wise to pay a somewhat higher price? I think so; that was my reason for recommending it. Another reason which was important to me was this: that I had a second lot of engines to arrange for. In addition to the fifty engines, there were twenty saddle-tank engines which had to be arranged for. Messrs. Dübs & Co. had made saddle-tank engines before as tender engines. The twenty-five engines referred to here as being the second order since the Commissioners took office were precisely the same engines as the saddle-tanks that are concerned in the order for twenty tank engines; so it appeared to me that if we were to get our engines as quickly as possible, it was advisable to give the order for the fifty to Messrs. Beyer and Peacock, and to expect that Messrs. Dübs & Co. would get the order for the second twenty, which they really did,

1530. Will you tell us what the difference in the delivery would be; what date did Beyer and Peacock undertake to deliver the first lot of engines in Liverpool? They promised to deliver in the following May.

1531. And Dübs' first delivery? In August afterwards.

1532. That was a very material thing to the Department? It was of the utmost importance that we should get our engines as quickly as possible.

1533. With regard to your cable to the Commissioners from England, indicating a higher price from Beyer and Peacock than from the other firms, did you state also that Beyer and Peacock's proposed engines were preferable to the other people's? Yes.

1534. The price was £3,300? Yes, in the first instance.

1535. *President.*] It was reduced to £3,200 afterwards? Yes.

1536. *Mr. Eddy.*] The Commissioners did not blindly give that order to Beyer and Peacok, I believe? No.

1537. They cabled back, did they not, that they considered the price high, and that unless it was reduced by £100 per engine, the order was to be placed with Dübs & Co.? That was so.

1538. Was that price reduced? Yes, by £100.

1539. Will you tell us what you feared when you got that cable from us? I was very much afraid that Messrs. Beyer and Peacock would not listen to any such suggestion. I went and saw Mr. Peacock on two occasions, and he went so far as to show me, and he showed the Agent-General also, proofs of the cost that these engines would be to them. He showed us their estimate, in fact, and he pointed out that it would not allow 5 per cent. profit upon the making of those large engines if the price was reduced to £3,200. But he also stated that rather than allow the order to pass his firm, as his connection with the New South Wales Government had been of such long duration, he would strain a point, and make the engines at a price which he did not think would pay, in order that we should have the benefit and experience of his firm in giving us the best engines they knew how to produce.

1540. And the ten engines of that order, which are at the present moment at work on our lines, have given satisfaction? Every satisfaction; they are doing splendid work.

1541. And, practically, they are drawing each night a train which, had they not been here, or the other engines, which we need not discuss, we should have to place two engines upon the same train night after night? Every night we should have to use two engines instead of one.

1542. Now, in regard to the necessity for these engines. You have told us that at the request of the Railway Commissioners you reported on the condition of the rolling stock. In addition to your report, did the Railway Commissioners obtain any other report? Yes. Mr. Price Williams made a report on the same subject.

1543. Will you kindly tell the Commission what conclusions Mr. Price Williams arrived at? ——

1544. *President.*] Who is Mr. Price Williams? He is a prominent engineer in London, and he has been associated with railways there for a great number of years, and he is recognised as an authority upon railway statistics.

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1545. Was he in the Colony at the time? He was. He was out in all the colonies. I believe he came to Tasmania on business, and after being in Tasmania and Victoria, he came over to New South Wales.

1546. *Mr. Eddy.*] We will put in the paper, Mr. President, on the front page of which are Mr. Price Williams' conclusions. (To witness): Will you read to the Commission the general conclusions at which Mr. Price Williams arrived with regard to our locomotive stock?

> Adopting the mileage run by each engine as the test of the present condition of the locomotive stock, it is evident that before the stock can be put into anything approaching a proper condition for working the traffic, at least 116 new engines of the standard types must be added to the present stock. In urging this to be done as speedily as possible, the main consideration I have in view is, of course, the avoidance of the very serious risks involved in working the traffic with the stock in its present condition. Apart from this, however, so timely and necessary an addition to the working stock (which, at present, is scarcely adequate for the requirements of the traffic) would largely conduce to greater economy and efficiency in working the traffic. For instance, with new engines, constructed by the best locomotive builders, embodying all the most recent improvements, and with the principal working parts interchangeable, the locomotive working expenses would at once be considerably and permanently reduced, and, what is of equal importance, the traffic, more especially on the steep gradient lines, will be worked, as, in fact, it ought to be now, with engines of greater power and efficiency, so as to meet the rapidly increasing requirements of the traffic.

1547. Those 116 engines, I take it, were to place the existing stock in good condition, and had nothing to do with any growth of traffic or the opening of new lines? Certainly not; neither the growth of traffic nor the opening of new lines. It was only applicable to existing stock.

1548. And of course the old engines to-day are in far worse condition than they were at the date Mr. Price Williams made his report? Some of them are; those that have been allowed to work down.

1549. He says the Commissioners ought to spend this amount of money in order to enable them to drag along with the traffic? Yes.

1550. Was not this great deficiency of locomotive power a recognised evil in the colonies for many years past? Yes, unquestionably.

1551. That paper [*handing witness a document*] contains extracts from the reports presented to Parliament from the year 1866 up to the time the Railway Commissioners took office? Yes.

1552. Will you indicate to the Commission the condition of affairs at the time immediately preceding the taking of office by the present Commissioners? It is a continuous story from 1866, but the Commission will be more interested in the later returns. The report commences with a report by Mr. John Rae, from 1866 to 1871, and then there are further reports by Mr. Rae, from 1872 to 1875, and also for the year 1876. Mr. R. H. Burnett, who was locomotive engineer in 1878, reported in that year upon the deficiency of rolling stock. Mr. Scott takes up the same story, he being Mr. Burnett's successor, in 1881. Mr. Thomas Midelton also reports in 1882, and Mr. Scott in 1883, 1884, and 1885, and, finally, Mr. Goodchap, the Commissioner for Railways, makes very clear and very strong reports in 1886 and 1887. Mr. Goodchap says:

> In my report for 1886 I drew attention to the necessity for the supply of additional locomotives for adequately meeting the requirements of the traffic, and supported the statement by a reference to the statistics of locomotive work performed in Great Britain, in the various countries forming the Continent of Europe, and in America, which showed that with one exception the locomotives in use on the lines of New South Wales were more heavily worked than the locomotives of any other country. The twenty additional engines supplied during 1887 afforded some relief, but more are required, and it is questionable whether the fifty engines recently ordered from colonial manufacturers will be supplied in time to meet the demand.

I may say that the fifty engines were never supplied; we have not got them up to the present day. The colonial contracts fell through, and we did not benefit, or the Department did not benefit, by the fifty engines ordered from that source.

1553. That distress had arisen although the traffic had not grown very largely? Quite so.

1554. Will you tell us what the total growth of traffic had been in the five years ending December, 1887? The increase of returns amounted to £509,431.

1555. To meet that growth of traffic to the extent of over half a million of money, how many new engines had been provided out of capital? 160.

1556. Will you tell the Commission what the aggregate increase of traffic is expected to be in the five years ending June of this current year? £916,037.

1557. Almost double what it was in the previous five years? Yes.

1558. Will you also tell the Commission what the growth was during the year ended June, 1891? £341,335.

1559. More than two-thirds of the total growth in the five years preceding the taking of office by the Commissioners? Yes.

1560. And although our predecessors in office had complained time after time to Parliament of their great difficulty in carrying on the traffic with the existing locomotive supply, we have practically, either by improved arrangements or some other means, struggled through with a supply on capital account of? Eleven engines for the four years ending June, 1891.

1561. And how many will there be to the end of June, 1892? We expect fifty-two additional engines by the end of June this year.

1562. Making the total of sixty-three? Yes, for five years.

1563. That is on capital account? Yes.

1564. You are excluding from that statement any engines provided from the renewal account? Yes.

1565. *President.*] Can you give us the increased mileage?

1566. *Mr. Eddy.*] The train mileage? That is the measure, Mr. President.

1567. *President.*] I mean new lines opened?

1568. *Mr. Eddy.*] It is very little, about 150 miles.

1569. *President.*] Then the increased traffic represents increased accommodation on the present lines?

1570. *Mr. Eddy.*] It is train mileage in carrying this additional traffic. If we get 1,000 tons of goods we have to put on more waggons than if we only had 500 tons. (To witness): Has it not been a fact that during the busy time, ever since you have been in office, your officers and the steam-shed foremen all over the country, and the traffic officers have been crying out at the inability of the Locomotive Department to give them engines to move the traffic? Constantly; we have been very much distressed indeed, and have had to refuse trains over and over again because we have not had the engines to carry the trains over the country.

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1571. And has it not been a fact that you have had to turn out engines which were practically unfit to run? Yes. Engines sent into the workshops for a thorough overhaul, because they were considered to be unsafe, or, at all events, unsuitable for carrying the traffic, have been sent out again before they received those repairs so that we might carry it on.

1572. And have you not had to turn out engines before they have received proper attention after having made a journey; have those engines not had to go out instantly to take trains which were waiting? Times without number engine firemen have been kept waiting to receive engines coming in with one train to get out on the road again, and take back another train before the engine had received any attention beyond water and coal.

1573. Have not vast sums of money been wasted by such a mode of working? I should think so.

1574. Have you not had to keep men at work at night to get engines ready to go out the next day? Yes, men have been kept during night hours when six hours form a day's work, or we have to keep them on longer so that they might effect necessary repairs, and we have had to pay them overtime. It has also been a common practice to have men working on Sunday so that engines might be repaired, because we have not had an opportunity to attend to them during the week.

1575. You have also, I believe, had to use passenger engines on Sunday to move goods traffic? Frequently.

1576. Generally the position might be summed up in this way: The distress for engine power was great, and much money was being wasted in carrying on the business of the country in this hand to mouth way? I am certain of that.

1577. Carry your mind back to the traffic after the strike which has been referred to here. That traffic was carried on under very great difficulties? Yes; very great difficulties, indeed.

1578. You remember there was a great outcry about the shortness of trucks. Was there any shortness of trucks? Did the difficulty not arise from the inability of the Department to remove the trucks? That was the principal cause. We have had numbers of trucks standing in stations without engines to move them. On one occasion, at least, I know we had as many as 400 trucks blocking up a station without having any engines to carry them.

1579. Then it was the shortness of engines, and not the shortness of trucks, as the public seem to think, which was responsible for the difficulties which arose at that time? Yes.

1580. At the present time, I take it, the railway traffic is not so great as it is at other times of the year? No; it is slack at present.

1581. And engines may be standing about now; but that does not show what will happen when the wool season is on? Not at all.

1582. Can you give the Commission any idea of the value of the traffic at the present time? ——

1583. *President.*] I do not think we have anything to do with the traffic at the present time, Mr. Eddy. The question is whether at the time these engines were ordered there was any necessity for them.

1584. *Mr. Eddy.*] Very well, Mr. President. I will put it in another way. (To witness): Will you give the Commission an idea of the value of the traffic for each week in the month of June? About June is a slack time, and the value of the traffic would be from £50,000 to £55,000 per week.

1585. And in the busy season it amounts to how much? From £70,000 to £80,000.

1586. Therefore, if you kept at work every engine you had in the slack time, there would be utter disorganisation at the busy time? Certainly there would.

1587. In addition to the great bulk of traffic that you have told us about, I presume the Commissioners have to look forward into the future to some extent to provide for the opening of new lines, as well as for the growth of traffic? When new lines are opened engines ought to be here to work them.

1588. And some of the engines which have been supplied to the Commissioners since they have been in office have taken how long to obtain after sending the orders home? About eighteen months.

1589. Can you give the Commission any idea of the amount of mileage of new railways which will have to be provided for by the Commissioners within twelve months? About 266 miles, I should think.

1590. And within a very few months a good deal of that mileage will be opened? Yes; we expect to have to provide engine power shortly.

1591. What are the lines about to be opened? There is the Nyngan to Cobar.

1592. How many miles? I am not sure that I know the mileage.

1593. Then there is the Culcairn to Corowa railway; but I need not go into this question further. I may say, Mr. President, that within twelve months there will be 250 miles of new railways to be provided for. (To Witness): Can you tell the Commission how many of the total number of engines ordered by the Commissioners will be paid for out of capital account? I think it is about half-and-half.

1594. About eighty out of capital account? I think about eighty from the renewal account, and about eighty-four from the capital account. That is the division at present.

1595. So that 160 new engines were provided from the capital account to meet a growth of half a million of traffic, and the Railway Commissioners have to meet a growth of £900,000 in their traffic, as well as the opening of 250 miles of new railway, with about eighty new engines? Yes; that is so.

1596. And you do not consider that that is an extravagant way of conducting business? Not at all.

1597. A number of these eighty-four engines to meet renewals have been provided, I presume, out of a special vote of Parliament to make up for the decrepitude of the stock upon which you and Mr. Price Williams made reports? I believe that is so.

1598. It was under special consideration then? Yes.

1599. We have had evidence as to a number of engines awaiting repairs. Are not many of those engines of such an inferior type that it would be unwise to spend a lot of money upon them to put them in order? Yes; I think so. They are types which are not powerful enough for our present needs.

1600. And is it not the usual practice, in all well administered locomotive departments, to break up or sell obsolete types, and to replace them out of working expenses? Constantly. Every railway department gets rid of its old and antiquated stock in that way, either by breaking up or selling.

1601. The Commissioners have sold some engines, I believe? Yes; several have been sold.

1602. A question as to the number of types has been raised. Did not the Commissioners direct special attention to that question when they asked you to come here three years ago and report upon the rolling stock? Yes.

1603. And it has been the policy of the Commissioners to reduce the number of types since they came into office? Undoubtedly it has.

1604.

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1604. Can you tell the Commission, roughly, what has been effected in that way? Perhaps I had better put another question first. These engines that are displaced by more powerful ones are removed from the stock of engines supplied on capital account, and are treated as duplicates, are they not, if they are fit for further work? Yes.
1605. What do you use them for? We use them when the traffic is so great that our standard engines are more than fully employed, and we use them for such purposes as ballast, or supplying emergency demands.
1606. Unimportant work? Unimportant work, certainly.
1607. And so long as they are capable of doing anything they are kept going? Yes; they are kept at work.
1608. Can you tell the Commission, keeping in view that we do not look upon these duplications as part of our stock, that these engines are simply put on one side to wear themselves out, can you tell the Commission to what extent we have reduced the number of types already? Yes. Out of forty-two types that I mentioned in my evidence as showing small differences amongst the engines, we have removed twenty-one by the placing of certain engines in the duplicate stock.
1609. With respect to the locomotive engines ordered by the Commissioners since you have been in office, if any one said that a "ring" or combination had "ensured" the getting of the orders for these engines through me would you think it true? Quite untrue.
1610. Do you know it to be true? I know it to be untrue.
1611. *Mr. Schey.*] I must object to this question, your Honor. The witness cannot possibly know of his own knowledge that what Mr. Eddy says is true or untrue. He can say that he never heard of such a thing, that he does not believe such a thing, or that he has not seen evidence of such a thing; but I submit that the question cannot be put to him that he knows it is not true. It cannot possibly be within his knowledge, unless he knew every possible person who might be named, probably every person in the world, and unless he knew what was in the minds of those persons. Unless he knew that it would not be possible for him to say of his own knowledge that he knew such a thing was not true.
1612. *President.*] Will you put your question again, Mr. Eddy. I did not quite catch it.
1613. *Mr. Eddy.*] I was asking Mr. Thow if any one said that any "ring" or "combination had "ensured" that the orders for engines given by the Railway Commissioners should go to them through me, whether such a statement would be true.
1614. *President.*] Witness, of course, can only speak of his own knowledge and belief.
1615. *Mr. Eddy.*] I will put the question in another way. (To Witness): You saw the placing of orders for a large number of engines when you were in England, Mr. Thow. You had more to do with the negotiations there than the Commissioners here; we only controlled the price and the settlement. Do you believe that the orders were placed by me from any corrupt motive? Certainly not. I think the ordering of the engines was done in the most open manner possible. In the course of the questions which were asked me by Mr. Schey it was indicated that in ordering locomotives we ought to go into the open market and ask any person, or every person who makes locomotives, to tender for our requirements. That I think is a most injudicious method, and it is one which I have never followed, and never would advocate. The proper course for an important railway administration like that of New South Wales is to choose those makers in whom they have confidence, and to ask a price from such makers. My own impression was that we should be meeting all the requirements of fair play if I secured prices for these locomotives from Messrs. Beyer and Peacock and Messrs. Dübs & Co. I should like, if your Honor will allow me, to refer to the history of this locomotive question rather more fully than has been done up to the present. When I left here to go to England there was no doubt apparently in the minds of any person, certainly not in my mind, and I should say from the conversation I had with the Commissioners there was no doubt whatever in their mind at the time I left, that the locomotive syndicate which had arranged to build engines in the colony was going to carry out its contract. It was only after I left, that intimation was conveyed by the Agent-General to the Commissioners or the Government that there was some doubt on that point. When I got to England I still believed that the members of the syndicate were going to carry out their arrangements at once, and it was only after seeing the Agent-General for the first time that I heard there was the slightest doubt or uncertainty in the matter. I then had an opportunity of seeing the Managing Director on one or two occasions about his intentions, and I came to the conclusion that he himself was uncertain as to what he would do. There and then, and before the Commissioners knew anything about it, I thought it necessary to look about and see whether I should be able to get engines to supply the requirements of the Colony, and for which we had been relying upon this locomotive syndicate. In doing that it occurred to me that Messrs. Beyer and Peacock and Messrs. Dübs & Co., who had previously supplied engines to this Colony in large numbers, knew our requirements, and were the best possible people I could go to in order to ascertain whether they would be able to help us out of the difficulty in the event of our requiring their assistance. It was before the locomotive syndicate question was finally settled that I was in communication with Messrs. Beyer and Peacock and Dübs & Co. on this matter, and which led me, or, rather, led the Agent-General, at my instance, to cable to the Railway Commissioners, recommending that I should consult with Messrs. Beyer and Peacock about these particular engines. Then it was that the Commissioners, anxious, I presume, to guard against any doubt as to there being open tenders in such a matter, instructed me to consult with Neilson & Co. as well. I went further than that. I saw the drift of the Commissioners' telegram; I saw the meaning of it, and that it was intended that the work should not be confined to Beyer and Peacock and Dübs, but should be made a more open matter; and I went further than they asked me to go, and saw the Clyde Locomotive Works Company. Now, the Clyde Locomotive Works Company is an old firm, which traded under the name of Sharpe, Stewart, & Co., in Manchester. The company moved from Manchester, and went to Glasgow, and they are now trading under the title of the Clyde Locomotive Works. I made an inquiry of Kittson & Co., of Leeds, also locomotive builders, and these five firms are the firms I recommended ever since I came to Australia. When I was in South Australia I always recommended these five firms, and I did so because I had confidence in them; but I should certainly not consider that I was doing what was best for the railways of any colony, if I placed a large order involving the expenditure of something between £350,000 and £400,000 in the hands of smaller makers, who would no doubt gain their experience at the expense of their customers.
1616. *President.*] Are there many large firms in England engaged in the manufacture of locomotives? Not many, your Honor; but there are a number of smaller firms.
1617. I mean large ones? There are only a few large firms, and they are those I have already mentioned. The two firms, the Clyde Locomotive Works Company and Kittson & Co., are smaller than the other three.

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1618. Which do you say is the largest locomotive manufacturing company of those you have mentioned? I should think Neilsen & Co. were the largest. I should think they turn out more engines than any other firm. Beyer and Peacock would come next certainly. It may be doubtful whether Neilsen or Beyer and Peacock are the largest; they are about on a par. I should say that Dubs & Co. came third; but I should like also to say, your Honor, so as to remove the slightest doubt as to the alleged existence of this "ring," it surprised me very much, when the negotiations were being completed, to find that the Agent-General was not personally acquainted with any member of the firm of Beyer and Peacock or any member of the firm of Dubs & Co., although he had been transacting business with these firms for years previously. It was a matter of surprise to me that he did not know any of these gentlemen, because I should have expected that in ordinary business operations he would have seen a good deal of them. Now, since this alleged "ring" theory has been started that fact has recurred to me, and it is proof positive to me that the Agent-General knew nothing about the "ring." Then, with regard to Sir John Fowler, whose name has been introduced for the purpose of showing that he was connected with this "ring," I should like to say that Sir John Fowler never came into this question in any shape or form. He was not consulted about the locomotives until the contracts were signed, and the specifications and drawings handed over to him with the request that he would give, as required by his connection with this Colony, his services in inspecting the engines.

1619. *President.*] Then he had no voice in the selection of the manufacturers? Not the slightest, your Honor.

1620. *Mr. Eddy.*] Then, Mr. Thow, in placing orders with Beyer and Peacock, and Dubs & Co., the Railway Commissioners are simply following the practice of all good business men;—when they find a good manufacturer they go to him and repeat their orders? Certainly.

1621. In locomotive work, I take it, that it is exceedingly important that the engines, although of exactly the same type, should be supplied by the one firm? Yes, we have found great inconvenience arising in the past. I will give one instance, although there are many others; but the instance I refer to has already been mentioned in this inquiry. We had twenty-five engines as a second lot of goods engines supplied by Dubs & Co. That was the second lot of engines supplied after I became connected with the Railway Department. Previously the engine of that class had all of them been made by Beyer and Peacock. Although we supplied drawings to Messrs. Dubs and Co., clearly showing what alterations we ourselves wanted, a number of the details were left to them; we could not supply drawings for all. The result is that we have to keep these engines distinct and separate from other and similar engines. When we want to deal with them we have to take great care that the engine we are dealing with is a Dubs or a Beyer and Peacock, because there are slight differences in the two types which make it inconvenient and somewhat expensive to effect repairs.

1622. It is a matter not affecting this inquiry, but it has been brought up before this Commission, this question of working trains by one engine instead of two. The weight of the engine has been referred to, but I take it that the weight of the engine has little bearing upon the construction of the permanent way unless you consider the number of wheels underneath; and those large engines of yours have ten wheels instead of six in many engines, and eight in others? Yes.

1623. And is it not far safer to work a train drawn by one engine than by two? Unquestionably I think it is a much safer plan.

1624. *Mr. Schey.*] You said, Mr. Thow, in cross-examination to Mr. Eddy, did you not, that there was extreme urgency for the supply of these engines? An extreme urgency.

1625. And you produced, to show that extreme urgency, a paper from the Chief Mechanical Engineer to the Secretary of the Railway Commissioners? Yes.

1626. The first paper amongst those documents is a letter from yourself is it not, the date of which is 9th April, 1892? Yes.

1627. Then this particular set of documents concerning the urgency for these engines has been presented to the Commissioners a month subsequent to the speech made in Parliament upon which this Commission is founded? Oh, no. They were only collected then; the Commissioners have seen these documents before.

1628. Will you kindly answer my question and I will be satisfied with your answer;—are you aware of the date when the speech was delivered in Parliament by myself upon which this Commission is founded? No, I am not.

1629. Would you be surprised to know that the date was 10th March? I should not be at all surprised.

1630. And the date of your letter is 9th April, 1892? Yes.

1631. That would be a month to the day? Yes.

1632. After the speech was delivered in Parliament? Yes.

1633. And this letter of yours covers a variety of information as to the urgent necessity for locomotive power? Yes.

1634. The next document, marked A, is one presented by Mr. Loughry. I have not had time to read these letters, but I presume you were sending these reports to the Commissioners? No doubt the Commissioners saw these reports at the time they were written.

1635. But this letter of yours is a covering to information gathered from various sources as to the sparsity of locomotive power? No doubt.

1636. You say on the top, "I forward herewith copies of some reports and extracts from correspondence addressed to me"? Yes.

1637. And it is signed with the initials "W.T";—that is your own signature, is it not? Yes.

1638. The first report is from Mr. E. A. Loughry, dated September, 1891? Yes.

1639. The day is not given, which is rather peculiar, for when people write letters they usually put the day of the month upon them? I do not know why the omission has occurred. Mr. Loughry usually puts the date upon his letters. The one you refer to was written some time in September, 1891, but on what day I cannot tell you.

1640. If the letter were required afterwards, perhaps the exact day might be omitted? I do not understand you.

1641. If the exact date on which a certain representation was made could not be furnished, and a letter were required, it would be convenient to state the month and leave the day out? I do not know what is in your mind.

1642. I think the question is plain enough? Perhaps it is to you. I tell you that usually Mr. Loughry puts

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puts the date on his letters, and you will see that on a subsequent occasion he dates a somewhat similar report 24/3/92.
1643. On this particular letter there is the month but no day mentioned? That is as it appears to me.
1644. The date is September, 1891? It is.
1645. And the next document is dated, "Eveleigh, 14th December, 1891"? Yes.
1646. That is only a few months ago? Yes!
1647. The next document is signed "E. A. Loughry, 24/3/92"? Yes.
1648. That would be a fortnight after the speech was made which forms the basis of this Commission? Yes, very likely.
1649. This document contains a number of letters into which I need not go, but all of which I observe are dated some time in 1891. I find on page 7 there is a list of memoranda of insufficient supply of locomotive power to meet the requirements of the traffic supplied by the Chief Traffic Manager to the Commissioners. The first extract is from officers minutes No. 244? Yes.
1650. And the date of that is ——? I should think 5th June, 1889.
1651. That is the first memorandum embodied in this paper? Yes, from the traffic officers.
1652. What is the next one? 5th September, 1890.
1653. That is fifteen months after the first? Yes.
1654. And no doubt a careful search was made, in view of this Commission, for all memoranda which would support this view of the urgency for these locomotives? I am not aware of what search the traffic officers undertook, because I have only seen these papers in their printed form.
1655. It is reasonable to suppose that some person got these memoranda together? Very likely.
1656. And it is also reasonable to suppose, from the dates on the front of the document, that the memoranda had only been compiled lately? They were compiled on the dates attached to them.
1657. The list has only been put together lately? This collection; but the documents have existed since the dates mentioned.
1658. Undoubtedly; but, as a matter of fact, it is reasonable to suppose that this collection of memoranda has only recently been made? Yes.
1659. And it would be reasonable to suppose, also, that any person making up this list of memoranda would obtain all the references he possibly could? I do not know that it is reasonable to suppose that.
1660. *President.*] This witness cannot speak to that fact; it is only wasting time to ask such questions.
1661. *Mr. Schey.*] I was not asking the witness as to the fact, your Honor; I was asking him if it was reasonable to suppose ——
1662. *President.*] That is for the Commission to decide, and not the witness.
1663. *Mr. Schey.*] As a matter of fact, Mr. Thow, the first memorandum is dated 5th June, 1889? That is from the traffic officers.
1664. These papers do not disclose anything before that, do they? I have not looked over the document; but I suppose the memoranda are arranged in the order of date.
1665. If you go over the dates, you will soon see? Very well.
1666. The first letter is your own, dated 9th April, 1892? Yes.
1667. The next letter is from Mr. Loughry, dated September, 1891; and the following ones from the same officer are dated 14th December, 1891, and 24th March, 1892; the next is from Mr. Stanger, dated 23rd January, 1891; and the next dated 31st August, 1891; and the next 28th September, 1891, also from Mr. Stanger; the next, dated 8th December, 1891, and 5th December, 1891, are also from Mr. Stanger; then comes the list of memoranda already referred to, the first, dated 5th June, 1889, being the earliest, the others following in their order of date? Yes, I believe that is so.
1668. And there are no others prior to the 5th June, 1889, or between that and the 5th September, 1890, a period of fifteen months, in this compilation as to the extreme distress? I do not see any.
1669. Now, I beg to put in the witness's hand a copy of the Commissioner's Quarterly Report, dated, Sydney, 28th October, 1890, and I will ask him to turn to page 2 of that report, and refer to the paragraph headed "General Remarks"? Yes.
1670. The paragraph reads—"The Maritime Strike, which began on the 15th August, and which was soon after followed by the stoppage of work at the collieries in the Newcastle, South Coast, and Lithgow districts, has seriously interfered with the revenue from the Goods Department, the mineral traffic showing a decrease of 168,765 tons, whilst in wool only 62,395 bales were carried during the quarter to Darling Harbour, Newcastle, and Morpeth—a decrease of 25,086 bales." That is the paragraph, is it not? That is the paragraph you have marked.
1671. That is in the Commissioners Quarterly Report, and you have reason to suppose that that is a correct statements of facts? Yes.
1672. Will you kindly put the document in. [*Document put in.*] I will now hand you the Commissioners Quarterly Report, dated Sydney, 30th January, 1891, and I will ask you to turn to page 2 of this report, and to read paragraph 2 under the head of "General Remarks"? Very well. "The traffic during the months of November and December were so abnormal, and taxed the present resources of the Department so severely, that it may be mentioned that the mineral traffic carried during November and December amounted to 441,824 tons, as against 82,695 tons during September and October. At the end of October the wool traffic showed a decrease of 60,994 tons, whereas at the end of December this decrease had been overtaken, and an increased traffic was shown of 34,052 bales, a total of 321,952 bales having been carried in the two months—an increase of 95,046 bales over the corresponding period of the previous year."
1673. *Mr. Schey.*] I put this document in, your Honor. [*Document put in.*] Now, the traffic there referred to relates to two succeeding quarters, does it not? Yes, I suppose it does.
1674. One quarter during which the great strike of 1890 occurred, and the other the quarter immediately following the termination of that strike? Yes.
1675. During the time of the strike the report would go to show that a large quantity of traffic was not carried which might have been carried? Really you are asking me questions upon a matter of which I know nothing. I am not Traffic Manager, and I cannot vouch for any of those statements that you are asking me about. If you get the Chief Traffic Manager, instead of myself, he will be able to give you all information about the traffic.
1676. Are you not as intimately concerned with the increase or decrease of traffic as the Traffic Manager? Certainly not.

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1677. Do you not have to supply engines for hauling the traffic? Yes; but the fact of the number of bales of wool, or the number of heads of cattle, does not come before me.
1678. I am not asking you as to the amount of traffic carried; I am asking you whether, from your reading of the report, it does not appear to you that in the first quarter referred to a large amount of traffic was not carried;—does not the report say so? I should be willing to give you any information ——
1679. *President.*] The report speaks for itself. It is no use getting out of the witness what appears in the report. It is not this witness's report; it is the report of the Railway Commissioners, and it speaks for itself.
1680. *Mr. Schey.*] Then the succeeding report indicates that a large quantity of traffic was carried ——
1681. *President.*] That also appears in the report.
1682. *Mr. Schey.*] Although the traffic during the months of November and December, 1890, was so abnormal, I suppose it was carried? Yes, with certain exceptions.
1683. Will you allow me to point out that there can be no exceptions to what the report states was carried? I was looking at it in a more general way.
1684. That traffic which the report states was abnormal was carried over the railways? Yes.
1685. And by the locomotives then in the possession of the Department? Undoubtedly.
1686. Will you kindly tell me what number of engines were in service on 30th November, 1890? I cannot say from memory, Mr. Schey; I shall be pleased to give you a return if you wish it.
1687. I wish to know what number of engines were in service on 30th November, 1890? Do I understand that you wish to know the number of engines actually at work.
1688. The engines which were actually at work;—which were not laid up under repair or awaiting repair; I want those actually at work? Very well, I will let you know.
1689. I mean all those which were actually at work, and which were in a position to work? Will you give me the exact date again?
1690. 30th November, 1890? Yes, I will prepare that information for you.
1691. I also wish to know the number of engines that were under repair, or awaiting repair, or incapable of working on the same date? Yes.
1692. And, in addition, I wish to know the number of new engines that had been put into steam and were actually at work, engines that had completed their 1,000 miles trial, and were finally delivered to the Department; the number of new engines that were in traffic on that date which had been imported since you took office, excluding the ten first supplied by Messrs. Dubs & Co., for which, of course, you were in no way responsible;—you had nothing to do with those ten engines? No, I had nothing to do with them.
1693. Mr. Eddy asked you as to the traffic now, and whether it could be carried;—is it not a fact that the traffic now is in a depressed condition? At the present time it is less than it has been.
1694. Therefore, it would be no criterion as to the carrying capacity some months ago? At present we do not feel any distress for want of engines, if that is what you mean.
1695. There having been a great shrinkage in the traffic necessarily with the same number of engines, there would not be the stress now that there might have been formerly? No.
1696. I understood you to say, Mr. Thow, that 266 miles of new lines had been provided for;—in what period? I said 266 miles would have to be provided for.
1697. Would have to be provided for—that is, in the future? Yes; this mileage might be opened within twelve months.
1698. Then, that does not enter into your calculations for the supply of these locomotives? Oh, yes it does; we have to get locomotives ready for these lines.
1699. But you have only said it will be necessary to supply them? We must have them here in time.
1700. Are all the new engines which were ordered supplied? Oh, dear no.
1701. They have not all been supplied? No.
1702. How many are there yet to arrive? About forty.
1703. When do you expect them to arrive? We have only got ten at present at work, and I suppose it will take the whole of this year before we get the remainder.
1704. *President.*] Are those the engines from England? Yes, your Honor; they are the fifty engines which have been spoken of.
1705. *Mr. Schey.*] Will you tell me how many miles of additional line you have had to provide engine-power for since the Commissioners took office? ——
1706. *Mr. Eddy.*] It would be much better, Mr. President, to have a return of this information. We can give you a return to-morrow of all the lines opened since we took office.
1707. *Mr. Schey.*] It would be much more convenient, your Honor, if these returns could be handed in now. I have been waiting several days for documents to be produced from the Railway Department, and unless I get them I cannot carry on my examination of the witnesses.
1708. *President.*] These returns cannot be extemporised, Mr. Schey.
1709. *Mr. Schey.*] About fifty of these matters have been passed over, your Honor, and if I am not sharp enough to observe them, and recall the witnesses, they will be left out altogether. It appears to me to be a point with the other side to prevent me getting this information.
1710. *President.*] On the contrary, Mr. Schey, as soon as you asked for the return Mr. Eddy said he would get it, and let you have it in the morning.
1711. *Mr. Schey.*] Now, Mr. Thow, in reply to Mr. Eddy, you gave a certain number of engines as having been supplied by Messrs. Dubs & Co.? Yes.
1712. You quoted several lots supplied by them? Yes.
1713. And there were also a number supplied to your order by Messrs. Beyer and Peacock? Certainly, there were the fifty engines which have been spoken of.
1714. Can you tell me the number which have been ordered from Messrs. Beyer and Peacock? They are supplying fifty at the present time.
1715. And previously? There were seventy-seven altogether.
1716. *President.*] Does that include the fifty engines before referred to? Yes, your Honor, that includes the fifty.
1717. *Mr. Schey.*] Although several orders have been given to Messrs. Dubs & Co., still Beyer and Peacock have received orders for seventy-seven locomotives? Yes, that is a fact.

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1718. And the average price of these locomotives as delivered to the Department would be ——? I have already told you that.
1719. But I want the average price. I suppose it would be something over £3,000? I have given the figures already, but I will give you the exact figures again if you require them.
1720. I do not require you to go to that trouble? I prefer to give the exact figures rather than doubtful ones.
1721. Very well, give me the exact average? About £3,200 roughly speaking; that is, inclusive of freight and all charges, delivered here.
1722. And the total would be ——? About £267,000; that also includes freight, and all charges for delivery in steam here.
1723. That is the price as they are handed over on the books of the Department? Yes.
1724. Then, Messrs. Beyer and Peacock have received orders for a quantity of locomotives, excluding all the boilers and other things you have been talking about, to the value of over a quarter of a million of money? Yes.
1725. I notice, in your evidence to Mr. Eddy, you stated that there was a great deal of dubiousness about the price of the fifty Beyer and Peacock engines? I do not remember saying so.
1726. You gave it in answer to Mr. Eddy, that certain representations were made to Beyer and Peacock that the price was too high? Messrs. Beyer and Peacock were asked to reduce their price.
1727. Then the price was too high, and the Commissioners objected, and a request was made for them to take off £100 from the price of each engine;—is that not so? I think they reduced the price at the first representation.
1728. They were asked to take £100 off each engine? And I think they did so.
1729. But they were asked so to do? They were asked so to do.
1730. And in spite of the dubiousness about the price they got the contract? So you say.
1731. In spite of the different attempts to reduce the price they got the contract? They got the contract, but I do not know that it was in spite of anything.
1732. I think you said you had an interview with Mr. Peacock about this matter? I had.
1733. And I think you also said that Mr. Peacock laid stress upon the long duration of his business relations with New South Wales? Very naturally he did.
1734. I quite agree with you. It is the most natural thing in the world. I am glad to see that you agree with me in that matter at least; and I understood you to say that sooner than that the order should go past his door, and in view of the long business relations between himself and this Colony, the firm would cut a little bit off the price in order to secure the contract? Certainly.
1735. A point has been raised as to certain engines being charged to capital account; that, I suppose, is distinct from revenue account? Yes.
1736. But it will make no difference to the public which account these engines are paid from;—as a matter of fact, the tax-payer will have to find the money for these engines whether they are charged to the capital account or revenue account? I do not think that is a subject which requires debating.
1737. It is not a matter of consequence, so far as the amount of money is concerned, whether the engines are charged to one account or the other? It is a matter of great consequence, so far as the railway accounts are concerned.
1738. Undoubtedly; but it will not affect the fact that the tax-payers will have to pay in the end? Really I cannot decide your questions, Mr. Schey.
1739. I notice, Mr. Thow, that you laid stress upon the number of train miles? ——
1740. *President.*] Two of the returns you asked for just now, Mr. Schey, have just been handed in. One is as to mileage.
1741. *Mr. Schey.*] Thank you, your Honor. (To Witness): I notice, Mr. Thow, that you laid stress on the increase of train mileage;—does the increase of train mileage necessarily show an increase of earnings? Will you refer to my answer, Mr. Schey? I do not remember that I stated any such thing.
1742. I think your Honor will remember that Mr. Eddy got the witness to lay particular stress upon the large additional number of train miles that had been run. I think your Honor will remember this statement.
1743. *President.*] Some questions were asked.
1744. *Mr. Schey.*] I ask the witness whether the number of train miles is always a criterion as to the amount of the earnings or the amount of the traffic? Not necessarily.
1745. As a matter of fact, the train miles run may be empty carriages? Sometimes they are.
1746. The locomotives running may be light engines without anything attached? Yes.
1747. And, therefore, you might have a large increase of train mileage without inferring good management or anything of that sort? You might on railways badly managed.
1748. I suppose you have heard, Mr. Thow, that some clever railway managers make a large increase in the train mileage for the year for the purpose of trying to establish an increase of traffic? I cannot say that I have heard anything of the sort.
1749. If you were assured that some railway managers did such a thing it would be a surprise to you? I cannot say that I have met with any such case.
1750. In speaking about these locomotives you referred to two officers who were continually reporting upon them? Did I refer to it? I do not think so.
1751. I took it down at the time. Mr Eddy asked you the question, and you said there were two officers continually travelling who had reported over and over again as to the scarcity of locomotive power. I am sure such a question was asked.
1752. *President.*] No member of the Commission has any recollection of having heard it.
1753. *Mr. Schey.*] I will ask you, Mr. Thow, whether or not you have two travelling Locomotive Inspectors for the purpose of looking after the work of the Department? Yes, we have.
1754. When were they appointed? The travelling inspectors have been appointed within the last two years.
1755. And they receive salaries of how much? I am not able to tell you just now what their salaries are.
1756. Is it something about £500 a year? No; I think you must be referring to different officers.
1757. I am referring to Mr. Stranger and Mr. Loughry.
1758. *President.*] What has the Commission to do with the salaries of these gentlemen
1759. *Mr. Schey.*] I am trying to get that for some other purpose, your Honor.

1760.

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1760. *President.*] It has nothing whatever to do with the inquiry before the Commission, and we cannot allow you to get it out.
1761. *Mr. Schey.*] The two officers I refer to have been appointed within the last two years? Not those you refer to; they are different officers, and they were in the Department employed in very much the same duty when I came here.
1762. I am talking about the two positions of Locomotive Inspector which have been made within the last two years? The officers whose names you gave have been in the service for some time, and they have been employed as out-door officers for a number of years.
1763. Are there not two Locomotive Inspectors who have been appointed within the last two or three years? Two assistants have been appointed.
1764. And those are the officers you were referring to? Those are the officers I was referring to when I said they had been appointed within the last two years.
1765. And those officers owe their position to the present administration? They have been appointed since the present Railway Commissioners took office.
1766. You also said in reply to Mr. Eddy that this want of locomotives compelled you to keep numbers of men at work at a large expenditure for overtime, &c.? I did.
1767. Is it not possible to keep engines at work without keeping men at work also? Not if you can only get the engines to repair at night. If the engines are fully employed during the day the night is the only time we can repair them, and then you must have men to do the work.
1768. Undoubtedly; but I thought you were referring to the staff which was running the engine? Those men do not repair the engines.
1769. I am quite aware of that; but I understood you to refer to the necessity that existed for keeping these men on duty, and paying them large sums for overtime?
1770. *President.*] That is not so, Mr. Schey. The answer had reference only to those men employed repairing the engines.
1771. *Mr. Schey.*] You further said, in answer to Mr. Eddy, that Parliament had given a special consideration, and had voted a sum of money for the supply of locomotives, did you not? I think that what was asked me was whether the locomotives were paid for out of some special vote.
1772. You say that was so? I believe that is the case.
1773. Was that special vote not obtained from Parliament in consequence of the reports made by Mr. Price-Williams and yourself? I cannot tell you what it was that led Parliament to provide the money.
1774. You cannot say, as a matter of fact, whether those reports were presented to Parliament, and scared Parliament into voting a large sum of money to remedy the defects which were supposed to exist? I cannot tell you anything about parliamentary matters.
1775. Do you know how much money Parliament did vote as a special appropriation? I do not.
1776. Would you be surprised to hear that it was over £1,000,000? It would not surprise me.
1777. Then you spoke of the reduction of the number of types of engines; and in answer to Mr. Eddy you said it had been considered advisable to reduce the number of types. You considered that it was necessary? Certainly.
1778. Had not that necessity been emphasised before you took office? I have not the least doubt that all locomotive officers feel the necessity for keeping the types down as low as possible.
1779. You do not mean to say that you were the first person who discovered or accentuated that necessity? No.
1780. You say that the types have been reduced, and that there are about 21 types less than there were? I did not say that; I said that out of 42 types, formerly recognised by placing a number of engines in what we know as the duplicate stock, 21 types had been taken out of the 42.
1781. By what means have the 21 types been removed—have the engines been destroyed? Oh, no; some of them have been sold, and some of them have been broken up.
1782. And some, I suppose, have been altered? The others are still in existence.
1783. Then you were asked some questions about the possibility of any understanding existing concerning the supply of locomotives, and you said you had no knowledge of it? I do not believe that such an understanding existed.
1784. But it would be perfectly possible for such an understanding to exist without your being aware of it? I have no doubt such an understanding might exist without my being aware of it.
1785. It does not of necessity follow that you must be aware of it if such a thing did exist? No, I do not suppose so.
1786. Do you know a paper called the *Railway News*? I have seen it.
1787. It is recognised as a leading railway paper in England is it not;—I mean that it is a recognised authority for prices of rolling stock, materials, quotations, shares, and so forth? I am not able to tell you what its particular status is.
1788. Do you ever see copies of it? Very seldom.
1789. You know that a number of the railway companies in Great Britain manufacture their own engines do you not? Yes, some of them do.
1790. The London and North-Western Railway Company for instance? Yes.
1791. And a number of others? Yes.
1792. And that kind of thing is on the increase rather than otherwise? I think so, so far as these companies are concerned.
1793. One large firm I believe has put up a locomotive place at Horwich? Yes.
1794. And those railway companies, which do not build their own stock, usually advertise quarterly or half yearly for the supplies they require, do they not? It is very usual for them to advertise when they want supplies.
1795. They advertise for tenders to be sent in on a certain day for certain goods? Certainly.
1796. And that specifications, plans, &c., are to be seen at the Engineer's Office, as the case may be? Yes.
1797. And that is also the usual practice in America? I do not know anything about American practice.
1798. I understood you to say, Mr. Thow, that you were sent to England by the Railway Commissioners to help to form the syndicate which was to establish locomotive works here? Sent for what purpose?
1799. Sent to England to give information and general assistance towards the formation of this syndicate for the manufacture of locomotives? Oh, dear no; I said nothing of the kind. 1800.

Mr. W. Thow. 11 May, 1892.

1800. I am under a wrong impression then? You certainly are.
1801. Of course, Mr. Thow, you received a salary for your services in the Railway Department? Yes.
1802. Was any bonus paid to you at Christmas in addition to your salary? No.
1803. Was any bonus tendered to you? No.
1804. No mention of such a bonus was made to you? No, I never heard of such a thing.
1805. You have never heard of any one else in the Department receiving a bonus I suppose? I have not.
1806. I understand you to say that there may be a great difference in engines manufactured by different firms from the same drawings? No, I did not say that. I said that under our circumstances we found that considerable differences in small details had occurred in engines manufactured from similar drawings by Beyer and Peacock and Dubs & Co.
1807. But, Mr. Thow, if tenders were called for any engineering work—locomotives, or anything else—and that work was to be done to plan and specification, and identical drawings were furnished to the different tendering parties, no matter whose tender was accepted the finished article would be the same, would it not? Not necessarily.
1808. Of course I am excluding the difference in the quality of the material? Even then you would find that one maker would put holes in one part, and another holes in other parts; so that you cannot possibly get engines built by two makers from the same templets.
1809. That is not a matter which is affected by the drawings or specifications? No, it is not affected.
1810. *President.*] I think this would be a convenient time to adjourn. What witnesses do you wish to have summoned Mr. Schey? I may tell you that we propose to adjourn until Friday, for the reasons stated.
1811. *Mr. Eddy.*] Mr. President, I must object to that. I think this inquiry is of too great importance for such an adjournment to be granted.
1812. *President.*] Mr. Schey tells us that he wants to have time to look into the papers, notice to produce which he gave the other day, and to prepare himself for the further examination of witnesses.
1813. *Mr. Eddy.*] I submit, with all due respect, Mr. President, that Mr. Schey, when he made these charges against me, said he could prove them. I think, therefore, that Mr. Schey should be prepared to go into the witness-box, and, on oath, prove his charges.
1814. *President.*] That is another matter, Mr. Eddy. At present we are dealing with the question of whether there should be an adjournment to enable Mr. Schey to have an opportunity to look at the papers.
1815. *Mr. Eddy.*] I respectfully urge that an adjournment shall not be granted. Witnesses are put into the box without the slightest warning, and they are expected to answer all sorts of questions from Mr. Schey; and therefore, I think, Mr. Schey should be prepared to put his case before you. He has had nearly two months in which to prepare, and I respectively submit that no adjournment should be granted.
1816. *President.*] We have decided to adjourn until Friday to give Mr. Schey an opportunity of looking into the papers he has spoken of.

FRIDAY, 13 MAY, 1892.

[*The Commission met at 11 a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

JOHN YOUNG, ESQ., J.P. | ALEXANDER KETHEL, ESQ., J.P.

1817. *Mr. Schey.*] Your Honor, before calling another witness, I beg to draw your attention to the fact that I have not yet received the papers which I have asked for, and it is a matter of serious inconvenience to me that I have not got them. I also beg to call your Honor's attention to the fact that if it takes so long to collect these papers, it must necessarily take me a much longer time to peruse and take extracts from them.
1818. *President.*] I understand that the documents to which you have referred are now in the Court. I am very sorry that they were not obtained before, but the Department appear to have had some difficulty in collecting all of them. However, I believe that, with the exception of one or two, all the documents that you have asked for are now before the Commission. [*Documents produced.*]
1819. *Mr. Schey.*] I would like to say that on the 6th April I made application to be permitted to inspect the documents in the Department for Railways, and to take what I required from them. Had that request been acceded to, there would have been no further trouble. I would now like to suggest to your Honor's consideration whether an order can be given to me to inspect all documents by arrangement with the other side (which it seems to me might very well be done), and then I could select from them instead of having to call for documents here from time to time.
1820. *President.*] I do not know that we have the power, Mr. Schey, to do that. Our power is defined by the Act, 44 Victoria No. 1; but, as far as the matter can be done by arrangement, we will try and do the best we can for you. In the meantime, there are a few documents [*referring to large bundle on the table*], for you to look through.
1821. *Mr. Schey.*] I should like to make another application for the use of those documents which have been called "Private and confidential." I should like the Commission to say wherein the right of property of these documents rests. I stipulated, when this matter was before the Assembly, that I should have all the documents that I required, and I laid great stress upon the word all. The Attorney-General promised that I should have every document that I asked for. It appears to me that these documents are the property of the Government, most of them being correspondence which has passed between government officials—that is to say, servants of the Government, paid by the Government, and on Government business. I only ask for those. Of course, I can quite understand that there might be some documents of a private and confidential character, in the ordinary acceptation of the term, such as might be kept from the outside public and confidential to the Department which I do not ask for. Such a limitation is a very proper one under ordinary circumstances. But I would submit, under the circumstances of this Commission, that the Government have a perfect right to dispose of their own property, and the documents which I particularly refer to undoubtedly are the property of the Government, who, in the Legislative Assembly, promised me the use of such documents. It seems to me that if any evidence exists in connection with the subject matter of this inquiry, it would probably be in documents of the most private nature, though not according

to

to the construction which Mr. Eddy places upon the term. I submit that before this Commission was appointed the Government had already disposed of their own property in these documents through their promise to me. Mr. Eddy disputes the right of the Government to dispose of their own property; but I contend that these papers should certainly be made over to my inspection, and I trust that your Honor will give some further consideration to the point I have raised.

1822. *President.*] We will consider the point.

1823. *Mr. Schey.*] There is one other point, your Honor. Certain papers have been handed to the Secretary to the Commission as exhibits. You will observe that they are very voluminous, and among them, and others which will probably be handed in, there may be some which I shall require to see again. I understand I cannot obtain the use of these exhibits without the authority of the Commission, and it would be very inconvenient for Mr. Allen, as well as myself, to attend here in order to get at these papers. I would, therefore, suggest that some arrangement might be made by which, on application to the Secretary, I might be allowed to take such documents as I want.

1824. *President.*] We cannot allow any documents which have been put in before us to go out of the custody of the Commission. But any exhibits can be examined by you in Mr. Allen's office, or such other place as may be mutually arranged by you at any time. We cannot allow any of the documents to go out of the possession of the Commission. I am reminded by Mr. Kethel that the majority, or almost the whole, of the exhibits put in are printed documents which you can obtain from the Government Printer.

1825. *Mr. Schey.*] Very well, your Honor.

1826. *Mr. Eddy.*] We have prepared some photographs of the different classes of engines which we thought might perhaps assist the Commission somewhat. These [*referring to papers on the table*] are the original papers regarding the purchase of some of the engines, and other matters connected with them. Some of the papers are missing, as they are in the custody of the Treasury Department; but the Treasurer has intimated that when requested he will put them in.

1827. *Mr. Schey.*] I would like the Secretary to prepare a list of the documents that have been put in.

1828. *President.*] That has been done to a large extent up to the present time, and you can obtain a list from the Secretary.

1829. *Mr. Schey.*] Very well, your Honor; but I would point out that as I do not know the contents of the documents which Mr. Eddy has put in, I cannot exercise my right of objecting to any of them unless I have a list.

1830. *President.*] Perhaps it will be better not to put in these documents at present.

1831. *Mr. Eddy.*] They are produced because we had notice to produce them. These are in regard to the deficiency of engine power and delays of traffic, &c., and they were collected in accordance with this list handed in by Mr. Schey, and are embraced in sections 2 and 4 of his list, as follows:—"All papers, tenders, telegrams, minutes, or documents having relation to or in any way relating the supply of locomotives or tram motors," and 4 "all public reports or reports of any kind from any officer of the Railway Department or any other person bearing upon or having reference to the above subjects."

1832. *President.*] Then you cannot object to these documents going in, as they are returned to your order?

1833. *Mr. Schey.*] Very well, your Honor. I would now ask to be permitted to say something by way of personal explanation. An attempt was made yesterday to damage myself ——

1834. *Mr. Eddy.*] I would ask that Mr. Schey be put in the witness-box and make his declaration on oath?

1835. *President.*] What do you mean by damage to yourself? Do you mean to say that your life or limbs were in danger?

1836. *Mr. Schey.*] No, your Honor; I do not fear that my life or limbs are in danger from the Commissioners.

1837. *President.*] What is the matter, then?

1838. *Mr. Schey.*] Well, your Honor, an accusation was made against me yesterday by the Commissioners that I had unduly sought to obtain evidence from employees of the Department.

1839. *President.*] I cannot allow you to enter into that.

1840. *Mr. Schey.*] You will not allow me to make any explanation, then, your Honor?

1841. *President.*] Certainly not.

Mr. Charles A. Goodchap sworn and examined:—

Mr. C. A. Goodchap. 13 May, 1892.

1842. *Mr. Schey.*] I believe you were for a number of years Commissioner for Railways, Mr. Goodchap and that during that time you had the entire management and control of the Railway Department? Yes.

1843. Now, I would like to know from you, whether, during the time you were Commissioner for Railways, any recommendations were at any time presented to you relative to the question of calling for tenders for locomotives? Yes.

1844. On any particular occasion? On several occasions.

1845. Did you accede to those requests, or did you refuse them? Sometimes I acceded, and sometimes I declined to do so; it all depended upon the circumstances.

1846. When you were Commissioner for Railways, was not the Minister for Works Ministerial head of your Department? Yes.

1847. Then you had not the same amount of free hand that the present Board of Commissioners have? No.

1848. Not by a long way? No.

1849. And, therefore, whilst there are times when the present Commissioners, under the powers they hold, would absolutely decide a thing for themselves, you were compelled to refer to the Ministerial head of the Department? Certainly.

1850. So that there would be a wide difference in the reasons that would dictate different actions as between yourself in the position of Railway Commissioner, and the present Board of Commissioners? There would be this difference: that they would have independent action, and mine would be controlled by the decision of the Minister.

1851. Under the present Railway Act, the present Railway Commissioners have power to do as they like, have they not? Within the scope of the Act, yes.

1852. But the scope of the Act is so wide, I understand, that practically they are beyond Ministerial interference? Yes.

1853. Now, did you not follow a distinct line of policy in reference to the supply, not only of locomotives but material generally for the use of the railway? Yes.

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1854. And I believe you made your policy known from time to time as being a policy of widening out the area of competition in every possible way? Yes.
1855. Your general policy in regard to obtaining supplies was to get the widest competition, with the object of getting the lowest price and the best goods? No; I always selected the best manufacturers. I did not call for tenders from everybody, but selected several well known firms, and allowed the competition to keep within a certain area, sometimes extending the area by allowing firms that were not previously admitted to compete with the firms which were already allowed that privilege.
1856. But your constant policy was to extend the area of competition as far as you possibly could, compatible with obtaining the best class of goods? Yes; but I wish to qualify that by saying it was not the policy at that time generally to admit public tenders from anybody. There was always a circle beyond which we did not ask for public tenders.
1857. *President.*] Would you mention the names of those firms that were so selected? Do you mean for locomotives?
1858. Yes. There were Beyer, Peacock, & Co., Dübs & Co., Neilson & Co.
1859. *Mr. Schey.*] Sharp, Stewart, & Co.? No. Perhaps I knew the firm under another name.
1860. *Mr. Eddy.*] Was it the Clyde Locomotive Works? Yes.
1861. *Mr. Schey.*] And Manning Wardell? Yes, in the earlier days, but not latterly.
1862. Stephenson & Co.? Not latterly; they did make a lot for us, but not of late years.
1863. The others you do not recollect? No; there were four or five firms only, and the Baldwin Company.
1864. *President.*] How long had that practice obtained? Eleven or twelve years.
1865. Eleven or twelve years before you left the Service as Railway Commissioner that was the practice? Yes.
1866. *Mr. Schey.*] I believe the Vulcan Company, of Newton-le-Willows, was another that was asked for tenders, was it not? I think not.
1867. You do not remember? No; I do not remember.
1868. Do you remember the manufacturing of a lot of engines not long prior to your retirement on Mr. Scott's specification? They were called the Vulcan, I think.
1869. May I ask whether your Locomotive Engineers afterwards took the same view as yourself as to the area of the competition? I am not aware that they offered any objection.
1870. You do not think that they desired to restrict the area beyond what you desired. The heads of the locomotive offices in your time were Mr. Scott and Mr. Burnett, I think? Yes, and Mr. Mason was also Locomotive Engineer for a considerable time.
1871. That was prior to Mr. Burnett? Yes.
1872. Did not Mr. Burnett recommend that a large order be given to Messrs. Beyer, Peacock, & Co. without tender? Not a large order. Four tank engines.
1873. Has it not been stated that a large order was recommended by him and refused? No.
1874. Are you aware whether the late Mr. Sutherland at any time refused a recommendation to that effect? I am aware that he refused to give an order without tender for locomotives; but Mr. Burnett did not recommend a larger number than four to be obtained in that way.
1875. Mr. Burnett took the objection very badly, I believe, and assumed that he had the right to order without tender? He did take up that ground, I believe.
1876. *Mr. Eddy.*] I submit that these questions can have no bearing upon the subject before the Court—that is, my being connected with some "ring" or combination of persons at Home. Mr. Schey is now dealing with matters that took place in the Department years before the present Commissioners took office.
1877. *President.*] Except in this way, Mr. Eddy: It shows that the practice obtaining in the Railway Department for a number of years before the appointment of the present Commissioners was to restrict competition to a certain number of firms; and a number of the firms mentioned are identical with those which have been mentioned before during this inquiry. Whether that exonerates you or otherwise, is a matter the Commission have to consider.
1878. *Mr. Eddy.*] I am not objecting to that. I simply raised the point as to whether Mr. Schey's questions, dealing with the action of individual officers years before I took office, could have anything to do with the specific charge made against me.
1879. *President.*] I cannot stop Mr. Schey in everything in which he appears to be out of order. If I stopped everything that was irrelevant, I should be talking the whole time.
1880. *Mr. Schey* (to Witness).] However, Mr. Burnett took up such a position, and he was ultimately called upon to resign, was he not? Yes.
1881. Then he was practically dismissed from the Service? ——
1882. *President.*] This is carrying the matter too far, Mr. Schey. There certainly is another section of the charges wherein reference is made to officers being discharged for certain purposes; but we are not dealing with the inquiry under that head at present.
1883. *Mr. Schey.*] You will remember a certain number of engines being procured by Mr. Burnett, or on his recommendation, which were known as the Isle of Wight engines? Yes.
1884. They were brought here on Mr. Burnett's recommendation, were they not? No. Mr. Burnett's recommendation to me was that an engine weighing 33 tons should be brought here, and I consented; but he introduced an engine weighing 40 tons; and that was one of the reasons why he was removed from his position.
1885. The engine you refer to being known as the Isle of Wight engine? Yes.
1886. Do you know why those engines were known by that name? I believe Beyer, Peacock, & Co. made a number of engines for the Isle of Wight Company; and it was because these were similar to the engines made for the Isle of Wight Company that Mr. Burnett sent the indent in that form.
1887. They were nearly 10 tons more than you allowed? No, 7 tons.
1888. You were not satisfied with the way in which he carried out the order? No; I was very much dissatisfied.
1889. And they have done a lot of damage, I believe, on the line? I am assured so by the permanent way engineers.
1889½. And they were manufactured by —— ? Beyers, Peacock, & Co.

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1890. Have you heard it stated that these engines were tendered by Beyer, Peacock, & Co. to the Isle of Wight Company? There was a rumour that these engines had been built for the Isle of Wight Company originally; but it was only a rumour, and although it was mentioned to me, I declined to pursue any inquiry in regard to it.
1891. Was it not stated that the Isle of Wight Company refused to take those engines on the ground that they were too heavy—finding the same fault with them, in fact, as yourself? No.
1892. Then the rumour you referred to was that they were a job lot, hanging on the Isle of Wight Company's hands?
1893. *President.*] Mr. Goodchap did not say that. You must not put words into his mouth which he has not used.
1894. *Mr. Schey.*] Are you aware whether any recommendations have been made at any time by Sir Saul Samuel to Sir John Fowler to take engines from certain people without tender? No; I am not aware that any recommendations came from that quarter.
1895. Are you aware of any case in which a recommendation was made to yourself, and I presume through you to the Minister, to order locomotives without tender, and which recommendation was refused, and tenders called for the engines? I believe on one occasion, when 100 engines were required, Messrs. Beyer, Peacock, & Co. cabled out that they would construct the whole of them for £3,000 apiece—that was at the time that it was proposed to have these locomotives made in the Colony, and Beyer, Peacock, & Co. anticipated, as it were, that proposal by submitting a cablegram to the effect stated.
1896. That would be so that the order would not be given to colonial firms? Well, certainly, if the English firm got the contract, it would not go into the hands of a colonial firm.
1897. Do you remember a certain number of engines, which you were asked to approve of, being built—that is, you were asked by Mr. Scott. I refer to forty-four locomotives, about eighteen months before you left office? I have no recollection of the matter.
1898. Now, Mr. Goodchap, there were ten engines in process of being ordered just before you left office—I refer to what are known as the Scotch Yankees, which were made by Messrs. Dubs & Co., of Glasgow, in accordance with the specifications of Mr. Midelton? Yes.
1899. Do you know whether tenders were called for those engines? Yes; I think tenders were called in London, by the Agent-General.
1900. And you recommended that tenders should be called for those engines? No doubt.
1901. That was immediately prior to your leaving office? You did not complete the negotiations yourself did you? I did not.
1902. Was there not, immediately after you left office, and when the present Commissioners had assumed office, a very heavy condemnation of the state of the line and rolling stock and everything connected with them? Yes; and, as I thought, very much in excess of the case.
1903. You do not think that the amount of condemnation was deserved? I did not think it was deserved.
1904. Did not you apply in your own mind the term "scare" to that condemnation? Well, certainly it was calculated to produce a scare.
1905. A scare in the mind of the public? Yes.
1906. At that time Parliament was asked to pass a vote for rolling stock and other things? Yes.
1907. Now, Mr. Goodchap, do you think, if you had asked for a similar sum to be voted, that Parliament would have granted it?
1908. *President.*] How can Mr. Goodchap answer that? I rule that the question is inadmissible.
1909. *Mr. Schey* (to Witness).] However, you did not think so large an amount was actually justified by the circumstances? There were two reasons given. If the proposal was to reduce the number of types of engines, so as to have our locomotive power within a certain compass, a few types of engines with interchangeable parts, then, I say, the course was justifiable. It was a course I would have taken myself some years previously, and was advised to take; but under the circumstances of the country at that time, it did not seem to me a wise course to take. However, the circumstances of the country changed within a very short period of time, and it was altogether a justifiable policy to reduce the number of engines, and bring about a system by which a few types only would work the traffic. I think that was a justifiable course, and under similar circumstances I should have adopted it myself.
1910. You yourself were perfectly convinced of the justifiability of doing such a thing under the circumstances? I have said so. I was endeavouring to ascertain which types were the best to adopt, and I intended to recommend the adoption of a few types only, and to get rid of the old stock. The objection that I took was as to the representation that this course was necessary owing to the dilapidated, worn out condition of the then existing stock.
1911. *President.*] The action of the Commissioners was one which you would have adopted yourself under similar circumstances? Yes.
1912. *Mr. Schey.*] Was not an exhaustive trial made of the different engines? Yes, especially the Vulcan, designed by Mr. Scott, and class 304, designed by Mr. Midelton.
1913. In which Mr. Midelton's engine was victorious? The expert board reported in favour of Mr. Midelton's engine.
1914. Which resulted in a trial order of ten being given? Yes.
1915. I suppose you have kept yourself posted as to how affairs have gone in the Department since you left office? No.
1916. You are a keen observer? I have only observed casually; I have not made it my business to inquire into the administration of the Department in any way whatever. Having severed my connection with the Department, it seemed to me that it was no part of my duty to interfere in any way with the administration of those who succeeded me.
1917. I suppose, among other things which came under your observation, you noticed the very large amount of traffic that was carried on our railways after the labour strike of 1890? Yes.
1918. The term "abnormal" was applied to that? Phenomenal, I should say.
1919. At that time there were none of the new locomotives which were ordered by the Railway Commissioners in traffic? I am not sure, but I think the ten ordered by me were on the railways at that time.
1920. You would take it, I suppose, that if the locomotives then used were capable of dealing with the traffic described as "phenomenal" they would be able to deal with the normal traffic? That follows as a natural corollary.

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1921. Were you not a trifle surprised to hear of this phenomenal traffic being carried after the condemnation which had been passed upon the engines to which we have just referred? No. I knew perfectly well that the engines were capable of conducting such traffic, that they were not in the state represented by Mr. Price-Williams, and, as a matter of fact, they have run over 16,000,000 miles since Mr. Price-Williams represented them as being incapable engines.
1923. Then, if there had been any justification for the condemnation of the engines, you would have been surprised at that traffic being carried? Certainly, they would be incapable of doing it if that report were correct.
1923. And, therefore, the fact that you were not surprised was caused by the other fact that the state of the rolling-stock was not as represented in the report? Quite so.
1924. I suppose you were fairly well acquainted with all that went on in the various departments of the railway while you were in the position of Chief Commissioner? Yes.
1925. Do you know if it was a usual thing to procure drawings for locomotives when they were ordered? More recently it was; yes.
1926. At the latter part of your term of office it was the custom to prepare drawings and specifications? Yes.
1927. And they were completely and properly prepared? I think so.
1928. When you, as Railway Commissioner, had a number of locomotives under consideration, you ascertained by the drawings and specifications that everything was properly and fairly being put forward? Yes.
1929. And, as a matter of fact, you had a number of drawings and specifications put before you to approve of? Yes; it would be a portion of my duty to see them.
1930. Therefore, you are able to say that a large number of plans were prepared for different engines? Yes.
1931. Now, also, in relation to boilers;—were there not plans of boilers, to your knowledge, in the possession of the Department? I cannot say; I am not quite sure about that.
1932. Now, are you aware that when locomotives were supplied by different firms that sets of drawings were supplied by the makers? Yes.
1933. They were sent out with the engines? I do not know whether detail plans were always sent out, but large photographs were.
1934. I am referring to the plans and drawings of parts of the engines? I think, if my memory serves me, that I insisted on the manufacturers sending out detail plans.
1935. So that if it became necessary to repair a portion of an engine the plans would be in the possession of the Department to enable you to do it? Yes, that was my object.
1936. I believe it is the usual practice to get plans when obtaining goods from a manufacturer? As regards locomotives, I believe it is.
1937. While you were in office, Mr. Goodchap, was your attention ever directed to the inspection of locomotive boilers as to their condition? Certainly. I gave directions to Mr. Burnett, the Locomotive Engineer, so that there should be a periodical inspection of boilers. There are two modes of inspecting boilers. You test them by a hot water test up to 200 lb. to the square inch. Their usual traction power is worked up to between 130 lb. and 140 lb. to the square inch, and it is properly contended that if a boiler will stand a test, without weeping, of 200 lb. to the square inch, it is demonstrated that they are in safe running order. Another test, which I insisted upon being taken every five years, was that the boiler should be completely dismantled, the tubes taken out of the fire-box, and every inch of the boiler gone over to see that it was in good condition.
1938. In what year were your instructions given to Mr. Burnett? About the year 1878, when I assumed the office of Commissioner.
1939. Then you yourself were fully alive to the necessity of inspection? Certainly.
1940. And your direction was that the boiler inspection should take place in the most minute manner by persons qualified to conduct it? Yes.
1941. Your staff was increased so that a more thorough inspection could be carried out? Yes, that was a detail I did not interfere with. I left it to the Locomotive Engineer, and he gave directions.
1942. *Mr. Eddy.*] I would respectfully draw your Honor's attention to this class of evidence. I contend that it has no bearing on the question in view. If this line of examination is continued I shall have to cross-examine Mr. Goodchap on the subject in a way very painful to me, as I am sure it will be to Mr. Goodchap, and as it really has no bearing on the case, I must ask that it be discontinued. Mr. Schey is attempting to draw Mr. Goodchap into a discussion about the management, past and present, of our railways, which I am sure Mr. Goodchap is not wishful to go into any more than myself. I may also point out that the object of Mr. Schey's examination seems to be to discredit a previous witness.
1943. *President* (after consulting with his colleagues).] We are all of opinion that this evidence ought not to be excluded. Some evidence has been given as to the condition of the boilers at the time when the present Railway Commissioners took office, and I presume the object of this evidence is to show that the state of the boilers at that stage was not so bad as was made out. It has a bearing on the case to that extent. You can go on, Mr. Schey.
1944. *Mr. Schey.*] I do not propose to proceed much further with that matter; I will put one question to conclude that part of the examination. Now, Mr. Goodchap, if any person has deposed that the locomotive boilers were in such a horrible condition as to be unsafe to life immediately after you left office, and that it was absolutely necessary to cable to England for forty boilers; do you think ——
1945. *President.*] There is no evidence before the Commission yet which will warrant you in asking such a question.
1946. *Mr. Schey.*] I am putting a hypothetical question, your Honor.
1947. *President.*] It is not so, Mr. Schey. You are giving Mr. Goodchap to understand that some evidence is before the Commission of the nature you specify. It is a form of question well known to frequenters of the Court; but the rule of equity, justice, and truth is that when a question of that kind is put the very words as nearly as possible used by the witness should be given. You have not done that; but have put a question regarding a statement which has not been before the Commission.
1948. *Mr. Schey* (to Witness).] Well, do you consider that the state of the locomotive boilers was of such a character as to necessitate the immediate cabling to England for forty boilers without tender? I had no personal

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personal knowledge of the condition of these boilers; but from reports made to me by the officers chargeable with their condition, I had no reason to believe anything of the kind. I should like to say, with reference to Mr. Price-Williams, that he did not condemn the condition of the rolling stock on any practical basis; but he set up an empirical, speculative theory, that the engines which had been running for ten years were *ipso facto* unsafe engines and ought to be replaced; that a boiler would last ten years only; and that the running life of a locomotive was 200,000 miles. He had previously to this stated, in England, that the running life of a locomotive was thirty years, and that within that time a locomotive would run 600,000 miles. He offered no reason for departing from his theoretical basis, and I looked upon his report as altogether unreliable, and as that of an empiric, a speculative man, who had no practical knowledge of the subject with which he was attempting to deal.

1949. I suppose you know there are in various places engines running very much longer, and that the maximum number of miles given has been exceeded very frequently? Yes. What I looked upon was this: that no engine upon our lines had run over thirty years or for 600,000 miles. Therefore, Mr. Price-Williams had to alter his basis. If he had gone on the basis which he advocated in England—that the life of a locomotive was thirty years and the running power 600,000 miles—then he could not have condemned our engines, because certainly not more than one of the 429 engines at that time in the Colony had run 600,000 miles; so he had to reduce the maximum of 600,000 to 200,000 miles, and the life of the engines from thirty to ten years. He could not have brought forward his condemnation of the engines except on that basis.

1950. Therefore, it follows that you consider the report was framed with a certain specific object in view? I decline to say anything of the kind.

1951. But the maximum fixed, you say, has been largely exceeded in many instances? Yes; certainly.

1952. And this is capable of proof to demonstration from a large number of sources? I believe so.

1953. I believe the Engineer-in-Chief for Railways until lately was Mr. John Whitton? Yes.

1954. He was Engineer-in-Chief prior to your entering the Service? No; I was an older public officer by two or three years.

1955. But he was Engineer-in-Chief for some time before you became Commissioner, I believe? Yes.

1956. And I believe Mr. Whitton for a number of years evinced a very great objection to yourself? I must decline to answer that question.

1957. *President.*] You cannot go into these matters, Mr. Schey. You cannot rake up all the squabbles that have taken place in the Department.

1958. *Mr. Schey.*] Mr. Whitton is Sir John Fowler's brother-in-law, I believe? ——

1959. *Witness.*] I trust, your Honor, that I shall not be badgered with this class of questions.

1960. *President.*] We rule that you cannot go into these questions, Mr. Schey.

1961. *Mr. Schey.*] Is it not a fact that Mr. Whitton for some time had control of the Permanent Way as well as the Engineering Department? Yes.

1962. And would have power to order locomotives? Yes.

1963. He did order a number of supplies, I believe? He recommended that things should be obtained, and the Commissioner of the day obtained them, or exercised his discretion in the matter.

1964. But I understand Mr. Whitton was in such a position that practically he was given his own way for a very long time in such matters? You may think so, but I do not assume so.

1965. And Sir John Fowler was Inspecting Engineer in England, was he not? Yes.

1966. And Mr. Whitton had charge of the equipment of new lines before they were handed over to you as head of the Railway Department? What am I to understand by equipment? If you mean by that the rolling stock, he had nothing to do with it.

1967. For some time he supplied rolling stock? Many years before I was Commissioner.

1968. In the supply of equipment, whatever it was, he used to fit out the lines as he chose, did he not? I am not prepared to answer any question of that kind.

1969. He would put stuff on the line which you, as executive Commissioner, did not approve of? What do you mean by stuff?

1970. Equipment, material? If you mean sleepers, ballast, and so on, that was within Mr. Whitton's province as Engineer-in-Chief.

1971. Were you on the railway station when Mr. Eddy arrived in Sydney.

1972. *President.*] We have ruled, Mr. Schey, that you cannot go into these questions.

1973. *Mr. Schey.*] Do you know, Mr. Goodchap, a large lift that was purchased for Darling Harbour, technically called a "gantry"?

1974. *President.*] What have we to do with this?

1975. *Mr. Schey.*] Your Honor, I am leading up to the question of a certain combination of persons interested in the purchase of railway material.

1976. *President.*] If you read your charge—and I wish you would read it before you come here, as you appear to forget it every day—you will see that the reference to this combination refers to the purchase of locomotives, and nothing else.

1977. *Mr. Schey.*] It becomes necessary for me, your Honor, to establish a connection between certain persons alluded to as a "ring, and then between those persons and the locomotives.

1978. *President.*] But that has nothing to do with the machinery at Darling Harbour.

1979. *Mr Schey.*] That was simply a preliminary question, your Honor.

1980. *President.*] Go straight to the question you want to ask, and leave out the preliminary question.

1981. *Mr. Schey* (to witness).] The question I want to ask is this: Were the persons or firms who supplied this machinery related in any way to Mr. Whitton? I really cannot tell you.

1982. Can you tell me whether that machinery has ever been used, Mr. Goodchap, so far as you know? Yes; it was used continually in my time.

1983. *Mr. Schey.*] Your Honor, I would like to ask the witness certain questions on my own account personally, as I understand that my own character is to be impugned.

1984. *President.*] That has nothing whatever to do with the inquiry at present.

1985. *Mr. Schey.*] Then, I shall not be subject to having my character impugned in cross-examination afterwards.

1986. *President.*] Except in so far as your action before the Commission is concerned, and in no other way.

1987.

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1987. *Mr. Schey* (to Witness).] I direct your attention to a document in the paper before you, entitled "Railways.—Tenders for engines, and tests for suitable type of engine." The paper is signed "W. Scott, 25/5/86," and a little lower down occurs this passage:—"I cannot concur in Mr. Scott's recommendation that, for the reasons given, the orders for the sixteen passenger engines required be given to the Vulcan Company without competition. We have not, I think, received the engines which the Vulcan Company obtained recently the contract for, and, therefore, cannot know much of the quality of the work; but even if it be all that can be desired, I do not think it right that we should depart from the approved system of inviting tenders." This is signed "Ch.A.G., 28/5/86;"—You wrote that minute yourself, in relation to this lot of engines? Yes.

1988. Then occur the following words, Mr. Goodchap: "The system of inviting tenders should not be departed from. It is represented that it is absolutely necessary these engines should be obtained. I therefore approve of tenders being called.—W.J.L., 29/5/86." Those, I presume, are the initials of the Minister in that Department? Yes.

1989. And those initials represent —— ? W. J. Lyne.

1990. Who at that time was Minister for Works? Yes.

1991. And the Ministerial head of your Department? Yes.

1992. Now, following that, Mr. Lyne having approved of tenders being called for these engines, tenders were called, were they not? Yes.

1993. Will you now refer to page 18 of the paper before you; the table I refer to is marked F.1475. There are two of these tables, being schedules of tenders—one is for twenty-eight engines, the other for sixteen engines? Yes.

1994. And each table contains a list of twelve firms, who tendered for them. The first is Dubs & Co., then follow others: Beyer, Peacock & Co., Stephenson & Co., Kittson & Co., Sharpe, Stewart, & Co., Neilson & Co., The Clyde Locomotive Co., Vulcan Foundry Co., and then there are a German firm and a French firm? Yes.

1995. *President.*] The Clyde Company is the same as Sharp, Stewart, & Co., I understand.

1996. *Mr. Eddy.*] I think there was originally a Clyde Company, and when Sharp, Stewart, & Co. moved into Scotland they took over the property of the Clyde Company.

1997. *President.*] Then there were two distinct firms?

1998. *Mr. Schey.*] Yes. In addition to those I have mentioned, there were Burnham, Parry, Williams, & Co., and the Canadian Locomotive Company—that is a Canadian firm? Well, I suppose so.

1999. Then come the German and French firms, and those firms are the same in both cases? Yes.

2000. And they tendered prices for these engines under two separate conditions, did they not? I am not quite sure about that. There was a new condition, I believe, and that was, that inspection should take place in the Colony, and that final payment should be deferred until they had ran 1,000 miles in steam. The practice had been for inspection to take place by Sir John Fowler, in England, and delivery accepted there on behalf of this Government.

2001. And a certain amount of the contract price was paid by the Agent-General, on their being passed by the engineer? Yes; and the remainder paid when they had run 1,000 miles in steam on our lines.

2002. Then, subsequently, Mr. Lyne approved of these tenders, and he, having gone out of office, was succeeded by the late Mr. Sutherland as Minister for Works? Yes.

2003. Do you know the date? It was early in 1887—February, I think.

2004. Mr. Sutherland then became Minister for Works? Yes.

2005. And he introduced a new system in connection with the purchase of these engines—an alternative condition, that tenders should be invited on the old conditions of inspection in London, and on the new condition of inspection on arrival in the Colony? My memory does not carry me so far; but if the papers show it, of course, that is the case. I think you are mistaken as to the conditions. The condition which Mr. Sutherland proposed was, that there should be no inspection in England. He pointed out that if the American or Continental firms were the successful candidates, there would be no inspection in those countries, and the English firms should not be placed at a disadvantage by having an inspection in England. He contended that they should all be on the same basis, that the inspection should take place in the Colony, and that, after passing the Inspecting Engineer here, 75 per cent. of the purchase money should be paid to the manufacturers, and the remaining 25 per cent. on the engines running 1,000 miles in steam.

2006. Was there not something to be paid when they were shipped? No.

2007. You feel sure of that? There is the paper to prove it.

2008. At the head of the columns in the tables on page 18—the page I have already directed your attention to—one column reads "Altered conditions, pay in Colony"? Yes.

2009. And "Original conditions, pay in England"? Yes.

2010. Then, there were two sets of conditions? No. I wish to correct what would be an inaccuracy in this connection. There was only one condition with reference to the purchase of these engines—that is, as I have said, payment in the Colony of 75 per cent. after passing the inspection here, and 25 per cent. after running 1,000 miles in steam. This heading has reference to action taken in England by the manufacturers. They submitted two prices. It was unusual for them to be paid in the Colony, and they said, if we carry out the work on the original conditions, viz., pay in England, then the price would be so much less. It was a stipulation made by the manufacturers.

2011. And the instructions in sending for these locomotives were that tenders were to be called simultaneously, I believe, from the Continent of Europe, America, and the United Kingdom? Yes.

2012. And in the Colony? Yes.

2013. And the matter was represented, was it not, as being one of urgency? It was one of urgency—of very great urgency, I may say.

2014. And, therefore, these instructions to call for tenders were sent through cable? Yes.

2015. And tenders were called for in accordance with the conditions laid down? Yes.

2016. And tenders were obtained, as represented in the two papers on page 18? Yes.

2017. Now, will you quote the prices,—take the top of the section which reads "eight outside-cylinder bogey goods-engine with tenders"; take that given by Neilson & Co. under the original conditions to pay in England;—what is the price? £2,228.

2018. And for the Northern line engines, the same? The same.

2019.

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2019. Now, going on the same line to Neilson & Co.'s tender under the altered conditions to pay in the Colony, what have you? £2,245.
2020. And the same for the Northern engines? Yes.
2021. Then Messrs. Sharpe, Stewart, & Co.'s tender,—they did not tender under the old conditions? No.
2022. But tendered the price under the new conditions? Yes.
2023. Will you quote the price? £2,368.
2024. And the same for the Northern engines in that class? Yes.
2025. Will you now go to the top of the table and quote the price given by Dubs & Co.? £2,265 and £2,290, under the original condition; and under the altered condition, to pay in the Colony, £2,725 and £2,850.
2026. Then we come to Beyer, Peacock, & Co., what are their prices? £2,345, £2,495, and, for the Newcastle engines, £2,520.
2027. *President.*] Do these refer to payment in the Colony, or in England? They refer to payment in the Colony. They make a difference of about £150 for payment in the Colony.
2028. *Mr. Schey.*] Then, Mr. Goodchap, the tenders of Sharpe, Stewart, & Co., and Neilson & Co., are both lower than Dubs & Co., and Beyer, Peacock, & Co.? Yes.
2029. Between £300 and £400 per engine, roughly speaking? Yes. I do not see in this list the time for delivery. Admitting, as you said just now, that there was great urgency for these engines, it might be reasonable to accept a tender at a higher price if they were to be supplied in quicker time, time being the essence of the contract in such a case.
2030. But, as the papers stand, the tenders were all given on the same understanding,—if there was any specification for time, these tenders would be all the same? Yes.
2031. *Mr. Eddy.*] I ask, Mr. President, if Mr. Schey is trying to prove that I had the placing of contracts years before I came into the Colony? The charge is that I, during my term of office, have placed contracts.
2032. *President.*] I presume that Mr. Schey is contrasting the prices then given with the prices subsequently given.
2033. *Mr. Eddy.*] I submit that with the prices ought to be submitted the power of the engine.
2034. *President.*] Mr. Schey is not bound to give the evidence. No doubt the evidence is very imperfect as it stands now; but Mr. Schey may give that information afterwards.
2035. *Mr. Schey.*] I ask you now, Mr. Goodchap, whether the English manufacturers had a deputation to the Agent-General to protest against the new conditions? I am not aware of it.
2036. But representations were made, were they not, that the new conditions were not favourable to the English manufacturers? I can quite understand that the English manufacturers did not favour the new conditions.
2037. And Sir Saul Samuel supported that view? I do not know what his view was.
2038. Will you turn to page 17 of the paper you have in your hand,—you will find a letter there, signed "Saul Samuel"; that would be the Agent-General? Yes.
2039. And there is an enclosure to that letter, signed "John Fowler"? Yes.
2040. That enclosure is a letter from Sir John Fowler, addressed to the Agent-General of the New South Wales Government? Yes.
2041. And in the enclosure, take the two last paragraphs, are these words: "If it be a question of excellence of manufacture, I should recommend that the goods engines be given to Messrs. Dubs, and the passenger engines to Beyer and Peacock, who have made similar locomotives for the Colony, and have always given satisfaction in their work. Also, that payment be made in England in the usual manner, the price being respectively £2,265 for the goods engines at Sydney, and £2,495 for the passenger engines at Sydney. The Newcastle delivery is £25 each more"? Yes, that is a portion of the enclosure; but there is one line you have left out. It has reference to the price of the goods engines, and it says, "Price since been reduced by £100."
2042. Now refer to Sir Saul Samuel's letter. You will find that it contains the copy of a cablegram sent to the Secretary for Public Works. The paragraph reads:—"On the 19th inst. I further telegraphed as follows: 'Tenders, locomotives. Large difference between old and new conditions to cover possible rejection, risks, and deferred payments. Six firms not tendered under new conditions. Consider Government best served (Dubs) £2,165, passenger (Beyer) £2,495. Payment in England, as hitherto. Believe Beyer would take £100 less.'"
2043. *President.*] Who is that from? That is from Sir Saul Samuel, your Honor.
2044. *Mr. Schey.*] Then, as a matter of fact, Mr. Goodchap, the recommendation is that the orders be given to Messrs. Dubs, and Beyer and Peacock? That is the recommendation of the Agent-General.
2045. And the prices quoted by Dubs, and Beyer and Peacock, are both higher than the tender of either Sharpe, Stewart, & Co., or Neilson & Co? Yes.
2046. As a matter of fact, the effect of the new conditions, if they had come into force, would have been to deprive Sir John Fowler of his inspecting fees, would it not? That would have been the effect, no doubt; there would have been no inspection in England.
2047. Can you tell me what amount of fees Sir John Fowler draws from this Colony on the average for these inspections? I think the terms are 2½ per cent. on all materials except rails.
2048. Would it not mean in many cases from £50 to £55 for each engine? 2½ per cent. upon contract price would be about the sum you name.
2049. And, therefore, it would represent in the course of a year or two a considerable sum of money? No doubt.
2050. Do you know anything about the locomotive firms mentioned in these tenders—I mean as to their standing or status? Yes.
2051. Is not Sharpe, Stewart, & Co., a well-known firm? Yes.
2052. It is a firm of good standing? Yes, of good standing; but I believe not recognised as one of the first locomotive manufacturing firms in England.
2053. *President.*] Which are the principal firms? I think Neilson and Co. stand first; Beyer, Peacock, and Co. second perhaps; and then Dubs & Co.
2054. *Mr. Schey.*] You think Neilson & Co. are the best makers? I think they have the largest trade.
2055. And Neilson's price is lower than that of Beyer and Peacock or Dubs? What I mean is this, there

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can be no objection as to the standing of Neilson & Co. that they were not able to carry out this tender having made it? I should think not.
2056. They are a firm of good standing? Yes.
2057. *Mr. Schey.*] I put the paper in, your Honor. [*Document put in*].
2058. *President.*] This paper, Mr. Schey, which you have just put in contains a great deal more matter than you examined the witness upon. Do you wish the other matter to go in as well?
2059. *Mr. Schey.*] I am not particular, your Honor. I merely put the paper in for the matter I have examined upon.
2060. *President.*] But it entails upon the Commission the reading of the whole of this matter.
2061. *Mr. Schey.*] I have no intention that that should be the case, your Honor. I think the Secretary might take out the paragraphs I have referred to; or perhaps I might be allowed to put in the two pages.
2062. *President.*] That would be the best way. Now proceed with the examination.
2063. *Mr. Schey.*] Mr. Goodchap, underneath the two schedules of tender there is a telegram from London station to the Colonial Secretary. "Locomotives tenderers pressing for answer, please reply." Yes.
2064. Then there is the note, "Refer to works.—C.W., 10/5/87." That would be the Principal Under Secretary, I suppose? Yes.
2065. "Railways.—J.R., B.C., 12/5/87." B.C. I suppose stands for blank cover; who does the J.R. refer to? John Rae, Under Secretary for Works.
2066. "Submitted for Minister's direction.—D.V., 13/5/87";—that would be Mr. Donald Vernon, who was Under Secretary for Railways at that time? Yes.
2067. "I think we should cablegram to say, 'Cannot finally decide till all the tenders are in the hands of the Government.'—Ch.A.G., 25/5/87";—that is a memo. by yourself, Mr. Goodchap? Yes.
2068. "Approved.—J.S. 26/5/87." J.S. was the late Hon. John Sutherland, at that time Minister for Works? Yes.
2069. Therefore, it would seem there was an attempt to crowd these recommendations before the whole of the tenders were in the hands of the Government? I do not think it is right to put that construction upon the cablegram. The manufacturers had tendered some considerable time before that cablegram came out. Prices were rising in England, and they were necessarily anxious to know whether they were to have the contract or not. I do not think they showed any impatience. I do not think the cablegram is capable of the construction you wish to place upon it.
2070. But, Mr. Goodchap, the letter of the Agent-General, in which the tenders are sent contains the copy of a telegram forwarded on the 19th instant. The date of that letter is 22nd April? Yes.
2071. The cablegram referred to would be four days prior? The 19th instant.
2072. The cablegram was sent by the Agent-General four days before he wrote the letter? Nothing of the kind. The date of the letter is the 22nd April, and of the cablegram 19th May.
2073. I beg to differ from you. My copy reads, "On the 19th instant, I further telegraphed as follows." I am referring to the letter of the Agent-General for New South Wales to the Secretary for Public Works, dated 22nd April, 1887? You are referring, I understand, to the cablegram which says, "We want a reply."
2074. No, Mr. Goodchap, I am referring to the cablegram which is quoted in Sir Saul Samuel's letter? I see.
2075. That letter is dated 22nd April, and the cablegram referred to therein was sent on the 19th instant? That would be the 19th April.
2076. The cablegram would be sent immediately after the tenders were opened by the Agent-General? Yes, if they all came in on the same day.
2077. As the recommendations are made by the Agent-General as the result of the tenders he must have had all the tenders in when he made the recommendation? Yes.
2078. And the letter dated 22nd April would have to come out from England by the mail which would take approximately six weeks? Yes.
2079. And would arrive in the colony during the first few days of June? Yes.
2080. The date of the second cablegram, which states that the tenderers are pressing for an answer, appears to be 10th May? Yes.
2081. Which was barely three weeks after the receipt of tenders by the Agent-General? Yes.
2082. Therefore, if Mr. Critchett Walker made his memo. on the day he received the urgent telegram, only three weeks must have elapsed since the tenders were received? Yes, a very material time when prices are rising.
2083. But the whole matter was only three weeks? Yes.
2084. And to have waited until the tenders arrived only involved a waiting for another three weeks? That is all.
2085. *Mr. Schey.*] I do not think, your Honor, that I desire to ask Mr. Goodchap any more questions, but I desire to put in a document, namely, the Quarterly Report of the Railway Commissioners, dated 31st January, 1889. I wish to draw special attention to a paragraph on page 2, under the heading of "Rolling Stock," which reads as follows:—"The locomotives are also needing much attention, as when we took office no less than seventy-four out of the total of 429 engines were under or waiting repairs"; and also to a paragraph on page 3, headed "Accommodation for Traffic," which reads: "Throughout the country we found the accommodation generally sufficient for the traffic, the stations and sidings having originally been well laid out. A good number of requirements of a minor character were, however, brought before us which will be dealt with. On some of the sections of the lines opened in the early days of the railways, such as at, Newcastle, Maitland, &c., it will be necessary to spend a considerable sum of money at an early date to facilitate the growing trade." Before Mr. Goodchap leaves the box, I should like to ask him one question based upon those paragraphs. Before doing so, however, I should like to hand in a letter from Mr. McLachlan, the Secretary for Railways, dated Sydney, 11th May, 1892, stating "That the number of locomotives under and waiting repairs at the time of the first complete record I have after the Commissioners took office, namely, March, 1889, was ninety-two. The number under and waiting repairs from 30th April, 1892, was 124." [*Documents put in.*]
2086. *To Witness.*] I only want to ask you this, Mr. Goodchap: The papers put in disclose that there has been a large increase of engines under repair since you left office? Yes.

2087.

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2087. Do you consider that, if the same attention had been paid to the engines as was paid to them during your term of office, the number might have been kept down to the same proportion that there were when you left office? I presume that a number of these engines are those which it is proposed to abandon as fresh engines are being obtained. The new engines are coming in gradually, and I think it is a wise course not to repair the old engines if they are not to be used again, but to leave them in a state of disrepair with a view to their being eliminated from service.
2088. But the papers do not say that these engines are to be abandoned; they only say that this number of engines are under or waiting repair. That would indicate that there was an intention to repair them, and, therefore, your remark as to the abandonment would not apply? I don't know what that means.
2089. *Mr. Eddy.*] I won't trouble you with many questions, Mr. Goodchap; but I wish to ask you one in reference to your last answer. I presume if the Commissioners spent £112,000 in the year 1888 in repairing engines, and spent according to the last annual report £187,000 in repairing engines, it would indicate that they are giving special attention to this question of repairs? Certainly.
2090. When you left office I believe you fully recognised that the Department was short of engine power? Quite so.
2091. And if you had had the same freedom in regard to ordering plant that the present Commissioners have, you would have ordered more engines? I would have done so.
2092. Since you left office there has been a very great growth in the traffic? No doubt.
2093. The returns which have been placed before the Commission show that since 1888 or 1887, I am not quite sure which, there has been a growth of about £900,000? Yes.
2094. That in itself, in addition to arrears which had to be made up, would require a considerable additional amount of motive power to deal with it? Yes.
2095. Then, again, the Commission has had before it a statement that commencing almost immediately with the Nyngan-Cobar and the Culcairn-Corowa railways, and at various intervals within the next twelve months about 250 or 260 miles of additional railway will be opened. That additional mileage would, of course, require additional motive power? No doubt about it.
2096. Therefore, putting the shortness of power in 1888, and the great growth of traffic since that time, and the prospect of new lines to be opened—putting those things together, would, in your opinion, a considerable addition of motive power require to be placed on the lines? No doubt.
2097. Then in regard to placing contracts for locomotives. In your experience you found it desirable when you had been doing business with firms of repute who understood your requirements, to keep your work to some extent in the hands of those who had the patterns, and knew exactly what your requirements were, and whom you could rely upon to do the work well, rather than run about the world and get small outside firms who, though they might do the work cheaper, might perhaps do it badly, to tender for your requirements? I have no hesitation in saying that it is a wise course to circumscribe the area of competition in such cases; and those locomotive firms who have made engines for any particular railway, and have the patterns and templets, are likely to do the work cheaper and better than any other firm.
2098. Therefore, in getting a number of tank engines, say for goods traffic and for other purposes, it would be a wise thing to go to the firms that had made the tender engines of which these tank engines were practically to be duplicates? There can be no question about it. The only qualifying remark to that is the price might be excessive; but so long as the price was reasonable, it would be preferable to go to a firm that had previously executed your orders.
2099. A lot of papers have been put before the Commission with regard to forty-four engines. I would ask you, Mr. Goodchap, if those engines were ever supplied? No; they were not.
2100. Although they were very urgently required? Yes.
2101. *Mr. Schey.*] Mr. Goodchap, you said in answer to Mr. Eddy that you would have ordered more engines? Yes.
2102. As a matter of fact there were several requisitions for additional locomotive power before you left office? Yes.
2103. Can you say whether you would have ordered the same number of engines—but, perhaps, I had better ask you first whether you know what number of engines has been ordered by the present Railway Commissioners? No; I do not.
2104. I may tell you that 164 engines have been ordered by the present Commissioners, the delivery to be completed within a month or two.
2105. *Mr. Eddy.*] No; the orders will not be completed until towards the end of the year, or the beginning of next year, when the new lines will be nearly all opened.
2106. *Mr. Schey.*] I think the Secretary for Railways gave evidence to the effect that the orders would be completed in June or July. However, it does not matter very much.
2107. *To Witness.*] Can you say whether you would have ordered such a large quantity of engines as that? Well, if I did so I should have one object in view, and that would be to reduce the number of the heterogeneous types of engines; and in that case it would be necessary to order a very large number.
2108. *President.*] I think the number has been reduced from forty-two to twenty-one. It has been, or is, about to be reduced? Yes, your Honor. In view of the deficiency of engine power at the time of my leaving office, in view of the increased traffic, and in view of the additional lines of railway about to be opened, I in no way think the orders have been excessive.
2109. *Mr. Schey.*] You say that, in view of the large amount of work which was done by the existing stock after the strike? Yes.
2110. Now, is it not a fact that, during the five years before you vacated your office as Commissioner, there were a large number of additional miles of railway completed? Yes.
2111. Can you tell me about how many? I think there were, on an average, during the eleven years I was in office ——
2112. I asked for the five years? I think about 200 miles a year, in round numbers; there might have been a less number in one year and more in the following; but I think 200 miles was about the average.
2113. That was a large additional mileage year by year for five years? Yes.
2114. And there had been, for years in the past, a large additional mileage completed? It grew during my time from about 660 miles to a little over 2,000.
2115. That was altogether in ten years? Yes; ten or eleven years.

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2116. Do you know anything at all of the number of miles opened since the present Commissioners took office? I am not quite sure, but I think it is something under 50.
2117. You have been questioned as to the necessity of constructing locomotives in view of anticipated extensions of railways? Yes.
2118. Of course it would belong to all railway managers to provide for the extension of lines? No doubt.
2119. Do you know about how many miles approximately will be opened within any reasonable period from now? I have been told over 200 miles within the next twelve months.
2120. That is under construction? I do not know it of my own knowledge, but I understand that is the number of miles.
2121. Now, Mr. Goodchap, had you been ordering engines would you have ordered these engines without tendering? I am not speaking of a circumscribed tender. I will put it plainer. Had you been ordering these engines, would you have been likely to order them by cabling direct to a firm to supply so many engines without inviting prices from any other firms whatever? The practice of the department was to invite tenders from a circumscribed area, such as I have spoken of. I should have known of no reason for departing from that practice; but, of course, there may be good reasons.
2122. You would have strongly opposed the practice of sending orders, and especially large orders, to a single firm without asking prices from other firms? Yes; I think I should.
2123. And, therefore, in the event of certain engines not being ordered from one firm direct, but prices being asked from three firms, that would be a very small area of competition? Yes.
2124. For instance, if an order for fifty locomotives in one line—and may I ask you, Mr. Goodchap, fifty locomotives of one class—were ordered from one firm before or during your term of office? I do not recollect that we ever gave such a large order as that.
2125. Then three firms, say Dübs & Co., Beyer, Peacock, and Neilson & Co., would be a very small area of competition? I should say they comprise the best manufacturers in England.
2126. But the number of firms makes the area of competition very small? No doubt; but they are the three best firms in England.
2127. A point has been made about the number of small firms. Is it not a fact that there are other large locomotive firms of good standing besides the three I have just named? Not so large.
2128. But there are others of good standing, such, for instance, as the Clyde Locomotive Works, and Sharpe, Stewart, & Co.? Yes.
2129. And several others? Yes.
2130. *Mr. Schey.*] That is all I have to ask the witness.
2131. *Mr. Eddy.*] You have been asked a question, Mr. Goodchap, about the amount of mileage opened during certain of the years you were in office. I take it that the mileage of line opened is an unimportant question as compared with the mileage you have to run upon the line? No doubt it is.
2132. For instance, the line from Hay to Jerilderie, where there is not more than one train a day or week, is very unimportant as compared with the work on 12 miles of suburban railway? Quite so. The difficulty of working 12 miles of suburban railway might be very much greater than working 600 other lines of railway; you might have to run 150 trains on the 12 miles, and only five or six trains on the 600.
2133. Therefore, the actual train miles run is the criterion? Yes.
2134. Will you look at the mileage in 1884, and the five years afterwards in 1888? [*Handing witness copy of Commissioners' Annual Report.*] During those five years 160 new engines were obtained, but what was the growth in the actual train mileage? Very little.
2135. About 286,000? Yes.
2136. While between 1888 and 1891, and since 1891, perhaps, you will have noticed in the quarterly reports that there has been a very great growth of traffic? Yes.
2137. Has not the increase between 1888 and 1891 been about 1,750,000 miles? Yes.
2138. And that is due to the extra traffic? Yes.
2139. *Mr. Young.*] In your remarks upon the report of Mr. Price-Williams, I think I understood you to reflect somewhat upon his inconsistency in saying in England that the life of a locomotive was thirty years, while in this country he said it was ten? Yes.
2140. Is that correct? Yes.
2141. Is this the paragraph you had in mind when you made that statement. I will read it:

> "Further, there are 100 engines (or nearly one-fourth of the whole stock) whose ages vary from ten to fourteen years; altogether, as will be seen from the following statement, there are at present 168 engines (or considerably more than one-third of the entire stock) whose mean age is exactly fifteen and a half years, while the age of fifty-six others verges upon ten years—the life span, so far as regards the period of renewals—of modern locomotives, the average age of the entire stock being nine and three-quarter years."

Was that the paragraph you had in view when you made that remark? I cannot say, sir. I gave you the impression which was in my mind after reading the whole report. Whether it was from that particular paragraph, or some other paragraph, I cannot say; but I know that in the paper Mr. Price Williams read before the engineers in London he stated that the life of a locomotive was thirty years, and its running power 600,000 miles, and I know that that information was challenged at the time by a number of engineers, who then conclusively proved that the statement was incorrect, and was wrought out on a wrong basis.
2142. *President.*] In what way—that the life was less? No, sir; that the life was considerably more. It was shown that the basis on which Mr. Price Williams pursued this inquiry was untenable, and could not be supported. He sought to prove his case by what is called a concave line; but the engineers who opposed him pointed out that, instead of a concave line he should have taken a convex line for his basis. It must be apparent that there is a great discrepancy there.
2143. *Mr. Young.*] Judging from this paragraph, Mr. Price Williams seems to recognise a difference between renewals and ordinary repairs. I will read you another paragraph:

> "In order to fully realise the significance of these figures it is necessary to remember that in the case of a well-maintained locomotive stock, 200,000 train miles is considered, in England, to be the limit which an engine should be allowed to run before all the principal parts subject to wear and tear have been entirely replaced."

Witness.] I think he is mistaken.

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2144. *Mr. Young.*] The paragraph continues:

"Such, for instance, as the tubes, crank, axles, tyres, boiler, axle-boxes, &c., &c. In fact, in many cases, it is found preferable to construct an entirely new engine, taking credit for the scrap value of the old one, which, if not broken up, is employed for shunting or other minor duties."

Witness.] No locomotive engineer would interfere with an engine by the expiration of time. He would ascertain whether the boiler was worn out, or whether the tubes were affected. Many engineers state that they have known boilers to last for fifteen or twenty years; it depends very much on whether the boiler is used very much, what kind of water is used, and what kind of a driver you have. All these things are factors in the consideration of this question, and to set down any hypothetical or theoretical basis of that kind must be, as was stated to Mr. Price Williams at the time, misleading and entirely unauthorised by practice.

2145. *Mr. Young.*] But in the paragraph I take it that the ten years' life has reference to the period of renewals, for afterwards Mr. Price Williams explains renewals to be something different to ordinary repairs? There of course are running repairs, and there are renewals, and ordinary running repairs must be separate from renewals. A renewal may mean a new boiler, or some of the working parts.

2146. In a further paragraph I notice that Mr. Price Williams gives an account of the engines renewed, and it would be quite within his view of the question that the engines requiring renewals were at that time unfit for service? Yes, from his theoretical point of view. This gentleman never inspected these boilers; he gave it as a theory that a boiler necessarily wears out in so much time, and calculating the length of time the engines had been running, he condemned them on this theoretical basis, a basis which, as I said before, was challenged by the engineers before whom he read the paper.

2147. I think it seems clear that his ten years refers to the life span of the engine as regards the period of renewals, and not the total life of the engine? You will see another paragraph in the report in which Mr. Price Williams says practically that an engine is worn out in ten years, and had better be out on the scrap heap, and another engine obtained in its place. Might I be permitted, Mr. President, to make an observation in connection with my examination? I wish to say, sir, that I think I am entitled to this indulgence because of my relation in the case to the present administration. It must be, I think apparent to every generous mind that I have been dragged here very reluctantly, very much against my will, and that I should not have been examined in the way I have been for the purpose of depreciating the services of my successors. So far from having any sympathy with these charges, I have viewed them from the first with the greatest indignation, and I believe them to be the emanations of a prurient and suspicious mind.

2148. *President.*] There must be no noise of that kind. I will order the court to be cleared if there is any repetition of it. I don't think, Mr. Goodchap, that any one can find fault with the way in which you have given your evidence. I can quite understand the difficulty you felt in giving the evidence; but Mr. Schey desired to have you as a witness, and of course we could not prevent your being called. The way in which you gave your evidence must have commended itself to the minds of everybody.

2149. *Mr. Schey.*] I desire, your Honor, at this stage to put in a portion of the papers which I have received in answer to my request. One document dated Sydney, 11th May, 1892, is:

"In reply to Mr. Schey's inquiry as to the mileage of lines opened, I beg to say that the number of miles opened for the five years prior to the Commissioners taking office was 798½; and the number of miles opened since the Commissioners have taken office has been 55½. Under construction, 256 miles 15 chains."

To this is appended a schedule of the lines under construction which I do not intend to read; but I may say that the document shows that the miles opened since the Commissioners took office, together with all those in course of construction, is little more than one-third of the mileage open during the previous five years. I also desire to put in a document detailing the delivery of the first six tank engines ordered from Messrs. Beyer, Peacock, & Co. in 1889. [*Documents handed in.*]

Mr. James Chambers sworn and examined:—

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2150. *Mr. Schey.*] Mr. Chambers, you were for some years in the service of the Railway Department, were you not? Yes.

2151. For how many years? Twelve altogether, I believe.

2152. And what position did you occupy? I was draftsman the whole time except during the last year.

2153. And during the last year? I was steel and iron tester at the Eveleigh works.

2154. Were you any portion of that time chief draftsman? Yes.

2155. For any considerable portion of it? Well, I was leading draftsman for several years, and latterly about four years I was chief draftsman; for three and a half or four years I am not certain.

2156. *President.*] What drafting did you do? Locomotives, carriages, and waggons.

2157. *Mr. Schey.*] You were chief draftsman, and you are not now in the service? No.

2158. How long is it since you left? About two and one-third months.

2159. You were at one time in Mr. Fowler's (now Sir John Fowler) office? Yes, in London.

2160. As a draftsman? Yes.

2161. Prior to coming to this colony? Yes, quite twenty-five years ago.

2162. *Mr. Schey.*] I want to ask the witness some question about that lifting gear at Darling Harbour, your Honor, as to who supplied it? Your Honor ruled against me on the last occasion I asked a similar question. Will you allow me to repeat it now?

2163. *President.*] In what way can that throw any light on this matter under inquiry?

2164. *Mr. Schey.*] Well, your Honor, I want to get out the relations of certain persons who it is alleged had formed themselves into a combination for the purpose of effecting these supplies.

2165. *President.*] It would facilitate matters very much if you would give the Commission the names of the persons whom you allege form this "ring." You have never formulated who they are, and it is only from evidence

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evidence which has been given that the Commission is at present able to form any conception of what you mean. But it would facilitate matters very much if you would state just now who compose the "ring" or the combination you speak of.

2166. *Mr. Schey.*] Well, I do not think I ought to be asked that.

2167. *President.*] You will be asked it before this inquiry is over, you may be certain, and asked on oath, too.

2168. *Mr. Schey.*] I do not desire to say that each one of these persons to whom I refer is a conspirator and knitted in a conspiracy with other persons.

2169. *President.*] I do not use the term "conspiracy;" but the term used by you in your speech, and which has been put into the Commission, and which constitutes the charge upon which we are now making an inquiry. You there speak of a "ring" or combination, and I ask you who do you mean to include in that combination. I ask you to mention the names of those persons.

2170. *Mr. Schey.*] That is who I conceive to be mixed up in the ring?

2171. *President.*] Who you conceive to form the "ring" or combination you speak of? My question is a very simple one.

2172. *Mr. Schey.*] I have already named Sir John Fowler, and his brother-in-law, Mr. Whitton, and I want to show the connection of other persons.

2173. *President.*] I do not ask that. I ask you to name those who you conceive to form the "ring" or combination you speak of in your charge. You have mentioned Sir John Fowler and Mr. Whitton. Are there any other persons?

2174. *Mr. Schey.*] Yes, I consider that certain other persons are more or less mixed up in the matter.

2175. *President.*] Name them?

2176. *Mr. Schey.*] I name them as Mr. Burnett, Mr. Thow, and Messrs. Beyer and Peacock. Of course, I am not assuming that these persons ——

2177. *President.*] I asked you nothing about that. Just go on with the names.

2178. *Mr. Schey.*] Well, your Honor, there are different degrees in the matter, and I am endeavouring to ascertain the relations of these persons one to the other.

2179. *President.*] But, Mr. Schey, you must know who you were referring to when you spoke of a "ring."

2180. *Mr. Schey.*] In giving the names, I am only giving the names I thought were connected with this combination.

2181. *President.*] That is all I ask you to do. Are there any other persons? Is there anybody else connected with this combination?

2182. *Mr. Schey.*] Yes, your Honor. I have thought that Mr. Eddy was mixed up in the same matter.

2183. *President.*] You have mentioned Sir John Fowler, Mr. Whitton, Mr. Burnett, Mr. Thow, Messrs. Beyer and Peacock. Is there anybody else?

2184. *Mr. Schey.*] Yes, I say I think that Mr. Eddy is in some way or other mixed up with this "ring" of persons.

2185. *President.*] Is there any other person?

2186. *Mr. Schey.*] Yes. Sir Saul Samuel and Sir Henry Parkes. I think, your Honor, that includes them all, so far as I can tax my memory.

2187. *President.*] There is no other firm or body such as Messrs. Beyer and Peacock mixed up in this "ring"?

2188. *Mr. Schey.*] I think not, your Honor; but I wish to be distinctly understood that in mentioning these names I do not say here deliberately that each person is a conspirator. You have asked me to give certain names which I esteemed from my own thoughts were connected with this business, and I have given them. You see, your Honor ——

2189. *President.*] Now, do not misunderstand me, Mr. Schey: I will read you the charge. "That a certain "ring," or combination of persons, or firms, mainly responsible for the appointment of the said Edward Miller Gard Eddy, as Chief Commissioner, had ensured that the said engine should be ordered from them, and that they obtained the order for the same through the said Edward Miller Gard Eddy." I want to know who are the "ring" or "combination" of persons and firms there referred to.

2190. *Mr. Schey.*] These are the persons, your Honor, who at the time I spoke, and who I now think composed this combination.

2191. *President.*] And there is nobody else. I mean so far as your mind is concerned. Do you mean to include any others?

2192. *Mr. Schey.*] In speaking of the firms specially favoured in the past, I am referring to Messrs. Beyer Peacock, and in a subsidiary way to Messrs. Dübs & Co.; but I do not mean the other portion to apply to Messrs. Dübs & Co. I only speak of them as one of the firms specially favoured in the past; but I do intend it to apply especially to Messrs. Beyer, Peacock, & Co. Of course you understand I am simply giving these names as those who were in my mind at the time I made my speech. I did not make any distinct charge that each of these persons was a conspirator, or, as a matter of fact, a swindler. I did not say, and I do not say, so at the time.

2193. *President.*] Now proceed with your examination.

2194. *Mr. Schey* (to Witness).] May I ask you, Mr. Chambers, who supplied that big lifting gear, technically known as a "gantry," erected at Darling Harbour? I do not know of my own knowledge, but I believe I have been told it was supplied by Messrs. Appleby, of London.

2195. You cannot say from your own knowledge whether the firm which supplied that machinery was in any way related to Mr. Whitton, and thereby to Sir John Fowler? No.

2196. *Mr. Kethel.*] Are you referring to the structure which has been recently dismantled?

2197. *Mr. Schey.*] It is the big lifting gear I am referring to.

2198. *Mr. Kethel.*] Not the steam crane?

2199. *Mr. Schey.*] It was erected for the purpose of lifting coal trucks.

2200. *Mr. Kethel.*] It is the machinery at the northern end of the wharf.

2201. *Mr. Schey.*] I think it is. (To Witness): Is that particular machine still in use? I do not know of my own knowledge.

2202. Do you know whether it was unused for a considerable period after being put up? I believe so; I have heard it stated so.

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2203. *Mr. Eddy.*] Mr. President, I must ask you, seeing that this structure was erected many years before I came into the colony, if these questions have any reference to the charges before the Commission?
2204. *President.*] Perhaps it may be better to allow Mr. Schey to ask a few questions about this subject. He seems very anxious to do so.
2205. *Mr. Schey.*] I would like to ask you, Mr. Chambers, whether you think it would be possible for me to obtain adequate evidence on that point from any member of the railway staff at the present time?
2206. *President.*] Repeat that question, Mr. Schey, I did not catch it.
2207. *Mr. Schey.*] I was asking the witness, your Honor, whether, in his opinion, it is possible for me to obtain adequate evidence from the railway employees at the present time.
2208. *President.*] I rule that question is one that cannot be put. It is a preposterous question.
2209. *Mr. Schey.*] I desire your Honor to obtain from the witness whether it is not a fact that the staff is under such a system of terrorism that evidence cannot be obtained from them. Do you rule me out of order?
2210. *President.*] How can this witness answer that?
2211. *Mr. Schey.*] Considering that he has been in the department for many years, and has only just left it, I think he can give me an answer, your Honor.
2212. *President.*] He can say he does not like to come here and give evidence, but he cannot speak for other persons. You may ask him if he is afraid to speak the truth now that he is before the Commission.
2213. *Mr. Schey.*] I will put my question in a different way, your Honor. (To Witness): If you were still employed by the department would you be afraid to give evidence although you have been summoned?
2214. *President.*] I rule that that question cannot be put. As I said before, you can ask the witness what his personal feelings are—whether he is terrorised by the Commissioners and is afraid to speak the truth. If he says he is we shall know how to deal with him.
2215. *Mr. Schey.*] Having left the service he is hardly likely to be terrorised at the present moment. (To Witness): Will you tell me how many engines were under repair when you left the service? I cannot do that.
2216. It is in evidence that the number under repair and waiting repair on the 30th April, 1892, was 124. Will you tell me whether the works at Eveleigh are fully employed? I would not like to say that the works are fully employed. The workmen are fully employed, that is the working staff I mean.
2217. Those that are there, but are the works full? I think not.
2218. *President.*] Mr. Chambers, what are you now? I am nothing at present.
2219. What do you know about the state of the works at Eveleigh if you are no longer connected with the department? It is only six weeks since I left the Railway Department, your Honor.
2220. I beg your pardon, I thought you said six months.
2221. *Mr. Schey.*] No, your Honor, he has only just left the service. (To Witness): As a matter of fact are not the works only going five days a week at the present time? I believe so.
2222. And a considerable number of men have been put off during the last three months? Well, I have heard of men being put off from time to time.
2223. A large number? I should not like to say a large number. I have not paid particular attention to these things.
2224. But having been there for a number of years you have an intimate acquaintance with the Eveleigh works. You have been there since the works were built, I believe? Yes.
2225. Now, in your opinion, could not a great many more men be employed and a great deal more work turned out of these works than is being turned out at the present time? I do not say a great deal more, but certainly more could be done.
2226. I mean is there no room for the employment of extra men? There is extra capacity if it were absolutely required.
2227. You were a draftsman in the office were you not at the time Mr. Scott was Locomotive Engineer? Yes.
2228. *Mr. Schey.*] I desire your Honor to add to the list of names already given the name of Mr. Scott. I had omitted him.
2229. *President.*] To the list of those forming this combination?
2230. *Mr. Schey.*] Of course in a subsidiary way. (To Witness): Do you remember some years ago Mr. Scott being dispatched to England? Yes.
2231. Who took his place? Mr. Midelton.
2232. Do you remember immediately after Mr. Scott's departure being shown a document in Mr. Scott's handwriting defamatory of Mr. Midelton? Yes.
2233. You assert that this document was shown to you at a time immediately after Mr. Scott's departure for England? Yes.
2234. That is some years ago? Oh, yes.
2235. About how long? I should say about ten years ago.
2236. Hardly so long ago as that is it? It is very near. It must be getting on that way.
2237. And by that you would have judged that Mr. Scott had a great objection to leaving Mr. Midelton in his place? I should have inferred as much.
2238. You know that Mr. Midelton succeeded Mr. Scott after Mr. Scott finally retired from the service? Yes.
2239. Do you not think that during Mr. Midelton's connection with the department that very great efforts were made in many quarters to remove him from the department? I cannot say of my own knowledge.
2240. *President.*] That is all you can say. You must not go upon mere rumour.
2241. *Witness.*] I have been told this, your Honor.
2242. *President.*] We cannot have what you have been told.
2243. *Mr. Schey.*] What was the most powerful type of goods engine in existence when Mr. Thow took office as Locomotive Engineer? The consolidation American goods engine.

2244.

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2244. What is the class No. of that engine? One hundred and thirty-one I believe.
2245. Then if any person has stated that the 205 class was the most that would not be correct? Not at all.
2246. The other type had a greater tractive power? It was more powerful than the 205 type? Undoubtedly.
2247. Can you tell me what the 205 class of engine can draw going on the southern line from Picton to Thirlmere, a section which contains the severest grades on the southern lines? I cannot tell you what it would draw there.
2248. You know that section? I have been over it once each way.
2249. Can you tell me what the 205 class of engine can draw between Picton and Thirlmere? I cannot say without going into the figures for it.
2250. Can you supply the figures if I supply you with the questions? Yes.
2251. *Mr. Schey.*] I desire to ask the witness these questions, your Honor. Will you allow the witness to supply the information?
2252. *Mr. Eddy.*] Mr. President, I want to point out that a printed table has already been put in by one of Mr Schey's own witnesses—a table worked to every day.
2253. *President.*] Mr. Schey, Mr. Eddy says there is a printed table in evidence showing all this.
2254. *Mr. Schey.*] Yes, your Honor, but I would like to have this witness work it out on his own data.
2255. *President.*] This witness was only a draftsman in the department, and how can he be in the position to work out that information?
2256. *Mr. Schey.*] With all respect, your Honor, I think he is in a position to work out the information I want. I contend that he would understand the construction of the engines, the size of the cylinders, &c.
2257. *President.*] Very well, I will not shut out the evidence.
2258. *Mr. Schey.*] I want to know from this witness what a consolidation goods engine would draw from Picton to Thirlmere, and what one of the 205 class would draw over the same section?
2259. *Mr. Young.*] Is the 205 a passenger engine and the consolidation a goods engine? They are both goods engines.
2260. *Mr. Schey.*] I am only referring to goods engines.
2261. *Mr. Eddy.*] One is an American and the other an English engine.
2262. *Mr. Schey.*] I also want to know what an engine of the "Scotch-Yankee" type would draw over the same section, distinguishing in each case between fast and slow goods. (To Witness): Do you know the new Beyer and Peacock engines? Yes.
2263. Of what class are they nearly duplicates? Well, to a certain extent, they are not unlike the "Scotch-Yankees."
2264. Will the "Scotch-Yankees" draw as many trucks of goods from Picton to Thirlmere as a new Beyer and Peacock engine? I should say not.
2265. You will work out the difference for me? Yes.
2266. You know, of course, that fifty passenger express engines—I think that is the correct term—have been ordered from Messrs. Beyer and Peacock by the Commissioners? Yes.
2267. Are those fifty engines the same that were recommended by Mr. Thow as the standard heavy passenger engine? Did Mr. Thow make a recommendation to the Commissioners as to a standard heavy passenger engine? I believe so.
2268. You know these new Beyer and Peacock engines? Yes.
2269. Are they the engines recommended by Mr. Thow to the Commissioners? No.
2270. Are they similar? They are not at all similar.
2271. The design is not at all similar? No.
2272. Now, broadly speaking, what is the difference in the design of each? Take the engines that Mr. Thow recommended to the Commissioners as the standard heavy passenger engine? The engine Mr. Thow recommended to the Commissioners as the standard heavy passenger engine was an inside cylinder four-couple engine.
2273. That is a broad description? Yes. It is very similar to the present express engines.
2274. What do you call the present express engines? The high wheeled engines accustomed to do the mails in the express service.
2275. Give me the number of the class you are referring to? 261 is the lowest class number.
2276. What, broadly speaking, is the design of the fifty engines just supplied by Beyer and Peacock? An outside cylinder six-couple engine, a very much more powerful type.
2277. That is as opposed to a four-coupled inside cylinder? Yes.
2278. Are the new Beyer and Peacock engines similar to those designed by Mr. Midelton? They are somewhat similar, but more powerful.
2279. They are similar in being six-couple, and having outside cylinders? Yes.
2280. Therefore the recommendation of Mr. Thow was entirely opposed to that of Mr. Midelton? Yes.
2281. When he recommended four-couple inside cylinders? Yes.
2282. And the engines which Mr. Thow has actually brought out, these fifty Beyer and Peacock engines, are opposed to his own recommendation previously made, and somewhat similar to the engines recommended by Mr. Midelton? Yes.
2283. Then, Mr. Chambers, does not this appear to be a testimony to Mr. Midelton's good judgment as a locomotive engineer? Well, I should say that it indicated superior judgment on the part of Mr. Midelton.
2284. Were there not very full plans prepared for the engines which Mr. Thow recommended? Yes.
2285. That is to say, a full set of plans and specifications, and everything necessary to build the engines, was prepared in the drawing-office at Eveleigh? Yes.
2286. You know that of your own knowledge? Yes.
2287. You designed the plans? Yes.
2288. And these plans were all finished and ready when Mr. Thow went to England last year? I believe so

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2289. Then, as the engines brought out are entirely different, something must have occurred in England to change Mr. Thow's opinion? Apparently.
2290. Or, at all events, his practice? Yes.
2291. Then, if Mr. Thow designed these fifty engines while he was in England, it was not because there were no plans from which to build engines of his own recommending? No.
2292. Neither would it be that they were so designed in England because there had been no time to prepare plans—that follows, does it not? Yes.
2293. As a matter of fact you say that very complete detailed plans were drawn? Yes.
2294. Why do you think the change ——
2295. *President.*] We cannot allow you to carry this any further, Mr. Schey. What on earth can this witness know of Mr. Thow's mind in England? How can he know what happened to Mr. Thow in England? Mr. Thow was here yesterday, and you examined him at great length. Why did you not ask him these questions yourself? You cannot get from this witness what he imagines was in Mr. Thow's mind.
2296. *Mr. Schey.*] I think that the witness can give a very shrewd idea, your Honor.
2297. *President.*] I do not know anything about his shrewd idea. It is not evidence, and I cannot admit it.
2298. *Mr. Schey.*] I will submit the next question to your Honor's judgment. (To Witness): Who do you think led Mr. Thow to change his practice in regard to these engines?
2299. *President.*] Really Mr. Schey, how can the witness answer that question? You may argue as you please upon the evidence; but the witness cannot say of his own knowledge what may have influenced Mr. Thow, especially as Mr. Thow was in England and he was out here.
2300. *Mr. Schey* (to witness).] Were there plans for other engines in existence at Evelcigh when you were there as draftsman? There were various plans of engines when I was there.
2301. Were there not a large number of plans of different engines? Yes, we had plans of several different classes of engines.
2302. Had you not plans of nearly all the different engines supplied by Messrs. Beyer and Peacock? Reckoning from No. 79 class upwards, we had plans of all Beyer and Peacock's engines except two.
2303. Then that would comprise a large number of engines in the service? A considerable quantity.
2304. All those of which we have the greater number, and are the most useful? Yes.
2305. Were not plans supplied by Messrs. Beyer and Peacock for years in sending out engines? Yes, as a rule, but with two exceptions.
2306. And in those cases did not something happen to the plans? I never heard it said so.
2307. You never heard, for instance, that plans were being sent out, and that the ship sunk which had them on board? I never heard that stated.
2308. But there were a large number of plans of various engines besides those supplied by Messrs. Beyer and Peacock—Dübs', for instance? Yes, we had plans of some of Dübs' engines.
2309. Were there plans of any boilers in existence? When we had plans of engines they included the boilers, so that the plans we had of engines also comprised plans of boilers.
2310. I understand you to say that when you had plans of engines you also had plans of boilers? Exactly.
2311. And therefore, if it were necessary to duplicate the boilers the plans would be in existence from which to do it? Yes, in the cases I have mentioned.
2312. Would you know, if you saw the class numbers of the engines, whether there were plans in the office for boilers to suit those engines? Yes.
2313. You think you would? Yes, I think so.
2314. Will you kindly look over this indent for locomotive boilers [*handing witness a document*] and see whether there are any plans in the office for any of the boilers there specified? I cannot tell from the makers' numbers; we always go on the number of the engine.
2315. *Mr. Schey.*] May I ask, Mr. President, for the rotary numbers of the engines to which these boilers were supplied to be put in?
2316. *President.*] I suppose it can be done, Mr. Eddy.
2317. *Mr. Eddy.*] I beg to submit, sir, that the charge against me is that I placed orders for £500,000 worth of locomotives in England. How has this question of the boilers any bearing upon that? This witness is a man who has been removed from our service, and I feel it is not right that we should be asked to go outside the inquiry.
2318. *Mr. Schey.*] I submit, your Honor, that as locomotives include boilers, if there is a large order for boilers, it is certainly pertinent to this question of locomotives. In making the speech concerning locomotives, one would not specify the number of axles and boilers, and so on.
2319. *President.*] The evidence hitherto, I take it, has referred to the question of boiler-plates sent out as part of locomotives, either as duplicates for locomotives or for the purpose of making boilers here.
2320. *Mr. Schey.*] I am referring to forty boilers, your Honor, upon which some evidence was given the day before yesterday. Thirty of these boilers, I may mention, were supplied by Messrs. Beyer and Peacock, and ten by Messrs. Dübs, and as the witness cannot identify them by the makers' numbers, he desires to have the rotary numbers of the engines to enable him to do so.
2321. *President.*] For the purpose of proving what?
2322. *Mr. Schey.*] For the purpose of proving this, your Honor: Mr. Thow, in giving evidence, stated that there were no plans in existence from which these boilers could have been made, and that, therefore, they were cabled for by the maker's number without tender. I want to show that that is hardly a correct statement, and that plans were in existence; and for the purpose of identifying boilers which were supposed to be duplicates, I want to get the rotary numbers of the engines as opposed to the makers' numbers—two different things, your Honor.
2323. *President.*] I think you are entitled to get this document, Mr. Schey.
2324. *Mr. Eddy.*] We will have pleasure in supplying the information, your Honor.
2325. *Mr. Schey.*] You say, Mr. Chambers, that until you get the rotary numbers, you can give us no further information about these boilers? Yes.
2326. Do you know that there are drawings of a number of different classes of boilers in the office? Yes.

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2327. You have a very full acquaintance, have you not, with the locomotives belonging to the Government? A fair acquaintance.
2328. In your opinion was there such great urgency as to warrant these engines being ordered by cablegram without tender? What do you mean by these engines?
2329. Well, 164 within a brief time? Not without tender, I should say.
2330. You think it would have been the last degree of urgency to warrant such an order without tendering? Yes.
2331. You know of a number of cases in your own experience while you were in the service where tenders were called for engines, I suppose? I believe tenders were invariably called prior to the present Commissioners taking office.
2332. Do you know whether plans were prepared in the office for the construction of two classes of engines designed to be built in the colony? Yes.
2333. They were the only plans for the purpose? Yes.
2334. Were those plans ever made use of? Were engines ever built from them? Two contracts were let and started in Sydney, but they proved abortive.
2335. The plans were prepared for the purpose of getting colonial firms to make engines? Yes.
2336. And neither of the plans have had engines built to them? Not complete engines.
2337. Did you ever know the Government to give so large an order as for fifty engines of the same type in one line? I should like to make a correction, your Honor, of my last statement. I am not positive that the ten engines known as "Scotch Yankees" were not ordered from the plans which Mr. Schey has been just questioning me about.
2338. *President.*] I suppose you can hardly know anything about the matter yourself? You were merely a draftsman in the office.
2339. *Witness.*] I had charge of the plans, your Honor, and I believe these ten Scotch Yankees were ordered from the plans referred to.
2340. *Mr. Schey.*] Do you know, Mr. Chambers, whether so large an order as for fifty engines was ever given in one line by the Government? Not to my knowledge.
2341. And certainly not without tendering? Certainly not without tendering.
2342. Do you know a Mr. Brewster? Yes.
2343. Who is he? The agent in Sydney for Messrs. Beyer, Peacock, & Co.
2344. Do you know how long he has been in Sydney? About thirteen years I should say.
2345. Is he an agent in the ordinary sense of the term? Does he represent the firm which has an agency for Messrs. Beyer, Peacock, and Co., or does he do nothing else but represent this firm? I think he does nothing else but represent Beyer, Peacock.
2346. Was Mr. Brewster a very frequent visitor at Mr. Scott's office, when Mr. Scott was Locomotive Engineer? Tolerably frequent.
2347. And to Mr. Cobb's office? Yes.
2348. Do you know whether Mr. Goodchap on any occasion refused to accept recommendations to purchase engines without tenders? I cannot remember distinctly, but I believe that Mr. Goodchap always insisted on having public tenders called for locomotives.
2349. And do you know whether there was any difference between his desires in this direction, and the desires of his locomotive officers? I do not know, because that is a good many years ago, and I had not the same sources of information at that time as I had latterly. I was not in a position, then, to know exactly.
2350. You think Mr. Goodchap's general policy was to widen the area of competition? ——
2351. *President.*] You have examined Mr. Goodchap and got his answer. You cannot have the evidence from this witness;—how can he tell us what Mr. Goodchap's policy was?
2352. *Mr. Schey.*] Very well, your Honor, I will ask the witness no more questions until the paper is supplied on which I desire to examine Mr. Chambers.
2353. *Witness.*] Your Honor, can I have access to any tables I may wish to see, showing the size of locomotives?
2354. *President.*] Yes, if it is necessary for you to answer the questions Mr. Schey has put to you, you may see the papers.
2355. *Witness.*] And if I am short of any technical information, I can get it?
2356. *President.*] Yes. I suppose there will be no difficulty, Mr. Eddy, in supplying that information to the witness?
2357. *Mr. Eddy.*] Not the slightest objection, sir. We will give him any information he wants.
2358. *Witness.*] I may want to know about the length of the grades, and whether there are any curves on the section of the line between Picton and Thirlmere. That is all I shall want.

Mr. Thomas Midelton sworn and examined:—

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2359. *Mr. Schey.*] What are you by profession, Mr. Midelton? A mechanical engineer.
2360. You have had large experience in that capacity? I have.
2361. Under several English railway companies? Yes. The Great Western and the Great Eastern Railway Companies.
2362. You were on the Great Western and the Great Eastern Railways? Yes.
2363. Were you ever specially engaged in any capacity as mechanical engineer, which would give you an opportunity of seeing the working of other companies? Yes. I had the usual training on the Great Western and the Great Eastern Railways, and I have had the best possible opportunities for acquiring knowledge in my profession.
2364. You were trained on the Great Western Railway in England? Yes; under the late Sir Daniel Gooch, and his brother William.

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2365. Were you not at one time engineer to a brake Company? I was.
2366. And in that capacity you saw the rolling-stock of a large number of English companies? Yes. I saw the rolling-stock of the North Eastern, the Great Northern, the Manchester, Sheffield, and Lincolnshire, the Monmouthshire, and other railways. I put on the first continuous brakes for these companies.
2367. Were you not in the works at Stratford? I had charge of the running sheds at Stratford for the Great Eastern Railway Company. While there I was asked to become the engineer for the Vacuum Brake Company, which position I accepted, and I then did what I have just described.
2368. You were second in command of the whole of the Stratford Works? Yes; I was second; in fact, I was chief of the running repairs. I had the running repairs of three large shops, comprising 152 engines, and that was when I was 27 or 28 years of age.
2369. From that time you have been constantly amongst locomotive engines, and you have always had charge of large numbers? I have been amongst locomotive engines, and that department of railway work, all my life.
2370. You have been in the service of the New South Wales Government? Since August, 1880. I was engaged by Mr. Robert Burnett, who was then Locomotive Engineer. In August, 1880, he promised me the position of assistant to himself. I started as draftsman under him in the drawing office. I waited some time, but his promise was not fulfilled, and I remained a draftsman until 1882. Mr. Burnett was removed from the service, and Mr. Scott was promoted to his position, whilst I was appointed to Mr. Scott's position as second in command. Do you want any more?
2371. Yes. You may as well proceed with the positions you have filled? I was Locomotive Overseer, that being the official title given to me, from 1882, till about August, 1885, when I was suspended by Mr. Goodchap, the late Commissioner, on certain charges made against me by Mr. Scott. I was called upon by the Governor and Executive Council ——
2372. *President.*] This is a very interesting autobiography, no doubt, but have we anything to do with it, Mr. Schey?
2373. *Mr. Schey.*] I think so, your Honor. I propose to make the evidence pertinent, by showing that Mr. Midelton has been inimical in his position to this combination of persons, and that, therefore, Mr. Midelton has been subjected to certain pains and penalties, and practically has been put out of his position for the purpose of allowing this combination of persons to work their purposes in a better form. That is my theory in the matter.
2374. *President.*] You can go on with the evidence.
2375. *Mr. Schey.*] I don't know that it is necessary to go much further, your Honor. As a matter of fact ——
2376. *President.*] You may proceed, if you think proper.
2377. *Mr. Schey.*] As a matter of fact, Mr. Midelton, you were subsequently reinstated? Yes; fourteen months afterwards I was reinstated, or re-employed on the tramways, instead of being put back with Mr. Scott again. I was put on the tramways, and I had full charge at Randwick at a higher salary. I held that position for two and a half years, and then I was appointed Locomotive Engineer in succession to Mr. Scott, and I had the honor of working under Mr. Goodchap again for five months, and under the present Railway Commissioners for five months also. Then I was removed by the present Commissioners.
2378. After your suspension you were honorably reinstated? Yes. The charges fell through. I showed cause, and I heard no more about the charges, and I took it that my re-employment was intended to exonerate me in every way.
2379. You say you got an increase of salary? Yes; £50 increase.
2380. Did you get a bonus? I got a bonus in 1883 for the manner I had discharged the duties of both departments in the absence of Mr. Scott, who was Locomotive Engineer, and of Mr. Down, who was Superintendent of the Tramways Rolling Stock. Mr. Scott was away for some fourteen months, and Mr. Down for nine months, and I carried on both positions. I had charge of both tramways and railways, and I received £100 gratuity for the way in which I performed those duties.
2381. You received a bonus for the excellent way you filled Mr. Scott's position which was superior to your own? Yes, I got a letter of thanks congratulating me upon the efficient way I had discharged the duties, and also a bonus of £100.
2382. And when you left the tramways you became Locomotive Engineer, did you not, for both Railways and Tramways? Yes.
2383. And you received? £800 a year, with a promise that it should be increased to £1,000 later on.
2384. The present Locomotive Engineer is Mr. Thow, is it not? Yes.
2385. Does he also attend to both railways and tramways? I believe not. He did when he started, but things have been altered.
2386. Do you know his salary? I believe he receives £1,200 a year, that is the amount set out in the estimates.
2387. Have you studied the way in which locomotives and rolling stock have been supplied in New South Wales? Yes.
2388. And the history of the New South Wales railways? Yes.
2389. You have made a particular study of this subject I believe? I have looked into the matter for a long time past.
2390. Can you tell me this: Do you know anything of any "ring" or "combination" of persons who have supplied rolling stock in the past? I do not know about any "ring," or what may be called a "ring," but there seems a remarkable coincidence in the names which I have met with in the printed official documents.
2391. *President.*] Will you mention those names, please? I would rather be asked, your Honor.
2392. Well, you are asked, and what is more you will have to answer the question, Mr. Midelton? Well, your Honor, the names which seem to me to be rather prominent were those of Sir John Fowler and Mr. Whitton. They seemed to be rather prominent names, and as I judge from the papers Mr. Whitton has had control of the Railway Department from the beginning or since he arrived in the colony, and that does not appear to me altogether consistent.
2393. Consistent with what? Well, with business, your Honor.

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2394. *Mr. Schey.*] These coincidences do they appear to your mind to warrant the supposition that there was a "combination" of persons for the purpose of getting locomotive orders to run in certain directions? I cannot say what was the purpose; I cannot give any idea or any opinion about the purpose, but as I said before it strikes me as a remarkable coincidence.
2395. That locomotive orders did flow from these particular directions? Yes.
2396. *President.*] He did not say that.
2397. *Mr. Schey.*] I am asking the witness, your Honor, whether he does say that?
2398. *President.*] You are not asking the question, you are putting an answer into his mouth which he did not give, and that is a very different matter.
2399. *Mr. Schey* (to Witness).] You have mentioned Sir John Fowler and Mr. Whitton. Do you think this coincidence extends in any way to Mr. Burnett? Mr. Burnett was appointed by Sir John Fowler; he came out here and performed his duties, and was removed as before stated.
2400. I ask you this question, Mr. Midelton, do you think this coincidence extends in this way? It seems to me hardly the thing that Mr. Burnett should be appointed to this position by Sir John Fowler. Mr. Burnett was appointed to the Metropolitan by Sir John Fowler I believe, but I do not know positively. I knew Mr. Burnett on the Metropolitan Railway. I do not know how he got the appointment, but I believe it was through Sir John Fowler. There was a vacancy here in 1878, and Mr. Burnett was sent here, I presume, by Sir John Fowler, but I do not know positively.
2401. *President.*] Do you know anything at all about the matter, Mr. Midelton, one way or the other? I do not your Honor.
2402. Then why do you say that Mr. Burnett was appointed by Sir John Fowler. Remember you are on your oath? I believe I have read it in some printed correspondence.
2403. *Mr. Schey.*] Would that coincidence appear to you to apply in any way to Mr. Thow? I have seen lately from Mr. Thow's evidence that he was in Sir John Fowler's office some years ago, and this fact strikes me as another instance in furtherance of the coincidence.
2404. Does this coincidence between certain persons as to the supply of locomotives appear to apply to Mr. Thow also? These persons were certainly friendly I should think. I do not know anything more than that.
2405. *Mr. Young.*] Have you any objection to his being in Sir John Fowler's office? No, sir, I see no objection.
2406. Is there anything suspicious in the fact that a person has been in Sir John Fowler's office? Not so far as I can judge.
2407. *President.*] What do you call a coincidence? I want to get some information from you. You have used this expression, which I do not understand, and I want an explanation? Well, your Honor, it seems extraordinary that all the staff I have mentioned came from the same office; for instance, Mr. Burnett and Mr. Thow were both supported by Sir John Fowler.
2408. How do you mean supported by him? Well, I presume they were supported.
2409. I do not want presumptions, I want to ascertain what you know. Tell the Commission what you know, and we will deal with that evidence; your presumptions are of no importance whatever. What do you know about these matters;—do you know anything at all about them? Well, I know what I have read, your Honor, that is all.
2410. That is all you do know? Yes, your Honor.
2411. *Mr. Schey.*] Might I ask you, Mr. Midelton, who first directed your attention to these coincidences? Nobody directed my attention to them exactly.
2412. In the first instance they struck yourself? Yes; some years ago they struck me when I was with Mr. Burnett. I was struck by the matter at the time I was associated with Mr. Burnett in this Colony; I was struck by his peculiar treatment of me, by his subsequent removal, and by circumstances which have taken place since.
2413. Did any other person after that bring the matter prominently to your mind? Yes.
2414. Who was it? As the gentleman is dead I do not think it necessary to refer to him.
2415. Did the late Hon. John Sutherland draw your attention to this matter in any way? Well, we had conversations over the matter. I do not think that he drew my attention to it; it was more a simultaneous opinion on both sides.
2416. Judging from those conversations, do you think Mr. Sutherland entertained similar views as to these coincidences? Yes; I should think he did from evidence I have seen.
2417. Did he ever say anything to you as to his opinion that there was a ring or combination of persons? No.
2418. But he remarked to you on the coincidence? He agreed with my views on the matter.
2419. Did not your views on the matter lead you to make a rather extensive study of the business? My treatment generally led me to do so.
2420. And you were led to see connections or to trace certain connections between these persons? Yes.
2421. *President.*] Will you let the witness say how he traced the connections, and not merely put the words into his mouth. Let him say what he knows. We do not want mere suspicion or coincidence—we want what he himself knows to be the truth.
2422. *Mr. Schey.*] Did you ever see a report from a Select Committee of the Legislative Assembly, Mr. Midelton, which was ordered to be printed on 7th April, 1864? I have seen a document similar to the one lying before you. [*Document handed to witness.*] Yes; I have seen it.
2423. *President.*] Is that 1864? Yes, 7th April, 1864.
2424. *Mr. Schey.*] That document does not belong to you in any way? No.
2425. Have you seen a copy of this document before? I have a copy of it myself.
2426. Might I ask where you procured that copy? I got it from Mr. Sutherland.
2427. Mr. Sutherland gave it to you? Yes, some six years ago.
2428. Do you think that the document contains information which would throw light on these coincidences? Yes.
2429. You do? I do.
2430. *Mr. Schey.*] I want to examine from this document, your Honor. Is there another copy of it procurable? I cannot examine without my own marked copy.
2431. *President.*] We do not want to see it, Mr. Schey.

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2432. *Mr. Schey.*] Can I proceed to put in the different paragraphs without getting them from the witness, or must I get them from the witness.

2433. *President.*] I do not know what the paragraphs are, Mr. Schey, the document apparently was printed twenty-eight years ago.

2434. *Mr. Schey.*] It was printed in 1864, your Honor.

2435. *President.*] Then, I am not far wrong in saying that it was printed twenty-eight years ago. I cannot tell what there is in that document bearing on this case. Of course, you may show that Mr. Eddy's appointment was immediately connected with what appears in that document, but until I hear the paragraphs I cannot know what they refer to.

2436. *Mr. Schey.*] There is nothing in this document, your Honor, referring to Mr. Eddy's appointment, but there are a number of other matters which refer to other persons which I have named as forming this ring or combination. My point is to show the operations of this combination.

2437. *President.*] But, Mr. Schey, this charge of yours is directed against Mr. Eddy. You say that a ring or combination existed at the time of Mr. Eddy's appointment, or since that time, and therefore I cannot see how any ring or combination in the year 1864 can have any bearing on this charge.

2438. *Mr. Schey.*] I want to show that at that time, your Honor, certain things were being done which showed a remarkable coincidence, and I want to proceed to show that from that time this combination of persons has gradually worked in the same direction; I want to trace their operations to the present time. I submit that I have to show the existence of this ring or combination of persons; I have to show where I consider the combination commenced, and all the reasons which led me to say what I have said. After doing that I have to ——

2439. *President.*] I do not see how Mr. Midelton can give evidence of what took place in 1864. (To Witness): Were you in this Colony in 1864? I was not.

2440. When did you arrive here? In 1880.

2441. *Mr. Schey.*] But, Mr. President, Mr. Midelton is aware of what this document contains.

2442. *President.*] Only from reading it.

2443. *Mr. Schey.*] That is all, your Honor.

2444. *President.*] Then we do not want to know what Mr. Midelton has read. You can prove what there is in the document pertinent to this case otherwise than through Mr. Midelton.

2445. *Mr. Schey.*] Then may I read the extracts, and put them in?

2446. *President.*] Why not proceed with the examination of Mr. Midelton?

2447. *Mr. Schey.*] Because, your Honor, I want to put the thing in its proper sequence. For that purpose I want to put in these extracts first. If your Honor will permit Mr. Midelton to retire I will proceed to read the extracts, and put them in. [*Witness here left the box.*]

2448. *President.*] Perhaps this will be a convenient time to adjourn. Mr. Eddy, the Commission ask to have the documents connected with your appointment. I understand that you have certain of them here in court at the present moment. We do not ask to have these documents put in evidence now; that can be done at some future period; but the Commission would like to have the documents before them—that is, if you want to get rid of them now.

2449. *Mr. Eddy.*] I can give them in now, Mr. President, or at any other time suitable to the Commission.

2450. *President.*] Which is most convenient?

2451. *Mr. Eddy.*] I will hand the documents in at once. I understand, of course, that they are intended as information to the Commission, and not as exhibits.

2452. *President.*] That is so; they are for the use of the Commission at present, and not as exhibits.

2453. *Mr. Schey.*] Do I understand, your Honor, that these documents relate to Mr. Eddy's appointment?

2454. *President.*] Yes.

2455. *Mr. Schey.*] But your Honor has already prevented me from dealing with Mr. Eddy's appointment on this charge.

2456. *President.*] Not in the slightest degree, Mr. Schey; on the contrary, the whole question of Mr. Eddy's appointment will have to be gone into under this charge. In the first charge you propounded you spoke of "occult" reasons which suited private persons, and which were not for the welfare of the country. Without an explanation from you as to the meaning of that phrase it is impossible for anybody to understand what you intended by it. Instead of going into the box yourself, or giving any evidence on that point, you withdrew the charge after a statement by the Commissioners that if you did so they would consider that you had made the charge without having any reasonable grounds for it. When that charge had been withdrawn, Mr. Eddy wished to go into the box. We then stated that we thought at that stage of the case such a course was undesirable and unnecessary, but we pointed out that at a subsequent period the application might be renewed, and we would consider it. That had reference to the second charge, in which you make an explicit statement of what you intended by the first charge—that Mr. Eddy procured his appointment through a ring or combination of persons and firms; in fact, you allege that Mr. Eddy, since his appointment, has been playing into the hands of that ring. That is the meaning of the second charge; and under that second charge it is necessary to go into the question of Mr. Eddy's appointment—into the whole matter which could not be gone into on the first charge, because you had withdrawn it, and it was at an end. The whole matter will have to be gone into on the second charge. Mr. Eddy will be examined as to his appointment, his papers will be laid before the Commission, and we shall also expect that you, Mr. Schey, will go into the box, or, if unwilling to do so, you will be put into the box by the Commission, and you will have to answer certain questions which the Commission intend to put to you in reference to this charge. There has been no statement whatever from the beginning to the end that Mr. Eddy's appointment was not to be considered on this charge; on the contrary, the real gravamen of this charge deals with the question of Mr. Eddy's appointment, and that question will be gone into and sifted to the bottom by the Commission before this charge is done with.

2457. *Mr. Schey.*] When I called Mr. Eddy, and was proceeding to ask him certain questions concerning his appointment, your Honor ruled the questions to be inadmissible, on the ground that the first charge had been withdrawn—you would not allow me to continue that line of examination. However, your Honor, I submit the point to you between this and the Monday sitting. Several questions I believe were disallowed.

2458. *President.*] A great many questions were disallowed, Mr. Schey.

[*Mr. Eddy here handed in the documents relating to his appointment.*]

MONDAY,

MONDAY, 16 *MAY*, 1892.

[*The Commission met at* 11 *a.m. in the Equity Court, Chancery-square.*]

Present:—

His Honor JUDGE OWEN (President).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

2459. *Mr. Eddy.*] I wish to hand in a few more papers concerning the supply of locomotives, which I understand have been asked for.

2460. *President.*] There must be some elimination of these papers because, when the matters are reported upon by the Commission, the evidence before the Commission will have to be appended, and it will be rather much to have to ask to have all these papers printed *in globo* as an Appendix. It would take three or four volumes.

2461. *Mr. Eddy.*] I think, sir, it is altogether wrong; but these papers have been asked for, and we have been ordered to put them in.

2462. *President.*] Asked to be produced, and not necessarily put in. I think there ought to be some selection made instead of having the whole mass of papers put in evidence.

2463. *Mr. Eddy.*] We have not desired to put one in, your Honor.

2464. *President.*] I wish also to make an explanation, because there appears to have been some misconception as to what the Commission did say on Friday evening last. What I intended to point out, and what I thought I did point out, but what does not appear perfectly clear on the shorthand writer's notes, was this: That as Mr. Schey was proceeding to prove these charges, and was, therefore, to a certain extent, in the nature of a prosecutor on these charges; and as the first charge had been withdrawn by him—we thought that in the second charge Mr. Schey could not himself proceed to give evidence in reference to Mr. Eddy's appointment. That would have been to allow him in one breath to withdraw the charge, and in another breath to proceed to repeat it. But we never said that the Commission itself would not make all necessary inquiries into Mr. Eddy's appointment. The matter having been formulated into a charge, and the Commission having the duty of inquiring into the truth of the charge, it rests upon the Commission to clear up any matters that may be left in doubt, or that may require further elucidation when Mr. Schey concludes his evidence; and what I intended to convey on Friday evening was, that although Mr. Schey would not be allowed to go into evidence as to the charge himself, the Commission themselves would investigate the matter fully. Of course any witnesses that are called by this Commission and placed in the witness-box will be open to cross-examination by Mr. Schey. We should also request Mr. Schey and Mr. Eddy to mention the names of any persons who they thought would be able to throw any light upon the subject, and these witnesses would be called, not by Mr. Schey or by Mr. Eddy, but by the Commission, and would be examined by the Commission, subject to cross-examination by the parties.

2465. *Mr. Schey.*] I had occasion before to draw your Honor's attention to the extreme difficulty which I have had in carrying on this matter so far in consequence of the affection of the throat from which I am suffering. Also, I have occasion to draw your Honor's attention to the fact that the ordinary businesses of life will not stop because Mr. Eddy desires to have this matter pushed through. I beg to intimate to your Honor that when I left the Commission on Friday evening last, I was compelled to go and consult the solicitor for the association by whom I am employed for the defence of one of its members, who has been committed for trial for manslaughter, the trial to take place at Glen Innes to-morrow. In consequence of that I had to spend Saturday morning, at all events during the business part of the day available, in interviewing and feeing the barristers engaged for the defence. Although no postponement was granted me by which I might have attended the conference of the association with which I am connected, still it follows that a large quantity of returns and information had to be prepared for that conference, and I was engaged until late last night in doing that work. At the present time the conference is sitting in the Temperance Hall, Pitt-street. I beg now to inform your Honor that I find myself in an unfit condition of health this morning to proceed any further. I beg to state also that this morning I consulted a medical practitioner—the ordinary medical practitioner who has attended me for the past five years—and I submit for your consideration a certificate from that gentleman as to my state of health and the prescription he has given me.

2466. *President.*] Is the doctor in Court?

2467. *Mr. Schey.*] No, your Honor, but he can be called if you desire it. I certainly would not undertake to bring the doctor to Court, I am not prepared to pay the expenses of doing so. That must rest upon the Commission, and not upon me. And I beg to state further that in consequence of the necessary work which I am compelled by my employment to undertake I am at least 2½ days behind in the evidence of this Commission. The last two days' proceedings I have not even perused, much less taken any notes in connection with them.

2468. *President.*] But you have received that evidence I suppose?

2469. *Mr. Schey.*] I have received Friday's evidence. The report of Wednesday's proceedings I received at 4 o'clock on Thursday, and Friday's evidence I received at 3 o'clock on Saturday afternoon.

2470. *President.*] You see, Mr. Schey, where you yourself are taking the evidence, that is to say, asking the questions, and receiving answers, it is not of so much importance that you should receive the short-hand writer's notes, because I must assume you carry in your mind the evidence you have elicited. It is not as if evidence was given by somebody else, and you had to peruse the evidence given by them. This is your own evidence, taken by yourself.

2471. *Mr. Schey.*] Still, your Honor, I submit that it is necessary I should read the evidence for the purpose of obtaining points on which to examine other witnesses, and I must obtain these before I can examine the other witnesses.

2472. *President.*] Surely you must know the questions you have asked, and the line of examination you have adopted. You must know the answers which the witnesses have given you. I cannot see what you want the notes for. Possibly it may be necessary to refresh your memory upon one or two points, but I should say that an hour or two would be ample time for you to do that.

2473. *Mr. Schey.*] I have not had time at present to read through the notes which I last received. They are very voluminous.

2474. *President.*] I should think that you ought to be able to read them through in an hour?

2475. *Mr. Schey.*] No, your Honor, it would be utterly impossible; but in any case I was engaged until late last night in writing.

2476. *President.*] But, Mr. Schey, we cannot take any notice of work that you have to do outside this Commission, either for the conference of which you have spoken or any other body. You must not let that work interfere with the work of this Commission.
2477. *Mr. Schey.*] Permit me to say that if I have to take the position which your Honor assumes, this Commission would absolutely deprive me of my means of livelihood. I cannot see that the Commission should or ought to go on in such a way as to deprive a person who is not before the Court charged with any offence, and who is not before the Court as a suitor—I cannot see that the Commission should go on in such a way as to deprive a person in my position of the opportunity of following his ordinary avocation; in other words, to deprive him of the means of livelihood. I beg to say that such a view as that appears to me to be extraordinary. At the same time, I would direct your Honor's attention to the fact that a great number of different sets of papers—I believe 493—connected with the case have been handed in, and I have as yet had no time whatever in which to peruse them.
2478. *President.*] The secretary informs the Commission that a large number of these papers, if not the whole of them, have been lying in the Secretary's Office since Tuesday last, and there have been additions to them from time to time since then, but there have been no additions since Friday last. We have informed you, Mr. Schey, on several occasions that you have the right to inspect all the documents that are in the office of the secretary to this Commission. Those documents have been there all the time, and the office has been open all the time, and I understand from the secretary that you have never once applied to him for leave to inspect those documents.
2479. *Mr. Schey.*] That is quite correct, your Honor. I have not had an opportunity to do so.
2480. *President.*] It appears to me you have had every opportunity. The office has been open, and you have only had to walk in in order to inspect the documents.
2481. *Mr. Schey.*] Quite so, your Honor; but I beg to point out that the Court has been sitting almost every day until the afternoon; and I have necessarily something else to do besides attending to the business of the Court. What I mean is, that I have not had an opportunity, through my own circumstances—not through the circumstances of the secretary, or the circumstances of the Commission, but simply owing to the circumstances in which I myself have been placed; and I cannot live without eating. However, the matter is simply this: that I am not this morning in a position to go on; and I ask you to grant me an adjournment. The certificate of my medical adviser I have handed to your Honor, and, as you will observe, he advises me to go home and rest. I asked him how long a rest I should take, and he said, probably until Thursday, if I actually did take the rest; but I must distinctly say this, that if the adjournment be granted, I must not be expected to come down to the office of the Commission, and go through the long list of papers which have been put in, because I am in such a condition of health as to require repose. I submit that such a thing would be altogether unreasonable. If your Honor causes me to go on this morning, I shall have to ask to be permitted to read certain documents and put them in, and not to be called upon to call witnesses, for I am really not in a position to examine witnesses this morning.
2482. *President.*] The inquiry before this Commission is of a peculiar character. As I have pointed out, it is not a mere administrative inquiry. It is a judicial inquiry, and the charges that have been brought against Mr. Eddy are of a most serious character—serious not only to him, but to the Colony at large—and we think that no further delay ought to take place in carrying on this inquiry than is absolutely necessary. At the present moment, we do not see that there is any necessity for further delay. If these proceedings were being conducted in the Supreme Court, the objections taken by Mr. Schey would not be listened to for a moment, and it appears to me that the matters which this Commission has to inquire into are quite as important as any that are taken in the Supreme Court. Of course, if Mr. Schey says that his health has broken down, and proves it in a proper way, the Court may take that into consideration; but no other consideration, such as the fact of his being engaged in other employment, will be allowed to interfere with the proceedings of this Commission. Therefore, we call upon you to proceed, Mr. Schey.
2483. *Mr. Schey.*] Do I understand your Honor to refuse my application for an adjournment?
2484. *President.*] Yes.
2485. *Mr. Schey.*] And that you refuse the evidence of the doctor's certificate?
2486. *President.*] At present I have no evidence before me at all on the subject. This certificate is no evidence. It simply recommends that you should take a rest in consequence of some throat affection.
2487. *Mr. Schey.*] May I ask what certificate you require, your Honor?
2488. *President.*] None at all. The doctor must come and be examined before the Commission in the ordinary way.
2489. *Mr. Schey.*] Will you kindly send for Dr. Long, then, your Honor?
2490. *President.*] That will be considered. In the meantime, you say you can proceed with certain documents. Will you kindly read them.
2491. *Mr. Schey.*] Certainly, your Honor; but, in the first place, with reference to the medical evidence as to my state of health, I hope it will be understood that, if your Honor sends for the doctor, his expenses will be paid by the Commission, and not by myself?
2492. *President.*] We are not going to call the doctor at present. We will proceed with your documentary evidence.
2493. *Mr. Schey.*] The first document I propose to produce is the "Progress Report of a Select Committee of the Legislative Assembly on the disorganised state of the Public Works Department, together with the proceedings of the Committee, the minutes of evidence and appendix," ordered by the Legislative Assembly to be printed on the 7th April, 1864. I desire to say that I shall be prepared to hand the document in as it stands; but I will not give the Commission the trouble to read other portions than those I particularly refer to unless they like, because the extracts are all plainly marked.
2494. *President.*] Very well. Now refer us to the pages you want particularly to refer to as you are reading them.
2495. *Mr. Schey.*] Page 235 is the first. I may say, your Honor, that the quotations I shall make are from evidence which has been taken on oath before a Committee of the Assembly. This first extract is part of the evidence of John Whitton, Esq., late Chief Engineer for Railways, and reads as follows:—"My engagement with the Government is simply to lay out and construct the railways of the Colony." A little further down, on the same page, the following passage occurs:—"I undertook, in addition to my ordinary duties, to take charge of the maintenance of the railways, to keep all accounts of the Department of repairs to the rolling stock, repairs to the permanent way. I felt it was then my duty to do so; but I intended only to do so for a short period; but I have continued to the present time." Then, at question

, on the same page, he is asked, "But you say your duty is to supervise the construction of railways; when they are constructed you hand them over to the management of the Commissioner? No doubt that is strictly my engagement; but I have been doing about four times what I engaged to do, without receiving any additional pay." Further up, on the same page, at question 7524, Mr. Whitton is asked, "How long have you been Engineer-in-Chief to this Colony"?—and he answered, "A little over seven years." The period of service is thirty-two years, from 1857 to 1889. It appears, from the 2nd extract I read, that Mr. Whitton undertook voluntarily to do this particular work. The next extract is on page 103 of the Appendix to the same report; this is not evidence, but a letter, which was produced in evidence, and which is printed in the Appendix. It is dated from "Toogood's Hotel," Pitt and King Streets, Sydney, 28th April, 1863, and is addressed to the Under Secretary for Public Works, and is a tender for the construction of certain locomotive engines. The letter commences, "I, Charles Fowler, hereby propose to supply the passenger engines for the Southern and Northern railways, to be constructed at the works of Messrs. Sharp, Stewart, & Co., Manchester, in strict accordance with specification, and to the satisfaction of the Inspecting Engineer, at the following prices." I do not desire to go into the prices. The point which I wish to direct the attention of the Commission to is: that at that time Mr. Charles Fowler, who signs the tender, was in the Colony, and he was tendering to build locomotive engines to the satisfaction of the Inspecting Engineer, who was his own brother, Mr. John Fowler.

2496. *President.*] How do we know that?

2497. *Mr. Schey.*] I shall proceed to show it from the evidence, your Honor. My point, as I have stated, is: that Mr. Charles Fowler proposed to supply these engines, to the satisfaction of the Inspecting Engineer, his own brother, that being, I submit, a somewhat unsatisfactory arrangement.

2498. *President.*] I understood, from what you read, that the engines were to be constructed by Sharp, Stewart & Co.?

2499. *Mr. Schey.*] No, your Honor. The letter says, "I, Charles Fowler, hereby propose to supply the passenger engines for the Southern and Northern railways, to be constructed at the works of Messrs. Sharp Stewart, & Co., in strict accordance with the specifications, and to the satisfaction of the Inspecting Engineer."

2500. *President.*] That is what I have said.

2501. *Mr. Schey.*] Yes; but you will observe that he is to "supply them." Having no works of his own, of course he could not construct them.

2502. *Mr. Kethel.*] Was Sir John Fowler at that time Consulting Engineer for the Colony?

2503. *Mr. Schey.*] Yes. I shall proceed to show further on in the evidence that that was so. Further down, on the same page of the Appendix, appears another letter from Charles Fowler, Esq., to the Secretary for Public Works, also dated from "Toogood's Hotel," 9th May, 1863:—

> I have the honor to acknowlege the receipt of your communication of the 7th instant, accepting my tender for the supply of eighteen locomotive engines for the Government railways, upon depositing as security the sum of £6,000, either in cash or Government debentures, within ten days, the terms of the advertisement calling for tenders and a form of tender attached to the specification for the eighteen locomotives being that the party tendering should find two persons as security to execute a bond within fourteen days from the notification of the acceptance, and although cash security to one-half of the bond has in some cases been advertised for, I am not aware that it has been hitherto insisted upon in any Government contract. I trust it will not be so in my case, but that the tender will be accepted according to the terms of the advertisement.

On the following page, No. 104, of the Appendix, appears some further correspondence relating to securities, which I propose to put in. There is a letter here from the Under Secretary for Public Works to Charles Fowler, Esq., which reads as follows:—

> Sir, Department of Public Works, Sydney, 19th May, 1863.
>
> With reference to your letter of the 9th instant, complaining of your being called upon to deposit the sum of £6,000 instead of providing sureties for the due performance of your contract, if accepted, for the supply of eighteen locomotive engines for the Government Railways, I am directed by the Secretary for Public Works to inform you that the cash deposit in view of sureties was required in accordance with your own offer to that effect, contained in your tender, dated the 28th ultimo, for the work in question, and that, as it now appears from your letter under reply, that you are unable to comply with this condition, and as there is otherwise reason to believe that you are unable to complete such a contract, and that your offer is not of a *bonâ fide* character, your tender is declined, and your name has been noted as ineligible for future Government contracts.
>
> I have, &c.,
>
> JOHN RAE.

2504. *President.*] Then he never got the contract after all?

2505. *Mr. Schey.*] No, your Honor. But I will now direct your attention to another letter from Mr. Charles Fowler, which appears on page 127 of the Appendix. It is dated from the "Custom House Hotel,' Macquarie-place, Sydney, 16th November, 1863, and reads as follows:—

> Dear sir,—
>
> Will you write me saying when you will be in Sydney, and where I can see you, to try if we cannot settle my account against your firm, as it is over three years due, and Mr. Rhodes examined it, and went through every item, and the dates in his diary and past the account, and also you have seen Mr. Fraser's letter, which confirms this statement. I am particularly anxious about this being done at once, as I wish to leave here by the next mail for Jubulpord, in India, and it is very important that I should have the needful; and if you state the case to Mr. Brassey and my brother, Mr. John Fowler, ——

This shows the relationship, your Honor, which I have referred to.

> they will, no doubt, make the matter alright with you. I trust you will be particularly careful not to mention this until all is settled.

The last few words are printed in italics; and then the letter concludes:—

> I shall be glad to leave, as it will prevent my giving evidence before the Committee of Inquiry, which would bring many matters to daylight both as regards Whitton, your firm, and John Fowler, and cause such an unpleasant exposition as would never be forgotten, and which, I think, is much better avoided. Your immediate attention to this will oblige.
>
> Yours truly,
>
> CHARLES FOWLER.

2506. *President.*] What is the account he refers to there?

2507. *Mr. Schey.*] I do not really know, your Honor. I think it was some account between the firm of Samuel Wilcox and Mr. Fowler. Mr. Wilcox, I believe, was agent for Messrs. Peto, Brassey, & Co. at the time when the Menangle Bridge was constructed, and Mr. Charles Fowler had something to do with this bridge, for which he claimed a certain sum of money from that firm.

3508. *President.*] That has nothing to do with the purchase of locomotives.
3509. *Mr. Schey.*] I admit that, your Honor, it was only incidentally introduced as part of the general subject. Then, on page 280, in the body of the document appears some evidence relating to the letters I have just read, and the account mentioned in it. Beginning at question 8495:—

> This is Mr. Want's handwriting? Yes.
> The statement is in your own; Yes; a statement of facts and circumstances within my own knowledge.
> *By Mr. Dalgleish.*] Mr. Want is the solicitor for Messrs. Peto, Brassey, and Betts, or their agent? Yes, and he has been from the first.
> The other letter is from Mr. Fraser, the accountant to Messrs. Peto, Brassey, and Betts? Yes; he was in the same position when Mr. Rhodes was here as Mr. Spiller is now, and knew all about the matter.

And then Mr. Dalgleish asks this question:—

> Mr John Fowler is your brother? And the answer is, "Yes."

I will now refer to the Progress Report of this Committee of the Assembly, page 5. The Committee in making their report say:—

> Your Committee beg to draw the attention of your honorable House to the documents laid before your Committee by Mr. Whitton for the purpose of throwing discredit on the evidence of Mr. C. Fowler ——
> That is the Mr. Charles Fowler referred to already.
> and also to the document produced, and evidence given by the last-mentioned gentleman on his final examination, which appears to your Committee, as far as Mr. Fowler is concerned, to be satisfactory.

I now turn to page 108 of the evidence, Mr. John Whitton being under examination. Begin at question 3521:

> Was the order for the last bogie engines sent to Messrs Manning, Wardell & Co.? Yes.
> 3522. What was the price of those engines? I do not know; I can ascertain from the office. £2,500 each.
> 3523. Was the workmanship of them good? I believe it is; I have had no serious complaint. I have heard that some of the buckles for springs were defective, and some other slight defects, which is often the case in new engines.
> 3524. Are Manning, Wardell & Co. considered to be first-rate makers? They are.
> 3525. How many engines have been imported direct from them for this Colony for the public service? That I cannot tell without reference; but I think about ten.
> 3526. Have these engines been completed for your orders sent direct to that firm? Yes; orders sent direct to that firm.
> 3527. Is Mr. John Fowler the gentleman who examined the locomotive engines for the Colony? Yes.
> 3528. If he is a monied partner in that firm, do you think it proper he should be so? If I had the least suspicion of such a thing, I should not have ordered them from those works; but I do not believe he has anything to do with that company, and from the fact that I know he is one of the proprietors of large iron-works near to Chesterfield. I believe the whole of his time is taken up by them, and in the practice of his profession.
> 3529. I am given to understand that Mr. John Fowler is one of the monied partners of Manning, Wardell & Co.? I do not believe anything of the sort.
> 3530. Have you any reason to disbelieve it? Well, I have no reason to disbelieve it any more than I may have to disbelieve any other statement that may be made to me with reference to the private transaction of any other person.
> 3531. Do you know of any reason whatever why he should not be? I know of no reason why he should not be.
> 3532. Is it not a dishonorable thing? I see no dishonor in being connected with a large firm; but I do not believe anything of the sort. I believe the statement to be utterly untrue. It is the first time I ever heard of it, or had the least idea of anything of the kind.
> 3533. *By Mr. Morris.*] If Mr. Fowler had been a partner, do you think it likely you would have heard of it? I think so, for I know of most of Mr. Fowler's transactions, and I never heard anything of the kind. I do not think Mr. John Fowler has anything to do with these works; but I can ascertain, and will do so.
> 3534. *By Mr. Dalgleish.*] From what firm was the Menangle Bridge ordered? Messrs. Peto, Brassey & Co.
> 3535. Was it tendered for by large firms in England? No.
> 3536. Were tenders called for? No; an arrangement was made with their agents here for building the masonry for the Menangle Bridge, and I wished to arrange with him the price for the ironwork; but he said he was not aware what the cost would be, and preferred leaving it to his firm in England to be decided by them. He asked that someone should be appointed on behalf of Government to arrange the price.
> 3537. Who was so appointed? Mr John Fowler. Mr. Fowler was not appointed director in the Colonies; but by Captain Bolton, R.E., to assist him in making these arrangements in England. He was not appointed by the Government, or with my knowledge.
> 3538. Were the designs for the bridge made here? Yes.
> 3539. Who made them? They were made under my superintendence.
> 3540. Who made them? Mr Drewett.
> 3541. Have you the original sketches? The original drawings are in the office.
> 3542. Were not rough drawings made in the first instance for your approbation? No; the drawings of the bridge generally were sent them, with instructions that the bridge should be.

Then Mr. Dalgleish goes on:—"I think you misunderstand me"; but further down some evidence is given as to the supply of ironwork. Question 3547:

> The ironwork? The detailed drawings for the ironwork were made in London.

Then at 3549:

> Do you allow matters of that importance to be done out of your department, and without your concurrence? The arrangement with Mr. Fowler is this,—That he is to provide the whole of the detail drawings and specifications, and they are to be done to his satisfaction; it is therefore unnecessary for me to prepare working drawings here.

Question 3551:

> What commission does he receive? Two and a half per cent. on iron girder bridges and on rolling stock, and 1 per cent. permanent way material.

I now turn to page 113 of the evidence, where Mr. J. Whitton is still under examination. Question 3671:

> You did not compare the drawings with the original sketch to see if Mr Drewett had carried out your instructions? I do not remember. With regard to the ironwork, we did not make detail drawings in the Colony simply because Mr. Fowler was paid to do so.

Question 3673:

> Mr. Fowler has a direct interest in making the bridge heavy? I do not think he has.
> 3674. Does he not get a commission, and the more tons' weight the more the commission? Yes.

Question

Question 3678:

Does it not occur to you that the contractors, Messrs. Peto & Co., have a direct interest in making the bridge as heavy as possible? They have an interest in making it heavy.

There is a note added on revision: "But they had nothing to do with designing it." Question 3679:

Do you not think that your being placed between the public and the contractor ought to have furnished the details of this bridge to secure the public interests? No; I did not think so. Mr. Fowler having been appointed to act for the Colony, it was no part of my duty.

The next extract is contained in the Appendix, page 112, document B (to evidence given by John Rae, Esquire, 27th November, 1863). Under the heading, "Information, papers, or plans asked for," appears "Estimated cost of the Menangle Bridge, £20,000; actual cost, £90,000." That is exactly four and a half times as much as the estimated cost. At page 241 of the evidence, John Whitton, Esquire, is again under examination, and gives evidence as follows:—

7697. Were not the designs for the Penrith Bridge copied from the Menangle Bridge? They are not exact copies; the general design is pretty nearly the same, but many alterations were made.
What is the nature of the alterations? The Penrith Bridge was not in some respects so strong as the Menangle.
7699. Less iron? Less iron.
7700. Are the spans the same? They are larger.
7701. The spans are wider? Yes.
7702. Still, there is less iron in them? Yes.
7703. Then, in reality, the ironwork of the Menangle Bridge is heavier than necessary? Yes. I stated to the Committee when I was here before that I had sent home the sectional areas and the general drawings, but that the strength had been increased in England by Mr. John Fowler, who had stated in a letter to me that it was necessary to make them stronger than was originally proposed by Mr. Fairbairn.
7704. *By Mr. Dalgleish.*] Have you that letter from Mr. John Fowler? I have a letter, I think, from Mr. Fowler's secretary.
7705. Stating that it was necessary to alter your plans? Stating that it was found necessary to increase the strength of wrought-iron bridges, beyond the formula of Fairbairne.
7706. Will you send that letter in? It is a private communication.
7707. A private communication on a public matter? I do not correspond with Mr. Fowler on public matters.
7708. Do you think it was Mr. John Fowler's duty to alter your design? I consider that Mr. Fowler was appointed in England to attend to these things.

At page 243, John Whitton, Esquire, being still under examination, is asked at question 7752:

Did you ever know the Minister to refuse an appointment to any one recommended by you, either in the traffic or any other department connected with the railway? I know the Minister has often refused to appoint persons recommended by me.

Then at question 7778:

Without wishing to be personal, I would ask you who selected you for the office or Engineer-in-Chief—who recommended you to the appointment? Lord Stanley, President of the Board of Trade.

Then he is asked by the Chairman:

Do you know whether Mr. John Fowler had anything to do with your appointment? I do not know that he had, not beyond what any other person would have who had given me testimonials.

At page 118, Mr. Charles Fowler, C.E., is under examination, and at question 3840 is asked by Mr. Tighe, also a Member of the Assembly:

Who is this Mr. Moody? The Chief Clerk. I think he was once in the police force as a detective, or something of the kind. I have heard Mr. Rae and Mr. Whitton abuse Captain Martindale in no measured terms for employing this man in this capacity, and then when he is gone they employ him in the same capacity themselves.
3841. As an eavesdropper you mean? Yes, actually going behind the door to listen to conversations. In the old office, the plan of the room will easily explain how the thing was done. [*Witness explained by sketch.*] Of course a man who would consent to play the part of eavesdropper will say anything that he is required to say.

2510. *President.*] Really, Mr. Schey, you are carrying this too far; raking up old charges which were levelled so long ago as the year 1863 against certain persons in a department with which we have nothing whatever to do. We cannot inquire into the truth of these charges, and if we did it would not bear in the least upon this present inquiry. It is merely wasting the time of the Commission.
2511. *Mr. Schey.*] I did not estimate it so, your Honor, or I should not have taken the trouble to take out the references. However, I will pass that. On the next page to that I have just been quoting from, Mr. Charles Fowler is still under examination, and is asked at question 3870:

Are you a brother of Mr. John Fowler? Yes.
3871. Do you know if Mr. John Fowler is an ironmaster in England—the owner of large ironworks? Yes, near Chesterfield.
3872. What description of iron does he manufacture principally? I really have not heard much about it lately. There are smelting furnaces and a rolling mill; but whether they roll rails, or what they roll, I do not know.
3873. Do you know if Mr. John Fowler is a partner of the firm of Manning, Wardell, & Co.—the money partner—the person who supplies the money carries on the work? I do not know that he is the money partner; all that I know about it is that he and Mr. John Leather lent them some money to start the concern.

Then, at page 280, Mr. Charles Fowler, C.E., is again under examination:
2512. *Mr. Eddy.*] Mr. President, I must make an appeal against this burlesque which is being carried on by Mr. Schey for the sole purpose, apparently, of wasting time. This Commission, as I understand it, was appointed to "inquire into certain allegations or charges in so far as such allegations or charges, or any one of them, might impeach or impugn, or should be found to impeach or impugn the honor and integrity of Edward Millar Gard Eddy"; but Mr. Schey has been for the last hour and a quarter dealing with charges against Mr. Charles Fowler, a person of whose existence I had never heard until he began to read these papers. He is now dealing with certain bridges which were built twenty or thirty years ago, and is trying to prove that Sir John Fowler, then Mr. John Fowler, made those bridges too heavy in order to draw a heavier commission on the price of their construction, whereas it is a matter of history that there has been a royal commission, since appointed, over those bridges, which found that they were not strong enough; and, as a matter of fact, the present Railway Commissioners had within a short period of time to strengthen them in order to enable them to carry a double line of traffic. It appears to me that Mr. Schey's only object at present, although he has complained of an affection of the throat, is to use his voice for the purpose of wasting the time of this Commission and of every one concerned in the inquiry. It seems to me to be a very great loss to the country that the Railway Commissioners should have to come here to spend their time in this way to the neglect of the Department.

2513.

2513. *Mr. Schey.*] I beg to point out to your Honor that you called on me to mention certain names of persons whom I have conceived to be intimately concerned together in a sort of combination for a certain purpose, and I have to show to your Honor the basis upon which I founded the opinion that I have expressed. I am now endeavouring to do that with the material at my disposal, and I must certainly commence at the beginning. I am trying to show where, in my opinion, this business commenced, and to trace it right along from the commencement up to the present time. It appears to me that this is the only way in which I can possibly show how I came to possess the opinions which I have expressed.

2514. *President.*] But, Mr. Schey, many of the persons to whom you have referred in the evidence, and to whose appointment you have referred to have apparently no connection whatever with this "ring" or "combination of persons" you have named. Mr. Charles Fowler, for instance, was not mentioned by you, nor was Mr. Moody.

2515. *Mr. Schey.*] No, your Honor ——

2516. *President.*] The charge is, that this "ring" or "combination of persons" is mainly responsible for the appointment of Mr. Eddy. That is what you have to show in the first place; and then in substance the remainder of the charge is that Mr. Eddy, in ordering this half-million pounds' worth of locomotives, played into the hands of this "ring" you speak of.

2517. *Mr. Schey.*] In respect to Mr. Charles Fowler, I submit that I have only read from his evidence as much as I have thought sufficient to show the operation of Mr. John Fowler, one of the persons named, and of Mr. Whitton, another of the persons named. But I am pretty near finished with this document now.

2518. *President.*] Very well, you had better finish it as soon as you can.

2519. *Mr. Schey.*] I want to show the way in which this thing has been managed. At page 280, question 8503, Mr. Charles Fowler is asked:

> What is the weight of the Menangle Bridge per foot forward? I have been told 960 tons for 3 in 50 each, or including the piers 480 feet; taking the entire weight at 960 tons, that would be 2 tons per foot forward exactly; that is double the weight there is the slightest necessity for.

On the next page at question 8518, the witness is asked:

> Can you account in any way for the immense weight of the Menangle Bridge? I cannot account for it. I can only suppose things. I do not know whether the iron is of good quality, or whether it is ships' plates (a very inferior description of iron coming from Birkenhead works. If it is good iron the quantity of metal put in is absurd.)
> 8519. Would not the increased weight of the iron give a higher commission to the person who had charge of the work? Of course, if he were paid by a percentage the greater the cost the more the commission.
> 8520. Are you aware that Mr. John Fowler is the proprietor of large ironworks in England? Yes.
> 8521. Was he the proprietor of these ironworks when he designed the Gainsborough Bridge? No.
> 8522. Was he when he designed the Torksey Bridge? No; the Torksey and Gainsborough were designed by me nineteen years ago; of course he certified them.
> 8523. Was he the possessor of these ironworks at that time? No; he has not had them above seven years.
> 8524. Have you heard that Mr. John Fowler and Mr. Leather are the monied partners of the firm of Manning, Wardell, & Co.? Yes, I believe them to be so. I have no doubt about it that they found the money to start them; it was a matter of common conversation with the family. Leather married one of Wardell's daughters. I have no doubt about it.
> 8525. Do you know that the greater part of the engines that were ordered before the last order, you remember that? Yes, I remember that remarkably well.
> 8526. Were orders direct from Manning, Wardell, & Co., without competition? I believe the engines for the Windsor line were. I think you have that in evidence before the House.
> 8527. If you do not know, say so? You mean the bogie engines?
> 8528. The bogie and other engines? Yes; I do know it from Mr. Willis, of the firm of Messrs. Willis, Merry, & Co. They were sent direct; and the excuse for their outrageous cost was they had to make new patterns.

You will see, your Honor, there has been a similar kind of excuse produced since. The Report of the Committee proceeds to impugn Mr. Whitton's veracity in certain matters with which he had been dealing, and as to certain officers who were dismissed from the department, and without troubling you with a lot of details, I may say that the Committee recommended that certain of Mr. Whitton's doings should be reversed, and one clause of the Committee's Report is as follows:—

> In the face of these facts your Committee cannot refrain from drawing the attention of your honorable House to Mr. Whitton's report to the Minister as regards Mr. Robertson's ability, conduct, and duties, which contains statements quite at variance with the above.

Thus Mr. Whitton's veracity is undoubtedly questioned. There are other recommendations in the Committee's Report dealing with Mr. Whitton's actions, such as, for example, where they express the opinion:

> That Mr. Thengrouse should not be dismissed as recommended by Mr. Whitton.

2520. *President.*] What have we got to do with dismissals by Mr. Whitton?

2521. *Mr. Schey.*] I am trying to show, your Honor, the way in which this business has been conducted.

2522. *President.*] Yes; but you are not doing it. If you can point out how, in any way, this has the least bearing on the question before the Commission we will listen to it.

2523. *Mr. Schey.*] Well, your Honor, I was simply trying to get out what I was going upon, when I said what I have said with respect to this matter. Of course it may not answer to your Honor's mind; but it must be remembered that I am not a lawyer, or a barrister. I am merely an ordinary man.

2524. *President.*] Then you are reading this evidence to satisfy us of what was in your mind at the time when you made the charge, and that you thought the charge was true?

2525. *Mr. Schey.*] I have already said that I did not make that, to my mind, as a charge—it was rather an inference drawn from certain facts.

2526. *President.*] Well, call it a statement. And are you reading this evidence to show what was in your mind at the time you made that statement, and that you believed it to be true?

2527. *Mr. Schey.*] Undoubtedly. I would ask your Honor to bear in mind that Mr. Whitton, who had been ordering goods for the public service of this country, was brother-in-law of Sir John Fowler, the Inspecting Engineer, and I may point out that the Committee of the Assembly in its report recommended with regard to Mr. Whitton as follows:—

> Your Committee therefore recommend that the Engineer-in-Chief for Railways should devote the whole of his time to the construction of works, and not interfere with the management of those portions of the line which are completed.

That is all I need read from this document. [*Document put in.*]

2528. *President.*] I understand that all the matters you have been referring to took place before the year 1864, is that not so?

2529.

2529. *Mr. Schey.*] Yes, your Honor. My notes inform me—I am not at present able to lay my hands upon the document to prove it, but I have no doubt on the matter—that in 1855 Mr. Scott, who was some time afterwards Locomotive Engineer in charge of the department, brought out the first four locomotives which were designed by Mr. McConnell of the London and North Western Railway; and I am informed that this type of engine is still running, and considered to be a very excellent type. I have already shown your Honor, by referring to Mr. Charles Fowler's evidence, that there were eighteen locomotives at that time for which tenders were called. Mr. Fowler did not get that order. I do not think it will be necessary for me to search the records of the departments to prove that; and I believe that it will be admitted that between 1857 and 1869 ten different types of engines were ordered and introduced, all being brought here more or less under the recommendation of Mr. Whitton, except the first four. In 1869, he recommended, I believe, four standard types, or fresh types of engines, for the future, of which two types were to have inside and two outside cylinders. Up to the present time I believe only two or three types ——

2530. *President.*] Are you putting forward your statement now as evidence of the facts you were referring to?

2531. *Mr. Schey.*] I am still trying to connect the matter. I may say that these are my notes ——

2532. *President.*] You must connect the matter by evidence, and not by statements such as you are making. Of course, if you wish to go into the witness-box and make your statement on oath it can be taken down as evidence if you wish, but we cannot have statements made as you are doing now, and accept them as evidence.

2533. *Mr. Schey.*] I have simply taken this from my notes, your Honor.

2534. *President.*] Your notes are not evidence of anything. If you want to make a statement you must make it on oath. Then, of course, it will be dealt with as evidence.

2535. *Mr. Schey.*] As I have said, I have not the documents at the present moment to go into this. I simply gave my notes as they were made up from the documents.

2536. *President.*] Then you had better not refer to your notes. If you want to prove anything you must do it in the ordinary way.

2537. *Mr. Schey.*] I would now refer your Honor to a report on the "Construction and Progress of the Railways of New South Wales from 1860 to 1871 inclusive," by John Rae, M.A., Commissioner for Railways.

2538. *President.*] What date is that?

2539. *Mr. Schey.*] It was ordered to be printed by the Legislative Assembly on 21st April, 1873, and the dates covered are from 1866 to 1871. I desire to read a portion of page 11, being a short portion of the report of Mr. Rae, as follows:—

> For several years after commencing the construction of our railways the only means we had of procuring permanent way, rolling stock, and other material, was by calling for tenders from English manufacturers through the Agent-General. This mode of proceeding was generally felt to be injurious to the interests of the Colony; and on the 10th January, 1862, a motion was carried in the Assembly: "That in the opinion of the House tenders should in future be called for within the Colony for all railway plant, rolling stock, supplies, and goods required for the public service." From that date accordingly tenders have been invited in the Colony for all railway material, but few were received from Colonial manufacturers till the year 1869, when the Government considered that the best mode of inducing manufacturers and capitalists to incur the necessary outlay for building and plant was to make the contract extend over a series of years. On this principle tenders were called for in this and the neighbouring Colonies; and in June, 1869, the tender of Messrs. Mort, Vale, and Lacy was accepted for the construction of locomotive engines, and that of Messrs. P. N. Russell & Co. for the construction of the rest of the rolling stock. The contract being for one year certain, and to be extended to five years on Parliament giving its sanction to the arrangement. The passing of the vote for the second year's supply was considered sufficient sanction, and in December, 1871, it was intimated to the Contractors that their contracts were extended to five years respectively. We have still to depend on the mother country for the supply of permanent way materials; but with the exception of wheels and axles, and some other parts of the stock, which, from want of the necessary appliances in the Colony, must also be procured from England, the whole of our rolling stock is now manufactured in Sydney; and, after an experience of three years, the Government has every reason to be satisfied with the success of the experiment. The quality and cost of the stock will bear a favourable comparison with that imported from England, and its manufacture in the Colony gives encouragement to some of our largest industrial establishments, affords employment to hundreds of workmen, and puts in circulation a large amount of capital which would otherwise have found its way to England.

Appended are figures showing the total amount expended on rolling stock from the commencement to the close of 1871, namely, for locomotives manufactured in the Colony, £49,026 13s. 2d.; for passenger and goods stock manufactured in the Colony, £72,459 18s. 3d. So that in the year 1871, your Honor will see that there were over £120,000 spent in the manufacture of engines and rolling stock in the Colony. As Mr. Rae says in his report:—

> With the exception of wheels and axles and some other parts of the stock which, from want of the necessary appliances in the Colony, must also be procured from England, the whole of our rolling stock is now manufactured in Sydney; and, after an experience of three years, the Government has every reason to be satisfied with the success of the experiment.

From the same report, on page 21:—

> Supply of Railway Materials.—In table 18 will be found a return in detail of all permanent way and other railway material imported from England from 1866 to 1871 inclusive. But as doubts have been entertained as to the quality of the material supplied, and insinuations made as to the excessive price paid for them, I consider it my duty, for the satisfaction of the public, who contribute the cash, to dissipate these doubts, if possible, and show the *bonâ-fides* of the transactions in the supply of stock and stores from the mother country. In my first report, I referred to certain rumours that were in circulation to the effect that the Government had been defrauded in the price paid for railway iron imported from home. In consequence of these rumours, Mr. Holroyd, Secretary for Works, on November 21st, 1864, instructed Captain Mayne, who had recently been appointed Agent for the Colony, to proceed, on his arrival in England, to investigate into and report upon all the circumstances connected with these purposes, and the actual value of the rails and chairs so purchased. I appended a copy of the correspondence on the subject, and of the report of Captain Mayne, in which he considers it to be beyond doubt that in the purchase of permanent way materials the Colony had been zealously, faithfully, and efficiently served, and had not been charged for the materials supplied prices in excess of the fair current rates of the period. This appeared a satisfactory explanation at the time; but in 1870 the subject was revived by certain allegations made before the Select Committee of the Legislative Assembly on "Railway Extension," which led the Committee to "believe that the Colony had been for years largely and constantly defrauded to an enormous extent in the article of rails." The matter was again referred for the investigation and report of the Agent-General; and I feel persuaded that a perusal of the appended correspondence between the Colonial Agent-General, the Consulting Engineer, and the English contractors who supplied the rails and engines, will leave the same impression on every unprejudiced mind as the investigation left on the mind of Captain Mayne: that the supervision at the works during the execution of the contracts was closely and constantly directed to the faithful carrying out of the specification, that the application of proper tests was full and complete, and that no undue meaning was shown towards the contractor. Captain Mayne thus concludes his report:—"I should be wanting in mere justice to Mr. Fowler did I not, in forwarding his explanation, emphatically state my absolute conviction that in no case coming within the range of his duties as Consulting Engineer had the interests of the Colony been otherwise than jealously and faithfully guarded by him. That this should be so, the Colony had full right to expect; that it had been

been so, Mr. Fowler's unblemished reputation, his high character, and professional position all guarantee." To show the care bestowed by the Inspecting Engineer in the proper rolling of the rails, I have appended a copy of the instructions issued to the Rail Inspector, and of his report on the nature of the tests applied.

Therefore, it would appear from this, your Honor, that I am not the first person, by a great number, who has challenged something of this kind.

2540. *President.*] Yes; but there has been an answer to the challenge as regards Captain Mayne's report on Mr. John Fowler.

2541. *Mr. Schey.*] Yes, your Honor; but the matter was brought before the Assemby, and again answered; and you will see that this correspondence on the matter is between the Colonial Agent-General, the Consulting Engineer, and the English contractors who supplied the rails and engines, and they, being the parties concerned, would not be likely to send reports in any way impugning any arrangements made between themselves or each other. I have already told your Honor that Mr. Mason succeeded Mr. Whitton as Engineer for the permanent way. Now, at page 35 of Mr. Rae's report, in the appendix, there is a letter from John Fowler, Esq., to the Colonial Agent-General, dated 23rd August, 1870, wherein Mr. Fowler says:—

As regards the suggestions offered by Mr. Mason, with a view of ensuring better quality of rails, it is obvious that the mode recommended in his evidence ——

Then there is a reference to page 29, question 735, which I do not propose to trouble your Honor with, as it is not in this document; and the paragraph in Mr. Fowler's letter goes on to say—

that of inspection and test, subject to rejection on arrival of the material in the Colony, would not by any means accord a better security of good rails, and it would materially increase the cost, without ensuring the only test not applied in England, namely, that of wear.

This, your Honor, is one of the points I have taken before. I am one who has been advocating a similar course of procedure to that recommended by Mr. Mason, and in which Mr. John Fowler was strenuously opposed to Mr. Mason. In considering the evidence in favour of his opinions, I shall have something more to say about him; but you will see at once that Mr. John Fowler at that time raised a great objection to this course of procedure, and your Honor will see that as the number of miles of railway that has been completed is very considerable, having reached altogether over 2,000 miles, there has been a considerable amount of material coming from England for the construction of these works, and that consequently Sir John Fowler's commission has totalled a very serious item. Therefore, there was a motive at once why he should object to any inspection in the colonies. He pointed out that it would not be so good—certainly it would not be so good—for Mr. Fowler. Then he goes on to say, in the method under notice:—

As regards the mode of purchasing the rails, I think that under the system of open competition you get somewhat lower prices; but inspection becomes more difficult and in spite of every care you are more liable to get inferior rails, whereas in a limited competition from selected manufacturers of high reputation you get a much smaller percentage of inferior rails, but perhaps pay a little higher price. The best method to be adopted in the selection of manufacturers is, I still venture to think, what was done when rails were first purchased for the Colony, and what has been again resorted to lately, namely, the selection of firms of the very highest reputation only, but in sufficient numbers to ensure a wholesome competition, so that, with the attention we give the inspection here in England, will secure materials of the best possible quality, and at a reasonable price. As regards the evidence given by another of the officers of the colonial Government (Mr. Thomas) of the charges brought against myself, and the inferences drawn by him, I will say as little as possible. The statements are fortunately corrected for the most part by the evidence of the Engineer-in-Chief, and I will, therefore, only reply to a few of the salient points in the evidence, which were not corrected, in order to show the weight that should be attached to that evidence.

In this connection, it is necessary for me to remark that the Mr. Thomas there referred to was in the position now occupied by Mr. Thow. He was in charge of the Locomotive Department; and on charges, I think, mainly brought by Mr. Whitton, he was put out of the service. You will observe, your Honor, at this point, that Mr. John Fowler refers to these matters, and he says that they are corrected by the Engineer-in-Chief. But it must not be forgotten that the correction of what was said against Mr. John Fowler was made by Mr. Whitton, who was his brother-in-law, and, as I have shown, was in constant, and continual communication with him on private matters, because he said he would not produce one letter, as being of a private character, and that he did not correspond with Mr. John Fowler on public matters. Your Honor will see the pertinence of this matter to the subject in hand. I desire to add to this the appendix to the report on pages 52 and 53, as to the list of engines which were supplied at that time. They are numbered in the Appendix, 36, 37, 38, 39, 40, '41, 42, 43. These engines were built, four of them, by Mort & Co., and the other four by Vale and Lacey. That was for the Southern line; and on the Northern line, two were built, as numbered in the Appendix 18 and 19, by Mort & Co., and commenced to run in May, 1871. From information which I have received, I believe these engines to be of the same type as those originally imported from England. Now, your Honor, that, to my mind, admits two things: First of all, that at the date—twenty-two years ago—we were able to construct locomotive engines in the colony in every way suitable for the work required of them, as shown by experience. It also goes to show that they were built mainly similar to the first type of engines we had; and the other types, which were subsequently introduced by Mr. Whitton, were not considered at that time as good as those which were originally brought out to this colony. That follows from what has been produced. There were ten engines built at that time by private firms, and another that was built—I think there were two altogether built—at the Government workshops in the same year—that was, 1871—and at that time the workshops at Redfern were a very small concern indeed.

2542. *President.*] It may be as well to take this opportunity of informing you, Mr. Schey—it being now 1 o'clock—that the Commission have determined not to sit on Wednesdays or Saturdays. The days for the sitting of the Commission will be Monday and Tuesday, Thursday and Friday. That will give you Wednesday to look up any evidence you may require, and also Saturday and Sunday.

2543. *Mr. Schey.*] I should like to say I do not consider that to be sufficient.

2544. *Mr. President.*] I am very sorry, Mr. Schey. We will adjourn now for lunch.

On resuming,—

2545. *Mr. Schey.*] I again ask you, your Honor, to note my objection to proceeding further. I beg to inform you that I feel exceedingly unwell, and I ask your Honor for an adjournment.

2546. *President.*] Would it not be possible to go on with the evidence which you were giving this morning without any very great strain on your voice?

2547. *Mr. Schey.*] No doubt it is perfectly possible for me to do so, your Honor, but —— 2548.

2548. *President.*] If you spare your voice in reading these extracts, Mr. Schey, and simply draw the attention of the Commission to the paragraphs you desire to put in, that will be quite enough.
2549. *Mr. Schey.*] Your Honor, I cannot consent to do that, because I want to put these quotations and my case consecutively, so that they may be read as they stand.
2550. *President.*] Exactly; but if you mention the consecutive paragraphs which you want the Commission to read, we will read them ourselves.
2551. *Mr. Schey.*] But I want them to appear in a certain way, your Honor, and I desire to put them in that form now. Your Honor will remember that I have before told the Commission that some months ago —this does not rest upon my bare word, it was mentioned in the public press—there was every probability, unless I refrain from actively using my voice, that I should lose it altogether. It is not within my province to say that it is impossible for me to go on; but if I am compelled to proceed it may be dangerous to my voice. I submit this point to your Honor; but, at the same time, I have no desire to enter into any controversy. I submit that I am being forced in a way which is unfair and unjust to me, and that I am not receiving the opportunity which the Government of this country guaranteed to me in Parliament; and I must enter my protest once more against being forced to go on in this way, a way which I conceive to be dangerous to myself, and a way which I can assure your Honor and the Commission, absolutely prevents me from doing what this Commission has called upon me to do. Therefore, I beg to enter now my strongest protest at the manner in which I am being forced to go on when I am physically unfitted to do so, and when the result may be dangerous, not only to my future ability to talk, but thereby to a large extent my future ability to earn my own living. I consider that I am being treated in a way for which there is no warrant whatever, and I beg once more to say that I do not appear here as a suitor; I want nothing from this Commission except fair play. I am not brought here as a criminal to be tried, although it does appear to me there is an endeavour to force me into such a position. I have to assure your Honor that I cannot keep pace with the proceedings of the Commission without the assistance of lawyers and secretaries, an expense which I altogether decline to incur. I decline to incur any expense whatever in anything before this Commission; and that being so, you have done me the discredit this morning, when I produced a certificate from a reputable medical man to the effect that I ought to be at home resting, you did me the discredit to tell me in effect that you did not believe me, and that you did not believe the certificate. All I can ask you now, your Honor, is to take notice of my protest, and as I have nothing whatever to seek in the matter, I ask you to summon this medical gentleman yourself to-morrow morning and hear what he has to say. Meanwhile, I enter my solemn protest against the proceedings of this Commission being carried on in such a way as is absolutely preventative to my getting in material essential to the duty which the Government has cast upon me.
2552. *Mr. Eddy.*] Before I address you on this subject, Mr. President, I must ask you to be good enough to request Mr. Schey to go into the witness-box, and make his statements on oath. Mr. Schey might have saved his voice enormously in this inquiry. I must say that his voice has improved wondrously as he addressed you in terms which to me appear rather unbecoming. He apparently thinks nothing of the position in which he has gratuitously placed me. There can be seen in the public press this morning a cable to the effect that the statement has been published in England that I have been suspended from my office. To this statement Mr. Schey, no doubt, attaches very little value; yet a small matter which relates to himself, he attaches the greatest importance to. I am quite sure that the Commission will deal justly between us.
2553. *Mr. Schey.*] I do not see, your Honor, that this matter has anything to do with Mr. Eddy. His remarks to the Commission are such as might be expected from him, and which I personally should expect, in view of his attitude towards me.
2554. *President.*] So far as the opportunity of preparing his case is concerned, we consider that Mr. Schey has had ample opportunity to do so. It is necessary, perhaps, that I should go back and explain the action which has been taken by the Commission. We met on last Wednesday week for the express purpose of stating the procedure which we intended to adopt, and we pointed out on that day to Mr. Schey that if he would give a list of his witnesses, and of the documents he wished to see, we would take care that those witnesses were summoned for the day on which the Commission was prepared to take evidence, and that all documents required by him should be produced for his inspection. The parties not being ready to proceed upon that day, we adjourned the Court until the following Monday, to give Mr. Schey the fullest opportunity of having his witnesses prepared, of considering his evidence, and of examining any documents he required to see. During that interval Mr. Schey never asked for any document, nor did he give a list of any witnesses to be summoned. Since then, several documents—a very large number of documents, I may say—have been put before the Commission. As we are informed by the secretary, the greater number of these documents were put before the Commission on Tuesday last, and Mr. Schey has had an opportunity since then of looking into these documents, of examining them, and taking extracts from them in any way he thought fit. These documents, being in the possession of the Commission, it was impossible for us to allow them to pass out of our possession; but they were in the public office of the secretary, and Mr. Schey was informed that he could at any time go there, see the documents, examine them, and take extracts from them. We are informed by the secretary that Mr. Schey has never gone near the office, has never asked to see a single document or to take an extract from one of them; and now Mr. Schey complains that he has had no opportunity of preparing his case, and that he is not ready to go on with it. If this was a matter which concerned Mr. Schey alone, or if this was an administrative inquiry, merely affecting the general management of the railways, the Commission would be prepared to sacrifice their own time, and their own convenience, for the purpose of acceding to Mr. Schey's request; but, as I have pointed out over and over again, this is not an inquiry of that nature. These are most serious charges made by Mr. Schey, from his place in Parliament, against Mr. Eddy as Chief Commissioner for Railways. They are charges which not only affect the personal honor of Mr. Eddy, but they affect the purity and honesty of his administration; and it is not only a matter of vital importance to Mr. Eddy himself, but it is a matter of vital importance to the Colony that not one hour's delay should take place in this investigation. So far, therefore, as considering the documents and preparing evidence are concerned, we are clearly of opinion that Mr. Schey should not have any further indulgence. Mr. Schey, however, bases his application upon the grounds of health. When a person comes before the Court and asks to have an adjournment on the ground of ill-health, the practice is to give medical evidence satisfactory to the Court

that

that the state of health is such that the person cannot proceed. The only evidence we have is a very vague written document by a Dr. Long, to this effect :—"Mr. Schey is suffering from a relaxed sore throat and a slight feverish attack, and we advise rest for a few days." That is no evidence that Mr. Schey is unfit to go on with the giving of evidence before the Commission. We should be most anxious to spare Mr. Schey every possible exertion, and we cannot help thinking, in view of the evidence which has been given before us during the last week, that Mr. Schey would both have saved his voice and our time if he had made fewer speeches and asked more relevant questions. So far as the evidence is concerned to-day, we think that Mr. Schey should go on with the reading of extracts, or refer to the extracts, which he says he is prepared to do, from certain documents; if he is unable to read those extracts himself, but can refer them by numbers or otherwise to the Commission, the Commission will read them; or if Mr. Schey wishes to have them read aloud in Court, we would ask the Secretary to read the documents as Mr. Schey hands them in. In that way Mr. Schey's voice would certainly be saved, and we would be able then to go on as far as we can at present with the Commission. If to-morrow morning Mr. Schey satisfies the Commission that he is really physically unable to go on with the inquiry, we will consider any application he then may make.

2555. *Mr. Schey.*] I beg to point out to your Honor, that your Honor is under a misapprehension as to the documents. The Minutes of Evidence taken on Friday last contain the following remarks by me :—"Your Honor, before calling another witness, I beg to draw your attention to the fact that I have not yet received the papers which I have asked for, and it is a matter of serious inconvenience to me that I have not got them. I also beg to call your Honor's attention to the fact that if it takes so long to collect these papers it must necessarily take me a much longer time to peruse and take extracts from them." To which your Honor is reported to have said : "I understand the documents to which you have referred are now in Court." I believe, your Honor, that the documents were handed to you at that moment, and there is a mistake in saying that the documents were put in early last week.

2556. *President.*] The Secretary informs us that the majority of documents which are before the Commission now were before the Commission on Tuesday, and I would point out that since then other documents were before the Commission, and there were some, I believe a considerable number, which were put in on Friday; and you could have seen them on Friday afternoon, say between 1 and 2, or you could have seen them all through Saturday.

2557. *Mr. Schey.*] I beg to point out, your Honor, that such a limitation is impossible.

2558. *President.*] I am informed further, in reference to these documents, that although they were only brought into Court on Friday, they have been in the Secretary's office since Tuesday.

2559. *Mr. Schey.*] I beg to point out that such a limitation as you have laid down is utterly impossible. You say I could see the papers between 1 and 2 o'clock. I should like to ask your Honor whether you expect me, between the hours of 1 and 2, to be grubbing about amongst the papers getting evidence, and whether the hour is not allowed for refreshment, and whether, as a matter of fact, this Commission is to stop taking evidence or I am to procure evidence without the necessary cessation to take the meals which nature requires to be taken? Such a thing is absolutely impossible. As to time after 4 o'clock in the afternoon, I submit that when I have spent a day in this Court I am not prepared to go into the office for the hour which remains before the time of closing, or even if the time were extended, and to grub about in the 493 papers which have been put in, to find information which should have been supplied to me in accordance with the promise of the Government, made two months ago. I beg to protest, in the strongest way, your Honor, against the manner in which I am being dealt with before this Commission. It is absolutely impossible for me to procure the evidence I want from the papers which are supposed to be placed at my disposal; it is absolutely impossible for me to do this, and I can only suppose, if I am to be forced in this way, that the idea is to force me to abandon the whole position. At all events, I am compelled, in justice to myself, to say this: if I am to be forced in this way—a way which I have pointed out over and over again is most unfair—I assure you I cannot possibly keep up with the proceedings of the Commission, and the only effect will be that I shall be compelled to throw up the whole business, and to leave it in your Honor's hands to do exactly as you like. If I were free and willing, I could not go on; and I am not prepared to sever my family relations, and all those other things which go to make up every-day life, for the convenience of Mr. Eddy, and because he desires to get at me before this Commission. As I have said before, I decline to recognise these charges as being my charges. Some person has picked out the inferences and made them into charges, and drafted them into this Commission. That is not the fault of the Commission, and I do not blame your Honor or your colleagues for it; but the charges have been drafted, and I do not require you to assure me that this is so. I have complained before, and I say again, that I do not recognise the indictment as my own, seeing that it has been prepared by some one else; and I must again protest that I cannot go on at the speed which this Commission is trying to force me to proceed at.

2560. *Mr. Eddy.*] I submit, Mr. President, that, irrespective of any papers which have been produced before this Commission since it commenced its work, Mr. Schey ought to be prepared to go into the witness-box and prove his case. He made his charges in Parliament, and the words of those charges, as you have already pointed out, Mr. President, are identical with the words used by Mr. Schey in Parliament; and those charges are as grave as could be hurled against any living man. Without producing a single paper, Mr. Schey ought to be able to go into the box, and with a full sense of his responsibility, repeat those charges, and produce to you the evidence upon which he based them, because he declared, when he made his speech in Parliament, that the papers were in his possesaion by which these charges could be proved. But, sir, he is afraid to go into the box, and it is sheer cowardice which prevents his going there.

2561. *President.*] As Mr. Schey has stated that the charge which is now before the Commission is not a charge which he made, I shall read from *Hansard* ——.

2562. *Mr. Schey.*] I admit I used the words, your Honor, and there is no necessity to read them again.

2563. *President.*] If you will allow me, Mr. Schey, I will read the passage. I wish to read the very words which you are reported to have used in Parliament. I will first read the charge as it is in the Commission :

> That without first calling for tenders, and without any necessity on the ground of urgency, the Railway Commissioners ordered £500,000 worth of locomotive engines from England, which orders were given to specially selected firms, who had always been favoured in the past by the Government of New South Wales. That a certain "ring" or combination of persons or firms, mainly responsible for the appointment of the said Edward Miller Gard Eddy as Chief Commissioner, had ensured that the said engines should be ordered from them, and that they obtained the order for the same through the said Edward Miller Gard Eddy. That the said Commissioners spent the said sum of £500,000 in the said purchase not only without calling for tenders, but at a time when iron and other material and coal were at higher prices in England than they had been for years theretofore. That

That is the charge in the Commission which we are instructed to inquire into. These are the words which were used by Mr. Schey from his place in Parliament on the 9th or 10th of March, I am not quite sure which :

> That shows, he said, that there was no necessity, on the ground of alleged urgency, for ordering £500,000 worth of locomotives in England without any tenders being called for them. Those orders were given to specially selected firms which have always been favoured in the past by the Government of this Colony. The "ring," of which I have already spoken, and who are mainly responsible for the Chief Commissioner's appointment, made sure that these locomotives would be ordered from them, and they got the order through the Chief Commissioner without tenders being called for in the usual way. I have felt it my duty in discussing this matter before to make certain charges against the Railway Commissioners.

Those are the words used by Mr. Schey from his place in Parliament, and they are the very words embodied in the charge which is in the Commission. Those words are not made use of by Mr. Schey as a mere statement, but they are expressly formulated by him into a charge against the Chief Commissioner. He says that he had been told that his charges were "vague, indefinite, and intangible," and he goes on to say :

> I shall now proceed to put those charges into such a definite tangible form that nothing of the sort can be said again.

It is impossible, in face of these words, to contend that Mr. Schey did not make the charge which is now before the Commission from his place in Parliament. A little further on in his speech Mr. Schey says :

> The charges which I then made have not been disproved. I have proved them up to the hilt, and I am prepared to prove them again before any proper tribunal.

That was stated by Mr. Schey on the 9th March, and when he said so I presume he spoke of what he must have had in his mind, and what he believed at that time was true. If so, Mr. Schey must have had some evidence in his mind, and which he must have used when he previously proved his charges up to the hilt. So that it is absurd, as it appears to me, to allege now that Mr. Schey did not know what evidence he was to bring forward, and that he had to hunt through papers and documents to find out what evidence he was to get. He must have had some evidence before him at the time he made these charges, and he ought to be able to put that evidence before the Commission now.

2564. *Mr. Schey.*] I am glad you have read that portion of *Hansard*, your Honor, because that is exactly what I want to get in. As your Honor has quoted, I stated in that speech :

> I have been told that my charges were vague, indefinite, and intangible. I shall now proceed to put those charges into such a definite, tangible form that nothing of the sort can be said again.

Therefore, the remarks which preceded that statement were not intended as a charge. I say :

> I shall now proceed to put those charges into such a definite, tangible form that nothing of the sort can be said again. First of all, I say that the Commissioners have spent this huge sum upon locomotives without calling for tenders in the usual way, and that this sum of money has been spent at a time when iron and other material, and coal, were at a higher price in England than they had been for years.

That is what I said your Honor ; that is my first charge. Your Honor quoted a remark which I made at a later stage : "The charges which I then made have not been disproved." That refers to a previous speech, and I proceeded to say : "I have proved them up to the hilt." If you wish me to return to that speech I will show you what the charges were. They were charges against the Commissioners of having purchased a large quantity of locomotives without calling for public tenders. I stated "I am prepared to prove them again before any proper tribunal." Then your Honor will notice I go on to say ;

> I charge the Commissioners with general incapacity in the management of the railways. The proofs I adduce are briefly these :"

Then I go on to state the things which were intended to prove my case. The other words, those which were antecedent to this statement of charges, should not be taken in account. My charge is set forth plainly enough in this speech : "I charge the Commissioners with general incapacity in the management of the railways." That is my charge, and then I proceeded to say certain matters, and to deal with them. Now, your Honor, those certain matters have been left out while the antecedent words, and those quoted by your Honor distinctly, were not intended as a charge by me ; yet those are the words which have been picked out and formulated into a charge which I am now expected to prove. Those were the inferences ; those were the deductions I drew, and that is plainly proved by the subsequent words ; "I shall now proceed to put those charges into such a definite, tangible form that nothing of the sort can be said again." I did proceed to put the charge in a definite form, and it was that the Commissioners had purchased locomotives without calling for public tenders at a time when iron and other material, and coal, were at a higher price in England than they had been for years. I did not charge Mr. Eddy—and I protest again, your Honor, at this construction of my speech—with having received money, nor did I charge him as being corruptly interested in these contracts. I charged the Commissioners as a body with doing certain things, and from those things I made certain deductions, and that is the very gravamen of my whole argument that the deductions have been put into the Commission as charges, and charges I actually made have been left out of the Commission, thus rendering it impossible for me to prove what I am now asked to prove. As a matter of fact, I can only state things which happened, and the Commission must draw their own deductions just as I drew mine. In either case they may be right, or they may be wrong. But to prove that two persons had entered into a corrupt agreement, a thing I never alleged, would be necessary for one of those two persons to tell upon the other, and that it is not at all to be supposed could possibly be done. As a matter of fact, it would be impossible to prove such an arrangement between any of these parties and certain locomotive manufacturers ; such a thing could only be done by some of these people telling of one another.

2565. *Mr. Eddy.*] I wish to remind you, Mr. President, that only as late as the last sitting Mr. Schey named me as being one of this "ring" or combination which he accused of entering into these ——

2566. *President.* It is quite unnecessary for you to refer to that, Mr. Eddy. The Commission are not going to enter into any controversy with Mr. Schey as to what charges he did or did not make ; we will deal with that matter afterwards. The Commission under which we are sitting authorises us to make inquiries under certain charges, and of course we must listen to what Mr. Schey has to say, but not for the purpose of entering into any controversy.

2567. *Mr. Schey.*] You desire me to go on reading documents, your Honor ?

2568. *President.*] Yes, certainly.

2569. *Mr. Schey.*] I will proceed to read from a document laid before the Legislative Assembly and entitled "Railway Department (Mr. R. H. Burnett, late Locomotive Engineer)." The document was ordered by the Legislative Assembly to be printed, 30th January, 1884, and it was called for by Mr. McElhone, at that time a member of the Assembly. It is only necessary for me to preface the quotations I am about to read with the remark that there had been some sort of quarrel between certain officers of the Department and Mr. Burnett, who at that time was the Locomotive Engineer.

2570. *Mr. Eddy.*] Really, Mr. President, I must object to these continual speeches from Mr. Schey. From early morning until now it has been nothing but speeches. If Mr. Schey wishes to make any statement to the Commission I submit that he ought to go into the witness-box and make it on oath.

2571. *Mr. Schey.*] Mr. Eddy might as well ask the Commission to give the whole matter into his own hands at once.

2572. *President.*] Mr. Schey is referring to certain documents, and of course he cannot give evidence as to these documents; all he can do is to refer them to the Commission, and we cannot prevent him doing that.

2573. *Mr. Eddy.*] Let him put them in before the Commission. Every document we desire to be put before the Commission as evidence we will put in from the witness-box. If Mr. Schey has documents which he wishes to put in, let him do it without making these continual speeches.

2574. *President.*] I am afraid it is impossible to prevent that.

2575. *Mr. Schey.*] On page 13 of this document appears a minute from the then Commissioner for Railways, Mr. Goodchap, dated 1 August, 1881, in which will be found words which your Honor will see have a bearing upon the quarrel between officers of the Department and Mr. Burnett, referred to in the previous part of the papers:—

> I consider that, in the interests of the discipline of the Department, and of public life and safety (imperilled by the action which Mr. Burnett has taken in this and other cases, and which demonstrated his incapacity for the proper discharge of the duties of his office) he should cease to have control of the Locomotive Branch, and that Mr. Scott should be temporarily placed in charge pending the decision of the Government.—Ch. A.G., 1/8/81.

On page 19 of the document there is "Commissioners' Minute *re* Mr. Burnett's conduct, &c." This is a minute written by Mr. Goodchap, the then Commissioner for Railways, and paragraph 4 reads:—

> I will first refer to the circumstances which led to the appointment of Mr. Burnett as Locomotive Engineer. Previous to 1878 the administration of the Locomotive Branch had been combined with the duties of the maintenance of the permanent way and works, both divisions being under the charge of the Engineer for Existing Lines, who received his instructions from the Commissioner. The increase of work consequent upon the extension of the railway lines required that the combined duties should be divided, and it was decided that the Engineer for Existing Lines should retain charge of the permanent way and works, and another engineer, responsible in like manner to the Commissioner, should be appointed to take charge of the rolling stock, &c. It was determined to obtain from England the services of an engineer for the latter office, and upon the recommendation of Mr. Fowler, C.E., the Inspecting Engineer, the Agent-General, Mr. Forster, appointed Mr. R. H. Burnett to the office. (5.) The statement of Mr. Burnett's qualifications for the office is given in his application. This discloses that he acquired his knowledge of mechanics in the establishment of Messrs. Beyer, Peacock, & Co., locomotive manufacturers, and that his experience of railway management was gained as Locomotive Superintendent of the Metropolitan Railway. . . . (6.) Mr. Burnett commenced the duties of his office in September, 1878, and from that time to the present his conduct of the business has been marked by opposition to the established rules of the Department, impatience of proper control, delay and postponement of important works, and by general inefficiency and want of judgment. That he has been discourteous and offensive in his communications, and insubordinate, is evidenced by the fact that he is now under suspension for this misconduct, and by his admission that he has no defence to offer. I shall proceed to establish the other charges which, in the interests of the public service, I have considered it to be my duty to prefer against him. (7.) Mr. Burnett's first contention, shortly after his appointment, was that any recommendation which he might feel compelled to make with the view of meeting the immediate requirements of the Department, should be carried out without question. This had reference to the action of the Secretary for Public Works (Mr. Sutherland), when he decided that he could not give to Messrs. Beyer, Peacock, & Co., without competition—as recommended by Mr. Burnett—an order for certain engines; and he decided that specifications should be prepared and tenders invited for these supplies in the usual way. To the request that no time should be lost in preparing specifications for the rolling stock, Mr. Burnett contended that the manner in which he should proceed in the conduct of the business of his branch should be left to himself, and stated that there were other matters of more pressing importance to engage his immediate attention. He pointed out that, in proportion as his opinions and views as to the mode of proceeding with the business was interfered with, so his responsibilities would be limited; in short, he displayed a combative and controversial spirit, refusing to fall in, without unnecessary discussion, with the views of the Minister, and claiming uncontrolled power over the administration of the business of his branch.

I put that in, your Honor, to show that Mr. Burnett, employed, as previously stated in evidence here, in the works of Beyer, Peacock, & Co., and afterwards recommended by Sir John Fowler for a position upon the Metropolitan Railway, and afterwards sent to this country by Sir John Fowler, started his business in the Department by contending that he should do as he liked about locomotive engines; and, in pursuance of that contention, he recommended that a number of engines should be procured from Messrs. Beyer, Peacock, & Co., without tender; and when the Secretary for Public Works, at the instance of the then Commissioner, declined to accede to that request, Mr. Burnett set up the contention that he ought to be allowed to do as he liked in these matters. You have already heard, your Honor, from Mr. Goodchap, in the witness-box, that specifications were prepared for these engines in contradistinction to what Mr. Burnett sought to do, and that after the specifications were prepared, Mr. Burnett obtained leave to procure these engines. You heard also from Mr. Goodchap that after the engines were procured they were found to be not according to the specification which had been authorised, and which Mr. Burnett, in fact, had sent away against the decision of the Commissioner and the Minister. On page 21 of the same document, Mr. Goodchap goes on to say in his minute, in the latter part of paragraph 22:

> I have no confidence in the advice which this gentleman

That is, Mr. Burnett.

> offers me; and, notwithstanding his contention that his experience entitles his views and opinions to unquestioned acceptance, I shall venture to disregard them, as I have felt it to be my duty in several cases to do.

I do not think it is necessary to trouble your Honor with the next portion of the minute; but further down Mr. Goodchap, referring to a report made by Mr. Cowdery upon Mr. Burnett's proposal, says:

> Mr. Burnett's proposal, he states, to run three roads in place of two, as now run, would crowd the sheds too much, and make them insufferably hot in summer. He further adds, that to effect the alterations proposed, an expenditure of £680, already incurred at Goulburn and £800 at Bathurst, would be wasted.

This quotation, your Honor, has reference to Mr. Burnett's recommendations, and I submit that it is pertinent for me to show, not only where Mr. Burnett came from, but also that he was not a fitting man for the

the position he held, and thus was practically dismissed from the Department; as well as that he was not a fitting man because of his connection with these other persons. Mr. Goodchap goes on to say, in paragraph 24:

There has been a waste of most valuable time in the postponement of these works, which, but for Mr. Burnett's unwise interference, might by this time have been completed and ready for use.

These works, I may point out, your Honor, were the works at Eveleigh, which, at the time they were projected, were expressly intended for the manufacture of rolling stock. There is abundant evidence of that, and it was supposed that all the machinery requisite for manufacturing locomotives would be put into the sheds, so that the Government might carry out its own work instead of procuring supplies by tender from Great Britain. Mr. Burnett was called upon to deal with this matter, and he raised a number of objections. In paragraph 25, Mr. Goodchap says:

A great and unnecessary delay has also taken place in deciding upon the plans of the workshops at Eveleigh, for which Mr. Burnett is chiefly responsible. 26. Although Mr. Mason's plans ——

Mr. Mason was at this time Engineer for Existing Lines, and he was the person who took control of that branch of the Department when Mr. Whitton had been removed, as the result of the report of the Parliamentary Committee. Mr. Mason, I may say, was afterwards forced to resign from the service. The minute proceeds:

Although Mr. Mason's plans for these shops have been in Mr. Burnett's possession for months for suggested alterations, I fail to learn, from inquiries I have made, that anything whatever has been done in the matter. When the inconvenience and expense which have resulted from the absence of adequate workshop accommodation are considered, the delay in dealing with the matter is most incomprehensible and unsatisfactory.

That is Mr. Goodchap's opinion of Mr. Burnett's *bona-fides* in this matter. Turning to page 26, your Honor will see the following remark in a minute written by Mr. Burnett:

As will be seen by reference to the official papers, an order had been given by the Department some six months before, namely, on 29th March, 1878, for several engines, without tender or competition, and further, that a month or two after my proposal was rejected, namely, on the 20th December, 1878, the Department ordered nine engines from the same firm without competition of any kind.

Those are the engines which Mr. Goodchap afterwards pointed out were of no use. Just about that time an accident happened at Katoomba. That was on the 11th March, 1881. Now, there is always in existence, or is appointed when necessary, a departmental board to inquire into these cases of accident, and the Locomotive Engineer, or head of the Locomotive Department, is always a member of that Board. Mr. Burnett at that time was a member of the Board, and in a letter which he wrote to the chairman of the Board of Inquiry on the 18th March, 1881, Mr. Burnett refers to a vacancy, and says:—

I request that this paper be at once submitted to the Commissioner, respectfully asking that in the absence of any permanently appointed successor to the head of the Permanent Way Branch, Mr. Whitton be nominated to fill the vacancy at the Board, as being one of the very highest authorities on railway working in this or any other country.

That statement cannot be justified by facts, and I put it in here to show your Honor the action which goes on all the way through between these different persons. Quite apart from Mr. Whitton's dismissal from the management of that particular branch, here is a gentleman coming from the same place, recommended by the same persons, saturated by the same influences, recommending that Mr. Whitton be appointed to fill the vacancy on the Board, thus in every way seeking to give colour to the supposition, which certainly extended itself to my mind, that these people had a combination among themselves for business purposes. The only other extract I need trouble your Honor with in this document is from a further minute by Mr. Goodchap in reply to Mr. Burnett's defence, and dated 13/12/81. On page 34, your Honor will see these words:—

With regard to the tank-engines, Mr. Burnett does not deny that, without authority, the weight was increased from 33 to over 40 tons.

That is exactly the same statement as was given by Mr. Goodchap in the witness-box, and it goes to show how this business has, from time to time, been worked by those who were determined to have their own way in spite of regulations and orders given to them. Your Honor will see, both by this and Mr. Goodchap's evidence, that a positive order was given to Mr. Burnett in a certain direction, and that Mr. Burnett took upon himself to bring out other engines, which, as you have already heard from Mr. Goodchap, were a job lot, having been built by Beyer and Peacock for another company.

2576. *President.*] I do not think Mr. Goodchap said they were a job lot. You tried to put the words into his mouth, but he positively refused to accept them.

2577. *Mr. Schey.*] I understood Mr. Goodchap to say that he had heard they were on hand, having been built by Messrs. Beyer and Peacock for the Isle of Wight Company, who were unable to pay for them or something of the kind.

2578. *President.*] They were built by Messrs. Beyer and Peacock, and the company for whom they were intended did not have them delivered.

2579. *Mr. Schey.*] The engines were on Beyer and Peacock's hands, and, against the authority of the Minister and the Commissioner, they were brought out here by Mr. Burnett, a former employee of the firm, and put here on these railways. I will now put the document in, your Honor. [*Document put in.*] I only propose to read a small portion of the next document. The document is called, "Railways and Rolling Stock, Reports and Correspondence Respecting," and it was ordered by the Legislative Assembly to be printed 4th March, 1870, to a return by Mr. Lyons, a member of the Assembly at that time. The document refers to the rolling stock, and particularly to the case of Mr. J. H. Thomas, who, at that time, was Engineer for Existing Lines, and who, I may point out, was got rid of because of his opposition to Mr. Whitton, and to Mr. Whitton's desires in relation to locomotives. Mr. Thomas points out on page 4 his capacity for dealing with the question as opposed to that of a civil engineer, which was Mr. Whitton's employment while in the Service. He says:

Before giving any opinion upon the question myself, it would, perhaps be as well to show that I am qualified in to do so. This, I feel the more necessary, as it is a very common impression in this Colony that it forms part of every civil engineer's duty to do so. But such is not the case, for a man may be a very clever civil engineer, although his opinion on a subject such as this, immediately connected with mechanical engineering, would be utterly worthless.

Your Honor will notice that several questions are asked on page 3 by the Commissioner for Railways, and on page 4 a number of extracts are marked, to which I desire to draw attention. Speaking of the running of rolling stock, Mr. Thomas says, and your Honor will probably see how it fits in after reading the other marked portions, "there are twenty-four engines daily in steam, the average number of miles

run

run being considerably over 2,000 daily," which would mean about 83 miles each. Then, there are certain paragraphs at the bottom of page 4, which are quoted from an address delivered by Mr. John Fowler, C.E., to the Institute of Civil Engineers in London, on his taking the chair for the first time as President, in 1866. On pages 6, 7, 8, and 9, your Honor will find recommendations for certain locomotives, which go to show that at that time Mr. Thomas advocated a certain class of engines which were very similar to the American locomotives afterwards imported when Mr. Midelton was in office. That recommendation of Mr. Thomas was not then acceeded to, and he subsequently lost his position. Of course the introduction of the American types of engines would have been a very considerable blow at the industry which had gone on in the supply of locomotives from Great Britain. Mr. Scott, who was afterwards Locomotive Engineer upon the railways, was at that time a foreman. He came out, I may say, with the first engines obtained from England. Paragraph 14 on page 10 will show your Honor what Mr. Thomas had to say about Mr. Scott. The paragraph also shows that Mr. Burnett was sent out here in 1878 by Sir John Fowler, at the instance of the Government of that time, and further that Mr. Scott was not considered competent at that time, although he was afterwards given a position, and sent to England to select a lot of machinery, to make a report on various things he saw, and no doubt to use his eyes generally. On page 11, in paragraphs 24, 25, 26, and 27, Mr. Thomas says :

I am not responsible for the class of rolling stock imported, and which have proved a failure, as I predicted they would to the late Commissioner the first day I saw them ; and it is now upwards of eighteen months since I urged the necessity of getting others more suitable. I am in this position : I, as the responsible officer (rather that should be) give advice, and immediately every influence is brought to bear by those who are not responsible to prevent such advice being carried out. Now, can it be expected under such circumstances things can work well? Let but full confidence be placed in me. Let my advice be taken, and full powers given me to carry it out. In a word, let me be placed in the position that I should be if a company or an individual in place of the Government had the railways, and things would be carried on very differently, and the result would, I am sure, prove satisfactory. I have spoken out strongly on this occasion, as the minutes upon these subjects may at some future date be made to have a different significance to what I know the Minister intends them to have. I wish, therefore, to put my reply on record with them, in defence of my character and my professional reputation. In conclusion, I have to thank you for the way in which you have on every occasion given me the opportunity of answering all the insinuations, for in no case have they been charges, made with the view of disparaging my reputation ; but I feel confident that if my replies to them are read any impartial person would acknowledge there has not been the slightest foundation for their being made, and could only be prompted by a want of knowledge of the circumstances connected therewith ; and that I have done, or recommended should be done, all that it was in the power of man to do, to get sufficient rolling stock and a class of engines adequate to the requirements of the traffic. If my recommendations have not in some cases been acted upon, or in others deferred until too late, I, at least, cannot be held responsible. I have not rested content with merely reporting these things ; but as I think both yourself and the late Minister will bear me out that I have left nothing undone, answered every objection, and urged that my advice should be taken. Neither I nor any one else could do more.—JAS. H. THOMAS, 12/12/68."

This Mr. Thomas was afterwards put out of the Service, and you will see that in his minute he distinctly refers to the secret influences which were brought to bear to prevent him, the responsible person, from getting what he thought was requisite. Your Honor will see that Mr. Thomas did not want to say there were no locomotives required ; the question was as to whether they should be obtained in a particular way. Mr. Thomas having recommended certain types which were inimical to these other persons, he complains in the extract I have just read that "immediately every influence is brought to bear by those who are not responsible to prevent such advice being carried out." He complains, and like other people who complained of the same thing, he afterwards found himself ejected from the Heaven of the Department, and thrown outside on the cold world to do the best he could. I would now direct your Honor's attention to pages 14, 15 ——

2580. *President.*] Of the same return?

2581. *Mr. Schey.*] Yes ; the same return, your Honor, pages, 14, 15, 18, 19, and 21. On the latter page your Honor will find two paragraphs, which I now read, from a report by the Engineer-in-Chief, then Mr. Whitton, to the Commissioner for Railways, Mr. John Rae :

14. That the shops are grossly, badly managed, I am quite prepared to admit, and I fear they must remain in that unenviable condition as long as they are under the charge of Mr. Thomas, whose principal amusement, judging from the memoranda I have seen, appears to be to insult Mr. Scott on every possible occasion, and to refuse him that assistance which is absolutely necessary to enable him to discharge with satisfaction the duties appertaining to his office as Locomotive Foreman.

Further down, your Honor will see :

24. I am quite satisfied that Mr. Thomas is not responsible for the present class of engines ordered for the extensions beyond Penrith and Picton ; but I am pleased to say that I am. Engines more suitable for working the traffic cannot be made ; but when good engines are handed over to the charge of a man too ignorant to understand them and too conceited to learn, the result can hardly be doubtful. All Mr. Thomas' antecedents go to show that the only experience he has ever had on railways has been obtained in this Colony, and although his opportunities for improvement have been great, he appears to know little more than he did on his first appointment in 1859.

That goes to show, your Honor, that Mr. Whitton was responsible for the class of engines then on the lines, and he himself says that engines more suitable for the working traffic could not be made. Subsequent authorities have come to an altogether different opinion on that point, and, indeed, have condemned the engines which Mr. Whitton said he placed upon the line.

2582. *President.*] Who do you refer to as the authorities who condemned them? You say subsequent authorities ; do you mean Mr. Eddy?

2583. *Mr. Schey.*] I should think, your Honor, that the greatest condemnation which could be passed upon those engines would be the ordering by the present board of experts of other engines of a different type to replace them.

2584. *President.*] Then I understand they were condemned by Mr. Eddy and the present Commissioners?

2585. *Mr. Schey.*] I do not know ; but I presume, your Honor, if the Commissioners ordered different engines ——

2586. *President.*] Are they the persons you refer to as having subsequently condemned the engines?

2587. *Mr. Schey.*] Presumably, your Honor. They have ordered different engines, showing that they did not approve of those in service.

2588. *President.*] I thought you said, Mr. Schey, that Mr. Eddy and Mr. Whitton were playing into each other's hands ; that, in fact, they were members of the "ring" you have referred to?

2589. *Mr. Schey.*] The evidence I have adduced, your Honor, might go to show that having got the engines here now there was no necessity to get others, because if they were admitted to be good there would be no necessity to get others in their place. I do not draw the inference, your Honor, I leave it for you.

2590.

2590. *Mr. Eddy.*] Mr. Schey seems to be quoting from ancient history, Mr. President, somewhere about the "fifties" or "sixties." His theory seems to be that because the "Rocket" was the best engine in its days; therefore you ought never to improve, you ought to repeat the "Rocket" for ever.

2591. *Mr. Schey.*] Of course, your Honor, if any "ring" or combination of persons does exist, their desire would be to keep up a constant supply by making whatever alterations were necessary. I do not say this was so, I am merely supposing a case. On page 29 of this document there is another paragraph marked, which I wish to draw your Honor's attention to, and also on page 32.

2592. *President.*] I understand, Mr. Schey, that the witness you were examining on Friday when the Commission adjourned, Mr. Midelton, is in Court and has been here all day. Would it not be better before the Commission rises to complete the evidence he has to give?

2593. *Mr. Schey.*] No, your Honor, I think not. I desire to examine Mr. Midelton when I have got in what I am at present engaged in putting in.

2594. *President.*] I thought you might not know he was here.

2595. *Mr. Schey.*] I presumed he was, your Honor, because I understood he was summoned for to-day.

2596. *President.*] Very well, Mr. Schey, proceed.

2597. *Mr. Schey.*] I put in now, your Honor, the document referring to railways and rolling stock, from which I have been quoting extracts. [*Document put in.*] The next document I wish to produce is a return to the order of Mr. Cameron, a member of the Legislative Assembly, intituled, "Sir John Fowler—Employment of, as Consulting Engineer to the Government in England."

2598. *President.*] What is the date of that, Mr. Schey?

2599. *Mr. Schey.*] The document was ordered by the Legislative Assembly to be printed, 15th June, 1887, and it is a return to an order of the Legislative Assembly, dated 21st April, 1887, that there be laid upon the table of the House—

> "A return showing the various amounts paid to Sir John Fowler every year since his appointment; also, copies of all letters, minutes, and other documents having reference to the appointment of the abovenamed gentleman, showing who recommended his appointment, and any correspondence from any persons offering to carry out the duties performed by him on different terms to those at present in force."

The first item in the document is a memo. by the Chief Clerk, and it reads as follows:—

> The records of the Department have been diligently searched, but no paper anterior to 22nd September, 1863, can be found bearing upon Sir John Fowler's connection with the inspection business of the Department, although it is clear from the search made in the books of the Accountant's office, that payments to him on this account were made as far back as 1862. The following letter from the Commissioner for Railways to the representatives' agent in England, dated 22nd September, 1863, refers to an arrangement with Sir John Fowler, which was then in existence. In that letter, reference is made to instructions issued to the previous Inspecting Engineer, Captain Galton, R.E., but no copy of such instructions can be found in the records.—D.C.M'L., 13/6/87.

Those initials represent Mr. D. M'Lachlan, Chief Clerk in the Public Works Department. The next paragraph I direct your Honor's attention to is an extract from a letter to E. Hamilton, Esq., Representative Agent, dated 22nd September, 1863, in reference to inspection of railway materials. Mr. Hamilton, I understand, was the Representative Agent of the Government of New South Wales in England, at that time. The extract states:—

> The arrangements made with Mr. Fowler appear to me satisfactory; but, to prevent any misunderstanding on this head, I enclose a copy of the instructions to Captain Galton, R.E., and the late agents, which, as far as possible, should be adhered to. I may add, it is particularly desirable that all tenders accepted should be previously approved by you, using such discretion, however, under the advice of Mr. Fowler, as the circumstances may seem to you to render necessary, where you are unable to rely upon your own judgment. As a rule, however, you should, I think, act independently; but I offer this merely as a suggestion, and not in any way to fetter you in the mode of carrying out your very onerous and difficult duties.—JOHN RAE, Commissioner for Railways.

On page 2 is the following from the Secretary for Public Works, to E. Hamilton, Esq., London:—

> Sir, Department of Public Works, Sydney, 22nd October, 1864.
>
> In consequence of recent investigations of the invoices for railway iron shipped from England on account of this Colony, from the beginning of 1859 to this time, it appears to the Government that the charges for rails and chairs have been greatly and improperly in excess of prices current at the time of purchase and shipment. Under these circumstances, they are of opinion that a most rigid inquiry should be instituted in England, and, as a preliminary step, I have to request that Mr. John Fowler's services as inspector of railway iron, plant, and rolling stock, may be dispensed with at once. As to any orders for railway materials which may be transmitted by this mail, I have to request that they may be executed under the superintendence and inspection of a leading London broker in the iron trade. As to orders for railway materials which have already been transmitted to you, I have to request that, so far as practicable, the execution of contracts for such materials should be stopped until further orders. In respect of orders already transmitted, the execution of which cannot be fully stopped or suspended till next advices from this, I have to request that you will do nothing without consultation with a leading London broker as above-mentioned. If the advice and opinion of an engineer should be required in reference to orders still outstanding, you will be pleased to employ an experienced gentleman in lieu of Mr. Fowler. The Government are about to institute inquiries into the supposed overcharges above referred to, and I purpose forwarding by next mail full information and instruction for your guidance, or the guidance of your successor, should the Government be in a position to appoint such successor in the meantime."
>
> I have, &c.,
> ARTHUR T. HOLROYD.

2600. *Mr. Young.*] What is the date of that letter, Mr. Schey?

2601. *Mr. Schey.*] 22nd October, 1864. The following letter is from the Under Secretary for Public Works to the Agent-General for New South Wales, and the next is from Mr. Hamilton, the representative agent of New South Wales, to the Secretary for Public Works. The latter is dated London, 24th January, 1865, and it points out that under the terms of the contract for the supply of materials the money must be paid one month after the production of the bills of lading, accompanied by Mr. Fowler's certificate. It goes on to say:—"Any delay in payment through a second inspection may be resisted as being at variance with the terms of the contract, and will probably create trouble," and so on, the remainder not being pertinent. The next portion to which I desire to direct attention will be found on page 11. It is a *précis* by the Commissioner for Railways, Mr. Goodchap, dated 19th November, 1874, and has reference to the employment of Mr. Shields as Inspecting Engineer of railway materials imported by the Government. I ask your Honor to read the *précis*. I will content myself by quoting only one portion which is as follows:—"On the 10th January, 1872, the Agent-General wrote to say that he had been making inquiries as to the course pursued by other Governments in regard to inspection in England. He finds," he says, "the practice differs, and the opinions of engineers vary; in some cases inspection in England is insisted upon, but not in all," &c.

Mr. Cowper adds: "I wrote on the 8th instant to Mr. Fowler, requesting him to meet me here to-day that I might have some conversation respecting the existing arrangement with him. But Mr. Baldery, his deputy, wrote to me that he was absent in England where I understand he is likely to be for some months. Mr. Baldery, however came, and I briefly informed him that a change would probably be made"—that means that Mr. Fowler should no longer inspect the railway materials imported by our Government; the paragraph continues, and then he says: "The present seems a favourable time for making the change, as there is not much required by the Colony. Whatever may be found necessary with respect to machinery, I see clearly that inspection of rails here is not thought by Engineers to be of any value, though very large sums have been paid by us in past years on that account." I draw your Honor's attention to that particular paragraph, because I have already read Sir John Fowler's minute, in which he protests against allowing material to be inspected on arrival in the Colony, the reason being, no doubt, that it would result in the loss of his commission. The *précis* continues: "On this letter is a minute by Sir James Martin—'the Cabinet approves the suggestion of the Agent-General, 19th March, 1872.'" On the same date Mr. Robertson directed a letter to be prepared, informing Sir Charles Cowper, which was sent on the 26th March, and on the papers being forwarded to the Works Department Mr. Byrnes expressed his approval thereon on the 8th April following. On the 20th March, 1872, Sir Charles Cowper wrote to say that since the date of his letter of 10th January he had, when he required professional advice, consulted Mr. Shields, C.E., who was many years ago connected with the Sydney Railway Company. "Of his integrity and intelligence," the Agent-General says "I entertain a high opinion. Since he left New South Wales he has been in practice in London, thereby having ample opportunity of becoming acquainted with contractors for railway machinery; and his offices being in the immediate neighbourhood of my chambers, every facility for personal conference is afforded. I have not, of course, made any permanent arrangement with Mr. Shields, but the cost of inspection, &c., will be considerably less than 2½ per cent." In that letter Sir Charles Cowper expresses a high opinion of Mr. Shields, whom he had engaged, and he points out that Mr. Shields' charges would be less than 2½ per cent., which was the price paid to Sir John Fowler for his inspections.

2602. *Mr. Eddy.*] Mr. President, I would like to ask Mr. Schey if he also proposes to put in some subsequent papers, showing the result of a board appointed in this Colony to report upon an enormous quantity of rails which had been inspected and passed by Mr. Shields, and which were condemned absolutely; and showing further that Mr. Shields was put on one side, and that the Government in their trouble went back to Sir John Fowler, whom they have employed ever since?

2603. *Mr. Schey.*] Quite so. It is part of my case that Sir John Fowler was reappointed ———

2604. *Mr. Eddy.*] Well, then, in all fairness, you ought not to be talking in the way you are of Sir John Fowler and Mr. Shields.

2605. *Mr. Schey.*] I do not know what you mean by that inference.

2606. *Mr. Eddy.*] It is no inference, it is a straight-out statement.

2607. *Mr. Schey.*] Your Honor will see that none of the documents I have put in are mutilated in any way; and when I have put the documents in they belong to the Commission, and your Honor and your colleagues can read them. If I fail to put in any document which Mr. Eddy considers necessary, he has the remedy in his own hands, he can produce the document himself. I do not think he has any need to make me the subject of his sarcasm and innuendo while this inquiry is proceeding.

2608. *President.*] So far as I can understand, the evidence now being put in is not because it is necessarily pertinent to the inquiry, but because Mr. Schey says it weighed in his mind at the time he made this charge, and that it constituted the ground upon which he made the charge. Whether that is relevant, or irrelevant, is not the issue. It is whether it was or was not in Mr. Schey's mind at the time he made the charge; and, therefore, the evidence must go in if Mr. Schey wishes it.

2609. *Mr. Schey.*] The next paragraph in the *précis* says: "The only minute on this paper is one by the Hon. John Robertson, 'may be communicated to the Minister for Works, 8th May, 1872;' and the Commissioner for Railways has marked upon it, 'seen by Minister, 16-5-72. No further steps appear to have been taken, and it was not till Sir Charles Cowper wrote his letter of 31st October, 1873, that the question was again before the Government. Sir Charles, after calling attention to previous correspondence, says: 'Since those letters were written I have employed, Mr. Shields, who was connected with the Sydney railway in its earliest stages. This gentleman has for many years resided in London, and has maintained a reputation for strict integrity and close attention to the business of his profession. I found that Mr. Low, the Chancellor of the Exchequer, employed him in some of the Government works here, and still employs him occasionally. Since I have consulted him he has been most attentive, and always available when required. He has, in fact, given me entire satisfaction. The enclosed letter states minutely the rates which he has been paid for the several works he has inspected. When I first employed him I stipulated that, should he be employed in heavier works, the remuneration must be considerably reduced, and when the order for the railway extension to Wagga Wagga reached me I agreed with him that he should only be paid half per cent. for inspecting the rails. I found upon inquiry that the Victorian and Queensland Governments pay 2 or 2½ per cent. upon all their work, including everything, however extensive. Mr. Shields is to give the most rigid inspection of the work, in strict conformity with Mr. Whitton's specification, throughout the manufacture of the rails." Appended to the *précis* is the following:—"Mr. Fowler's charges were: 2½ per cent. on orders for machinery and 1 per cent. for rails and fastenings, &c. These charges included everything, cost of plans, consultations, &c., &c. Mr. Shield's charges are: 2 per cent. on orders for machinery and fastenings, &c., and ½ per cent. for rails; extra charges being made for plans, drawings, &c. Consultations, attendances at board for opening tenders, &c., &c." Now, your Honor, to prevent any mistake about the matter, I am quite willing to admit that there was an inquiry into the condition and quality of certain rails. I have already read to your Honor the opinion of certain people embodied in Mr. John Rae's report, and when I was reading I had previously stated the fact that this inquiry had exonerated Sir John Fowler. It is a matter of surprise to me that Mr. Eddy, who has so frequently protested against my going into anything concerning Sir John Fowler, and who has repeatedly expressed his aversion to ancient history, should have such an acquaintance himself with ancient history as to know that this inquiry took place, and resulted in the reappointment of Sir John Fowler. I am quite aware of the fact, your Honor. The next thing it is necessary to bring up is a minute by the Engineer-in-Chief, Mr. John Whitton, to the Commissioner for Railways, dated, "Engineer-in-Chief's Office, Sydney, 11th June, 1875." I do not propose to read the whole of it; I don't think it is necessary that I should do

so;

so; but the pertinency of the matter lies in this: that Mr. Whitton, who is brother-in-law to Sir John Fowler, and was the Consulting Engineer-in-Chief, whom the Government dispensed with, was the first man to question Mr. Shield's work; and your Honor will appreciate at once the delicacy of one brother-in-law questioning the qualifications or charges made by a person who had succeeded another brother-in-law. Further on you will see, no doubt, the pertinency of the whole business. Mr. John Whitton, in concluding his letter, lays stress upon the point of how much better it would have been if Mr. Fowler had been Inspecting Engineer instead of Mr. Shields. Then some sort of disagreement seems to have occurred with Mr. Shields, and Mr. Shields is notified that he will not be required to tend further advice to the Government of New South Wales. The next extract which is necessary for my case will be found on page 14. It is a telegram from W. Forster, Esq., to the Colonial Secretary, dated 16th January, 1876: "Letter, 7th July, from four engineers, about dismissal Shields, signed by Woods, then our engineer; this presents confidence in him; shall we return to Fowler? Received 17th January, 1876. Telegram to Forster to try the suggestion of the Martin Government." That is an alternative suggestion, your Honor, and not a suggestion to return to Mr. Fowler. Next is a letter from C. H. Gregory, Esq., and others, to F. W. Shields, Esq. In view of what has been stated by Mr. Eddy, I propose to read this letter, otherwise I should have no need to trouble your Honor with it. Mr. Gregory says:

Sir,

In accordance with your request, we have given our best consideration to the subject of the recent withdrawal of your appointment of Inspecting Engineer for New South Wales Government, as mentioned in the letter of the Agent-General, Sir Charles Cowper, to you on the 3rd ultimo, and in consequence of statements made in the Colony respecting certain rails supplied by the Park Gate Iron Company. After careful consideration of the documents placed before us, which documents comprise, as you inform us, the whole of the correspondence which has passed between the Agent-General and yourself on this subject, we have arrived at the following conclusions, namely:—

1. It appears to us, from those documents, that you have carried out the inspection (which was the only duty entrusted to you) in a careful manner, the returns showing that you have submitted sample rails day by day for testing during the progress of their manufacture, and had applied to them the tests described by the specification sent for your guidance. According to these returns, the rails have borne the tests satisfactorily, with the exception of that test named in clause 16 of the specification, which requires rails of the dimensions specified to support a weight of 30 tons on bearings of 3½ feet—a condition which, according to our experience, is entirely impracticable.

This letter, your Honor, which was written from "Great George-street, Westminster, London, 7th July, 1876," is signed by four well-known and reputable civil engineers, and I particularly draw your Honor's attention to it. The specification referred to I have already pointed out was Mr. Whitton's specification, and also that Mr. Whitton it was who was finding fault with Mr. Shields; and this fact is pertinent to my case because these four engineers state in the letter under your Honor's notice, that the condition in the specification was according to their experience, entirely impracticable. The letter continues:

2. We have noted the two telegrams communicated to you in the letter of the Agent-General of 3rd September, and 29th May last, namely, "rails tested very inferior, worn out in a month, better inspection required," and "regret that rails supplied by Park Gate Iron Company, 6,500 tons, condemned, utterly useless; make immediate inquiry as to inspection by Shields." In the absence of definite information, we cannot understand how it can have happened that so large a quantity as 6,500 tons—the whole lot—should have been proved to be utterly useless within so short a period. Such a result, as, also, that of any rails being worn out by any ordinary traffic in a month, being unprecedented in our experience.

I think your Honor will agree with these gentlemen that that experience was unprecedented.

3. We are of opinion that the application contained in your letter of the 31st May last, to the Agent-General, namely, that some of the rails in question should be sent back to be tested in England, is a reasonable and proper request, which should in fairness be acceded to by the New South Wales Government.

4. We have carefully considered the instruction sent to the Agent-General to withdraw your appointment without notice, and without any explanation of the reasons for which you were considered to have failed in your duty, other than an assertion that the rails were condemned as utterly useless. We find that no opportunity has been afforded you, as yet, of knowing or refuting the specific charges against you, on which, it is to be presumed, the order to withdraw your appointment has been based.

5. Under all these circumstances, we think that the instruction given by the Government of New South Wales to the Agent-General, to summarily withdraw your appointment, must have been sent under some misapprehension of the facts, as it is difficult to conceive that the Government should commit the injustice of withdrawing your appointment without affording you the opportunity and means, which you have asked for, of knowing and refuting the charges which are known to have been made against you.

We are, &c.,

Charles Hutton Gregory.
W. H. Barlow.
Edward Woods.
Charles Manby.

Those are four well known and reputable engineers. Now, your Honor, considering that the specification was Mr. Whitton's, that the condemnation was Mr. Whitton's, when the rails arrived in the Colony, and that this condemnation meant the dismissal of Mr. Shields without notice, and led to the re-appointment of Sir John Fowler, there appears to me to be a perfectly regular and very definite motive through the whole business; and, as Mr. Eddy has displayed a wide knowledge of the circumstances, may I ask him, on his part, to put in any documents which will go to show that Mr. Shields ever had any of these rails returned for tests in England, because such a thing as a rail worn out in a month, as these engineers point out, is unprecedented and impossible. I ask Mr. Eddy now, your Honor, to put in such documents as will go to show that Mr. Shields had any rails returned to England for experimental purposes, or that he had any chance of dealing with charges which, it must be remembered, were laid against him by Mr. Whitton—charges which led to the re-appointment of Sir John Fowler, Mr. Whitton's brother-in-law.

2610. *President.*] We are not going to try this question about the rails, Mr. Schey, and, really, we do not want any documents of the kind.

2611. *Mr. Schey.*] Your Honor will remember that I just now read a telegram from Mr. W. Forster to the Colonial Secretary, containing the question, "Shall we return to Fowler?" Sir John Robertson had something to say upon this matter. He telegraphed to Mr. Forster: "Unwilling to revert to old system, even with Fowler. We think it best to arrange, if possible, to have railway material approved here by our Engineer-in-Chief; other ironwork to be approved here by Engineer in Charge, as exhibited in specifications. Payments to be made on shipment to 66 per cent. of amount, and the remainder on approval here. None but first-class houses should be invited to tender. Understand Deniliquin railway has arrangement of the kind." That telegram was sent 31st January, 1876, and your Honor will find a copy of it on page 15. The next extract is No. 29—a letter from the Agent-General, Mr. Forster, to the Colonial Secretary. It is dated from London on 18th February, 1876, and reads as follows:—

Sir,—With reference to your following telegram, dated 1st instant: "Unwilling to revert to old system, even with Fowler. We think it best to arrange, if possible, to have railway material approved here by our Engineer-in-Chief; al other

other ironwork to be approved here by Engineer in Charge, as exhibited in specifications. Payment to be made on shipment, &c., 60 per cent. of amount, remainder on approval here. None but first-class houses should be invited to tender. Understand Deniliquin railway has an arrangement of the kind." I have the honor to enclose for your consideration a minute which I have prepared on the subject of the system of inspection and payment of railway and other materials, together with a report from Captain Jopp on the same subject. I also enclose a minute on the subject of the appointment held by Mr. Woods, C.E., and the copy of a letter dated 20th ultimo, conveying to him my intention not to refer the inspection of railway materials to him in future. A copy of Mr. Woods' reply is also enclosed.

Those enclosures, your Honor will find marked. I now desire to put in, without reading them, letters which will be found on page 19. No. 35 is a letter from Captain Jopp to Mr. Woods, C.E., who, apparently, at that time, was the Government Engineer, and who, because he had the temerity to append his name to the letter forwarded by Mr. Gregory to Mr. Shields, was also removed from his employment, and informed that he would not ——

2612. *President.*] Does the document you hold in your hand state that because he had the temerity to write he was removed?

2613. *Mr. Schey.*] The letter reads, your Honor:—

Mr. Forster has desired me to inform you that in view of the circumstances under which this letter was written, and of the opinions which you have therein expressed, he finds a difficulty in bestowing upon you that confidence which ought to subsist between the Government and their engineer; and he has, therefore, desired me to intimate that the inspection of railway materials will not be referred to you in future by the Government of New South Wales.

The very words I used your Honor will see.

2614. *President.*] The very words you used.

2615. *Mr. Schey.*] The next letter, your Honor, is merely an acknowledgment by Mr. Woods of the receipt of Captain Jopp's communication. The next, No. 37, is a minute by the Superintendent of Railway Stores *re* the introduction of railway material:—

I notice that Mr. Fowler is being paid 2½ per cent. commission instead of 2 per cent. the rate paid to his predecessors, Mr. Shields and Mr. Woods; also 1 per cent. for rails instead of ½ per cent. I presume this is correct.—A.R. The Secretary, 28/5/77.

A.R. I presume is Mr. Alexander Richardson, Controller of Stores.

The rates now paid to Mr. Fowler are those which were originally fixed. There are no papers in this office showing how Mr. Fowler came to be reappointed, nor the terms on which his services had been obtained. As the rates have been passed by the Agent-General it is presumed that they are correct, but it is desirable that the department most concerned (Public Works) should have some record of the matter.—CH. A.G., 4/6/77. Principal Under Secretary. Are there any papers on the subject?—J.R., B.C., 5/6/77. Certain papers forwarded herewith for perusal.—B.C., 8/6/77. Commissioner. These papers show only what we already know, namely, that there was some proposition to revert to Mr. Fowler; but that the Government did not desire to do so. They do not show how Mr. Fowler was appointed nor the rates of remuneration for his services.—CH. A.G., 15/6/77. Principal Under Secretary. If there be no other papers on the subject in the Colonial Secretary's Office probably the Agent-General might be able to furnish.—J.R., 15/6/77.

J.R. is probably John Rae. The next letter is from the Under Secretary for Public Works to the Principal Under Secretary, and it states:

That these papers do not contain evidence of the reappointment of Mr. Fowler as Consulting Engineer on behalf of this colony in England, nor the remuneration allowed; and as there do not appear to be any papers in existence giving the information required I should suggest that the Agent-General be requested to furnish the particulars of Mr. Fowler's reappointment, and the remuneration received by that gentleman for his services in order that the same may be made a record of this department.

The next, No. 39, is a communication from the Principal Under Secretary to the Under Secretary for Public Works, stating that certain information has been forwarded which had been received from Mr. Forster on this subject. No. 41—a letter from the Agent-General to the Colonial Secretary—and No. 2—a letter from the Agent-General to Sir John Fowler—are also marked. In letter No. 41 the Agent-General encloses a report for consideration, and he also points out that in April, 1876, on receipt of Public Works indents of 9th February, 1876, he referred them to Mr. Fowler, as he had no definite instructions to discontinue inspections, and he goes on to say:

I considered, acting on the responsibility which necessarily devolved on me with respect to ordering and despatching the articles required, that I could not do so satisfactorily without reference to a first-class civil engineer. Your despatch now under reply is the first communication I have received on the subject since the transmission to you of my above quoted despatch and reports of February, 1876; but, during the interval, the occasional mention of Mr. Fowler's name in the instructions accompanying various indents, as well as the absence of any reply objecting to the views taken in the above reports, have led me to infer that the system which I have adopted had met with the approval of the Government. At the same time, I would suggest that it is not, in my opinion, desirable to recognise or assume that any "appointment" has been conferred, either on Mr. Fowler or any other gentleman of whose services I may avail myself in connection with any matters entrusted to me, for whose proper execution, as far as such can be ensured by all reasonable precautions, I am responsible. At the same time, bear in mind that all such references are subject to your confirmation and approval, both in respect of the references themselves and of the persons to whom they are made ——

2616. *President.*] Have you nearly finished reading that document, Mr. Schey?

2617. *Mr. Schey.*] I think so, your Honor.

2618. *President.*] It has struck 4; and, if you have many more extracts, the Commission can read the document themselves without your reading the extracts aloud.

2619. *Mr. Schey.*] I only desire to say, your Honor, that that letter is dated 18th October, 1877, and prior to that time, Sir John Fowler had been reappointed Inspecting Engineer, although Mr. Forster at that time says that, in his opinion, it is not desirable to assume or recognise that any appointment has been conferred either on Mr. Fowler or any other gentleman of whose services he might avail himself. Singular to relate, from 1877 to the present time, Sir John Fowler has occupied his position without any appointment, and he has received very large sums of money from this country. The amounts are stated by Mr. Goodchap on page 24 of this document to be: From 1862 to 1887, Railway Department, £56,968, 11s. 2d.; Roads and Bridges Department (commission paid between 1879 and 1886), £2,365 10s. 5d.; Harbours and Rivers Department, between 1877 and 1886, £5,815 11s. 2d. The concluding letter in this document is one from Mr. Strickland to the Secretary for Public Works. It is dated, Sydney, 13th March, 1885, and reads

Sir,

I have the honor to point out to you that Mr. W. Mason, lately Engineer for Existing Lines, and for some twenty-six years in the service of the New South Wales Government as one of the engineers of the Railway Department, is now in England, and would be inclined to act as your representative for inspection of bridge work, rails, and other materials,

materials, which inspection requires a practical knowledge of the wants of the Department such as Mr. Mason, from his long experience possesses. Mr. Mason would undertake the duties—and I need hardly say would inspect to your satisfaction—either at a stated salary or on a much smaller commission than you have been paying. Will you please give this matter your consideration?

I have, &c.,
THOMAS STRICKLAND.

Mr. Mason, your Honor will remember, was the gentleman already referred to, who managed to incur such displeasure that he had to leave the Department.

2620. *President.*] We remember all that, Mr. Schey.

2621. *Mr. Schey.*] Mr. Mason was the late Engineer for Existing Lines, and this letter was forwarded to the Honorable W. J. Lyne, the then Minister for Works. Attached to the letter is the following memo.:—

Memo. by Chief Clerk. "Found in Minister's room when clearing up last week.—T.D.C.M'L., 12/10/85.

Attached to the front of this document, your Honor, are two extracts from the *Votes and Proceedings* of the Legislative Assembly. The first one is dated Wednesday, 13th April, 1887, and you will find on it the following questions:—

(1.) SIR JOHN FOWLER.—Mr. Cameron asked the Secretary for Works,—(1.) What amount is paid to Sir John Fowler in England for the inspection of rails, rolling stock, &c., required for this Colony? (2.) What is the total amount which has been paid to that gentleman on account of the said services for the years 1884, 1885, and 1886?

Mr. Sutherland answered,—

(1.) Railway Branch.—For inspection of rails and fishplates, 10d. per ton; fastenings for permanent way, 1 per cent. on invoice value. Miscellaneous.—Goods up to the value of £200,000, 2 per cent.; above that value, 1½ per cent. Roads Branch.—2 per cent. on the amount of invoice. Harbours and Rivers Branch.—2 per cent. and 1½ per cent. on amount of invoice. (2.) 1884, £5,414 4s. 11d.; 1885, £9,382 5s. 1d.; 1886, £5,955 9s. 4d.; total, £20,751 19s. 4d."

The second extract, dated Tuesday, 13th August, 1889, contains the following questions:—

(1.) INSPECTION OF RAILWAY MATERIAL BY SIR JOHN FOWLER.—Mr. Touhey (for Mr. Wall) asked the Secretary for Public Works,—(1.) When was Sir John Fowler appointed to inspect material used in the construction of railways and other public works of this colony? (2.) What is the total amount paid to Sir John Fowler for such services from date of appointment up to date? (3.) Is it the intention of the Government to endeavour to make any better and cheaper arrangements for the inspection of material than that now existing with Sir John Fowler?

Mr. Bruce Smith answered,—

(1.) The exact date cannot be given; but from a search made in the records of the Department, Sir John Fowler has been the Inspecting Engineer to the Department from the year 1862. (2.) It will take some time to prepare the amount to date; but from the year 1862 to the end of 1887,—a quarter of a century—Sir John Fowler received the sum of £65,149 14s. 9d. (3.) The Government would be very glad to entertain a cheaper method of inspection, if one could be suggested which would afford an equal security against loss.

[*Documents put in.*]

2622. *President.*] Do the documents from which you have been quoting all day, Mr. Schey, come out of your own possession?

2623. *Mr. Schey.*] Yes, your Honor. I may say for the satisfaction of the Commission on this point that the documents I have been reading from, and which I have produced to-day, were the subject of a speech I endeavoured to make in the Assembly last August on a motion of which I had given notice in June. I cannot fix the exact date when they came into my possession, because I have obtained them at different times; but I may tell you that they have been in my possession for more than twelve months before the present time.

TUESDAY, 17 *MAY*, 1892.

[*The Commission met at* 11 *a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

JOHN YOUNG, Esq., J.P. | ALEXANDER KETHEL, Esq., J.P.

2624. *President.*] The Secretary has handed to the Commission a telegram from Mr. Schey, which he received at a quarter to 11 o'clock, to this effect: "Please inform the Commission I am in bed, feeling too unwell to proceed to-day." I do not see how, under these circumstances, the Commission can proceed to-day. I think until Mr. Schey has closed his case it would be undesirable for the Commission to ask for any evidence on their own account. We stated yesterday that we did not intend to sit on Wednesday, and as Mr. Schey says he is too unwell to proceed, it will be better for us to adjourn until Thursday morning, at 11 o'clock.

2625. *Mr. Eddy.*] Very good, sir.

2626. *President.*] This Commission stands adjourned until Thursday morning, at 11 o'clock. I understand that there are three witnesses who have been summoned to attend—Mr. Midelton, Mr. Chambers, and Mr. Oatley. Two of these witnesses, Mr. Midelton and Mr. Chambers, were partly examined, and I am sorry they have had the trouble of waiting in court for their evidence to be concluded. I must only ask them to attend on Thursday, that they may be further examined by Mr. Schey, if necessary.

THURSDAY, 19 *MAY*, 1892.

[*The Commission met at* 11 *a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

JOHN YOUNG, Esq., J.P. | ALEXANDER KETHEL, Esq., J.P.

2627. *President.*] I hope you are better, Mr. Schey?

2628. *Mr. Schey.*] Yes, your Honor; I am considerably better this morning. Before proceeding any further your Honor I desire to again draw your attention to a matter which I brought under your notice before. You will remember that I asked you to consider the point raised by me on Friday last, I think, as to the property of certain documents which were held by Mr. Eddy to be private and confidential. Your Honor has not yet ruled upon that point, and I ask you now to rule, that is to say if you are prepared to do so.

2629. *President.*] We have considered the point, Mr. Schey.

2630. *Mr. Schey.*] And are you going to rule now your Honor?

2631. *President.*] We have considered this application to produce certain reports and other documents which are considered to be private and confidential. We are clearly of opinion that these documents ought not to be produced. I may mention that this point has been more than once before the Law Courts in England, and the courts have invariably held that reports and documents of that kind ought not to be made public, and the ground on which they have so decided is one which I think is as applicable to the proceedings of a Royal Commission as to the proceedings of a court. The ground is that it is contrary to public policy that these documents should be produced, that it would be impossible for any Government to carry on if its officers were not able to send from time to time to the heads of departments private and confidential communications, and that these private and confidential communications might never be obtained from officers of the Government if there was the slightest risk that such documents would in any case be made public. I understand that it is the practice of the Imperial Parliament and of the Parliament of this Colony never to order the production of these documents, if the heads of departments certify that it is not for the public good that they should be produced. Under the circumstances, therefore, the Commission is not prepared to order the production of these documents.

2632. *Mr. Schey.*] Then, the effect of your ruling your Honor, as I understand it, is that any documents which Mr. Eddy may claim to be private and confidential are excluded from being produced before this inquiry.

2633. *President.*] Not necessarily that, Mr. Schey. The ruling is that any documents which have been sent to the department as private and confidential documents, and to the production of which objection is taken by the head of the department, are not to be produced before this Commission.

2634. *Mr. Schey.*] I only ask your Honor to note that Parliament has not decided to refuse the production of the papers in this case.

2635. *President.*] I am quite aware of that, but that has nothing to do with the matter.

2636. *Mr. Schey.*] Very well your Honor. There is just one other matter. On Friday last certain papers were to be left by Mr. Eddy for the information of the Commission concerning his appointment. There was some difference of opinion, I think your Honor, as to whether those documents would be simply for the inspection of the Members of the Commission, that is to say yourself and your two colleagues, or whether they should be made exhibits. I apply now that any documents which have been put in, relating to Mr. Eddy's appointment, be made exhibits and be printed in the report of the Commission. I do not ask for your ruling on that point immediately your Honor. I am content to wait for that.

2637. *President.*] As soon as ever any documents of that kind are made use of by the Commission they will be made exhibits, and of course will be printed.

2638. *Mr. Schey.*] That, I presume, includes any documents produced by Mr. Eddy as to his appointment, or any other matter, which may be handed in for your perusal.

2639. *President.*] I do not say that.

2640. *Mr. Schey.*] That is what I want to be clear about, your Honor. I have submitted the point to your Honor's judgment, and am content to wait for its further consideration by you. I have now again to ask the Commission to discuss the question of sitting days. I ask that you will arrange, if it is possible for the Commission so to do, to sit three days in the week only, so as to allow one day between each sitting day. It is a matter of very considerable importance to me in conducting this inquiry, to say nothing of the strain upon my health.

2641. *President.*] Mr. Schey, we have considered this matter, and we are anxious of course, as far as we can, to give you as much relief and assistance as possible in this inquiry, subject to the right of the Commission to proceed as quickly as possible. As there are practically two holidays next week—that is to say Tuesday is the Queen's Birthday, and the Governor holds his Levee on Wednesday afternoon—we think it will be convenient possibly for the Commission not to sit next week until Thursday, that is to say, we will adjourn from Friday at 4 o'clock until Thursday at 11. That will give you three clear days next week.

2642. *Mr. Schey.*] Very well your Honor—"Sufficient for the day is the evil thereof."

2643. *President.*] I am sorry to say we cordially agree with you on that point, Mr. Schey.

2644. *Mr. Schey.*] I have to inform your Honor that I am going to depart somewhat from the sequence of what I had proposed to do, because I have asked Mr. Curnow, the Editor of the *Sydney Morning Herald* to attend here to day, and I desire that you will allow me to examine him before proceeding further, as a matter of convenience to Mr. Curnow himself.

2645. *President.*] Certainly, there is no objection to that.

2646. *Mr. Schey.*] I will ask Mr. Curnow to go into the witness box.

[Mr. William Curnow sworn and examined:—

Mr. W. Curnow. 19 May, 1892.

2647. *Mr. Schey.*] You are the Editor of the *Sydney Morning Herald?* Yes.

2648. Can you produce a copy of the *Sydney Morning Herald* of the 19th August, 1891?

2649. *President.*] A copy of the *Herald?*

2650. *Mr. Schey.*] Yes, your Honor. I have an extract here which Mr. Curnow will, probably, be able to recognise, as it is an extract from his paper.

2651. *President.*] Surely it was not necessary to call the Editor of the *Sydney Morning Herald* here to produce a copy of the paper?

2652. *Mr. Schey.*] No, your Honor; but I am going to ask him something else.

2653. *President.*] Very well; proceed.

2654. *Mr. Schey.*] In the *Sydney Morning Herald* of date 19th August, 1891, I notice a letter signed "G. W. R.," addressed to the Editor of the *Herald*. I do not desire to put any unfair pressure upon you, Mr. Curnow, but if it is compatible with your position as a journalist, I desire that you will give me the name of the writer of the letter in question——

2655. *Witness.*] May I ask your Honor if I am compelled to give the name of the writer?

2656. *President.*] No, you are not.

2657. *Witness.*] Then, your Honor does not require me to give any reasons why I should not?

2658. *President.*] Certainly not.

2659.

Mr. W. Curnow. 19 May, 1892.

2659. *Witness* (addressing Mr. Schey).] It is most incompatible with all journalistic custom and taste to give the name of a writer whose letter is unsigned. It is universally acknowledged to be a breach of good faith; and while, of course, the interests of justice are always paramount, if I gave the name of this writer I should be violating the confidence which exists between the writer of the letter and me.
2660. *Mr. Schey.*] Then, under the circumstances, Mr. Curnow, you decline to give the name?
2661. *Witness.*] I cannot give the name, your Honor.
2662. *Mr. Schey.*] Then I have nothing more to ask you.

[*The Witness then withdrew.*]

2663. *Mr. Eddy.*] [*having perused the letter in question*] I may mention, your Honor, I know nothing of the letter, and, as a matter of fact, the statements contained in it are absolutely untrue.
2664. *Mr. Schey.*] I have not put the letter in yet, your Honor, and I do not know whether Mr. Eddy is justified in talking about the statements contained in it.
2665. *President.*] I do not know anything about it—we have nothing to do with it.
2666. *Mr. Schey.*] I now beg to put in a document furnished by Mr. McLachlan, as to the number of engines supplied between the years 1883 and 1887. [*Document put in.*] I also propose, your Honor, to put in some more papers for the perusal of the Commission. The first is a copy of a leading article from the *Evening News*, dated Saturday, 24th March, 1888, entitled "Sutherland on Whitton." I do not propose to read it, but just to put it in for the perusal of the Commission.
2667. *President.*] Mr. Schey: Can we receive a statement of this kind as evidence—a newspaper article? A leading article in a newspaper cannot be evidence of anything.
2668. *Mr. Schey.*] With all respect, your Honor, I submit your Honor has called upon me to tell you how I came to certain conclusions, and I am trying to do so. Of course, if you shut out these documents—documents upon which I have founded the opinions expressed by me—I cannot say anything.
2669. *President.*] That is another matter. We have admitted a very great deal of evidence of the same character—such as the documents dealing with matters in the department from the year 1862, but you must understand, Mr. Schey, that you cannot refer to these as proving anything beyond that you perused these documents, and had come to certain conclusions when you made the charges which form the subject of this inquiry.
2670. *Mr. Eddy.*] I take it Mr. Schey will be put in the witness-box to give evidence in regard to those particular papers which led him to come to his conclusion, but I would point out that this particular paper is one that was written prior to any communications having been made to me in regard to my accepting the appointment I now hold.
2671. *President.*] That applies also to the reports of inquiries in 1862.
2672. *Mr. Eddy.*] Yes, your Honor.
2673. *Mr. Schey.*] The next papers I wish to refer to, your Honor, are two articles, both leading articles, from the *Evening News*, of 19th April, 1888, and both dealing with the late Mr. Sutherland and Mr. Whitton, and they go to show the state of affairs which existed at that time, and the particular friendship which existed between Mr. Whitton and Sir Henry Parkes. I will just quote one sentence from one of these articles, dated the 24th April, 1888:—"The Premier has permitted it to be semi-officially announced by his journalistic friends that he intends to settle the Sutherland-Whitton affair 'to the satisfaction of all parties.'" Then, a little lower down, "If that settlement is to be anything but a complete vindication of the action taken from first to last by the Minister for Works, in reference to the Engineer-in-Chief, then it is safe to say that the public will not be satisfied. No half measures, no compromise, will do in this affair. If the Premier chooses to act as a go-between, and bring about a compromise in order to save his friend, Mr. Whitton, Mr. Sutherland should not, and the people assuredly will not, be satisfied." This shows that dissatisfaction existed with some of the officers. Then, a little lower down, occurs this passage, "If Sir Henry Parkes arrives at any other conclusion Mr. Sutherland's duty is clear. He must leave a Premier whose dictatorial disposition and friendship for a civil servant will have induced him to put a slight upon one of his colleagues of all others whom he can least afford to lose, and who has alone redeemed his Ministry from the national ill-favour which its head has been bringing it into." I do not propose to quote any more from this article, but will put it in for the reading of the Committee. The next paper I wish to refer to is from the *Sydney Morning Herald*, of the 2nd May, 1888, and I shall only trouble to read a few words from it.
2674. *President.*] It is hardly necessary to do that, I should think.
2675. *Mr. Schey.*] I esteem it necessary for my purpose, your Honor.
2676. *President.*] Very well.
2677. *Mr. Eddy.*] But, your Honor, I must really object to this class of proceeding. Unless Mr. Schey intends to go into the box and give evidence on oath that these extracts are the only evidence on which he relied for making his charges in this matter, I, with all respect, submit to you that it is inadmissable.
2678. *President.*] The Commission undoubtedly would have required to get from Mr. Schey the evidence that he had at the time he made these charges. Mr. Schey, anticipating a line of examination of that kind, has put in evidence documents which he says induced or weighed with him at the time when he made those charges. Whether they represent the whole of the matter he had on his mind at the time or not is a matter which the Commission have afterwards to determine; but we cannot prevent Mr. Schey from putting forward what was in his mind at the time he made these charges. That is the only ground on which we allow the documents to be put in. You can be quite certain, Mr. Eddy, that the Commission will not look upon these documents as evidence of anything else.
2679. *Mr. Eddy.*] I only hope, sir, you will confine him to putting them in without making statements which are not on oath.
2680. *President.*] We cannot prevent him making statements of this kind. Mr. Schey is conducting the inquiry himself; but, as I have pointed out already, he will have to go into the witness-box afterwards.
2681. *Mr. Schey.*] This particular article is one which I have had occasion to refer to before, as showing the state of affairs which existed in the department at the time, and which must have weighed with me in arriving at a conclusion. It goes on to say, "And that brings us to the Montague and Capulet quarrel in another aspect. Each wants to be Chairman of the new Board of Commissioners. The result may be that neither may achieve his object." That, your Honor, refers to Mr. Goodchap and Mr. Whitton, you will see that from the previous part of the article. I am reading from nearly the bottom. The article goes on to say, "And it is quite on the cards that to make room for an imported 'duffer' two very valuable officers may be sacrificed. Cannot this stupid result be averted?" The writer goes on to give his opinion as to how that result might be averted, and says, "We cannot afford to spare either,

and

19 May, 1892. and we are certainly not called upon to get rid of either or both of them because our 'rulers' have been too cowardly, too incompetent, or too mixed up in their quarrels to do their duty to the public." From the same paper, in the News of the Day column, I suppose:—"No decision has as yet been arrived at by the Government in regard to the appointment of a Chairman to the Board of Commissioners under the new Railway Act. The acting Agent-General (Sir Daniel Cooper), has, we understand, recommended to the Government the appointment of a gentleman who has had considerable experience in railway management, and who has held the office of General in the British Army; but the Premier (Sir Henry Parkes), whilst recognising this gentleman's high qualifications, has declined to give effect to the recommendation. In a cablegram that he despatched yesterday evening Sir Henry Parkes impresses on the authorities in London the absolute necessity of securing the services of the very best man obtainable. No one who has not been trained from his youth in the working of railways, and who is not thoroughly acquainted with all the most recent developments in the science of railway management, will be appointed to the position. Sir Henry Parkes has also explained in the cablegram that there is a gentleman already in the service of the Colony who has had vast experience in the management of railways in the Colony." That, your Honor, goes to show that some gentleman was recommended by Sir Daniel Cooper, at that time acting Agent-General, for the position, and that Sir Henry Parkes, for some reason or other, would not accede to the recommendation; and this is further pointed by the fact that Sir Henry Parkes claimed to know nobody whatever, the Agent-General was to select a person for the office; but Sir Henry Parkes declined to give effect to the recommendation, and by cablegram called for the appointment of some other person. I may say, your Honor, that the late Hon. John Sutherland was a colleague of mine in the representation of Redfern, and therefore, of course, having been a colleague of my own, and being a man I had an intense respect for, I may say affection for, his opinion had great weight with me as a man who had been in public life for a great many years, and who had occupied the position of Minister for Public Works longer, I believe, than any other man that held that position in the Colony. And seeing that in such a position he had been identified so long with the administration of the railways in the Colony, his opinion would weigh very much with me in going into these matters. I have here an extract from a report in the *Sydney Morning Herald*, of the 8th March, 1888, as follows:—"Mr. Sutherland, in reply to Mr. Lyne, who asked if it were correct that the present Locomotive Engineer, Mr. Scott, was about to retire from the Service, and that the Government intended to appoint Mr. Midelton to the vacancy, said he could not say what were his intentions with regard to any party until he had carried them out. (Mr. Lyne: That is equivalent to saying that Mr. Midelton is to be appointed?) It would have been a good thing for the country if he had been appointed many years ago." Following that is another paragraph which says: "Mr. Sutherland spoke yesterday in very strong terms to a deputation relative to the influences which had controlled the management of the railways of this Colony. The people who had had control of the railways had not, he said, been in a position to control them. They had been controlled by political swindlers, by people who had adopted various means of picking the life blood out of them." The next is a telegraphic communication from Adelaide. I simply produce it to show the way in which orders for locomotives were sought to be obtained in other places as well as here. I may mention that Mr. Thow was at that time Locomotive Engineer in Adelaide, occupying the same position as he now does in this Colony. The telegram in question commences as follows:—"The Government to-day accepted the tender of James Martin & Co. for the supply of locomotives. Fulton & Co. were the other tenderers, the Government regarding an offer of Beyer and Peacock, of Birmingham, as informal." Your Honor can read the remainder of the paragraph if your Honor pleases. The next document I have to refer to is a cutting from the *Australian Star*, of Thursday evening, 12th January, 1888. It is headed "A Flagrant Injustice in the Railway Service—The Minister of Works out-voted by his colleagues—Something more than rumour—A questionable importation." The article reads: "A flagrant injustice is about to be perpetrated in the Railway Service, and what is more, an injustice surrounded by the most questionable—if not corrupt and contemptible—proceeding. An edict has gone forth from the Cabinet that all civil servants over 60 years of age are to retire from the service. The Locomotive Engineer, Mr. Scott, has outlived that limit, and there has arisen the necessity of appointing a successor. We do not propose to say a word against that gentleman personally. He has served the country for many years, and has long since expressed a wish to retire from the service, but for some reason that may be disclosed by a perusal of subsequent particulars, he has been induced to retain the position. Now he is told to go. It would seem that Mr. Scott has been the scapegoat of a very dirty transaction. We express ourselves mildly, and offer him our warmest sympathies. For a considerable time past a change has been looked forward to in the administration of the Locomotive Department. Mr. Scott is certainly not popular among railway men. Perhaps the blame rests with Mr. Scott, perhaps with the men. Whether it be one or the other is of little consequence. The change has come, and in that the men have rejoiced. But it may happen that their rejoicing has come too soon, and that they will only jump out of the frying-pan into the fire. Mr. Midelton is not to be Mr. Scott's successor, so the Government affirm. A little game is to be played, and played it will be. There is no doubt that Mr. Midelton is eminently suited for the position, and by his long connection with the department has endeared himself to those under him, while he has shown every ability to discharge the duties appertaining to the office. But, while Locomotive Foreman—an office since designated Assistant Locomotive Engineer—a deadly feud arose between Mr. Midelton and Mr. Scott. Many persons who claim to speak with authority declare the origin to be the dump-car business. It is well known that Mr. Midelton refused to pass those trucks, and his action then, though all sorts of pressure was brought to bear upon him to make him change his opinion, has been borne out by late developments, which have proved the trucks to be worthless for the purposes for which they were intended. Shortly after Mr. Downes brought forward the combination tramcar, and Mr. Midelton also reported unfavourably on that ridiculous proposal. Mr. Downes now holds the position that Mr. Midelton then held. These adverse criticisms brought Mr. Midelton into bad grace with certain persons who had the ear of the authorities, and it was not long before he was suspended from his position. That suspension remained in force for some twelve months, and at the end of that period Mr. Midelton was adjudged to be in the right. His salary in full was paid to him, and he was appointed to the Tramway Department, at a salary of £500. Since then he has been given control over the Permanent-way and Locomotive Departments, at a salary of £750 a year, or £50 a year less than the salary paid to the Locomotive Engineer, Mr. Scott. This in itself is sufficient proof of Mr. Midelton's

Middleton's ability to discharge the duties of Locomotive Engineer in the Railway Department. Moreover, if Mr. Scott, an old driver, has been for so long a period able to attend to those duties, surely it is thought Mr. Middleton, who is a tried engineer, would not fail. It may be remarked that the Government intend to combine the permanent-way with the Locomotive Department, but while persons competent to speak express themselves thoroughly satisfied with Mr. Middleton's ability to discharge both offices satisfactorily, still there is every reason to believe that the bunching of these offices has been done to serve personal ends, and to increase unduly the salary of one whom it is intended shall fill the position vacated by Mr. Scott. The salaries attaching to the two positions now amount to £1,860. The proposal made by Ministers is that the salary, when the two offices are amalgamated, should be £1,5000. But we are not quite finished with the Locomotive Department. The men have long laboured under the great injustice because Mr. Robert Scott, a son of the Locomotive Engineer, was appointed Locomotive Foreman, and directly in control of the men. Whatever grievance they have, the cure, it is alleged, rested practically with their immediate head. To appeal to Mr. Scott, senior, after the matter had been dealt with by Mr. Scott, junior, bordered largely on the old saying, "Ask my brother am I a liar." In speaking to a man employed in the Locomotive Department, he expressed himself in those terms to our representative. But then there is another little matter that is yet to be set right in connection with this Department, and which is now engaging the attention of the Minister of Works—Mr. John Sutherland. There was a person named William Oatley, not long ago employed in the Department. He took up his newspaper one morning, and looking over the *Government Gazette* notices, was surprised to learn that he had resigned under the provisions of the Civil Servants Act. It was the first he had heard of the matter, and he hastened to ascertain the necessary information from his superior officer. He appears to have received no satisfaction. It was perfectly true he had been shunted, but for what purpose remained a mystery to him and his friends. Of course his superiors must act on the *Gazette* notice, and on his remonstrating he was all but told that if he did not make himself scarce he would be given in custody to a policeman. A person named Littlejohn—a son, we understand, of a member of the Civil Service Board—was appointed in his place. In this matter the Minister of Works seems to have been somewhat dilatory in coming to a conclusion. But coming back to the gravamen of our charge against the administration of affairs in the Railway Department. A gentleman has recently arrived from Scotland, we are informed, named Donald Drummond. This gentleman, it appears, was managing engineer of the Caledonian Railway Works, in Scotland, and has been brought out here by certain members of the Government, to be pitchforked into the positions now held by Mr. Scott and Mr. Cowdery. It is believed that in this action certain members of the Ministry have been prompted by officials in the Railway Department, who all along have displayed the utmost hostility towards Mr. Middleton. The Government have observed the greatest secrecy in regard to this appointment, and are apparently attempting to shuffle it through unnoticed. It is stated that the matter has been several times before the Cabinet, and that the Minister of Works has displayed a disposition not to entertain the proposal to appoint this gentleman to the newly-created office, but that he is being coerced into making the appointment by the action of other members of the Ministry. So far nothing definite has been done in the matter, and it is to be hoped now that the *Australian Star* has succeeded in exposing the little job public indignation will be aroused, that the Government will pause before confirming the appointment. Several railway men who have worked on the Caledonian Co.'s line view with alarm the probable appointment of this gentleman to an important position in the railway service of this colony; and it would be interesting to know why Mr. Drummond left his lucrative position at home—if such is the case—and who has been instrumental in bringing him to this colony, and what prospects have been held out to him. Speaking to Sir Henry Parkes this morning, he said to our representative that he was not aware that the Government had entered into any negotiations with any gentleman outside the colony to fill any office in the railway service, and that if any such negotiations had been entered into, they were unknown to him." The next I have to read to your Honor, are two extracts from the *Sydney Morning Herald*, of 2nd May, 1888. The first begins: "Instead of dealing with financial business, as it was expected to do, the Assembly last night devoted itself to the Railway Bill." Then, a little further down, "Sir Henry Parkes told the Assembly last night, that the Government had never intended to appoint as Chairman of the Railway Commission, any person resident in the colony; and he also informed the House that as soon as the bill was introduced, the Agent-General had been instructed to look out in England for a railway expert." Further down in another paragraph I find the following:—"The Premier added that he never intended to appoint as Chairman any person resident in the colony—so far as his voice went; and as a proof of that as soon as the Bill was introduced, being persuaded that it would become law, he had instructed the Agent-General to make the necessary inquiries in England for a person who had from his youth been trained to the railway service, and who had attained by his own merits a position qualifying him to attend to our railways. There was a gentleman in England at the present time—the manager of a certain great railway, who had been seen in connection with the post, and who was represented as a man of the very highest character. He was not sure whether he would accept the position, but he had stipulated that his name should not be disclosed until he was fairly and officially appointed." I need not read any more of that. The next is from the *Sydney Morning Herald*, of the 25th February, 1888:—"The Government have as yet taken no action whatever with regard to the appointment of Commissioners under the new Railway Act, and it is unlikely that anything will be done in the matter before the arrival of Sir Saul Samuel, the Agent-General, who is on his way from England to the colony. The Government have not in any way fixed upon the Commissioners—have not even thought of or considered the qualification of any gentleman for the office. The Ministry are altogether unfettered and uncommitted so far as the appointments go. With regard to the selection of a Chief Commissioner, Sir Saul Samuel was requested to make inquiries in England with the object of ascertaining whether there were gentlemen there suitable for the position who were willing to accept it. The Agent-General, after making inquiries, replied that he knew of one gentleman in particular who seemed to be, in an eminent degree, qualified for the post, but it was undesirable that his name should be mentioned at present. The Government resolved, as soon as they knew that Sir Saul Samuel was coming to Sydney, to consult him before taking any steps in the matter." I would ask your Honor to compare that with the other paragraphs dealing with the state of the Railway Department. I would point out that Sir Daniel Cooper became acting Agent-General after Sir Saul Samuel left England, and he had to forward the recommendation to Sir Henry Parkes. Subsequently Sir Henry Parkes refused the recommendation made by Sir Daniel Cooper, and at that time Sir Saul Samuel was in the colony, presumably advising Sir Henry Parkes

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19 May, 1892. Parkes in the matter. The next extract I have here is dated 30th April, 1888, and is a report of a speech delivered by Sir Henry Parkes at Bathurst. In the course of that speech Sir Henry Parkes says :—"I may state now, for the first time, that in my judgement the head of the new managing board ought to be a stranger. (Hear, hear.) I do not wish to imply any want of confidence or want of appreciation of the ability of the gentleman who has managed the railways so far, but there are two reasons that I think ought to determine to obtain the services of a stranger at the head of the future railway management. The first is that he may have the most intimate practical and professional experience, and the other is that he shall have no acquaintance with people on the spot. (Cheers)." Of course he did not make any remark as to any acquaintance with people who were not on the spot. The next is an article published in the *St. Leonards Recorder*, in the year 1889, and entitled, "Railway Reformers. No. 1: Mr. Price Williams' Report:—'I tell you, sir, that thar ain't a engine with its biler bust, in all God A'mighty's Free United States of America that is so frizzled and busted up as that young critter in her luxurious location in the Tower of London will be when she reads the next double number of the *Water Toast Gazette*.—The Hon. Elijah Pogram. The announcement made, in a semi-official sort of way, in the morning newspapers, of the appointment of Mr. Price Williams, C.E., to report upon the condition of our rolling stock and permanent way, followed by the almost simultaneous appearance of recommendations from that gentleman, involving the expenditure of one million and a half of money, will serve to concentrate attention upon the department, and perhaps awaken a spirit of inquiry and reflection. We are aware that it is at the present moment unfashionable in the highest degree to entertain doubt, still less to infuse scepticism, as to the infallibility of Mr. Eddy and his two colleagues. The two Sydney morning papers have absolutely closed their editorial columns to criticism, and countenance no railway correspondence unless it is couched in circumspect, circuitous, and almost reverential phraseology. So far is this principle carried out that even a presentation to one of the Black Wednesday officers was recently excluded from both *Herald* and *Telegraph*, presumably because the regard of a few hundred men expressed after its object had ceased to exercise any influence over their well-being in the department was inferentially a censure upon the policy which dictated his removal. Some time ago the Chairman of the Board trumpeted a preliminary warning to the effect that some very large expenditure would shortly be requisite for the renewal of rolling stock and permanent-way. By some singular coincidence Mr. Price Williams happened to be in Australia at the time the necessity for this step became apparent. The probability is that Balaam had executed, or was fulfilling an engagement at the time Parak gave him a cursing commission. Necessities arise with the experts. To be serious, the people of New South Wales are suddenly placed in a position to appreciate 'the exceeding gravity of the present condition of matters, the locomotive carriages and rolling stock generally being in a deplorable condition.' The majority of the engines, Mr. Price Williams says, require renewal of their principal parts—many of them, he affirms, merit utter condemnation. Out of the 429 engines now in working, there are only 234 fit for service. Will anyone really credit this astounding statement? Then we are advised that it is absolutely necessary to add at least 322 carriages to the existing stock! During the last eighteen months the capacity of the traffic and passenger branches of the department have been put to the greatest tension, and they have born the strain without snapping, and now we are startled by the information that the engines are unfit for the track, that 322 new carriages are required, and that 2,274 of the waggons in use are scarcely worth renewal. A more serious indictment of Mr. Goodchap's administration it is not possible to conceive. Mr. Eddy has made a few wonderful changes of late. There is not an official in the service, with the exception of Messrs. Angus and Neale, who are illegally and improperly engaged under a five years' contract, who does not now come to his task in fear and trembling—his manhood undermined by insecurity and espionage, and this extraordinary charge ought to be sheeted home, or an opportunity given for its refutation. If Mr. Midelton and his predecessors in the office of Locomotive Engineer suffered the rolling stock to get into this alleged deplorable condition they ought almost to be indicted. Mr. Williams' report is a privileged communication, or it might furnish the ground-work for several actions of libel. The persons who have been in charge of the New South Wales rolling stock for the last twelve or fourteen years would appear to have been culpable to an almost criminal degree if this expert's evidence is trustworthy. In a few words a foreigner in the space of seven weeks is able to discover and expose a system of happy-go-lucky *laissez-faire* management which was not palpable at the very outset to Mr. Eddy and his specially appointed, specially imported experts from South Africa or some other queer place, and who is installed as a department within a department at Eveleigh! Who will believe this? One or other of two propositions is self-evident. There has been either a reign of mismanagement, incapacity, and ignorance for a series of years, or there is now disclosed a crafty plot of quackery and imposition. Was Mr. Williams engaged to curse by contract? He was known anciently amongst the brethren of the Civil Engineering Profession as a 'theorist of the theorists.' *Veni, Vidi, Vici*, cannot be emblazoned on his coat of arms; he comes, he sees, he's fee'd. In any other walk of life than fiction, more than seven weeks are required to warrant the pronounciation of an authoritative judgment upon the doings of honest qualified men. It is only when a supercilious official from England, on 'another job,' condescends to call here in passing, that the system of alarming by intuition and curing by faith is resorted to and faithfully credited as a revealed gospel in mechanical science. At country assizes and suburban police courts, we often see the advantage which is taken of the presence of the eminent Old Bailey practitioner of the barrister of *ad captandum* repute, a suitor or litigant, securing the services of Mr. Fogg or Mr. Samson Brass, Q.C., because he is there on another engagement, when otherwise he would be as unattainable as a pine-apple in Iceland. The Railway Commissioners properly appreciate the value of an authoritative report. They gave Mr. Williams the 'office' in a double sense. His commission comprised authority for cursing and blessing—the comminatory parts applying to the unscrupulous fellows who formed the remnant of the Goodchap *regime*, and the benedictory to the triumvirate whose wisdom festered for an outlet so long that the community were impatient for a manifestation. Mark: Mr. Price Williams came out as a witness in the case of the Tasmanian Line Railway Company *versus* the Queen,' the merits and details of which case would form an interesting chapter by itself. Singularly enough—but this might be considered a most malopropos side remark—Mr. Williams came out as a Government expert in the same ship with the Company's counsel. Does anyone recollect the disreputable incident of a Mr. William Clarke being authorised to report officially upon the Kenny Hill scheme of water supply simply because he happened to be engaged by the greenhorns of Hobart? The same gentleman was engaged to report on the main line railway, and he complacently undertook the job just as he would have undertaken any other commission

to which a lucrative fee was attached. Will the Assembly be prepared to swallow the extraordinary figment which has been sprung on the Colony? What firm is to receive the orders? Other queries suggest themselves, but these will suffice for the time." The next is a leading article which appeared in, the *Australian Star* of August 16th, 1889. I shall only quote part of this article your Honor, leaving your Honor, if you please, to read the remainder. This deals with the report of Mr. Price Williams, on which such stress has been laid. The article says: "But we showed that Mr. Price Williams had stated in Tasmania that he had not been actively engaged in connection with any railway company since 1861, that he had expressed an opinion concerning the running life of a locomotive that was contrary to experience, and that in England he had been spoken of by experts as a 'theorist amongst theorists.' Concerning Mr. Thow, the *South Australian Register* declared a couple of years ago that he was unfit for the position in the Railway Department, which he then occupied, that his most confident assertion must be taken at a very liberal discount, and that certain answers he gave when being examined before a Public Works Commission, 'proved him, if they were true, to be an egregious muddler, entirely out of place at the head of a large department.' Moreover, we showed by statement from recognised scientific authorities, and by indisputable facts, that when Mr. Thow asserted that copper was a very much superior metal to steel for use in the construction of locomotive fire-boxes, he showed that he could not be justly regarded as an expert in his profession. In view of these facts, with respect to Messrs. Price Williams and Thow, we warned our readers not to give full credence to their sensational reports until they had heard the other side. There was another side. And Mr. Goodchap presented it last night. In his lucid and otherwise admirable speech, Mr. Goodchap gave the House some information concerning certain alleged tactics of Mr. McMillan and Mr. Eddy, which had the effect of bringing a cloud of suspicion around those gentlemen. He said that in trying to get information for his defence, 'Mr. McMillan had always received him well, but he was not accommodated as he should have been with the means of consulting the records of the department, to enable him to prepare his case in reply. Mr. McMillan's voice was the voice of Jacob; but the hand of Esau was over it all in refusing to give the information.' Later in his speech he declared that 'Mr. Thow's report in March last, was never referred to the locomotive engineer for any remarks he might have to make on it." . . . . . The accusations preferred against Mr. Eddy must be fully answered. If it is not, the public can hardly be blamed if they come to the conclusion that the real object in bringing Mr. Thow over from Adelaide to report on the railways was to give him the position then occupied by Mr. Midelton. . . Mr. Midelton had a right to see the Thow report before it was made public. . . The Railway Commissioners should be made to explain why they did not let him see it and comment thereon. One of the statements made by Mr. Goodchap was interpreted to mean that in his opinion Mr. Thow had been chosen to fill the office of chief of the locomotive department because of the report he had prepared. . . What is quite clear to the public is, that within a few weeks after Mr. Thow had drawn up his report Mr. Midelton was dismissed, and the former put in his place. We frankly state that in view of the severe strictures passed on Mr. Thow by the *South Australian Register*, we regard this action of the Railway Commissioners with much suspicion, and we intend sifting it to the very bottom." The article goes on to show that "Mr. Goodchap informed the House that in many of the reports which he had issued when he held the position of Chief Commissioner, he had declared that a great deal of the rolling stock on the railways was in a defective condition, and that a considerable sum would have to be spent on renewals. His remark was quite true. So persistent had he been in directing attention to the matter that the public in general would not have been surprised if the Minister for Works had come down with an estimate of half a million sterling for rolling stock. That being the case, we should like to know what need there was to engage two so-called experts to report on the condition of the railways. . . Under the circumstances it was unnecessary to import the experts. . . There may have been no intention on the part of Mr. Eddy to give a back-handed blow to Mr. Goodchap, but we are bound to say that his action exhibited a lamentable want of tact and judgment. When Mr. Speight took charge of the Victorian railways the condition of the property was not superior to that of our railways, but he did not bring experts from England and elsewhere to make hasty investigation and draw up sensational reports. Relying on his own powers, and believing that the public would give him generous support, he set to work to make such improvements as in his judgment were needed. . . The reply of Mr. Goodchap to Mr. Thow's recommendations regarding the type of engines that should be employed on our lines was complete and crushing. Some of the types condemned by that pet of Mr. Eddy have been proved to be the very best on the lines, while one or two that were specially commended have been proved to be the worst. Amongst the latter is a tank engine, which, according to the reports supplied to Mr. Goodchap, had done more to knock the suburban line to pieces than all the other types of engines put together. The American engine did not find much favour in the eyes of the expert. There may be a great deal of truth in the observation of the ex-Chief Commissioner that if these engines had been made by Beyer, Peacock, and Co., they would have been accepted. Most of the engines recommended had, it appears, been made by that firm. Our own opinion is, that Mr. Eddy and the experts he employed are prejudiced too much in favour of British rolling stock, and because such is the case their recommendation in this respect as to the types of locomotives that ought to be used should be received with a great deal of caution. There are many reasons why Messrs. Beyer and Peacock should not have the monopoly of the manufacture of our railway engines, and Mr. Eddy will, we predict, have some exceedingly disagreeable experiences if he attempts to give that firm such a monopoly." Then the writer of this article goes on to say: "But it did not follow, because we were in favour of importing a Commissioner, that therefore we would approve of the man who was selected, and insist that he should receive constant support from the public, however he might act in the attempt to fulfil his duty. We are convinced that Mr. Eddy has made some serious mistake, and we are sure that if he does not walk more warily in the future than he has in the past, he will probably lose the confidence of the public." The debate in the House to which this article refers took place in the Legislative Assembly on the previous evening, and I produce an underlined report of the debate, which I beg to suggest to your Honor is very interesting and instructive reading.

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2682. *President.*] Instructive, possibly.

2683. *Mr. Schey.*] I put the papers in, your Honor. [*Documents put in.*]

2684. *President.*] You quite understand, Mr. Schey, that these extracts from newspapers you are putting in are not evidence of anything except what was in your mind possibly at the time you made the speech containing the charges which we are now dealing with. Reading extracts from newspapers is not proving the fact.

2685.

19 May, 1892. 2685. *Mr. Schey.*] I should not presume to dispute with your Honor upon the value of evidence.
2686. *President.*] Am I to understand that you want to have these newspaper extracts returned to you when the Commission is done with them?
2687. *Mr. Schey.*] So far as possible, your Honor, unless, of course, they are cut up by the printer when they are sent to the Government Printing Office.
2688. *President.*] I do not think that will be necessary.
2689. *Mr. Schey.*] Do I understand your Honor to say that they may not go to the printing office.
2690. *President.*] That will be a matter for the Commission to determine afterwards.
2691. *Mr. Schey.*] I thought they were handed in as exhibits, and that they would necessarily be printed in the report.
2692. *President.*] Not necessarily.
2693. *Mr. Schey.*] I ask, at all events, that they be printed in the report, your Honor. I now quote from *Hansard*, No. 25, Debates of the Legislative Assembly, from 17th to 19th April, in the Session of 1887–1888. The portion I am going to quote is in the debate on the 18th April, when a debate on the Government Railways Bill was proceeding, and Sir Henry Parkes, at that time Premier, was speaking. He says, "With regard to the Engineer-in-Chief, I have known him during his whole life in this country. I became acquainted with him within a week after he arrived. I have known him from that day until this; I have observed his conduct with close attention; and I do not believe that any Government on the face of the earth ever had a more high-minded, energetic, upright public officer than he is. I have stated that at all times. I think that it has been a priceless advantage to this country in the early history of the construction of railways that we had a man of such inflexible integrity, with such proficient knowledge of his profession, and of such determined character, presiding over the construction of these railways. Honorable members must recollect that I have never hesitated at any period throughout the thirty years of my knowledge of the Engineer-in-Chief to express that opinion. I have expressed it on all occasions when there was any reason for expressing it. Nothing has occurred to shake my absolute faith in all those high qualities in the Engineer-in-Chief, and I regret what has occurred immensely; but I am bound to say that I believe my honorable colleague who presides over the Works Department thoroughly believes that he was rendering a service to the country in the course which he took, which I think was a very mistaken course." In this connection, your Honor, and as bearing upon the question of the position of the Engineer-in-Chief for Railways, I will refer you to sub-section 6 of section 15 of the Government Railways Act, 51 Victoria No. 35. This section provides that "Nothing in this section"—that is, as to powers of the Commissioners to appoint a staff, &c.—"shall apply to the present Engineer-in-Chief for Railways, or Solicitor for Railways; but the said Solicitor for Railways shall be Solicitor for Railways under this Act." Thus practically these officers in the employ of the Government Railway's Branch were made officers of the Commissioners. The Engineer-in-Chief and the Crown Solicitor, who was Mr. John Williams at that time, were expressly excepted. They were in fact practically allowed to hold office as long as they chose, which I take to be a point in the case, as when Mr. Whitton retired from the service he was long after the retiring age, and he did not retire until the present Railway Commissioners had been in office a considerable time. It is also noticeable that the Premier, then Sir Henry Parkes, just about the time of Mr. Eddy's arrival in the Colony, and for the first time in the history of the Colony, removed the management of the railways from the Minister for Works and transferred it to the department of the Colonial Treasurer. Now, in the same debate, on the same date quoting from page 4,062—a debate had arisen as to whether the Commissioners should be debarred from making contracts for the supply of material, rolling stock, &c., outside the Colony without the sanction of the Government. The Legislative Council I may say struck out a provision in the Bill which was introduced for that purpose, and Sir Henry Parkes proposed to accept the amendment proposed by the Legislative Council; and I may say that afterwards the amendment was accepted, and that provision was omitted in the Bills. Sir Henry Parkes speaking says:—"We do not in any way prohibit the Commissioner from entering into contracts outside the Colony if it is necessary, but we simply provide that they must not do it without the sanction of the constituted Government of the country. *Mr. Tooley:* Why not go outside? *Sir Henry Parkes:* It is easy to say, why not go ouside. Once outside the Colony, there is no possibility of watching or controlling the proceedings of the Commissioners, if some authority is not exercised over them. *Mr. Lyne:* There is no power over them in the Colony! *Sir Henry Parkes:* There is that power which all through the Bill makes the Commissioners amenable to the Government in any extreme case." The next quotation I wish to make is from *Hansard*, No. 27, of the same session, 1887-88; but before I put in *Hansard*, your Honor, there is the copy of some correspondence which I wish to hand in. "Railways, Session 1887–88, Legislative Assembly. Ordered by the Legislative Assembly to be printed, 21st June, 1888." The first document is a telegram from the Colonial Secretary to the Agent-General, dated 31st March, 1887, as follows:—"Bill before Parliament to place Railways under independent Board of Management. Wish to engage able and experienced man, thoroughly acquainted with best systems of railway management as Chairman of Board. Make full inquiries; but no agreement to be made till letter on subject has been received in mail. Salary, £2,500; term, seven years.—HENRY PARKES." The next is from the Colonial Secretary to the Agent-General:—

Colonial Secretary's Office, Sydney, 4 April, 1887.

Sir,

Appended to this letter is a telegram which I sent to you on 31st ultimo.

2. The Bill about to be submitted to Parliament creates a Board of Commissioners to manage the railways which are open to public traffic; and this Board will have nothing to do with the construction or maintenance of railways. The Chief Commissioner will be the responsible functionary in the work of management, the other two members of the Board, having no power of themselves to out-vote him, even though they may dissent from his views. We therefore require for this important office, not only a man of proof integrity, but one of sound capacity for the business of railway management and of good experience. It would be an additional positive qualification if he were known for tact and success in dealing with workmen.

3. It occurs to me that Sir John Fowler may probably be able to suggest some gentleman of authority in connection with the Great English Railway, who can afford you valuable advice in your inquiry. From this side you might take into consultation Mr. Alexander Campbell as one who has a fresh knowledge of matters here, and in whose business sagacity much confidence may be placed.

4. I am sure I need not impress upon you the importance which I attach to a proper selection being made, as the success of the new system will largely depend upon the character and capacity of the officer at its head. The salary which Parliament will be asked to approve of will be £2,500 per annum. I will write to you within a few days explaining fully the terms of engagement.

I have, &c.,
HENRY PARKES.

Next

Next is a telegram from the Colonial Secretary to the Acting Agent-General, dated Sunday, 4th May, 1888, and marked "Confidential." It is as follows:—"Railway Act just passed, by which a Board of Commissioners appointed to manage Government Railways. Term of office, seven years, only removable by Parliament. (See letter, 4th April, 1887.) Chief Commissioner's salary, £2,500. Wish to engage thoroughly experienced man of energetic character from railway service in England." Then, your Honor, there are a number of asterisks, indicating that some portion of the communication is left out, and the telegram proceeds to say — 19 May, 1892.

2694. *President.*] I think you will find the reason of that omission explained underneath. It refers to communications sent in reference to certain persons, whose appointment was not appoved of by the Government, and they thought it unfair that their names should appear in the document, and so all reference to them was omitted from the corespondence.

2695. *Mr. Schey.*] The note in the margin is to this effect, "The omission represented by asterisks refers to another gentleman with whom negotiations were opened and terminated without result." I ask your Honor now to direct that this document be brought before the Commission, so that we may find out who it was that was recommended by Sir Daniel Cooper, and who was refused by Sir Henry Parkes. I think it is pertinent to this inquiry that we should find out who the gentlemen were, and what were the reasons assigned for passing them over in favour of the present occupant of the office.

2696. *President.*] We will give you an answer presently, Mr. Schey, to that application.

2697. *Mr. Schey.*] Very well, your Honor. In the meantime, I will put this document in. I do not propose to read the remainder of it, but put it in as an exhibit. [*Document put in.*] I now take up the volume of *Hansard*, No. 27, to which I have previously referred, but not quoted from. It is dated May 1 to May 3, and the date of the debate to which I desire to refer is 2nd May. The debate was on the Government Railways Bill. The paper I have just put in had at that time become public to the Members of the Assembly. The first person whose remarks I propose to quote from is Mr. G. R. Dibbs, the present Premier of the country. He on that date said, "The Chief Commissioner, that 'mysterious stranger,' as one of the newspapers had described him, whose name was not to be mentioned to the House, for some obscure and thin reason, might come out from England practically as the agent of English manufacturers. This gentleman might come out with specifications and tenders, and assume the chairmanship of the Board, with practically power to set the manufactories in England going at the expense of this country." As to this part of the honorable gentleman's speech, I have already laid stress on the fact that the name of the gentleman to whom the position had been offered had not then been disclosed; that was at Mr. Eddy's request. Hence the reference to the "mysterious stranger." The report goes on, "This mysterious party had been recommended by some gentleman at home probably conversant with railway matters. He had been recommended practically by the manufacturers of England, through Sir John Fowler, who had acted as inspector of rolling-stock to the Colony, with a view to secure the orders of the Colony in the future." A little lower down, "If the sub-clause were omitted, we should put the gentleman in this position, that he came out here as Chairman of the Railway Board under engagement from the manufacturers of England." This, your Honor, refers to the special clause which, as I have already told your Honor, was omitted by the act of the Legislative Council, but which was since renacted by the legislators. "He asked the House whether, in the inaugurating of a new measure introduced for the purpose of preventing political dealings with the railways, they were prepared to allow such a contingency to be 'on the cards.' It would be a long time before this gentleman who came out would have Australian sympathy. He would come out here strongly imbued with English sympathies, and with a keen eye to English advantages and English interests; and if he should come out here, the power to do nothing at home except with the sanction of the Government being struck out of this Bill, the Colony would be placed in a very awkward position." The report then goes on to say, "Otherwise, we should be handing over the railways of this Colony practically into the hands of English manufacturers."

2698. *President.*] That, of course, was before it was known who the Chief Commissioner was to be.

2699. *Mr. Schey.*] Undoubtedly your Honor. On the previous evening during the same debate—it was adjourned from evening to evening—I think at that time, Sir Henry Parkes said, "I have never made any statement, uttered any sentence or word, to lead any sensible person to suppose that it was intended to appoint this gentleman." That your Honor, was in reference to Mr. Goodchap; there was a suggestion before the Assembly at the time, that Mr. Goodchap should be Chief Commissioner. The report goes on to say, "As far as my voice went I never intended to appoint any person resident in the Colony to this highest office, never at any time." And again, "I yield to no one in my desire to limit the appointments to the Civil Service to the citizens of the country. I think that principle is so healthy, so sound, that it never should be departed from except on unanswerable grounds of policy. And then, I think, that it is of the highest importance that the person placed over this non-political system should not in any degree whatever be mixed up with any party or persons in the country; he should have a clean sheet, and know nobody in taking over his new duties. . . . . There is a gentleman in England, who is at the present time the manager of a great railway, who has been communicated with on the advice of very competent men in England connected with the railways, and who is represented as a man of very high character. I am by no means sure that he will accept the appointment; at all events, he has stipulated that his name shall not be made known unless the appointment is formerly offered to him. With regard to the other two Commissioners, the Government will make the best appointment they can, having regard only to the efficiency of the men to perform their duties." Following that, Mr. Hassall speaks, and he says, "Are we to conclude that because he comes from England he will be unknown here? With our intimate relations with foreign countries are we to conclude that this gentleman would come as a stranger amongst us, and administering our railways without fear or favour? It would be rather an overdrawn picture to suppose such a thing." Then Mr. Melville, says, "I also trusted that while the Government were determined to maintain the principles of freetrade, they were not prepared to had over our railways to some rabid free-trader, coming here with English cheap notions to control our railways with the one idea of making money. No man in England—not even the dark horse who has been mentioned—can have as intimate a knowledge of our railways, and how to work them at a profit as is possessed by the present Commissioner." Mr. Melville goes on to say, "Has Sir John Fowler had anything to do with this appointment? Is this man coming out to tell us that some of the rotten railway iron for which the country is paying can be laid down somewhere? . . . . . The hon. gentleman says that this man must be free from all political influences . . . . . will he come saturated with the worst influence for New South Wales. He comes

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19 May, 1892. full of imperialistic notions, and he also comes full of cheap notions . . . . But will the gentleman who is coming from England bring no political influences with him? Will he be a stranger at Government House? Will he have no friends at Darling Point? Will he show no kindness to the administration that have given him the situation? The Premier has told the representatives of the people to night that this man holds him in his power. The hon. gentleman has ever been looked upon as one who would never flinch, or be guilty of cowardice; but to-night he has admitted that he is prepared to offer a position to a certain gentleman whose name is not to be known. That shows that the man is unfit for his position. He is afraid that if his name were divulged he would lose his present billet. Are we to have an individual from England who is so valuable to his employers that if they were to discover that he is intriguing for some other position that they would dismiss him? Is that the kind of person who is to control the railways? . . . . I do not wish to make any imputations; but is the Engineer-in-Chief to waive the flag of triumph while the Commissioner goes about his business? Far be it from me to say that the Engineer-in-Chief has in any way deviated from the paths of honesty and rectitude. But he is so imbued with the idea that everything must be made in England, that there is a poor show for Colonial industry. Good bye to the sound of the hammer in Balmain if we agree to the Council's amendments. The Chairman of the Board, who will be a king or nothing at all, will send to his friends in England and give them the right of making our locomotives. We have passed the Bill. I have not been particularly in love with it at any stage; but I prophesy that the workmen upon our railways will live to curse the day when it was passed. We are told that this gentleman is coming to the colony with a clean sheet. But no man with a clean sheet would desire that his name should not be mentioned." Turning to page 4385, the same debate on 2nd May, the late Mr. James Fletcher is speaking, and he says, "With reference to the prejudice of the Commissioners, the late Locomotive Engineer who was appointed from England, was well known to be prejudiced in favour of certain manufacturers in England, with most disastrous effects upon the manufacture of locomotives in New South Wales. The prejudices of that officer militated so much against the best interests of the Department, that the Colonial Secretary found it to be his duty to suspend him. The officer stipulated that almost every article required for the construction of locomotives should be imported from certain manufacturers. He was admitted to be an able man, but he was beyond doubt prejudiced, and the Commissioner who might be imported from England would probably be prejudiced in a similar direction to the injury of local manufacturers." On page 4340, the same debate, Mr. O'Sullivan says:—"The Government therefore have the man up their sleeve, as it were, to be produced at any moment. I think that is an unfair position in which to place the country. What do we know about this man? What does the Premier know about him? Nothing, except what he has been told by Sir John Fowler, or some other individual who may be interested in recommending him. The Premier is going to buy a pig in a poke. Knowing nothing of this gentleman, he is willing to appoint him to this very high position. The hon. gentleman is departing in this matter from sound business lines, and there is not one business man in this chamber, who, whatever his feelings may be on the question, would act in a similar manner. The real reason, I suppose, is that he has had some further quarrel with the Engineer-in-Chief. We must all regret the feud which has existed between these two officers for so many years past; but I fail to see any reason why a man like the Commissioner for Railways"—this refers to Mr. Goodchap your Honor—"why a man like the Commissioner for Railways—whom we know to be a good officer, and whose ability has been proved, should be set aside when he ought to receive the reward of his labours by being appointed the head of the non-political Board. We have already had some fiascos in connection with the appointment of imported men. Mr. Burnett and other gentlemen who have come out here have proved themselves to be thoroughly wanting when put to work under colonial conditions. I also object to this high position being placed in the hands of irresponsible persons so far as selection goes. What will Sir John Fowler, or the person who will act for him, care whether the person they select will suit this country or not? All that they will care about will be the suiting of their own purposes. We have already had rather too much of the Fowler influence in the railway affairs of this country, and we have had to pay very expensive bills in return for very little benefit. The chief argument of the Premier was that an imported gentleman would come here with a clean sheet. Suppose that in four or five years he dirtied his sheet, it would be impossible to remove him, except on the vote of both Houses of Parliament. The imported gentleman might, by that time, have acquired sufficient political and social influence to prevent such a vote." I will make one more brief quotation your Honor, and the remarkable part of it is that the quotation is from a speach of my own in the same debate. It is rendered remarkable from the fact that, at that time, I was upholding the passage of the Railway Bill and advocating the bringing here of a Chief Commissioner from England or some other part of the world, rather than the appointment of some person in the Colony. And I mention this to show that I could not always have had some animus against the Chief Commissioner for Railways as has been suggested. I may also mention in this connection that when Mr. Eddy arrived in this Colony, I with a letter of introduction from the Hon. John Sutherland, waited upon him at his hotel and offered any assistance or information that was in my little power at that time. In a word, I was one of those who supported the Commissioner coming out here at the time of his arrival in the Colony.

2700. *President.*] Is it necessary to read your speech after that statement?

2701. *Mr. Schey.*] If your Honor accepts my statement as being correct, certainly not.

2702. *President.*] Of course we accept it, Mr. Schey.

2703. *Mr. Schey.*] Then I put in the volumes of *Hansard* from which I have been quoting, your Honor. [*Documents put in*]. I now desire to read two or three small extracts which refer to later transactions, and which, curious to relate, the same names occur again. The first is an extract from the *Australian Star*, dated 19th November, 1890, and headed the "The Railway Engineer-in-Chief." The paragraph says "The Minister for Works is now in communication with Sir Saul Samuel, Agent-General for New South Wales, Mr. Whitton, and Sir John Fowler, on the subject of selecting a qualified gentleman for the position of Engineer-in-Chief of Railways in New South Wales. A gentleman has been selected by the Committee." You see, your Honor, the statement is direct. "And his name and qualifications have been under the consideration of the Government; but, pending the receipt of reply to some inquiries which were made by cable to-day, the appointment will not be made. It is understood that Mr. Bruce Smith will be in a position to make the appointment at the latter end of the week." That was on the 19th of November. Then on the 27th November, "Mr. Bruce Smith stated in reply to an inquiry

inquiry from Mr. Abigail that (1) The Government could scarcely be said to have sent to England for an Engineer-in-Chief. Applications had been received and carefully entertained from gentlemen in this and other colonies, though not publicly invited, and the hon. member might rest assured that only a man who was conceived on the very best authority to be the most qualified man would be chosen for the position, irrespective of his whereabouts. (2) Experience shows that advertised invitations for applications for such a position as a rule did not attract the most highly qualified men, who generally refrained from entering into such competition." Then on December 5th.—"There was a meeting of the Cabinet yesterday, at which the proposal to appoint an Engineer-in-Chief for Railways as successor to Mr. Whitton was fully and for the present finally discussed. On the request of the Minister for Works made some time ago, the Agent-General Sir Saul Samuel, Sir John Fowler, and Mr. Whitton were asked to recommend one or more candidates, so that the most suitable man for the position should be secured, providing the Government deemed it wise to make a choice outside the colony. Mr. Bruce Smith is of opinion that none of the gentlemen named possess all the necessary qualifications, and therefore his recommendations to retain Mr. Deane in the position of Acting Engineer-in-Chief has been approved by the Cabinet. The filling up of the position by a permanent appointment has been left in abeyance for the present, but on the understanding that an Engineer-in-Chief may be appointed on a future occasion." I notice, your Honor, that the next quotation I am about to read should have come before the last, being dated two days prior to that paragraph. It is as follows:—"The Cabinet intends this week, it is understood, to appoint an Engineer-in-Chief for Railways, in succession to Mr. Whitton. It is also understood that, if possible, the gentleman appointed will be the nominee of Sir John Fowler and his brother-in-law, Mr. Whitton, the two gentlemen who have for so long a time exercised such a baneful control over the railway service of this country. The obvious conclusion therefore is, that Mr. Deane, who has since Mr. Whitton's retirement from active duty in the colony satisfactorily discharged the duties of Engineer-in-Chief, is not a suitable man for the position, and that no other professional man can be found in all Australia capable of performing the duties required. The proposition requires only to be stated to prove its incorrectness, and the Government would have acted far more honestly by saying at once that it had decided to leave the matter entirely in the hands of Messrs. Fowler and Whitton, no matter how many men there might be, in or out of the service, fully competent for the position of Engineer-in-Chief. As it is they have done even worse than sending abroad on their own account for the official, and Mr. Bruce Smith's statement the other day that they had not actually sent to England becomes intelligible because it means that the recommendation has been left entirely in the hands there of Mr. Whitton and his brother-in-law. It also throws some light upon the Government proposal to increase Mr. Whitton's retiring pension up to the full amount of his working salary. It has been stated also by the Minister for Works, that men of professional eminence in the colonies will not apply for the vacant position although invited by advertisement. Of course they will not. How can it be expected that they should when they believe that the appointment would not go by merit or by recognition of claims to consideration, but by the favour of the paternal co-partnership which manages these things for the Government? It is perfectly understood that the invitations to apply for the office are mere matters of form intended to give the arrangement some show of genuineness, while the matter itself has been cut and dried beforehand. The position of Engineer-in-Chief is itself one which would be sought for by many able men in and out of the public service in Australia; but they decline to put themselves in the humiliating position of being the mere nominees of Mr. Whitton and Sir John Fowler. Here we have the real truth of the case." That is from the *Australian Star*. The next extract is from the *Sydney Morning Herald* of the 13th December, 1890, being a report of the proceedings of the Legislative Assembly on the 11th of December, when Mr. Bruce Smith, in reply to the remarks of some members, said among other things: "The name of Mr. Hurtzig was mentioned as the gentleman to be appointed as Engineer-in-Chief. He desired to say that no such gentleman had been suggested or recommended, and he had never heard of that man, nor had any of his colleagues brought the matter before the Cabinet." The *Australian Star* of the same date said: "The Minister for Works has decided that Mr. Deane shall retain the position of Acting Engineer for Railways during next year, with the right of succeeding to the full title subsequently. He has also refused to recommend any of the nominations made by the English co-partnership of Fowler and Whitton. We heartily congratulate Mr. Bruce Smith upon the sound judgment and discretion which he has been forced to exercise upon this matter. As our readers are aware we have from the very first protested against the course which some moving spirit in the Cabinet, probably Sir Henry Parkes, proposed to adopt in going abroad for a successor to Mr. Whitton—to be nominated by Mr. Whitton himself and his brother-in-law—when a perfectly competent man was to be found in the Civil Service at home. The principle is essentially vicious, and it is of a piece with the entire line of conduct pursued by Sir Henry Parkes, who, while he likes to pose as the first of Australian statesmen, seldom has a good word to say for his own country when he can find something to praise elsewhere. Perhaps the loftiness of his own mind prevents his considering otherwise than with contemptuous disdain the claims of the people gathered around his feet. Be this as it may, the Minister for Works has sufficient strength of will to manage his own department upon his own responsibility. He has ignored the Fowler-Whitton faction, and has kept a valuable appointment in the country, and in the hands of a good officer. All that we hope is, that the manly example which he has thus set will be followed by his colleague in future appointments, and that the unworthy notion that it is needful to go out of the country in order to obtain men to pick up the choicest prizes of the public service will be finally abandoned. And while we are on this subject, we notice with satisfaction, that the order for Mr. Fischer's despatch to America to pick up notions in connection with the Electric Tram has been countermanded. The idea of sending him was, as we pointed out when the subject was mooted, quite a mistake. He could not possibly obtain technical information which he did not already possess, and it was absurd to suppose that he could obtain any other intelligence as to the profitable working of the line which would be reliable. Mr. Thow, who is on his way home, is to be commissioned to procure any particulars available, without, we presume, any directions in favour of one system or another. Probably all he can collect will not amount to very much; but at any rate, it will be selected by an unbiassed person, and the Commission will not be open to the reproach of wasting public money upon a foolish errand." The next is a leading article from the *Australian Star* of December 26th, 1890, headed "Sir Henry Parkes." From this article I only propose to quote a few words—"He (that is Henry Parkes) is as he said the other night opposed to pensions, although he pathetically urged the House

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19 May, 1892. House to vote a pension to his friend Mr. Whitton." There are just three small quotations here your Honor, which I desire to give from the *Herald* of June 8th, 1891. The first paragraph says: "A few days ago our London correspondent cabled to the effect that, the Caledonian Railway Company had offered Mr. Eddy, Chairman of the New South Wales Railway Commission, a salary of £4,000 a year to return to the service of the Company. Mr. Eddy, questioned on this matter last Saturday, said he felt annoyed that any information regarding offers made to him should have been made public. The Caledonian Railway Company had not offered him any appointment, but the Chairman of one of the leading British Railway Companys had made him a tempting offer to accept the position of General Manager of a certain railway. He, however, felt it could not be with him a question of inclination or money, as he had a clear duty to perform to New South Wales. The Government and Parliament of this Colony had placed a very large sum of money at the disposal of the present Railway Commissioners, having confidence in them that it would be wisely spent, and would result in good to the country. Until he had seen the whole of that money wisely expended, and the country was reaping the anticipated advantages from the policy now being followed by the Commissioners, he felt he would not be justified in relinquishing his Commission, although it would have been to his advantage in every way to have accepted the offer made. He, however, declined the offer some weeks ago." The next is an extract from a report of the Legislative Assembly, dated 21st August, 1891. Sir Henry Parkes, in reply to Mr. O'Sullivan, said, "Sir Saul Samuel had held the office of Agent-General since 11th August, 1880." The next is a cablegram from London, dated 24th September, stating that "A number of Australian colonists and leading engineers in London have invited Mr. Eddy to a banquet." The next exhibit is the letter to which I have already referred as having appeared in the *Sydney Morning Herald*, and signed G.W.R." That is the letter upon which I asked Mr. Curnow a question this morning. I also desire to put in a document entitled "Supply of rolling stock required from the Government railways," being a minute for Cabinet, and signed John Sutherland, 10/5/1887. It contains a recommendation as to the manufacture of a large quantity of rolling stock. Mr. John Sutherland says, "I am informed by the Commissioner for Railways that, in anticipation of the opening of fresh extensions of railway, contracts for which have already been entered into, and to provide for the growing traffic on the existing lines, there will be required within the next four years 100 new locomotives, the estimated cost of which is close upon £300,000. The votes now available for rolling-stock will not be more than sufficient to meet the orders already given for locomotives and to provide for the carriage and truck accommodation immediately required. It is desirable, however, to invite tenders at once for the additional engines and rolling-stock which will be required during the next five years, in order that local contractors may have an opportunity, should they offer eligible tenders for the work, to provide the necessary appliances and erect the workshops required for carrying out such works. With this object in view, I now submit the question for the consideration of the Government, and to obtain its sanction to my entering into contracts, after public competition, in the usual way, to the extent of £620,000 for locomotives and rolling-stock generally, in anticipation of Parliamentary authority for the expenditure of the money. It may be stated, however, that though contracts will be entered into, no payment thereunder will be required to be made until the money has been voted. With the exception of three American cars (one known as a "sleeper") imported from New York, and eight carriages and one brake-van ordered from an English firm, and which are expected in the Colony in a few months, all rolling-stock, other than engines, has for the last nine years been manufactured in the Colony; and as this description of rolling-stock can be made here quite as well and at a cheaper rate than it can be imported, there is no reason whatever why the principle of giving such work to local contractors should be departed from. In the year 1869 tenders were invited for a supply of rolling-stock required for five years, and Messrs. P. N. Russell & Co. obtained the contract. Since the expiry of their contract in June, 1874, similar rolling-stock has been obtained (with the exception already named) in small lots as required from various local contractors. The objection to this system is that we fail to get the timber used in such vehicles sufficiently seasoned, and owing to the uncertainty of securing further orders capitalists have not felt justified in erecting the required buildings for carrying out such contracts on a large scale, and consequently at more moderate prices. To meet these objections, which have great force, I propose that tenders should be invited for the supplies required in the following five years, with a stated minimum quantity in each year, in order that the successful tenderers may make the necessary arrangement for carrying on the works on a sufficiently large scale and procure an adequate supply of timber. Attached are lists showing the estimated requirements in this respect which will be wanted in each of the following five years, and the estimated cost."

2704. *President.*] Was that proposal adopted by the Cabinet?

2705. *Mr. Schey.*] It was your Honor; I shall not trouble you by reading the tables attached.

2706. *President.*] Was the proposal ever carried out?

2707. *Mr. Schey.*] I think not; I think some difficulties arose to prevent it.

2708. *President.*] I see.

2709. *Mr. Schey.*] Mr. Sutherland concludes:—I am reading from another part of the document now. "The importance to the Colony of establishing and maintaining in our midst locomotive manufacturers without infringing the principles of freetrade, cannot be over estimated; and I believe that if reasonable facilities, in regard to time for completion, &c., be given to our local manufacturers, they would be able to construct the locomotives in the Colony as cheaply as they can be imported. At all events it is my earnest desire that the question should be thoroughly tested, and for this purpose I propose that, having estimated our requirements for four years, we should at once invite tenders for their supply, under conditions which will afford our local manufacturers a reasonable opportunity of competing successfully for them." Under the signature and date appear the following words:—"The Cabinet concur in the recommendation of the Secretary for Works.—J.S.F., 2/7/8." That would be Mr. J. S. Farnell, at that time, Premier. [*Documents put in.*]

2710. *Mr. Schey.*] Your Honor I desire to put in another paper. It has reference to the supply of rolling stock required for the Government railways. It is headed with a note from Mr. John Rae, at that time Commissioner for Railways, bearing date 27th August, 1878. The document relates to the negotiations which were conducted for the making of locomotives in the colony, and it contains a number of letters and minutes which I will not trouble to read.

2711. *President.*] I must again remind you, Mr. Schey, that there are three gentlemen summoned here as witnesses, Mr. Midelton, Mr. Oakley, and Mr. Chambers. Mr. Chambers and Mr. Midelton have already been examined at some length by you, and it is hardly fair to bring them here day after day and

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to refrain from examining them while you read these documents. Cannot you finish with these witnesses before reading any further documents to the Commission? 19 May, 1892.

2712. *Mr. Schey.*] In the first instance I had intended, when calling Mr. Midelton, to proceed on a slightly different plan; but in view of some remarks made by your Honor about certain documents I was proceeding to deal with, I thought it would be wiser to read the documents first, so that the questions coming thereafter would have more pertinency to the charge than they would have if the questions were asked before the documents had been read. That is the reason, your Honor, why I am taking this course, but I may say that I might finish with Mr. Chambers and with Mr. Oakley whose examination I think will be brief, and then I might be permitted to leave the further examination of Mr. Midelton to another day.

2713. *President.*] Very well, Mr. Schey. If you can take the witnesses you have mentioned and complete their examination they may be allowed to go, but I think you should have the courtesy to indicate to Mr. Midelton that you will not require him to attend here until a certain day, and thus save him unnecessarily waiting in the court from day to day.

2714. *Mr. Schey.*] It is impossible for me to say, not being a lawyer and well versed in these matters, when I shall require Mr. Midelton again. That is my trouble, your Honor. On the first day you asked me to give the names of any witnesses I might require and I mentioned the names of these three gentlemen, but I could not exactly tell when I should require them. If your Honor desires I will proceed with Mr. Chambers now.

2715. *President.*] I think it would be better for you to do so, Mr. Schey.

2716. *Mr. Schey.*] I may say, your Honor, that I have not seen Mr. Midelton to tell him that he will not be required to-day. Perhaps the secretary might convey an intimation to him, as your Honor has suggested, that he will probably be required to-morrow.

2717. *President.*] Very well.

Mr. James Chambers called and further examined:—

Mr. J. Chambers. 19 May, 1892.

2718. *Mr. Schey.*] On the previous occasion when you were in the witness-box, Mr. Chambers, I asked you some questions about an indent for locomotive boilers. You could not then supply me with the information I wanted, and to assist you, you were to be supplied with the rotary numbers of certain engines. I ask you if you have been supplied with those numbers? I have got an old classification list which gives ——

2719. The point I am referring to is in this document which I showed you, an indent for locomotive boilers. The makers' numbers were given, and I asked you about the drawings. You said you could not distinguish these by the makers' numbers, and it was then promised that the rotary numbers of the engines should be put in, so that you might be able to identify the boilers. Have you been able to make that identification? No; I have not the information—I have not asked for it.

2720. But there was a promise that the numbers should be supplied? It is not on the list of questions which you handed to me, Mr. Schey.

2721. Have you got the written list of questions that I gave to you? Yes; it is here.

2722. *President.*] Do you say that you did not ask for the information, Mr. Chambers? I did not ask for the information, your Honor, but I asked for and obtained an old classification list, believing that probably Mr. Eddy could point out from the new classification list the numbers of the engines.

2723. *Mr. Schey.*] I asked for certain information, your Honor, in order that the witness might give me some evidence about these boilers.

2724. *Witness.*] If your Honor is agreeable, I think I can give that information now. I can tell you what classes of locomotives we had drawings of, including the boilers, and what Mr. Schey asks for could be obtained by comparison afterwards.

2725. *President.*] I understood that that was the information Mr. Schey desired to obtain?

2726. *Mr. Schey.*] No, your Honor. On page 31 of the typewritten evidence of Friday, 13th May, your Honor will see that Mr. Chambers was under examination. I had asked him some questions about forty locomotive boilers, of which I handed him the indent, a document which I then put in as an exhibit, and which I have shown to the witness again. I asked him about the boilers, and then I said, "May I ask, Mr. President, for the rotary numbers of the engines to which these boilers were supplied to be put in," to which your Honor remarked, "I suppose it can be done, Mr. Eddy." Mr. Eddy then said that the charge against him was so-and-so, and, in fact, he objected to giving the information. I then submitted to your Honor that as locomotives include boilers, if there is a large order for boilers it is certainly pertinent to this question of locomotives. Your Honor asked me what I wished the information for, and I explained. Proceeding on page 32 your Honor will find the following:—"*President.*] I think you are entitled to get this document, Mr. Schey. *Mr. Eddy.*] We will have pleasure in supplying the information, your Honor. *Mr. Schey.*] You say, Mr. Chambers, that until you get the rotary numbers you can give us no further information about these boilers? Yes." It is that information I am asking for, and it is necessary for me before I can complete Mr. Chambers' examination.

2727. *Mr. Eddy.*] I submit this is simply wasting time, Mr. President. The witness has said that he can give the information asked for. He has obtained all the information he requires, and therefore all this by-play on the part of Mr. Schey is merely so much waste of time.

2728. *President* (to Witness).] You say you can give us this information now?

2729. *Witness.*] I can state, your Honor, what classes of engines, according to their numbers, we had drawings of, including boilers.

2730. *President.*] Very well, Mr. Chambers, kindly give us that information?

2731. *Witness.*] We had complete working drawings of 79 class, engines built both by Beyer and Peacock and Dubs, with slight differences in detail. We had full working drawings by both makers. We had complete working drawings of 205 class, Beyer, Peacock and Co. We had complete working drawings of 261 class.

2732. *Mr. Schey.*] Might I interrupt the witness a moment, your Honor? I do not hear what is going on, but I presume your Honor is getting the numbers of certain classes of engines for which boiler plans existed ——

2733. *President.*] I understand Mr. Chambers to say that he can give information as to the boilers as well.

Mr. J. Chambers. 19 May, 1892.

2734. *Mr. Schey.*] No doubt, your Honor; but I submit that if this information is elicited before the return is presented for which I have asked, it will materially prejudice the case I am trying to carry on. I ask that the information may be furnished before these questions are answered.
2735. *President.*] Mr. Chambers is not answering any question now put to him, but he is answering a question put by you on a former occasion. Witness then said that he was not in a position to answer the question; he now says that from information supplied he is able to give an answer, and he was giving his answer when you interrupted.
2736. *Mr. Schey.*] What question is it that he is referring to?
2737. *President.*] The question is as to the number of boilers for which he had plans in the office. He is giving that information now, and I cannot stop him.
2738. *Mr. Schey.*] I ask you to take a note of my objection to these particulars being given.
2739. *President.*] No doubt the short-hand writer has taken a note of what you have said, but the witness must proceed with his evidence.
2740. *Witness*] (continuing.) We had also complete working drawings of 206 class and 436 class. I believe, your Honor, that so far as there was an indent at that time, these were the only classes of engines of which we had complete working drawings. One other class I remember, No. 285.
2741. *President.*] You had complete drawings for that class?
2742. *Witness.*] Yes, your Honor; we had complete working drawings for that class, and also for class 373.
2743. *Mr. Schey.*] I presume, before I pass from these forty boilers, the information required will be supplied to me, your Honor?
2744. *President.*] I do not know what further information you need, Mr. Schey.
2745. *Mr. Schey.*] I want to know the numbers of the locomotives to which these forty boilers have been supplied, and also the date on which the boilers were supplied respectively to the locomotives. There are two promises in different places that this should be done.
2746. *President.*] As I understand, the way the question arose on the last occasion was this: You asked the witness whether he could tell you the number of the boiler from the maker's numbers. The witness said, "I cannot tell from the maker's numbers, we always go on the number of the engine." Then you asked for the rotary number of the engine to be given in order that the witness might be able to answer your question as to these plans. He has now answered that question; he has told you the numbers of the engines for which plans were in the office, and he has given those numbers from information which has since been supplied to him.
2747. *Mr. Schey.*] I beg to submit, with very great respect, your Honor, that that does not answer my purpose at all. The witness now states that the numbers of the engines for which he knows boiler plans were in existence, but that does not enable him to identify the locomotives mentioned in this indent. This indent states that forty boilers were ordered, thirty from one place and ten from another, that they were ordered by the maker's numbers, and that they were so ordered because they were the duplicates of the boilers in certain engines. Now, I want to identify the engines into which these duplicate boilers have been fitted, in order to ascertain whether the boilers mentioned in the indent were really duplicates at all, or whether they were not ——
2748. *President.*] What does this witness know about that subject.
2749. *Mr. Schey.*] Everything, I take it, your Honor. This witness was a draftsman in the railway service, and he knows what boiler plans were in existence.
2750. *President.*] But he has already given an answer to that question.
2751. *Mr. Schey.*] With very great respect, your Honor, I submit that he has not. It is necessary for the witness to identify these plans with the makers numbers mentioned in the indent. I want to gather, your Honor, what rotary numbers these makers numbers represent. Mr. Eddy on page 32 of the evidence makes a distinct promise that the information shall be supplied. This is the information I am asking for, your Honor, and so far it has not been supplied.
2752. *Mr. Eddy.*] I would point out, Mr. President, that the witness has said he got all the information he wanted, and that he did not ask for these particulars. He shall have any information he wants, but he has already told you that he obtained all the information he desires.
2753. *President.*] And he has answered the question.
2754. *Mr. Eddy.*] If there is anything more wanted, and Mr. Schey puts it in writing, we will have pleasure in supplying the information.
2755. *Mr. Schey* (to Witness).] Before passing from this subject, will you kindly look over this indent for locomotives—[*handing document to witness*]—and say whether there were any plans in the office of any boilers there specified?
2756. *President.*] The witness has already given you an answer to that question, Mr. Schey. He has told you whether there are any plans in the office for any of the boilers specified in that indent.
2757. *Mr. Schey.*] Excuse me, your Honor, I say that he has not given me the information I am now asking for. He has only given the numbers of the engines for which he knows plans are in existence; he is not able to identify the maker's numbers with the rotary numbers. He knows what classes of engines there are boiler plans for, I admit, but that is not the question I asked. What I ask him is this, your Honor, whether there are plans for any of the boilers mentioned in the indent, and he says that before he can answer the question he must have the rotary numbers of the engines so that he may identify them with the maker's numbers.
2758. *Witness.*] I think Mr. Schey is perfectly correct, your Honor, I have not given him that information.
2759. *President.*] Do you know anything at all about these forty boilers, Mr. Chambers? I had nothing to do with the indent, your Honor.
2760. Do you know whether any of these boilers would suit any of the engines you have already mentioned? I believe so.
2761. Will you state which numbers? It would only be guessing if I did.
2762. We do not want any guessing; can you tell us definitely? I should say probably that that indent applied to several of the classes which I have just specified—79, 103.
2763. You do not know of your own knowledge, you are merely guessing this? Yes, your Honor, because these are old classes of engines which from time to time had to be renewed in their boilers.

2764.

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2764. *President.*] The witness says, Mr. Schey, that he does not know anything about this subject of his own knowledge, and we cannot allow this evidence to be gone into. It is merely a waste of time.
2765. *Mr. Schey.*] I do not want the witness to guess anything your Honor. You see, your Honor, this paper simply refers to the boilers by a number known only to the makers and to the Commissioners office, and probably the Locomotive Engineers. No one else understands what that makers' number represents. Now I want to find out what is understood between the makers and the Commissioners by that number; I want to know what it represents in actual service, so that I may find out the particular engines for which these boilers were supplied.
2766. *President.*] That may be information which you will require for your own mind, but all I say is that this witness can give no information on the subject. He says he should only be guessing—he does not know the matter of himself.
2767. *Mr. Schey.*] Will your Honor make an order for the information to be supplied for my own purpose. I may say that I do not want it to satisfy my own mind, I want to put it before the Commission. Until I get this information I cannot tender any further evidence about the boilers.
2768. *President.*] Put down in writing what you wish to get, Mr. Schey, and I will ask Mr. Eddy if he can supply the information. In the meantime finish with this witness.
2769. *Mr. Schey.*] Before proceeding, your Honor, I would point out that Mr. Thow also promised to supply this information.
2770. *President.*] If the information can be obtained, I suppose you will be entitled to it.
2771. *Mr. Schey* (to Witness).] When you were last under examination I asked you some questions about the tractive power of certain engines over certain sections of the line. The section which we took for the basis of the evidence was from Picton to Thirlmere, because it was the one taken by Mr. Thow in his evidence. Taking that section of the line, Picton to Thirlmere, as the basis for these further questions, I ask you, Mr. Chambers, whether the 205 class of engine was the most powerful goods engine in our service when Mr. Thow took office as Locomotive Engineer? No.
2772. What class of engine was? The 131 class.
2773. What was the most powerful passenger engine at the time Mr. Thow took office? As an engine, I should say the 373 class.
2774. Was the 373 class of engine more powerful than the 304 class? Yes.
2775. Then the 304 class was not the most powerful engine for passenger service when Mr. Thow took office? No.
2776. What is the load over the section just given, Picton to Thirlmere, for a passenger engine of the 304 class? I have not calculated the load for the 304 class as the 304 class; I have taken it as what is now known as the "Scotch Yankees," the ten engines made by Dubs and Co., and last supplied.
2777. Can you give me the load for the 373 class, the one you have mentioned as being most powerful? I cannot give you the load for that just now, I have not calculated it.
2778. Then you say you do not know the passenger load of the 304 class? I know the passenger load for the latest delivery of the 304 class, known as "Scotch Yankees."
2779. I see. That is an improvement on the old 304 class? Yes.
2780. What is the load from Picton to Thirlmere for one of the "Scotch Yankee" engines? I should say the proper working load for this engine, over that section, would be 151½ tons; that is the train alone, without reckoning the engine and tender.
2781. What would be the number of vehicles comprised in that weight—I mean passenger vehicles? That depends upon an arbitrary standard. I understood the present Chief Mechanical Engineer to state that 10 tons was the load reckoned per vehicle, but on inquiry of Mr. Loughry at the department on Saturday, I was told that 9 tons was the standard load; but I do not think that is material, because the load has to be calculated in total tons.
2782. One hundred and fifty-one and a half tons—that is ton loads? Yes, ton loads, behind the engine; that is the proper maximum load, you know.
2783. What number of vehicles, or tons, respectively, can the 205 class of engine draw over this section? Well, there are two sets of engines in that class, and I have made calculations for both of them. There is the old original 205 class, and the latest delivery since the Commissioners took office.
2784. Give us the old lot first? The proper maximum load for the old 205 class would be 177 tons, and for the new 174¾ tons.
2785. The 205 class which was in existence when Mr. Thow took office was the old 205 class, was it not? Yes.
2786. And at that time there were none of the new 205 class delivered? None.
2787. They have all been delivered since? They were actually ordered after Mr. Thow took office.
2788. You say that the 205 class was not the most powerful engine in the service when Mr. Thow took office;—will you kindly give me the load of the goods engine which you say was the most powerful in the service for this same section? I have not calculated that; that was not one of your written questions, Mr. Schey.
2789. The questions I asked you were: Was the 205 class the most powerful engine in the service when Mr. Thow took office, if not, which class was, and what number of vehicles and tons respectively could the 205 class draw? I see I have omitted one of the questions I desired to ask you. I intended to include the load of any other engine in the service which you might consider more powerful, in order that I might institute a comparison between the two? I shall be glad to make the calculation for you.
2790. Perhaps you will be able to give it to me afterwards. In dealing with the load by tons, that would be irrespective of goods or passengers? I have reckoned a goods train for a goods engine.
2791. What would be the difference for the two classes—between fast and slow goods? It depends on the difference of speed required. I should say that about three-fourths of the maximum load for a slow train would be a good load for a quick train.
2792. Do you know the new Beyer and Peacock engines? Yes.
2793. What number of tons will they draw over the Picton-Thirlmere section? The proper load for them would be about 196 tons.
2794. I suppose you can give me the difference in percentages between the "Scotch Yankees" and the new Beyer and Peacock? No.
2795. Nor as to the cost of them? No.

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2796. *Mr. Schey.*] I think that is all I have to ask this witness, your Honor; but of course I want that information regarding the boilers, and I may have to recall Mr. Chambers again.
2797. *President.*] I understand Mr. Chambers to say that he could give you that information—that he would work it out for you.
2798. *Mr. Schey.*] I think that had reference to another matter, your Honor. He will work out for me the tractive power of certain engines which he has not already worked out; but what I want is the information about these forty boilers, and their rotary numbers. I will write out what I desire if your Honor will permit me.
2799. *President.*] Yes, that will save any further misunderstanding.
2800. Do you desire to ask the witness anything, Mr. Eddy.
2801. *Mr. Eddy.*] No, sir.
2802. *President.*] [Having received Mr. Schey's written question] Mr. Eddy, will you look at these questions and let me know whether you can supply the information required.
2803. *Mr. Eddy.*] A return just handed in, Mr. President, gives the dates when the different boilers were fitted to the engines, but it does not give the numbers of the engines into which the boilers were placed. We will have a return submitted containing that information.
2804. *President.*] Part of the information you seek, Mr. Schey, is enclosed in a return which has just been handed to the Commission. The particular information you want is not in it at present; but Mr. Eddy promises to supplement it by the further information you have asked for.
2805. *Mr. Schey.*] And it will be handed to me when it is complete?
2806. *President.*] Yes.

Mr. William Alexander Oakley sworn and examined:—

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2807. *Mr. Schey.*] What are you by profession, Mr. Oakley? A draftsman.
2808. You have been in the Railway service, have you not? Yes; in the Locomotive Department.
2809. How long were you in the service? About eight years.
2810. What work were you engaged upon just prior to leaving the department? I was in the Stores Department.
2811. At Eveleigh? Yes, at Eveleigh.
2812. When you were in the Stores Department what were you engaged in—what was your particular business? I had charge of the locomotive stores.
2813. And I suppose you had a list of the stores under your charge? Yes; there was a list.
2814. I suppose you have no knowledge of that list since you left the department? No. It is nearly three years now since I left.
2815. *President.*] When did you leave the service? Over twelve months ago.
2816. *Mr. Schey.*] Did you at any time make an inventory of the stores under your charge? An inventory was made when the new Commissioners took office.
2817. An inventory of the stores in hand when the old Commissioner left office and the new Commissioners came into power. I suppose it was a kind of stock-taking? Certainly.
2818. And at that time you had a very large quantity of material of all kinds in store, I believe? Yes.
2819. Had you any duplicate portion of engines? Yes; a great many
2820. There were a number of Messrs. Beyer and Peacock's engines then on the lines, were there not? Yes.
2821. A considerable number? Yes; a lot of them.
2822. Of different classes? Yes.
2823. Had you many duplicate parts for those engines? We had several cases of parts of the Beyer and Peacock engines.
2824. Cases of duplicate parts? Yes.
2825. Were they important parts? Yes; different parts of the engines.
2826. What parts;—name some of them? Cylinders, slide-valves, pistons.
2827. Any cross-heads? Yes; cross-heads, and different portions.
2828. In fact, all the most important parts of the engines? Yes.
2829. Then, having a stock of these duplicate parts for a large variety of engines, there would be a great advantage in repairing engines of that class by substituting these duplicates for any parts which were worn out? That was done.
2830. They were brought out for that purpose? After the cases were opened out that was done. Many of these cases had been in the department for years and never opened. Until we classified them it was not known what there was in store.
2831. *President.*] When was that done;—was it after the new Commissioners were appointed? Partly. I was engaged on the work at the time the Commissioners arrived.
2832. And you continued it after they were appointed? Yes, your Honor.
2833. *Mr. Schey.*] Have you any recollection of the quantity of boiler-plates on hand at the time you made this inventory? No. I know there were a lot of plates in another store at Eveleigh, under Mr. Richardson's charge—a large quantity of boiler-plates, in fact.
2834. Was there more than one lot of boiler-plates kept in stock? There were two stores, and the locomotive stores were being drafted from Eveleigh to the Locomotive Department,
2835. I suppose you mean to say that when the stores were under Mr. Richardson's charge they belonged to the Stores Department, and that then they were issued from the Stores to the Locomotive Department? No; what I mean is this: That we were bringing all the locomotive stores from Mr. Richardson's store to the locomotive store.
2836. The particular item under discussion is boiler-plates. Do you know whether there was a large or small quantity on hand when the inventory was made? In the store I had charge of we had enough for ten engines of the American type. There was a large quantity of boiler-plates in the other store—I should think nearly 100 tons.
2837. Do you know whether the boiler-plates in either store, or both stores, had been designed for any particular purpose? I do not know that; but I may say that whenever a boiler-plate was wanted to repair any boiler a requisition was forwarded to Mr. Richardson's store, and the plate was supplied.

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2838. Do do know whether it was proposed at any time to build fifty engines by local contractors in Sydney? Yes.
2839. You know that was so? Yes; the material was ordered for the contracts.
2840. Were any boiler-plates imported for the purpose of supplying these contractors? Yes; I used to supply the contractors with material from the store as they wanted it.
2841. Were there any other boiler-plates in addition to those imported for this purpose? Yes; a large quantity.
2842. Those would be boiler-plates for the use of the department itself? Yes.
2843. As distinguished from those which were intended to be supplied to the contractors? Yes; they were for departmental repairs.
2844. You were in the department prior to the Commissioners taking office, were you not? I was.
2845. Did you ever hear of any plan or proposal to build locomotives at the Eveleigh workshops? Yes.
2846. That was at the time when this other plan, to build fifty locomotives by outside firms, had failed, or partially so, was it not? Yes.
2847. Did you know the late Hon. John Sutherland? I did, well.
2848. Do you know whether, when he was Minister for Works, he desired to build locomotives at the Eveleigh workshops? He desired to build them in the Colony, but seeing that the prices were too high, representations were made to him that the locomotives could be built at the Eveleigh shops, and he was desirous of doing that.
2849. Who was at the head of the Locomotive Department at that time? Mr. Midelton.
2850. Do you know whether Mr. Midelton recommended or was in favour ——
2851. *President.*] Mr. Midelton can speak for himself.
2852. *Mr. Schey.*] Undoubtedly, your Honor.
2853. *President.*] This witness cannot give, as evidence, what Mr. Midelton may have recommended or been in favour of.
2854. *Mr. Schey.*] But, your Honor, this witness may know whether Mr. Midelton did a certain thing.
2855. *President.*] Mr. Midelton can be the only witness to that subject.
2856. *Mr. Schey.*] Not being a barrister, your Honor, I have some difficulty in framing my questions in such a way as to meet with your Honor's approval. Perhaps I can get what I desire by other means.
2857. *President.*] If you frame your questions correctly they can be answered.
2858. *Mr. Schey* (to Witness).] Did Mr. Midelton ever tell you that he desired to build locomotives at the Eveleigh workshops?
2859. *President.*] You cannot ask that question, Mr. Schey, you must put it in another form. You are trying to get from this witness what he heard Mr. Midelton say. If you want to ascertain that, you must get it from Mr. Midelton himself.
2860. *Mr. Schey.*] At all events, Mr. Oakley, you know of your own knowledge that there was a proposal on foot to build locomotives at the Eveleigh workshops? I do.
2861. Do you know whether any material was imported for that purpose? Yes; enough material for ten engines.
2862. You say enough was imported to build ten engines? Yes; five of one class and five of another.
2863. To build five engines each of two classes, being a total of ten? Yes.
2864. And this material was imported for that express purpose? Yes.
2865. Amongst the material I suppose there was the necessary plates for building ten boilers? Yes; plates, rivets, and tubes.
2866. Everything requisite? Yes.
2867. *President.*] When was that imported? Just prior to the Commissioners taking office.
2868. When did it arrive in the Colony? I cannot say, but I know that after it arrived I had the material packed away.
2869. *Mr. Schey.*] Now, in addition to the boiler-plates that were imported for the purpose of supplying the local contractors who had undertaken to supply fifty locomotives, did the Government import certain other material for the use of these contractors, instead of allowing them to import it themselves? Yes.
2870. And, as well as the boiler-plates imported for the purpose of those contracts, other boiler-plates were imported for the purpose of building ten engines in the Eveleigh workshops? Not in addition. There was, as I have said, another lot of boiler-plates in the other store of which Mr. Richardson had charge.
2871. Do you say that boiler-plates were not brought out for the ten engines which it was proposed to build at the Eveleigh works? No; only for the engines which were to be built by Mr. Wearne and the Atlas Company.
2872. But there were other boiler-plates besides? Certainly.
2873. Do you know anything as to the quality of the plates? No; I do not.
2874. You do not know whether they were good or bad? No; they seemed to be of good quality so far as I saw and heard. I know they were favourably commented upon at the time.
2875. Were those plates fit to be made up into any boiler, or were they only fit to go into certain boilers? The boiler-plates in Mr. Richardson's store were fit for any work, because whenever we wanted to make any repairs we sent a requisition to Mr. Richardson and he sent out a plate, and the repair was done with that plate for any class of boiler. But for the American boilers for the ten engines I have already spoken of there were different plates. These were very large plates and could be used for any boiler.
2876. And being imported by the department I suppose, like all Government importations, they would be of good quality? They were subjected to a test.
2877. Were all of them tested? They were supplied to a test.
2878. There is no reason to suppose that the boiler-plates were of such an inferior quality that they could not be used? I think not. I have heard that the plates were very good.
2879. If any one was to say that they were inferior, you do not think that would be correct? No; I do not think it would be correct.
2880. Do you know a Mr. Haswell? I do.
2881. What is he? A draftsman.
2882. Where? In the Locomotive Department.
2883. At Eveleigh? Yes; he was in the service before, and he has gone back again lately.
2884. You say he has lately been re-employed? Yes; he was away for three or four years, but he has just gone back again.

2885.

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2885. Do you know where he came from when he arrived here first? I have heard from Beyer and Peacock's works; but I do not know it for a fact.
2886. Who was Locomotive Engineer when Mr. Haswell was first employed? Mr. Scott.
2887. Was Mr. Haswell here in Mr. Burnett's time? I do not know; I was not in the service then.
2888. Then you say Mr. Haswell went away? Yes.
2889. Where did he go to? To Queensland, I believe.
2890. He has lately returned? Yes; since Mr. Thow took office.
2891. Now, in relation to these boiler plates and this inventory,—in whose charge do you think that inventory is now? I believe it will be in the charge of the storekeeper. The inventory was, I think, made to an order from the Auditor-General. It was stated that there were £600,000 of stock to be handed over by the old Commissioner to the new Commissioners.
2892. That, I suppose, represents material of all kinds? Yes.
2893. *Mr. Schey.*] I should like that inventory to be put in, your Honor. Do you require me to summon the gentleman who has charge of it, or will the Commissioners produce the document?
2894. *Mr. Eddy.*] I object, Mr. President, to prepare and put in a document showing the stores represented by this £600,000.
2895. *President.*] Mr. Schey is not asking you to prepare a document; I understand the witness to say that an inventory was prepared at the time when you were coming into office. It was a kind of stock-taking. That is the document Mr. Schey is asking for.
2896. *Mr. Eddy.*] I do not think it can be put in without incurring the expenditure of an enormous amount of labour and money, and without upsetting the whole Department; besides, I scarcely think it is relevant.
2897. *President.*] Is there such a document in existence, Mr. Eddy?
2898. *Mr. Eddy.*] No, sir. There was a certain stock-taking after we entered office. We wanted to know whether the value of the stores was as indicated, and we had an account taken roughly of the stock; but as to having an inventory prepared and brought here ——
2899. *President.*] Mr. Schey is asking for a document supposed to be in existence at the time that stock-taking was done.
2900. *Mr. Eddy.*] There was no such document prepared. We simply had a rough estimate made of the material in stores. There is no document, so far as I know, detailing everything we then had in the stores. There are the books which had to be checked, but as to preparing such a list as Mr. Schey asks for, that would be utterly impossible.
2901. *President.*] You say that no such document was prepared, Mr. Eddy?
2902. *Mr. Eddy.*] That is so, sir.
2903. *Mr. Schey* (to Witness).] I ask you, Mr. Oakley, was such a document prepared? I say such a document was prepared.
2904. You swear that such a document was prepared? Yes.
2905. That you yourself prepared the document, and that a value was appended to the articles detailed in the inventory? Yes. When I say that I prepared the document, I ought to explain that I had a clerk to assist me; but I again assert that an inventory was prepared and forwarded to the Locomotive Engineer.
2906. *Mr. Schey.*] Now, your Honor, I ask for the production of that document.
2907. *President* (to Witness).] Did you see the document when it was prepared? I did.
2908. Did it contain a detailed description of all the stores? Yes; all the stores we had—lathes, and machinery of all kinds.
2909. It referred only to your stores? Yes; but I believe an inventory was made all through the Department.
2910. Do you know that? I am almost certain that it was done.
2911. Do you know that of your own knowledge? I know that a Mr. Scott was engaged for a long time in Mr. Richardson's store at this work, and he was so engaged because there were many technical parts of which the store people did not know the names, and Mr. Scott was sent to tell them what they were.
2912. In what form was the document prepared;—was it in the form of a book or not? It was in the form of sheets of foolscap, as far as I can remember, your Honor. I know that I received a letter, instructing me to take a list of all I had in the store. We were several weeks weighing up the materials; we had to take everything by weight, and I had four or five men employed for weeks at that work.
2913. Who did the document go to after you had prepared it? I believe it was sent to the Locomotive Engineer; but I won't say for certain.
2914. Who was the Locomotive Engineer at the time? Mr. Midelton. I should like to mention this fact, your Honor: A number of men were employed at this work for so many days or week, and their time was charged to the store work. I know that a considerable amount of labour and money was expended, as we had to weigh all the castings and bolts then in store.
2915. *President.*] Do you say, Mr. Eddy, that this document is not in your possession?
2916. *Mr. Eddy.*] The Commissioners are not aware of any such document, Mr. President. I do not think it exists. When we took office we tried to get a rough estimate of the value of all the stores. There is a sum of £600,000 standing to the credit of railway stores, and we wanted to see what amount of stores were really in existence to represent the balance outstanding. We had a valuation made, and we employed two gentlemen outside the Railway service to do the work. No doubt they had a lot of detail information prepared, and they utilised an enormous number of books in existence. They gave us an estimate as to the value of the stores, and we also had a list made of the obsolete stores; but as to a list being put before the Railway Commissioners representing the details of £600,000, that was certainly never done.
2917. *President.*] Have you these rough memoranda?
2918. *Mr. Eddy.*] I daresay they could be turned up, sir. If the Commission consider it relevant to this inquiry, we will do our best to obtain them.
2919. *President* (to Witness).] Did you keep a stock-book in your store? Yes.
2920. A book containing a list of all the articles in store at that time? Yes.
2921. And that book I suppose will show the whole thing? Yes.
2922. *Mr. Kethel.*] How often did you balance it? I was only in charge for a few months.
2923. *President.*] Do you know when it was last balanced before you left? Just before I left, because the stock was then handed back to the Comptroller of Stores, Mr. Richardson.

2924.

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2924. *Mr. Eddy.*] If Mr. Schey, instead of being so mysterious, and instead of asking for a return of £600,000 worth of stores, will tell me exactly what information he requires, I will have much pleasure in supplying him with the information. If he wants to know how many boiler plates there were in store, we will give him the information; but we do not think we should make a list.
2925. *President.*] There is no question of your making a list. It is a question of whether there is already a document in existence.
2926. *Mr. Schey.*] If the document is produced, and Mr. Eddy finds fault with the value set against each item, he can lodge his objection before the Commission.
2927. *President.*] That is not the objection which Mr. Eddy raises. He says that no such document as you are asking for is in the possession of the Commissioners so far as he is aware; but he says there are some rough notes or memoranda, and if those notes or memoranda are still in existence they will be produced; or if you will give a list of the information you desire to obtain, the Commissioners will try and procure that information for you. For instance, if you want to know the number of boiler plates at a particular date, they will try and ascertain it for you.
2928. *Mr. Schey.*] The witness says, your Honor, that a document was prepared, and I desire to have that document put in.
2929. *President.*] The witness says the document was handed to Mr. Midelton. You will have to find out from that gentleman if he received it, and if he did receive it, what he did with it.
2930. (To Witness): Do I understand you to say that you were only at the head of this store for two months? For two or three months, your Honor.
2931. Was that the two or three months just before you left the service? Yes.
2932. And you left the service about twelve months ago? Yes, your Honor.
2933. At the time this stock-taking was made what position did you hold in the store? I was in charge of the store. I was sent down from the drawing office to fit up the store, to arrange the racks, and do the classification and all that kind of thing.
2934. Who was appointed to your position after you left the service? I think the control was handed over to Mr. Richardson again. These stores were drawn from Mr. Richardson's stores, and brought down to a shop called "No. 15 shop." All the stores were set out and arranged so that we might ascertain what was actually in stock. There was a lot of material lying in Mr. Richardson's store in cases which had been there for years. No one seemed to know anything about them, and Mr. Midelton suggested that they should be brought down and arranged, so that we might know what the cases contained.
2935. And you were doing that work? These cases were actually with the locomotive works, and it was because it was not known what they contained that this inventory was made.
2936. Then I suppose Mr. Richardson remained the responsible official for the whole of the stores? Yes, your Honor.
2937. *Mr. Schey.*] May I ask, your Honor, what was the approximate value which Mr. Eddy set upon these things?
2938. *President.*] I think he said about £600,000.
2939. *Mr. Eddy.*] The amount standing to the credit of the railway stores is £600,000.
2940. *Mr. Schey.*] I am asking what Mr. Eddy considered was the value. I understood him to name a much less sum.
2941. *Mr. Eddy.*] No, Mr. Schey; I said that the vote for stores amounted to £600,000.
2942. *Mr. Schey.*] I understood the witness to say that an inventory was made of the stores, and that an amount was put down upon it, and that Mr. Eddy quoted a very much less amount as being the real value of the stores.
2943. *Mr. Eddy.*] I did nothing of the sort.
2944. *Mr. Schey.*] It was the witness who estimated the value at £600,000.
2945. *Witness.*] No; I did not estimate it at £600,000. I saw that amount mentioned in the papers.
2946. *Mr. Schey.*] At any rate, your Honor, I think I am correct in saying that Mr. Eddy objects, first of all, that the document is not in existence, and secondly, that there were some stores, but of an approximate value of so much, mentioning a sum of money very much smaller than the amount stated. I ask him what that smaller amount is—he did mention it, but I failed to catch it.
2947. *Mr. Eddy.*] I did not say anything of the kind.
2948. *Mr. Schey.*] Do I understand that a search is to be made for this document, and if it can be found that it is to be produced?
2949. *President.*] I suppose if there is a document of this kind, Mr. Eddy, it can be produced?
2950. *Mr. Eddy.*] Certainly.
2951. *President.*] I think you might trace this document, Mr. Schey. Apparently Mr. Richardson was the person in charge of these stores at the time the inventory was made, and he would be the person that could give you most information on the subject. The paper spoken of by Mr. Oakley was afterwards handed to Mr. Midelton, and as Mr. Midelton is your witness, and he will be here to-morrow to be examined, you will be able to ask him what he has done with the document.
2952. *Mr. Schey* (to Witness).] I presume, in the ordinary course of things, you would not hand this document yourself to Mr. Midelton. No; I handed it to the works manager.
2953. As a matter of fact, who did you hand it to? I cannot recollect.
2954. I suppose you did with this document as with any other official document? Yes.
2955. And of course it would find its way to Mr. Midelton, and presumably through him to the Railway Commissioners? Yes.
2956. *Mr. Schey.*] Under these circumstances, your Honor, perhaps it would be better to ask Mr. Richardson to be good enough to come here an see if he can give us any information about this document?
2957. *President.*] You only want to ascertain who the document was given to, and whether it can be produced. I do not want Mr. Richardson.
2958. *Mr. Schey.*] Then perhaps the simplest way would be to write to him, your Honor.
2959. *Mr. Eddy.*] We must first have the document indentified; this witness has wandered about in such a way that it is necessary to have a definite description of what is required. We ought to have a date.
2960. *President* (to Witness).] Do you remember the date?
2961. *Witness.*] I do not.
2962. *Mr. Eddy.*] First of all the witness tells us he gave the document to Mr. Midelton, then he says he

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he gave it to the works manager, Mr. Howe; then he turns round and says the document was passed along in the ordinary routine way. Before promising to supply any document we should like to have a little better identification.

2963. *Mr. Schey.*] I think the witness has been sufficiently descriptive. He has styled the document an inventory, and he says it was prepared at the time when the stores were handed over from the old to the new administration. That surely ought to be sufficient.

2964. *President.*] I do not think we can describe it any better than that, Mr. Eddy.

2965. *Mr. Eddy.*] That goes a long way back, Mr. President.

2966. *Witness.*] I said it was taken before the present Commissioners entered office.

2967. *President.*] I understand the inventory was prepared to show the quantity of stores at the time the old Commissioner was retiring and the new Commissioners were coming into office.

2968. *Mr. Eddy.*] The inventory I have been referring to, Mr. President, is one we attempted to make after entering office.

2969. *Mr. Schey.*] That is not what I want, your Honor. The document I want is the one your Honor has described.

2970. *Mr. Eddy.*] Very well, we will try and get it.

2971. *Mr. Schey.*] I suppose there is no mistake now about the document I want. It is the one mentioned by his Honor, and which was prepared about the time of the change in the administration. I do not want anything made by the Commissioners after they took office. (To Witness): Now, Mr. Oakley, do you know a Mr. Appleby? I do.

2972. Did Mr. Appleby tell you at any time prior to the arrival of the Chief Commissioner that he knew who the Chief Commissioner was to be? He did.

2973. He did tell you that? Yes.

2974. Do you know in what way Mr. Appleby got his information?

2975. *President.*] How can this witness possibly tell you that, Mr. Schey?

2976. *Mr. Schey.*] I think he can, your Honor.

2977. *President.*] I say it is not admissible. We cannot have any tittle-tattle and gossip which the witness may pick up.

2978. *Mr. Schey.*] Tell me this, Mr. Oakley, was Mr. Appleby related in any way to Mr. John Whitton? I have heard that he was.

2979. *President.*] Do you really know anything about this matter? Well, Mr. Appleby himself told me that he was related to Mr. Whitton.

2980. *Mr. Schey.*] He told you that himself? Yes.

2981. Do you know that he was a frequent visitor at Mr. Whitton's? I do.

2982. Did Mr. Appleby, at any time, antecedent to the arrival of the Chief Commissioner, tell you that he knew who the Chief Commissioner was to be? Yes.

2983. He told you he knew? Yes, he told me that he knew from Mr. Whitton. I wanted to know the name of the gentleman, but he would not tell me that.

2984. Did he give you any other particulars relative to the Chief Commissioner:—did he tell you anything which would transpire after the Chief Commissioner had arrived? On another occasion he did. I was out for a walk with Mr. Appleby, and I asked him Mr. Whitton's opinion of the railway muddle which was then going on. He told me that Mr. Whitton's opinion was that the new Commissioners should be got from England, and that upon their arrival Messrs. Scott, Goodchap, Midelton, Cowdery, and Reid should be got rid of.

2985. Would be got rid of? Should be got rid of. That was what he, Mr. Whitton, thought about the matter.

2986. Do you know whether Mr. Appleby supplied any goods to the department at any time? I know he supplied some pumping machinery for Goulburn, Bathurst, and Wagga Wagga.

2987. Did he supply anything for Darling Harbour? I believe he supplied some cranes.

2988. Was there a "Gantry"? Yes.

2989. What was that intended for? It was a crane for lifting coal.

2990. Do you know the machine in question? I have seen it, it was lying at Eveleigh afterwards.

2991. Have you seen it frequently? No.

2992. Do you know how long ago it is since it was supplied? I know nothing about the supplying of it.

2993. Do you know whether it has been constantly used, or whether it is out of use? The last time I saw it it was lying in the Eveleigh yard. It had been removed from Darling Harbour.

2994. You do not know anything about its use while at Darling Harbour? No; I do not know whether it was ever put up.

2995. You say Mr. Appleby told you that he was related to Mr. Whitton? Yes.

2996. He would, therefore, be a relation of Sir John Fowler's also? Yes, naturally.

2997. Have you ever heard it stated that there were any remarkable coincidences about the way in which locomotive orders went to certain firms in Great Britain? Only what I have read on the subject.

2998. Has it appeared to you from your reading that there have been any such? Any such what?

2999. Any such remarkable coincidences in the way that locomotive orders have gone, for instance, to Beyer and Peacock? Yes, they seem to have had a good share of the work.

3000. Have you ever heard it stated that there was apparently some little arrangement about the matter?

3001. *President.*] How can we have what he has heard elsewhere. If you want to prove that there is any such thing, prove it by facts and not by gossip.

3002. *Mr. Schey.*] I want to prove that it was a matter of common report, in fact that plenty of people had heard this report.

3003. *President.*] We have nothing whatever to do with any report. You have brought certain charges, and you will have to prove them, and prove them by facts and facts only.

3004. *Mr. Schey.*] Of course your Honor has noted the objections previously taken in regard to these charges. (To Witness): Did you learn from Mr. Appleby, or any other source, whether Mr. Whitton himself had a desire to become Chief Commissioner? I do not know that.

3005. You know the Eveleigh works well, do you not? I do.

3006. Are those works full handed at the present time? I do not know, I have been away for more than twelve months.

3007.

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3007. You do not know anything as to the reductions which have taken place lately? I have heard that a lot of men have been discharged.
3008. Do you think the reductions have been considerable? 3009. *President.*] How can the witness answer such a question. He says he has been away for twelve months. If you want to prove that there has been a reduction in the number of hands, prove it by the proper witnesses and in the proper way, and not by mere hearsay evidence.
3010. *Mr. Schey* (to Witness).] When you were employed at the Eveleigh works, Mr. Oakley, do you think it was possible to manufacture locomotives? I should not like to give an answer; not being a locomotive engineer, I should not like to say.
3011. When you yourself were at the Eveleigh workshops, Mr. Oakley, was any terrorism exercised over the staff by which the staff would be afraid to give evidence in matters concerning the Railway Department? After my experience I should think they would be afraid.
3012. For instance, if you, yourself, had been now employed at Eveleigh, or even at the time you were employed, would you have had any diffidence in giving evidence as to what was going on? No; I should have given my evidence in a straightforward way, believing that I should be protected by the Civil Service Act.
3013. Should you have feared any consequences? No.
3014. Should you have expected any consequences? I cannot say that I should.
3015. You do not think that any of the men employed at Eveleigh would fear dismissal if they gave evidence? I do not know that; I should not like to say that.
3016. Do you know anything of the price of materials for locomotive building? No; I cannot say that I do know much about it.
3017. For instance, do you know whether the price of material was high or low in 1890? I believe prices were high, because I remember Mr. Brewster once told me that they were so full handed in England that they did not know how to supply orders.
3018. Who is Mr. Brewster? He is either the agent for Dubs or Beyer and Peacock.
3019. Do you know which? I think it is Beyer and Peacock.
3020. What did he tell you? He told me, in the course of conversation once at Eveleigh, that prices were so high, and they were so full-handed and busy that they could not supply engines fast enough.
3021. That, I suppose, was in relation to some order? It was in the course of a conversation that the remark was made.
3022. *Mr. Schey.*] I think that is all I desire to ask the witness, your Honor.
3023. *Mr. Eddy.*] Mr. Oakley, your memory seems to be very good when you say that 100 tons of boiler plates in store were fit for any engine, and further, that you had plates and rivets sufficient for ten engines. I therefore will ask you one or two questions. You said you were eight years in the Department? Eight years in the department, and two years of that under suspension.
3024. But you did not say so? I was legally in the department for all that.
3025. When did you enter the department? In 1886. Perhaps I may refer to a document. [*Having referred to the document.*] In October, 1886.
3026. You entered the department then? Yes.
3027. Were you not removed from the service in 1886? In 1886 I was removed by the late Commissioner for Railways.
3028. But you have just told us you entered the service in 1886? I beg your pardon I meant 1883.
3029. You were removed by the old administration in 1886? Yes; and afterwards reinstated.
3030. You were put in by political influence I believe? I was not.
3031. What date was that? I was not put in by political influence.
3032. On what date were you restored by political influence? I say there was no political influence.
3033. Will you answer my question. On what date were you restored to the service. This is your sworn evidence: "Mr. Sutherland came into office about May 1887, and in July 1887 I wrote to Mr. Sutherland petitioning for redress." In June, 1888, you were restored to the service? Yes, after two years suspension. I fought for my rights under the Civil Service Act of 1884.
3034. And the law did not give you those rights? No, it did not.
3035. You were removed by the present Railway Commissioners on what date? I cannot give you the date, I believe it was in August, 1889.
3036. You have told the Commission on several occasions that you have been out of the service for a year? Yes, I said over a year.
3037. I am putting these questions to show the value of your evidence. Now it is not a fact you were removed from the service on the 1st September, 1889, two and a half years ago? On what date.
3038. First of September, 1889? Well, it may be.
3039. In face of that you have several times stated that you have only been out of the service for a year? I said over twelve months.
3040. I should call it 2½ years? It may be as long as that, but I know I have been waiting for justice ever since.
3041. You have been waiting for justice? I believe you brought an action against the Government in the Supreme Court did you not? I did.
3042. And you got justice, but not in the way you asked for? My declaration was wrong, and that was where I lost.
3043. Therefore, instead of having been in the service for eight years, as you told the Commission, you have only been in the service about four and a quarter years? Yes, I was suspended for two years
3044. Even if you were suspended for two years that does not make it eight years in the service? I am counting my service since my reinstatement.
3045. You have been in some service recently I believe? No, I have not been in the service since you put me out.
3046. You have been in some other service recently? Yes, I was with Messrs. Gulliver and Tate for about a month; when I received notice to go from the same influences which have been at work against me for years. Your Honor, may I read this statement to the Court in reference to my reinstatement?
3047. *President.*] You had better wait until your cross-examination is completed.
3048. *Mr. Eddy.*] I believe you were also in some other employment. Were you not secretary of an

association,

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association, I scarcely know what to call it, of dismissed men from the railway service? We were trying to work up an association.
3049. You wrote circular letters to men dismissed from the service did you not, asking them to try and induce others to join the association? Yes.
3050. Will you tell me where your place of meeting is or was at the start? Has that anything to do with this case your Honor; must I answer the question.
3051. *President.*] Yes.
3052. *Witness.*] The Grange, in Newtown, was our place of meeting.
3053. *Mr. Eddy.*] That is Mr. W. Coker's place? Yes.
3054. Who is president at the present time? We have none; the association has never been formed. We have had one or two meetings, but there is no association.
3055. I suppose there were a great many people who have not the same views about the reasons they were put out of the service as you have? It is very likely there are.
3056. I do not think it worth while to ask the witness any more questions, Mr. President.
3057. *Witness.*] Your Honor, may I be permitted to read this minute as to my reinstatement in the service. Mr. Eddy has stated that I was put back in the service by political influence. This is a minute by Mr. Secretary Sutherland, who was Minister for Works. I tried for two years to get justice under the Civil Service Act; and after petitioning the Government, I received this minute from Mr. Sutherland: "Having devoted considerable thought and attention to the suspension of Mr. Oakley, I fail to see any reasonable grounds for his removal from the service; on the contrary, the work upon which he had, in the interests of the Service, been employed on having been entrusted to Mr. Mideltou's charge as a test of the accuracy of the figures of the relative estimates of two engineers holding high positions in the service, Mr. Oakley would have failed in his duty to the service had he not loyally supported his superior officer in proving the accuracy of his estimate. Having satisfactorily proved the test proof of which I have myself observed, Mr. Oakley, by his actions has shown himself worthy of his position in the service. My decision, therefore, is that he be at once reinstated in the service to the position he may have been entitled had he not been suspended, and that he be fully compensated for any loss he may have sustained during his suspension. A copy of my decision to be at once forwarded to the locomotive engineer for his guidance and Mr. Oakley's information.—(Signed) JOHN SUTHERLAND, 29/6/88." I have never got that compensation yet, your Honor.
3058. *Mr. Schey.*] I suppose that document will be made an exhibit, your Honor?
3059. *President.*] No, Mr. Schey; had I known what the witness was about to do I should not have allowed him to read the document. No witness is allowed to rehabilitate himself in this way, it is only as a matter of grace that he is allowed to make a statement of that kind.
3060. *Mr. Schey* (to Witness).] You have been asked about your period of service? Yes.
3061. Do you count in your period of service the time you were under suspension? Decidedly. I maintain that I am in the service now legally. I was wrongly dismissed in 1886.
3062. *President.*] What the Commission wish to get at, Mr. Oakley, is your knowledge of the state of things in this store. If you were elsewhere during the past two years your evidence is not of much value.
3063. *Mr. Schey.*] I am putting these questions, your Honor, because Mr. Eddy attempted to depreciate the evidence of the witness.
3064. *President.*] He simply endeavoured to show that the evidence which the witness gave on these points was not of much value. Of course, if Mr. Oakley was absent from the store during the past two years, his evidence has no value.
3065. *Mr. Schey.*] I submit, your Honor, that the way in which Mr. Oakley counts his time is the usual way. Other people count their time in exactly the same manner.
3066. *President.*] We have nothing to do with the way in which people count their time.
3067. *Mr. Schey* (to Witness).] You were restored, then, by Mr. Sutherland, whose minute says that you ought to be compensated in full for the time you were suspended? Yes.
3068. Did you ever succeed in getting that money? No.
3069. You have been asked about some association—an association which Mr. Eddy stated consisted of dismissed men; is that a correct definition? Of men who considered themselves wrongly dismissed from the service.
3070. Are they men who have been dismissed, or men who have been discharged;—is there not a great difference between dismissal and discharge? I think if a man is discharged he is dismissed. I do not see any difference.
3071. Is it not usual to say if a man is dismissed that he is dismissed for an offence, and if he is discharged his services are simply dispensed with, without implying anything? I do not see any difference.
3072. *President.*] Really this is wasting the time of the Commission. What need is there to go into such matters as these?
3073. *Mr. Schey.*] I ask Mr. Eddy to put in a list of the men he has referred to and I will undertake to show that the majority of them upon whom Mr. Eddy has cast this aspersion were not dismissed at all.
3074. *President.*] I may tell you, Mr. Schey, that we have nothing to do with this question.
3075. *Mr. Schey.*] With all respect, your Honor, I think that these men should be allowed to rehabilitate themselves. As I now propose to proceed to read further documents might I suggest that it is hardly worth while my commencing with any fresh ones to-night.
3076. *President.*] We have ten minutes yet.
3077. *Mr. Schey.*] You desire me to go on, your Honor?
3078. *President.*] I think so, unless you be good enough to put the documents in and take them as read.
3079. *Mr. Schey.*] I am afraid that would not be fair to me, your Honor. The next article I desire to read is from the *Evening News*, of 2nd May, 1888.
3080. *President.*] You quite understand that if, in the opinion of the Commission, these newspaper extracts which you have been reading do not really affect the case they will not be printed.
3081. *Mr. Schey.*] Do I understand your Honor to say that my extracts will not be printed?
3082. *President.*] Yes, if, in the opinion of the Commission, they have no bearing upon the case. If we were to print everything which has been put in we should have volumes enough to fill a library. Some discrimination must be shown in putting in these documents.
3083. *Mr. Schey.*] Permit me to point out, your Honor, that the extracts I am reading are the very basis of

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of the matter I am dealing with. I certainly do not expect your Honor to print the 493 bundles of papers which the Railway Commissioners have so far put in.

3084. *President.*] Put in at your request, Mr. Schey.

3085. *Mr. Schey.*] Yes, your Honor, at my request, certainly, because there was no other means by which I could find out what I wanted. These papers, your Honor, have not yet been made exhibits, and probably very few of them will need to be made exhibits, and therefore a very large proportion of the documents will not need to be printed in any way. But these extracts which I am reading I certainly must ask your Honor to print, because even although it has taken a considerable time to read them, the extracts will take up very little space in print. I hope your Honor will allow me to have the extracts printed which I may read to the Commission, and then I shall be satisfied to allow the great mass of the documents to remain out.

3086. *President.*] We do not decide anything at present, Mr. Schey; we merely say that the reading of these extracts before the Commission does not at all show that the Commission intend to have them printed.

3087. *Mr. Schey.*] The article I am about to read, your Honor, is, as I said just now, taken from the *Evening News* of 2nd May, 1888. It is headed "That Mysterious Stranger," and it has reference to the gentleman who was, I believe, proposed for the office of Chief Commissioner, and who, as announced by the Premier, declined to allow his name to be mentioned. Mr. Eddy has since stated that he made such a stipulation, and therefore I presume ——

3088. *President.*] I do not think Mr. Eddy said anything of the kind, Mr. Schey.

3089. *Mr. Schey.*] I think he did, your Honor. I think if you turn to the evidence you will find—

3090. *President.*] Very well, Mr. Schey; if it will enable you to go on, you may take it that Mr. Eddy did say so.

3091. *Mr. Schey.*] I will undertake to show your Honor that Mr. Eddy did make the statement.

3092. *Mr. Eddy.*] What is the date of the article?

3093. *Mr. Schey.*] 2nd May, 1888.

3094. *Mr. Eddy.*] As a matter of fact, Mr. President, I knew nothing about my appointment on that date, and therefore I could not be the mysterious stranger referred to. I think the letters before the Commission will bear me out in what I say.

3095. *Mr. Schey.*] Your Honor will recollect from extracts I have read that prior to the date of this article Sir Henry Parkes had spoken of a gentleman in England whom it was proposed to appoint, but who they did not know whether he would accept the appointment. That shows, your Honor, that Sir Henry Parkes knew of the gentleman in England some days before Mr. Eddy had any knowledge of the matter at all. I draw your Honor's attention to the serious discrepancy between the two statements.

3096. *President.*] It also appears from the documents, Mr. Schey, that communications were made with other persons besides Mr. Eddy as to this appointment; and in all probability, so far as I can gather from the documents, before the appointment was offered to Mr. Eddy.

3097. *Mr. Schey.*] The only part of this article which I desire to read is this, your Honor:—"Sir Henry Parkes asserted last night that he never said or did anything which could have been construed into an intention on the part of the Government to appoint Mr. Goodchap, but it is very remarkable that the Press, Parliament, and the public should have come to such a conclusion without any just cause. As regards the coming man, it is perhaps too late to prevent his appointment. The Premier is in such a hurry to get the bill through and have it in his power to supersede Mr. Goodchap, that he has consented to an amendment made in the bill by the Council which he declared last week would be a great injustice to the public, and one which the Assembly should, therefore, not sanction. Last night he told the House it was a matter of no consequence, as, if any great abuse arose through the amendment being accepted, it could be rectified by another Act of Parliament." That is a very significant remark, your Honor, in view of the fact that another Act of Parliament amending the original Act in that respect has since been passed.—"There will, no doubt, be another political game of follow my leader this evening; and if the Council's amendment is accepted, the bill will practically have passed Parliament; and even before it receives the Royal assent the appointment of the 'mysterious stranger' in England may be ratified. It is a most remarkable thing that the Agent-General could only discover one capable man, and it is equally strange that his name must be kept a secret. We have it on good authority that no railway manager in England who has any position would come out to the Colony under the provisions of the bill which are so radically different to those of the Victorian Act, under which Mr. Speight accepted his appointment. * * * The facts that, under the Railway Bill of Sir Henry Parkes, the Commissioner will have to play subordinate parts in this respect is quite sufficient to prevent any man of good standing accepting the office which is to be offered to Sir Saul Samuel's mysterious candidate. Reference was made by one speaker last night to the probability of getting a man like Mr. Speight, but we venture to say that if Mr. Speight was offered £10,000 a year he would not take charge of our railways under the provisions of the Railway Act. The experiment of importing special railway talent from England has been tried already, but the lamentable failure which resulted does not appear to have acted as a caution to Sir Henry Parkes, although he played a conspicuous part in getting rid of the gentleman who was brought out to put everything right in the locomotive branch of the service. Mr. Burnett was imported in 1878, as Locomotive Engineer, and as was pointed out last night by Mr. Sydney Smith, after a trial of nearly four years he had to resign. With respect to his case Sir Henry Parkes, who was then Colonial Secretary, wrote the following minute: 'The question for the Government to decide is whether Mr. Burnett's retention in his office will be beneficial and not prejudicial to the working of the branch of the Railway Department over which he has been placed. It is clear to me that he has evinced qualities which, in a large measure, unfit him for the management of the class of men who have been under him, and in dealing with whom tact, consideration, and a conciliatory manner are important. I am of opinion that this inquiry clearly shows that it is not for the public interest that Mr. Burnett should be continued in his present office.' This professional importation having proved such a failure, how does Sir Henry Parkes know that the mysterious stranger, who is secreted in London, will be more successful? Mr. Burnett was recommended by a near relative of Mr. Whitton's, and it might be worth while to ascertain whether the same agency is at work in favour of the great unknown who is to be made Chief Commissioner. Concerning Mr. Burnett, Mr. Lackey, then Secretary for Public Works, wrote as follows: 'The Secretary for Public Works having perused the paper containing Mr. Burnett's defence and the minutes thereon of the Commissioner for Railways, regrets to have to state that

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that he can arrive at no other conclusion than that it would be most prejudicial to the interests of the Department if Mr. Burnett should continue to fill the office of Locomotive Engineer.' In this case the Colonial Secretary and the Minister for Works were perfectly agreed, and it would be interesting to know whether the same concurrence of opinion exists between Sir Henry Parkes and Mr. Sutherland with respect to risking another importation rather than appoint Mr. Goodchap Chief Commissioner."

[*Document put in.*]

FRIDAY, 20 MAY, 1892.

[*The Commission met at 11 a.m., in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

3098. *Mr. Schey.*] Your Honor, I beg to hand up an application for some information which I require from the Railway Commissioners.

3099. *Mr. Eddy.*] (*After reading the application*): We will try and get this information, as far as possible.

3100. *Mr. Schey.*] Do I understand the Chief Commissioner to promise that the information shall be furnished?

3101. *President.*] Yes, so far as he can.

3102. *Mr. Schey.*] Now, your Honor, concerning the question of stock-taking, about which there was some difference of opinion yesterday afternoon, I desire to put in a document. It is headed, "Audit of Railway Store Accounts and Stock-taking."

3103. *President.*] What is the date of it?

3104. *Mr. Schey.*] The first item is dated 19th April, 1888, a short time prior to the present Commissioners taking office—I believe they entered office in October following. The first document is from the Auditor-General to the Under Secretary for Public Works, and it is dated 19th July, 1888. I do not intend to read the whole of this document, your Honor, only some portions of it; but I put the whole of it in. The Auditor-General writes:—"Sir,—In view of the approaching change in the administration of the Railway Department, I assume that an official inventory of all railway properties will be made before handing over to the new Board; and with reference to that portion of the stock and plant represented by unissued stores in charge of the Railway Stores Department, I have the honour now to propose, for the favourable consideration of the Secretary for Public Works, that the details of such may be concurrently taken by officers of the railway and of the Railway Audit Branch of this Department." I may say, for the information of the Commission, that there are certain officers belonging to the Auditor-General's Department whose special duty it is to audit the railway accounts. "I am led to make this suggestion because hitherto no verification of the railway store advance account has been carried out by me by the light which would be afforded by an actual stock-taking of the stores held by the Railway Department, at any given date; and a reliable record, such as I now propose, appears not only necessary, on the grounds first alluded to, but would form a basis for any future check which might be decided upon over the operations of this large and growing account, and which, in the public interests, appears very desirable. I shall be glad to be informed, at an early date, whether the Secretary for Public Works approves or otherwise of the proposal now submitted, so that the requisite arrangements may be made in due time.—I have, &c., EDWARD A. RENNIE, Auditor-General. Railways for report, 20/7/88." Then follows a minute by the then Commissioner for Railways, Mr. Goodchap, in which he submits this letter of the Auditor-General for the Minister's consideration, and "Proposing that his officers, concurrently with the railway officers, should undertake the duty of taking the stock account of the railway stores." Then follow certain comments by Mr. Goodchap on the matter—he says, "It happens, however, that I have anticipated the Auditor-General's action. Being fully alive to the special importance of an independent stock-taking of the stores on the present occasion, when the transfer of the administration from the old to the new management is to be effected, I some time ago submitted to the Minister a minute, of which the following is a copy—'There is about £600,000 worth of railway stock on hand. I should prefer that the stock-taking should be deferred till the new administration is appointed, and that some person, mutually agreed upon as between myself and the new administration should be appointed to check the stock, and to see that it corresponds with the stock ledger.'" This was written by Mr. Goodchap, 6/8/88. Next is a minute by Mr. Secretary Sutherland, in which he says "I must adhere to the decision which I have given, that some person mutually agreed upon between the Commissioner and the new administration shall be appointed to take the stock, and see that it corresponds with the stock ledger." A minute as to the railway store system from Mr. Goodchap is appended, as also the certificate from Mr. W. M. Jackson, who had been appointed by the previous administration to go into this work, in which he comments upon the manner in which some of the ledgers have been kept, and the different means he had adopted to ascertain that everything was accurately marked, checked, and issued; in fact, he certifies generally to the correctness and accuracy of the stock on hand at that date, and which is represented to be worth £600,000. I put in the document. [*Document put in.*] The next document is a copy of the "Votes and Proceedings" of the Legislative Assembly, No. 15, dated Tuesday, 25th October, 1887. The portion for record is a notice of motion given in the Assembly for Tuesday, 22nd November. "Mr. Cameron to move,—(1.) That, in the opinion of this House, the amount paid to Sir John Fowler, C.E., as examiner of rolling-stock, &c., is altogether out of proportion to the services rendered by that gentleman, and immediate steps should be take to ascertain whether the same work cannot be carried out by some equally competent person at a smaller charge to the Colony. (2.) That the above resolution be communicated by address to His Excellency the Governor." I have taken the trouble to find out from the records of Parliament what was done with that motion, and the Parliamentary Librarian has marked on the foot of the paper that the motion was formally postponed on two occasions subsequent to November 22nd, and then withdrawn without debate on 13th November, 1887. I suppose it was withdrawn, your Honor, because that would be about the end of the Session, and at that period a whole lot of these notices are withdrawn or otherwise disposed of: [*Document put in.*] The next, your Honor, is a leading article from the *Daily Telegraph*. 3105.

3105. *President.*] We cannot allow any more of these articles to be read, Mr. Schey. You can put them in, and the Commission will read them. But we cannot have any more time wasted in reading these extracts. You must simply put them in.
3106. *Mr. Schey.*] I beg to point out, first of all, your Honor, that these articles—there are only two of them, forming the remainder of the articles which I wish to put in—are exactly pertinent to the points I am raising. I have to submit to your Honor, as Mr. Thow declared in the witness-box that he was giving his evidence to the people of the country, so I declare that I am giving my evidence to the people of this country; and it is absolutely necessary to me that these leading articles should be read, so that the people of this country, through the reports of the proceedings of this Commission, may see what it is I am producing, and thus be able to form their own opinion as to whether or not I was justified in doing what I have done. If I am prevented from reading these articles, your Honor, I am prevented from conducting my case, and I am prevented from doing, therefore, what the Government of this country assured I should have full opportunity to do. I beg to point out, your Honor, that the promise made to me by the Government of this country, before this Commission was appointed, contains many things which up to the present I have not had. And if this is done now—if I am prevented from reading these articles—it is impossible for me to conduct this business, and it is impossible for me to carry out the duties placed upon me by the Government. I submit, your Honor, that there are only two articles now, and probably two or three small extracts, which I require to put in, and under these circumstances I submit that I ought to be permitted to read them.
3107. *Mr. Young.*] But what have we to do with the political views of these newspapers, Mr. Schey?
3108. *Mr. Schey.*] I may say, sir, that these are not the political views of a paper. These articles comment on the amounts of money which have been paid to Sir John Fowler, and that, I submit, has a direct bearing upon the matter now before the Commission.
3109. *Mr. Young.*] But they are written from a political point of view.
3110. *Mr. Schey.*] No; I think not. I do not think the articles contain anything which can be called political, but merely draw attention to the enormous sums of money which have been paid to Sir John Fowler, and to the fact that if the people of the country understood what Sir John Fowler was being paid they would never submit to it at all.
3111. *Mr. Young.*] Those are the opinions they may hold, but there is no proof about it.
3112. *Mr. Schey.*] No, but it is proof to me of certain things, and I have to show to the Commission what ground I was going upon when I did what I have done. These articles contain a variety of figures which are taken from public documents, and cannot therefore be held to be opinions—they are facts.
3113. *President.*] But these facts are not proved by putting in a leading article. If you want to prove facts, you can prove them in the ordinary way. A leading article referring to facts does not prove them.
3114. *Mr. Kethel.*] If I mistake not, Mr. Schey has already put in a paper containing the figures quoted in one of the leading articles. If I remember correctly, in one of the returns handed in, and a portion of which was read—I believe it was a Parliamentary return to the order of Mr. Cameron—appear these figures as to the sums paid to Sir John Fowler, and that document forms one of the exhibits before us.
3115. *Mr. Schey.*] Undoubtedly it contains some of the figures, but I will not undertake to say at present that it contains all of them.
3116. *Mr. Kethel.*] What is the date of that article?
3117. *Mr. Schey.*] Twenty-sixth April, 1887.
3118. *Mr. Kethel.*] That was upwards of a year before Mr. Eddy's appointment.
3119. *Mr. Schey.*] Yes.
3120. *Mr. Kethel.*] Can you connect it with Mr. Eddy's appointment in any way?
3121. *Mr. Schey.*] I do not propose to connect it in any way with Mr. Eddy's appointment, except in the same way that I have read a number of other extracts, extending from 1863 and 1864 up to the present time, and which help to make up, in my mind, the evidence of certain coincidences which are required to be shown; and I submit that it is an essential part of my business to show these coincidences, and I have to show something more than that. I have to show also that I have had just ground for coming to those conclusions.
3122. *Mr. Young.*] But there is no proof. They are all insinuations. We want proof.
3123. *Mr. Schey.*] Proof of what?
3124. *Mr. Young.*] Proof of anything you did.
3125. *Mr. Schey.*] Quite so.
3126. *Mr. Young.*] But these are not proofs.
3127. *Mr. Schey.*] But with all respect I think they are proofs.
3128. *Mr. Young.*] I think it is a waste of time to read these newspaper articles.
3129. *Mr. Schey.*] I submit, with very great respect, that that is a matter of opinion.
3130. *President.*] Yes; but the opinion which is to rule in this matter is the opinion of the Commissioners.
3131. *Mr. Schey.*] Undoubtedly.
3132. *President.*] And when they have delivered their opinion there is an end of the matter.
3133. *Mr. Schey.*] Undoubtedly. Then I understand your Honor rules that I must not quote any more extracts.
3134. *President.*] I do so; and I do so as the spokesman of the Commission only. It is the unanimous view of the Commission that the time of the Commission has been wasted by the reading of these extracts, and we will not allow any more extracts to be read. You may put the extracts in, Mr. Schey, and the Commissioners, of course, will refer to them and look at them, and give them all the weight they deserve, but they will not have the time of the Commission wasted by allowing you to read these extracts. I wish also to say, and I think it right I should point out, that you are giving your evidence here to the Commission and not to the country. The only evidence you have to bring before us is evidence which will have weight with the Commission, and that evidence, when the Commission send in their report, will be published with their report, and any member of the public who wants to refer to that evidence can refer to it in the appendix of the report. But to read aloud now for the benefit of the audience which may happen to assemble in this room, while the Commission is sitting, is a matter we cannot allow for one moment. The whole of your remarks and the whole of your evidence must be addressed to the Commission, and to the Commission only.

3135. *Mr. Schey.*] Your Honor, I regret very much that you did not address the same remarks to another witness who was opposed to me, who made a similar remark when he was giving his evidence.
3136. *President.*] I cannot stop every idle word that may drop from the mouth of a witness. If you had made any objection to the remark of the witness at the time, the Commission would have paid attention to it.
3137. *Mr. Schey.*] I did raise an objection there and then, your Honor. The minutes of the evidence of that day will disclose that I drew your Honor's attention to the remark made by the witness, together with the fact that I made a strong objection at the very moment to it.
3138. *President.*] Very well; it will appear in the shorthand writer's notes of the proceedings.
3139. *Mr. Schey.*] Just so, your Honor; but the objection was allowed to pass, and now I am rebuked for doing the same thing.
3140. *Mr. Young.*] You cannot complain at all, Mr. Schey. You have had the greatest possible latitude.
3141. *Mr. Schey.*] That I submit again, sir, is a matter of opinion. As a matter of fact, the Government of this country promised me a great deal that this Commission has not given me. Of course it is not for me to talk to the Commission, but it is certainly for me to claim that the promise made to me by the Government should be fulfilled. I may say that one of the reasons which was uttered in support of an inquiry of this particular form, as opposed to the form of inquiry I demanded, was that every thing which could be got there would be got here; and I certainly say most distinctly and emphatically that I have not received what the Government promised I should receive when this matter was brought up in Parliament. In the next place, with regard to your Honor's remarks as to putting the articles in, your Honor says the Commission will read them, and if any one else wants to see them they can see them in the appendix to the report. But your Honor told me yesterday that these articles would not be printed as an appendix to the report.
3142. *President.*] What I said was that any articles you put in might appear in the appendix.
3143. *Mr. Schey.*] Quite so, your Honor, but you told me that these were not evidence.
3144. *President.*] If any documents are put in which are not evidence they will not be put in the appendix to the report, and neither the Commission nor the public have any interest in them whatsoever. However, we have not to consider the public in this case. It is simply a question for the Commission.
3145. *Mr. Schey.*] Well, I simply raise the point.
3146. *President.*] Really, we cannot allow this matter to go on any further, Mr. Schey. We have given our ruling and there is an end of it.
3147. *Mr. Schey.*] All I can do is to utter a protest against the way in which I am being dealt with before this Commission. I say most emphatically I am not being treated in the way I should be treated. I say further, I do not consider I am receiving fair play from the Commission. I do not consider that I am getting an opportunity to carry out the duties which have been laid upon me. Of course, I know that your Honor and your colleagues will rule in this matter, but at the same time it remains for me to utter my protest; I can do no more.
3148. *Mr. Young.*] There is no wish on the part of the Commissioners to keep out one iota of evidence which has any bearing upon the charges before us; but if you wander away amongst newspapers published all over the country, and read extracts from the writings of irresponsible people, that has nothing whatever to do with this case.
3149. *Mr. Schey.*] Will you allow me to say in answer to that, that I raised this point when the matter came before Parliament, and I also stated it in the correspondence which has already been put in evidence. I stated there, as one of my objections to this method of inquiry, that many things which I might deem to be evidence would be shut out because the law of evidence would be applied, a Judge being President of the Commission, instead of giving me an opportunity of producing what I thought right. But the Government of the country assured me that the Law of Evidence would not be put in force, and I say with all due respect, that the amount of latitude allowed to me is a matter of opinion. I certainly do not consider that I am being treated as I should be. As to the intentions of the Commission, that intention is privy to the Commission itself. I cannot have anything to say as to the intention of the Commission. I can only speak as to my opinion of the action of the Commission. That I think I am entitled to do.
3150. *Mr. Kethel.*] You may recollect Mr. Schey, that when you commenced to read these newspaper extracts, the President asked you your reasons for reading them, and you requested permission to put them in, in order to justify your actions in doing as you have done in making these charges, and to satisfy the Commission of what was in your mind at the time. It was pointed out to you that they were not pertinent to the case, that they were not evidence in the case, but the Commission agreed to allow you to read and put in a number of extracts from various sources of the public Press, to justify yourself, and to show what was in your mind at the time you made your speech in Parliament. I think, if I mistake not, it was impressed upon you more than once by the President, that these extracts were not evidence; but we said that whatever items or portions of them might be considered evidence, the Commission afterwards would accept as evidence and discard the remainder.
3151. *Mr. Schey.*] There is no doubt that such an intimation was made to me. But at the same time, I am perfectly within my right in joining issue with the Commission on that point. His Honor may declare that such a thing is not evidence, and I am quite willing to admit that his Honor's opinion as to what is legal evidence is so far above my judgment that I cannot attempt to dispute his ruling.
3152. *President.*] If I had ruled according to the strict law of evidence, Mr. Schey—the law which obtains in an action in the Supreme Court—I suppose that fully 90 per cent. of the evidence which has been given in the case up to the present would be wholly and utterly excluded. It is because I have waived the strict application of the rules of evidence, and allowed you to wander into matters outside the inquiry that the Commission have to make, that this mass of evidence has been given, and there must be an end of it. We cannot sit here for ever listening to statements which, when we come to consider these charges, we shall have to set aside as wholly irrelevant, and having no bearing whatever upon the matter which we have to report to his Excellency the Governor upon.
3153. *Mr. Schey.*] Of course, I can only bow to your Honor's decision, and again express regret that I should have to do a thing which is generally considered to be ungraceful, and that is to complain of the action of those who are dealing with me at the present time.
3154. *President.*] We do not mind that.

3155.

3155. *Mr. Schey.*] Then I am to understand I am not to read these articles?
3156. *President.*] Certainly.
3157. *Mr. Schey.*] But that I am to be allowed to put them in, and that they will be read by the Commission?
3158. *President.*] Certainly.
3159. *Mr. Schey.*] And that they will be printed with the Appendix to the report?
3160. *President.*] I did not say that, Mr. Schey.
3161. *Mr. Schey.*] But I ask your Honor to say so.
3162. *President.*] I do not say so. I have said half-a-dozen times at least, that if there is anything in these extracts from the newspapers which the Commission consider evidence of anything, that portion will undoubtedly appear in the Appendix to the report, but nothing further than that.
3163. *Mr. Schey.*] But have I not the right to present my case in my own way?
3164. *President.*] Before the Commission you have, and we allow you to do so.
3165. *Mr. Schey.*] But you have prevented me from doing so, your Honor.
3166. *President.*] On the contrary, we think we are giving you every opportunity.
3167. *Mr. Schey.*] I have said before, your Honor, that these extracts are part of my case, and if I am not permitted to produce them, I am not allowed to make my case.
3168. *President.*] You are permitted to produce them. We have stated that over and over again. You are allowed to produce them, and we say the Commission will read them and consider them. But further than that the Commission will not go.
3169. *Mr. Schey.*] That is only the legal production in the Court, your Honor. But I want to produce them in such a way that they shall be seen hereafter. I do not desire to produce these documents for the private inspection of the Commission. I desire to produce them so that the Parliament and the people of this country, to whom I have to answer for my actions, may see what was operating in my mind when I brought these matters forward as a member of the Legislative Assembly. If you neither permit me to read them, nor allow them to be printed in the Appendix to the report, but only to allow them to be put in for the private perusal of the Commission, then what the Government promised me is denied me, for I was assured that I should have every opportunity to produce every shred of evidence that I had in my possession.
3170. *President.*] I must assume, Mr. Schey, that you are not listening to the remarks that fall from the Commission, because time after time the Commission having made a statement you say that they have not made the statement. What I stated was, and I now repeat it, that you are allowed to put these papers before the Commission, and that the Commission will consider them; and if the Commission considers that they are evidence of anything, they will appear in the Appendix to the report. The Commission decline to state now whether they will publish the whole or any part of them.
3171. *Mr. Schey.*] Very well, your Honor. I now desire to put in a leading article of the *Daily Telegraph*, dated Tuesday, 26th April, 1887, and headed "Mr. John Fowler's Fees." I presume, your Honor, as I am not allowed to read the article, I may state the deduction which I draw from it, and make a comment upon the figures.
3172. *President.*] It entirely depends upon what the comment is.
3173. *Mr. Schey.*] Very well, your Honor. I desire to point out that Sir John Fowler in many years had drawn a salary amounting approximately to £7,000 a year, and I desire to point out to the Commission that this salary is more than twice that of the Chief Justice; is several times that of the Premier; is many times that of the highest functionary of the civil service; and is in excess of what has been granted for many years to His Excellency the Governor; and therefore the amount of money which has been paid by this country to Sir John Fowler for a number of years is such as would not for one moment have been passed by the Parliament of this country, or the people of this country, had they possessed a knowledge of what was going on; but not having that knowledge they have been unable to deal with the matter. That these payments being made up of commissions were not placed before Parliament (a list of some of the commissions has already been laid before your Honor), and that in some cases these commissions will amount to something like £80 upon every engine that is brought out here.
3174. *Mr. Young.*] Is not that rather a matter to bring before Parliament than before this Commission?
3175. *Mr. Schey.*] Well, that also is a matter of opinion. Certainly it is a matter which undoubtedly concerns the Parliament of the country; but I certainly think that it intimately concerns this Commission also. I am called upon to justify the strictures which I have passed upon those who ——
3176. *President.*] The only strictures you are called upon to justify is in having mentioned that certain persons form part of the "ring" or combination referred to in this charge.
3177. *Mr. Schey.*] Which your Honor compelled me to name.
3178. *President.*] Most undoubtedly.
3179. *Mr. Schey.*] Very well, your Honor. I did not desire to put it in that way, but your Honor compelled me to do it. I have always contended that I am merely giving a relation of facts as they appeared to my mind at the time, and upon which certain deductions were formed. It is in this connection that I am dealing with the matter as I am now doing.
3180. *Mr. Eddy.*] Mr. President, I would respectfully call your attention to the fact that we have been here now for nearly a fortnight, and that the charge before you is that I, without calling for tenders and without any necessity, placed orders for £500,000 worth of material with certain specially favoured firms in England. I may say that I have not seen ten minutes profitably employed in connection with proving that charge since the Commission began. Mr. Schey has gone into outside questions as to Mr. John Fowler and his commission on the purchase of rolling stock, without any facts being given to you or any particulars as to the number of inspectors which Sir John Fowler is obliged to employ. And as it is of the utmost concern to the country that I should be relieved from this daily attendance here, I must respectfully ask that some steps should be taken to curtail Mr. Schey's absolute burlesque of the proceedings of this Court.
3181. *President.*] No one can be more anxious than the Commission themselves are that this matter should be expedited, and I think Mr. Eddy you will acquit the Commission of any blame in the matter.
3182. *Mr. Eddy.*] Most undoubtedly.
3183. *President.*] The Commission have made every effort that could have been made so far to try and keep the evidence to the point, but, unfortunately, it is like the point which is supposed to exist in mathematics—it is a "vanishing" point.

3184. *Mr. Schey.*] I now put in the leading article of the *Daily Telegraph* of the date named. [*Document put in.*] The next is a leading article from the *Daily Telegraph*, dated Monday, 2nd May, 1887, and is headed "The Sir John Fowler Affair," and is a continuation of the last article that I have put in. I lay considerable stress, your Honor, upon this article as being a very important one, because it points out that it has been asserted in the past that this matter of Sir John Fowler's fees—on the large amounts, of which great stress has been laid—is the "ignoble product of departmental nepotism." The *Telegraph* does not say it is. But between that and the innocent nature which some people assume these transactions to have, there is a wide scope between the two extremes, in which the truth must be; and, therefore, it is hoped that the truth may be extracted in relation to this matter—a hope in which I venture, your Honor, to join. I now desire to put in extracts from the *Daily Telegraph*, 17th May, 1886, 14th December, 1887, 11th September, 1890, and 17th April, 1891. In the first it is pointed out that Sir John Fowler was in this Colony some years ago, and that while he was here—I may say that the person quoted is Sir Henry Parkes—out of mere love for his profession, he caused surveys and examinations to be made, and promised Sir Henry Parkes to send him full sections and plans, and everything that was necessary to build the famous North Shore bridge, a previous scheme for which had fallen through some years before. The next extract goes to show the opinion of the St. Leonards Council in connection with the matter. The next shows that Mr. Bruce Smith, at that time Minister for Works, laid on the Table of the House papers with regard to the matter; and the next, another quotation from Sir Henry Parkes, in which, in answer to a question, he states that some years ago he had had plans prepared by Sir John Fowler for the North Shore bridge, and that he had paid for the work out of his own pocket. Your Honor can contrast the statements made in the different portions of the extracts to which I refer. Your Honor is no doubt tolerably well acquainted with the characters of the public men in this Colony, and you will be able to appreciate which story is the more likely to be the correct one. The next document I desire to put in is a set of Parliamentary papers called for by Mr. Abbott, and ordered by the Legislative Assembly to be printed on the 27th April, 1887. The title of the paper is, "Railway Bridge over the Hawkesbury River—Tenders, reports, plans, &c." The particular point I wish to make in introducing these documents is that the estimate of Mr. Whitton, who prepared the estimates of the cost of the bridge, was £600,000, and it has been stated that a previous estimate by the same gentleman was £750,000. I think I am correct in stating that Mr. Dibbs intervened in the matter, resulting in tenders being called all over the world, and the price of the bridge when constructed was something like £320,000, thus effecting a saving on the estimate of Mr. Whitton of something between £200,000 and £300,000. Your Honor will not permit me to go fully into the matter, therefore, I am compelled to put it in this way. And if any portion of my statement, made in this way, turns out to be incorrect, the responsibility must rest upon the Commission and not upon myself, as the Commission will not permit me to go fully into the matter.

3185. *Mr. Eddy.*] I would like to make a remark upon that. The whole of the statements which are now being put forward are totally irrelevant to the present inquiry, and I do not propose to call any evidence to refute statements of that character.

3186. *President.*] Of course not, Mr. Eddy. You might just as well produce evidence as to who obtained the contract for the construction of Callan Park Asylum.

3187. *Mr. Schey.*] Your Honor will permit me to say that I fully appreciate the delicacy of your Honor's remark. The next extract which I propose to draw your attention to is from the *Sydney Morning Herald* of December 3, 1890, and headed "The Whitton Pension." The next is a leading article from the *Evening News* of December 2, 1890, headed "The Whitton Pension Job," which draws attention to the extraordinary attitude of Sir Henry Perkes in trying to procure for Mr. Whitton £1,800 a year, a larger pension than was ever granted to any similar officer before in this country, and gives the reasons which seem to the writer to account for the action which he there adopted. At this stage, your Honor, I would like to remind you that I asked this morning for the attendance of the editor of the *Daily Telegraph*. At that time I did not anticipate that I should require that gentleman so soon, but I find now that the consecutiveness of my statement may be interfered with unless I can secure his attendance now.

3188. *President.*] [*After consulting with the Secretary*]. We understand that the gentleman who has been asked to attend will not be in his office until half-past 3 this afternoon. It is, therefore, quite impossible for him to come before that time. The notice should have been given yesterday evening; but it was only to-day, at 11 o'clock, that application was made for his attendance.

3189. *Mr. Schey.*] I would like to ask your Honor whether those figures which were to be produced by the Railway Commissioners are yet to hand.

3190 *President.*] Yes, Mr. Schey, I believe the information that you ask for has been furnished by the Railway Commissioners.

3191. *Mr. Schey.*] Very well, I will now call Mr. Midelton to give evidence.

Mr. T. Midelton called and further examined:—

Mr. T. Midelton. 20 May, 1892.

3192. *President.*] You are sworn, Mr. Midelton? Yes, your Honor.

3193. *Mr. Schey.*] I think on your previous examination we got from you, Mr. Midelton, the particulars of your career in the Railway Department—at all events, up to late dates? Yes.

3194. I do not remember the precise period at which your examination stopped. However, I believe not very long prior to your leaving the Service—or, I should say, prior to the change of administration—you recommended that certain locomotive engines should be procured, did you not? I recommended that certain locomotives should be manufactured in the Eveleigh workshops—that was to the late administration.

3195. As a matter of fact, were not ten locomotives ordered on your recommendation from Messrs. Dübs & Co., of Glasgow? Yes. That was because the proposal to manufacture engines at the Eveleigh shops was frustrated, and we had to go to manufacturers in consequence.

3196. To make that intelligible, I believe there had been a plan for making fifty locomotive engines of two different sorts by manufacturers in the Colony? Yes.

3197. And that, for some reason or other, it had fallen through? Yes.

3198. And after that a plan was got out for making the same class of engine at Eveleigh, was it not? Yes.

3199. That was at the Government workshops? Yes.

3200. Of which you were at that time in charge? Yes.

Mr. T. Midelton. 20 May, 1892.

3201. And did you get out, or cause to be got out by the officers under your charge, plans and specifications, and everything necessary for the building of these engines? Yes.
3202. I shall return to that point later on. Now, in relation to these ten engines that were procured from Messrs. Dübs & Co., of Glasgow, were tenders called for the construction of those engines? Yes.
3203. Do you know whether the tenders were advertised? Yes; I believe they were advertised in the usual way in England and America, and if I remember correctly there were about ten or a dozen tenders received.
3204. That is for the ten engines? Yes.
3205. And did any American companies make any offer in relation to the matter? I really forget. I think the Baldwin Company did.
3206. What I want to ascertain is were tenders called for these ten engines? Yes.
3207. Now, can you tell me roughly how many firms there are in England that manufacture locomotives—I do not mean little shops, but well-known firms of locomotive manufacturers? Yes; I think I can give you the names of several. There are Dübs & Co.; Sharp, Stewart, & Co., of Glasgow; and Neilson, of Glasgow; John Fowler & Co., of Leeds; Hunslet Engine Co., of Leeds; Kittson & Co., of Leeds; the Yorkshire Engine Company, of Sheffield; Beyer and Peacock, of Manchester.
3208. The Vulcan Company? Yes; the Vulcan Foundry Company, of Warrington; and the Avonside at Bristol; Stephenson & Co., of Newcastle; Black and Hawthorn, of Newcastle, and several others.
3209. As a matter of fact, you consider that no five firms which could be selected would comprise all the responsible locomotive builders in Great Britain? I do not quite understand the question.
3210. Do you consider that any five firms that might be selected from the manufacturers of Great Britain would comprise the whole of the responsible locomotive builders in that country? No; I think there are more than five that I should care to entrust orders to. Those I have named forinstance. I should not hesitate to entrust orders to the Hunslet Engine Co. I had some engines made by that company for Tasmania—they were remarkably good engines; as good as I have seen from any other manufacturer.
3211. Equal to anything you have seen, in fact? Yes.
3212. Then if it had been said that there are only a few locomotive builders in Great Britain of a responsible character, or that any five firms would comprise the whole of those responsible firms, you do not think that would be correct? I do not think the other firms would consider that a compliment, anyhow.
3213. I do not suppose they would;—but I am asking you if that would be correct? No; I think it might be extended to more than five certainly.
3214. Now, for instance, take these firms: Beyer, Peacock & Co, Neilson & Co., Dübs & Co., Sharp, Stewart & Co., and Kitson & Co.—are there not what you would call good manufacturing firms outside those five? Yes; Robert Stephenson & Son, of Newcastle, I should call a responsible firm.
3215. Any others? Yes; John Fowler & Co., of Leeds, are a responsible firm too. They have made engines for the main lines of England.
3216. Then if it has been said that, outside these five firms I have mentioned to you, all other firms in Great Britain are small, and not to be considered in these matters, you do not think that is correct? I should say that. I do not think it is a fair statement of the case.
3217. Do you know whether it was usual in obtaining tenders during the time you were in the Department for Sharp, Stewart & Co., to give a price? They gave a price for forty-four engines that we advertised for in 1887. There was a tender by Sharp, Stewart, & Co. for those engines.
3218. And did they ever give prices for others in the past? I think so; but I cannot say for a certainty unless I look at the papers on the subject.
3219. Did Kittson & Co. give a price for the forty-four engines? Yes.
3220. They gave a price also? Yes; you will find it in the printed papers.
3221. Now, are there not other firms which make similar engines to the Baldwin engines? In America you mean?
3222. In America? Certainly, there are several others.
3223. That is to say that if any person wanted engines of a similar design to the Baldwin engines they might be able to get them without applying to the Baldwin Company? Yes.
3224. *Mr. Eddy.*] I think you have already ruled, Mr. President, that this Commission has nothing to do with the engines made in America. The charge is that I placed orders to the extent of £500,000 for locomotives in England.
3225. *President.*] The only way in which it can possibly be made evidence, and the reason why we have not objected to it, so far, is that it may possibly show what was the course of practice here. Although that practice might obtain in reference to American engines, it might at the same time show what was the course of practice in calling for tenders.
3226. *Mr. Schey.*] I am very sorry that Mr. Eddy should object, your Honor, especially considering the fact that the Secretary for the Railways in the Commissioners employment gave his evidence on page 49 of the proceedings on the 9th of this month. I certainly think, as the Secretary for Railways has already dealt with this matter, I should have the right to ask a question upon it. But I have noted your Honor's decision, and will proceed. [*Examination continued.*] Now, Mr. Midelton, as to the motors on the tramline, you were for some years in charge of the tramways, I believe? Yes.
3227. And you know intimately all the engines that are on the tramway? I do.
3228. Is it not a fact that all the motors on the tramways, with the exception of twelve from Vale & Co., recently purchased, are Baldwin motors? Practically they are; but there are four or five others from other makers—English makers.
3229. Then they are not all Baldwin engines? No.
3230. If anyone has said so, then they have made a mistake? Certainly.
3231. Now, have you any knowledge of the proportions of locomotives to miles of railway on different railways? Yes.
3232. Can you give me any information on that point? Yes. I have the figures here. They give the proportion per 100 miles, as follows:—England, 80 locomotives per 100 miles of road; Belgium, 80; Germany, 53; France, 47; Russia, 40; Austria, 32; Italy, 30; India, 24; United States, 19; New South Wales, 21·9.
3233. Are there any more? No; those are all I have.

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3234. What do you say is the proportion for this Colony? The proportion for this Colony is 21·9 per 100 miles—that is from the last number of engines given, namely, 481.
3235. That is the number mentioned in the last report of the Commissioners, is it? No; I think it is the number mentioned by the Chief Commissioner in his report yesterday to the Royal Commission.
3236. I see, and that gives a proportion of 21·9? Yes.
3237. Now, can you give me the proportion of locomotives to miles of railway in Victoria? No. I think they are slightly under us. But I have not the Victorian statistics by me.
3238. Can you procure them? Yes, I can get the Victorian report.
3239. Will you do so? I will try.
3240. Within two or three days? I do not think I can get the Victorian report within two or three days, as I shall have to write to the Department for it.
3241. However, you will try? Yes.
3242. Now, Mr. Midelton, do you know of any railway in the world which has twenty times as many locomotives as we have—that is twenty times as many engines per mile or per 100 miles of railway as we have in New South Wales? No; I think the London and North Western is about one engine and a half per mile, or something like that.
3243. *Mr. Young.*] That would be 150 engines per 100 miles?
3244. *Witness.*] Yes. I have the figures here and can give you the exact proportion. It is 1·15 per mile.
3245. *Mr. Young.*] That would be 115 to the 100 miles?
3246. *Witness.*] Yes.
3247. *Mr. Schey.*] Now do you know of any railway which has twenty times the number of locomotives per 100 miles that there are in New South Wales? No.
3248. You have given the proportion of locomotives to 100 miles of railway in New South Wales? Yes, 21·9.
3249. And twenty times that would be over 400 locomotives for 100 miles? Yes.
3250. Do you know of any railway that has that number of locomotives per 100 miles of rail? No.
3251. Did you ever hear of one? No.
3252. Did you ever hear of any one approaching that? No.
3253. What is the highest figure you have got over any line? The highest figure I have given is eighty per 100 miles in England.
3254. That is taking the whole of England? Yes.
3255. Not taking individual lines? No, the whole of the mileage.
3256. Do you know of any individual line that has anything approaching that number of locomotives per 100 miles? No.
3257. And you do not think there can be any? I do not.
3258. If Mr. Eddy has stated that there are lines which have twenty times that number of locomotives per 100 miles running on them than we have, you do not think that is correct? No; I think the Commissioner has made a mistake if he said that; or that perhaps you misunderstood him.
3259. You would be surprised to know that Mr. Eddy did make such a statement? He might make a mistake like any other person.
3260. You were for some time, were you not, in full charge of the Eveleigh shops? Yes.
3261. Those are the workshops built by the Government, and belonging to the Government railways for all locomotive purposes, I believe? Yes; my design.
3262. You have an intimate acquaintance therefore with these shops? I have.
3263. Do you consider the Eveleigh workshop a large establishment compared with others of its kind? I do.
3264. Do you consider it is well equipped? I do, certainly.
3265. And arranged? Well, the arrangement of machinery is not good. The arrangement of it might, I think, be better, and some of it might be dispensed with and more modern appliances used; but altogether they are first rate shops and will compare favourably with shops maintained by other railways for similar purposes. Mr. Scott, when he came from England and America, stated in his report that they were as good as he had seen, and compared favourably with any he had seen either in England or on the Continent, and I quite agree with that statement.
3266. In the course of your experience in Great Britain, I suppose you have seen and been through a number of the locomotive shops of the various railway companies and other people? Yes.
3267. Now, do these shops of ours compare favourably with those you have been through? Very favourably indeed. In fact they are far superior to many.
3268. You were for some time in charge of one portion of the workshops at Stratford on the Great Eastern Railway, I believe? Yes.
3269. And you had an intimate acquaintance with the works at Stratford? Yes.
3270. How many locomotives had they at the time you left the works on that line? Five hundred and twenty-six—that is to say on that division. I do not know whether that was the highest number, I only had the division at Stratford.
3271. At all events they had as many or more locomotives as the New South Wales Government? About as many as we have now.
3272. Were the Stratford works at that time as large as our Eveleigh works? No.
3273. Was there any considerable difference between them? Yes, a considerable difference. I should say they were about half the size, or even a quarter the size, that is to say, the works proper, the shops.
3274. I want you to compare them on perfectly equal terms? Well, it would be safe to say they were at that time half the size of the Eveleigh works.
3275. That would allow for everything? Yes.
3276. At the time you were at Stratford, did they build locomotives there? Yes.
3277. How long had they been building locomotives at those works? They were building them there before I went, in 1871 or 1872.
3278. They had been building for some time before that? Yes.
3279. And do you know about what rate they built them,—about how many they could build per year, for instance? About ten or twelve.

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3280. That is to say, they would turn out on an average about one locomotive per month? Yes.
3281. That is, complete? Yes.
3282. And that would be in addition to all repairs required to be done? Yes.
3283. Now, as to the traffic on the Great Eastern Railway, what sort of traffic is there on that railway? There is a very heavy coal traffic.
3284. Have you any statistics as to the amount of travel on that line? No, I have not; except such as could be obtained in the railway newspapers, which would give all the statistics necessary. This paper [*producing one*] gives all the statistics necessary about the English railways.
3285. *President.*] What is that paper?
3286. *Witness.*] It is *The Railway News*, your Honor, published weekly. It is the July number, and they publish all statistics, such as are being referred to now.
3287. *Mr. Sekey.*] Can you get from that document any statistics as to the traffic? Yes; I think I can.
3288. I will ask you to find out by the time you get the other information, the statistics I now ask for. However, you know what the traffic was when you were on the Great Eastern Railway, and you have a fair idea of the traffic as it exists here? Yes.
3289. What proportion do they bear to each other. Is there less traffic on the Great Eastern Railway than there is on the railway here? No; I should think more, certainly.
3290. Considerably more? Yes; considerably more.
3291. And of course the more the traffic, the larger the repairs would be? Yes; it ought to be in proportion to the work done, of course.
3292. And you say that the Stratford works, which are half the size of the Eveleigh works, did all the repairs needed for the Great Eastern Company? Yes.
3293. And built one engine a month in addition? Yes.
3294. As a matter of fact, did they build all the locomotives for the company? No, not altogether; they had engines built outside as well by different companies in the old country.
3295. But still they built about one a month? Yes.
3296. Do you know the works at Bow—the North London works? Yes.
3297. They belong to the North London Railway Company? Yes.
3298. Do they build locomotives there? Yes.
3299. And do repairs also? Yes.
3300. What sort of comparison is there between the works at Bow and the works at Eveleigh, as to size and appliances? The works at Bow are about the size of Vale & Co.'s works at Auburn. They were rather smaller, I should think, when I was at home.
3301. Do you mean to say that such small works are able to build locomotives? Yes.
3302. Do you know that? Yes.
3303. And you are comparing the works at Bow with the works of Vale & Co., of Auburn? Yes.
3304. And they built locomotives at Vale & Co.'s, at Auburn? Yes.
3305. Then, coming back to the Eveleigh works, do you think the Eveleigh works are large enough and sufficiently well-equipped to build locomotives? Certainly.
3306. You think there is enough room? Yes.
3307. I am speaking now more particularly of the time when you yourself were in charge of that department, and when you were therefore supposed to have an intimate knowledge of the works? If I had had the support which I expected from the new administration I could have repaired all our engines at those works and turned out a new locomotive per month in addition.
3308. That is besides the repairs? Yes; I have said so.
3309. Are you sure of that, Mr. Middleton? Yes; quite sure.
3310. You will say on your oath that you could have done so? Yes.
3311. And with a full knowledge of what you are speaking of? Certainly. It could have been done under the conditions that obtain in England, where the locomotive superintendent controls the locomotive works. I could turn out a repaired engine every day; if fact, I have turned out six engines in one week.
3312. That is to say, you could repair and turn out an engine ready for the road for every day in the week? Yes.
3313. And at the same time manufacture an entirely new engine every month? Yes.
3314. You make that assertion? I stake my reputation on it.
3315. And you are speaking of the Eveleigh works as they were when you left them? Yes.
3316. Have they been enlarged since? No; I do not think so. I did hear of a proposal of the kind some time ago, but I do not think it has been carried out. I have not seen any evidence of it.
3317. Then if Mr. Eddy has said that the Eveleigh works are not large enough to carry out the necessary repairs for our railways, and that the repairs needed to be undertaken at the Eveleigh workshops absolutely precluded any hope of manufacturing engines there, what have you to say to that? I say that, with all due deference to the high position which Mr. Eddy holds, I do not think he is a judge on that subject.
3318. Why not? Because he has not had the training to enable him to judge of such a matter as that, especially in this country.
3319. I suppose you mean that would be an engineering question? Certainly.
3320. Not being an engineer, you do not think he would be capable of judging? I do not think he is in the same position to judge as an engineer would be on such a subject.
3321. Well, supposing Mr. Thow has said so—you know Mr. Thow? Certainly.
3321½. He is the locomotive engineer for the Railway Department. If he has said that the Eveleigh workshops are not able to cope with the repairs, do you think that is correct? I think he must have said it without reflection—without due consideration.
3322. Then if any application has been made to extend the Eveleigh works because they are not capable of doing the repairs, let alone building any fresh engines, you think that is unjustified by the fact? Certainly; they are quite large enough now for both.
3323. Would you be surprised to hear that such an application has been made? No; I should hardly be surprised at anything I heard.
3324. I see. But you yourself assert that the works are large enough and amply equipped? Yes; with a good foreman and management, quite so.
3325. As a matter of fact, was there not a proposal to build locomotives there at one time? Yes.

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3326. And the plans and everything requisite were drawn, were they not? Yes; for two types of engines.
3327. Had those plans the approval of the Commissioner for Railways? The late Commissioner—yes.
3328. And they were approved by the Minister of the Department, at that time, I think? Yes.
3329. That was? Mr. Sutherland.
3330. You knew Mr. Sutherland, did you not? I did.
3331. Were you an advocate for building locomotives at Eveleigh? Yes; I have advocated that ever since I have been in the Colony.
3332. That is, you have advocated the Government building their own locomotives? Yes.
3333. Did Mr. Sutherland coincide in that view? Yes.
3334. And he supported you in your endeavours to bring it about? I may qualify that by saying that he endeavoured to get engines made by private firms in the Colony, but failing that, he concurred in my views of having them made in the Government workshops.
3335. Was any material imported for these engines? Yes; for five of each type. Wearne & Co. and the Atlas Co. had each a contract for twenty-five.
3336. That was twenty-five of each type? Either twenty-five or fifty, but I know there was material ordered during my time (boiler plates principally) for both firms to commence operations.
3337. When that fell though it was then resolved to go on building them at Eveleigh from these materials, was it not? Yes; I understood that would take place if the private firms gave it up.
3338. What amount of material had been imported, up to the time you left for that purpose? There was enough for five engines of each class for each firm to go on with, as I said.
3339. That is, you had enough material for ten engines? Yes.
3340. Five each of two classes? Yes.
3341. Do you know whether this proposal was known to the present railway administration? I judge it was from the remarks that fell from the Commissioners occasionally. I judge that they understood the subject perfectly well as I understood it. I never had any idea to the contrary.
3342. You supposed that when they took up the administration they would make themselves acquainted with all such matters? Yes; I thought they understood the subject as I did. There were a great many papers on the subject—Parliamentary papers and discussions in the daily press and in the engineering papers. I certainly thought everybody knew it at the time.
3343. The proposal was put in such a definite form, and in such a way, that you think it would come before the new administration? The private firms failing to go on with the work, we should have gone on with the work ourselves; that was the understanding I had with Mr. Sutherland.
3344. That is not the question I am asking you; I am asking whether the proposal was put in such a form that it might be supposed to be in the knowledge of the Commissioners when they took office? I can only assume that they knew all about it, as well as myself.
3345. Your opinion is that they should have done? I naturally concluded that they did know. I had not the slightest doubt about it.
3346. Would you be surprised to hear that Mr. Eddy has said he knew nothing of any proposal to build locomotives at Eveleigh? It would surprise me a little.
3347. You would think that he knew it? Certainly, I thought he knew it.
3348. Now just pay attention for one moment to what I am going to read. If any person has made a remark such as I now quote, that "There is no machinery in the colony proper for the manufacture of engines and no men skilled in the work," do you think that would be correct? I do not think it is a justifiable statement.
3349. Would you be surprised to hear that Mr. Eddy has made such a statement? Yes, I am surprised to hear it. I saw that statement in the locomotive papers, and I was very much surprised when I read it.
3350. You do not think it is justified by facts? I do not.
3351. Now as a locomotive engineer, a trained mechanical engineer, you have a knowledge, have you not, of the capacity of the colony both as to machinery and workmen? Yes, I believe so.
3352. Now in your opinion is there sufficient competent machinery in the colony to make locomotives? Yes.
3353. Plenty of it? Yes, I have given an instance already in the case of Vale and Co., of Auburn. They have made engines for the Government, and Mort's Dock Co. made engines for the Government years before I came to the colony; and other engines were made in the old Redfern shops.
3354. What do you call the old Redfern shops? The shops in the Redfern yard.
3355. That is the old Government shop? Yes.
3356. And what sort of shops were they? Well, very small compared to what we have now.
3357. Very small? Very small indeed.
3358. Then what you mean to say is this: That there is no justification for such a statement that there is neither machinery or skilled labour to make locomotives in the colony? I do not think so.
3359. Now as to your opinion of the men. Do you think we have men in the colony with knowledge sufficient to superintend the making of locomotives? Yes, there are as good men, mechanics' here as there are in England.
3360. I am speaking of the superintendent or higher-paid officials? It is somewhat difficult to find the right class of men for positions such as general foreman, works manager, and so on. But I daresay they are to be found in the colony if opportunity offered. I should not like to say they could not.
3361. And as to mechanics and workmen generally, you say they are abundant? Yes.
3362. And possessing all the necessary skill? Yes.
3363. And you think the only reason of their not being made in the colony is lack of opportunity? Yes. At the same time there has been an opportunity given by the Government to outside firms, but they never succeeded to any great extent.
3363½. Do you think the opportunities given adequate? I think so.
3364. However, you still maintain that at Eveleigh there is ample capacity for the manufacture as well the repair of rolling-stock? Yes.
3365. Will you look at the title of that paper? [*Paper handed to witness.*] It is entitled "Locomotive Works in the Colony—Correspondence respecting the establishment thereof." 31st May, 1890.
3366. Turn to the place I opened it at, please. What page is that? Page 5.
3367. Is there on that page a list of machinery proposed to be brought here by a locomotive syndicate? Yes.

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3368. Will you go over that list in detail and tell me what machinery is mentioned there which is not in the possession of the Government already? Yes; here is a frame-slotting machine; but that is a special tool.
3369. I suppose that might easily be obtained? We do not want it.
3370. It would not be necessary? No; not the one that is mentioned here. This is a special tool for slotting long slabs, 30 ft. long. It is not necessary for the class of engine we are introducing now. It is necessary for the English engines, but not for the American type.
3371. Is there anything else? Yes; here is a quartering machine—that is for setting the wheels on the axles so that the crank-pins shall be at an angle of 90 degrees exactly.
3372. Have we anything of that kind here? No; it is done in most shops without the machine, but I quite admit that the machine is best.
3372½. If we wanted such a thing of course it could be obtained? Yes; but we could do the work without it. I do not see anything else. There is a complete equipment of brass and iron moulding machinery that may be necessary later on, but I do not think it is necessary now.
3373. So that there is nothing there that we have not got, or that could not be easily procured, or that we cannot do without? No.
3374. Thus the syndicate did not confer any great favour upon the Colony in proposing to bring them out? I should say not. I am rather surprised at the smallness of the list of tools.
3375. There must be a great deal of machinery in the possession of the Government that is not there at all? Yes.
3376. Suitable for all sorts of purposes? Yes.
3377. And you say, therefore, that there was no necessity whatever for the locomotive syndicate to come and build locomotives here? I think not, because we have splendid shops of our own, and I do not think any syndicate outside could compete with us.
3377½. There was no necessity for any such thing? No.
3378. As a test whether that opinion is correct, do you know of any other railway companies, or manufacturers, who are making locomotives regularly with less machinery than we have at our workshops? Yes.
3379. Can you mention some of them? I have already named the North London and the Great Eastern, they each had less machinery when I was home than we have at the present time.
3380. Any others? There is the Canadian-Pacific line at Montreal.
3381. Does that compare with our line? Yes.
3382. In what way? It is about twice as long. The Canadian-Pacific Company have shops in Montreal, Canada, and their machinery is worth about £40,000; and they build a lot of their own engines.
3383. And do their own repairs? Yes.
3383½. Do you know the number of locomotives on that line? No; I do not.
3384. Can you procure the information? I think I can.
3385. Will you kindly put that with the other information I have asked for? Yes.
3386. You say the value of the machinery on the Canadian-Pacific line is about £40,000—that is the machinery in the workshops of that company? Yes; that is, according to the information I have obtained.
3387. What do you estimate the value of the machinery in the workshops at Eveleigh to be; I do not bind you down to any particular sum? I should say about £120,000, roughly speaking.
3388. Therefore, what you mean to say is this—that the Canadian-Pacific shops have about one-third the value of machinery as compared with what we have at Eveleigh? Yes.
3389. And they do all their repairs and build a lot of locomotives in addition? Yes.
3389½. Whereas it is stated that in our shops we cannot do repairs and build locomotives—is that what you mean to say? Yes.
3390. Do you know where the Victorian Government obtained their engines from? Principally, I believe, from the works at Ballarat, the Phœnix Foundry.
3391. I am speaking of late years? Lots of them have been made at the Ballarat Phœnix Foundry.
3392. Is that foundry as big as the Eveleigh works? I have never seen it; I have simply passed through the station, but I believe it is a very small place indeed, from what I have been told by persons who have had an opportunity of inspecting it.
3393. Now, Mr. Midelton, you have said there was a lot of material lying at Eveleigh which was imported for making locomotives. Was there also at the time that you yourself were in charge at Eveleigh a quantity of duplicate parts for the renewal of engines then in the service? There were duplicate parts in the store—I scarcely know what, but I have seen them there.
3394. What I want to get at is this, were there a number of duplicate parts there—I am referring to cylinders, cross-heads, pistons, and so on? There were a few cylinders there, crank-axles, and so on.
3394½. Was there sufficient material to carry on repairs and renewals in the department? Yes.
3395. Now, on what date did you leave the department, Mr. Midelton? In the beginning of April, 1889.
3396. Have you heard of forty boilers being indented for immediately after you left the service? Yes, cabled for.
3397. *Mr. Schey.*] It has been represented to me, your Honor, that the Comptroller of Stores for the Railway Department is in attendance to answer a question about that inventory which was spoken of yesterday. I do not desire to call him; I only want the document. However, he has been asked to attend to produce the document; and as I understand he is not very well, perhaps your Honor will allow me to interrupt Mr. Midelton's evidence, and put a few questions to Mr. Richardson?
3398. *President.*] Mr. Richardson, I understand was here this morning, but as he was unwell, and as it was thought his evidence would not be taken until the examination of Mr. Midelton is completed, he is not in attendance now; but he will be here later.
3399. *Mr. Schey.*] In that case, your Honor, I will proceed as previously. I think, Mr. Midelton, I had just got to a point at which I was inquiring from you as to the forty locomotive boilers that were indented for, about June, 1889—I believe you gave me the date of your leaving the Department as about April, 1889? Yes.
3400. And you are aware, are you, that forty boilers were indented from England shortly after that time? Yes.

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3401. Do you know where the boilers were procured from? No.
3402. Did you ever see a copy of the boiler indent? No.
3403. It is alleged that these boilers were ordered as a matter of special urgency;—well, if they were ordered some two months, certainly less than three months, after you left the Department,—the date of the order is given as June, 1889, and you left in April, therefore, if any urgency existed in June it must have existed when you were in the works in April;—I ask you the question was there any such urgency when you left the works in April, 1889, as to occasion a cablegram being despatched for forty boilers to be delivered instantly? I do not think there was. There was a necessity for heavy repairs being done on the northern line, but if I had remained in charge I should have made the boilers myself in the workshops in preference to sending to England for them as was done.
3403½. You would have made the boilers yourself in the Eveleigh shops? Yes.
3404. And in saying that, could you have made the boilers with sufficient rapidity to fit them into the engines as they came in for repairs? Yes; I could.
3405. What I ask you is this; I want you to understand it thoroughly;—I ask you, could you have made these boilers at Eveleigh under the conditions then existing, with sufficient rapidity to meet the requirements of the service? The conditions then existing were not favourable for my carrying the works out. The conditions I allude to are, that I was not allowed to do what I ought to have been allowed to do. There was not that freedom which should have existed between the head Commissioner and myself; but if I had had the freedom which is usually given to a locomotive engineer in England, I could have made the boilers at the Eveleigh workshops.
3406. When I said conditions, I meant conditions as to works—as to size of works, machinery, materials, and things of that kind; I did not mean any limitation imposed upon you? So far as regards the machinery there was ample provision in that respect.
3407. And the staff? Yes; I might have wanted a few more men, but the machinery was decidedly ample for the purpose, and so was the material.
3407½. You might have wanted a few more men? Yes.
3408. But if you had obtained more men, would you have had room for them? I could have made room for them.
3409. As a matter of fact, you say that had you been allowed to have your own way you could and would have made those boilers? Yes.
3410. Then, why did you not carry out that work; what stood in your way? The reasons I have just stated. I was restricted. I think one of the first minutes I had from the Commissioners was shortly after their arrival, and it ——
3411. Which Commissioners? The present Commissioners as a body. The first minute I received was to restrict my powers. Mr. Eddy wrote me a minute which stated ——
3412. *President.*] Where is that minute? It is in the department, your Honor. I am speaking from memory only, but I think it stated that I was to submit plans, specifications, and estimates for all alterations, and, indeed, for anything I proposed to do in the shops under my charge.
3412½. Submit to whom? To the Railway Commissioners, your Honor.
3413. *Mr. Schey.*] Was any restriction imposed upon you? Yes; I have just described it to his Honor. The nature of it was this: I had to prepare plans, specifications, and estimates for all the work I proposed to do in every shape and form. For instance, I had a job in hand at the time. It was only a trifling matter to the 23 class of engines. I was putting new leading axles into that class of engines to enable them to be utilised, as they had not been utilised since they were obtained, because they were continually running hot. I put a new axle in one engine, and put outside as well as inside bearings to it, and the engine has run satisfactorily ever since.
3414. *Mr. Young.*] Is it usual to give specifications for repairs? No, sir. My experience has been, as a foreman, to do what I thought proper without any restriction of that kind. A superintendent has usually sufficient confidence in his works manager or foreman to accept his advice in these detail matters.
3415. Was the practice in that respect altered when the present Commissioners entered office? Yes, sir. I had less freedom really under the new Commissioners than under the old administration.
3415½. You say you had to give plans and specifications and estimates for all repairs? That was the nature of the order conveyed to me.
3416. *Mr. Young.*] We had better see that.
3417. *Witness.*] I am speaking from memory. I cannot say exactly what was in the minute; but speaking generally, that was the effect of it.
3418. *President.*] Can you give us the date of that minute? I think it must have been in October, 1888.
3419. *Mr. Schey.*] This, in effect, is what you say: The carrying out of this work was impeded by the limitations placed upon you? Yes, and I felt it severely at the time—very severely.
3419½. You were thereby prevented from carrying out the work which otherwise would have been carried out? Yes; more or less. In fact, I was somewhat afraid what to do under the circumstances. I had done what I thought was for the best, but with these restrictions I was really afraid what to do.
3420. You felt afraid to do anything? Yes; really that was the condition I was in.
3421. You mean to say you felt afraid to do anything at all on your own responsibility? Anything outside actual repairs; nothing in the shape of an improvement.
3422. Beyond what was absolutely necessary in the ordinary course of business, you were afraid to do anything without orders? Yes; I may say that I interviewed Mr. Fehon on this subject, but I failed to get the satisfaction I thought I should have had.
3423. Well, then, concerning these boilers, you yourself were fully alive to the necessity which existed for putting new boilers into a number of engines? Not exactly new boilers, but I discovered on the northern line that the boilers were very defective. I appointed a Boiler Inspector, and he discovered a great many boilers on the northern section, much to my astonishment, which were in a very bad condition. I was making provision to repair these boilers, and I should have undertaken the work at once, when——
3424. Put it this way: You yourself were fully alive to the necessity which existed at that time for extensive renewals and repairs to boilers? Yes.
3425. And in fact you had commenced to carry out those repairs and renewals? Yes.
3426. As a matter of fact, I suppose, the repairs and renewals of boilers had been running on for some time? Yes.

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3427. And you considered that had you been left alone you would have been able to do all that was necessary? Certainly.
3428. And without making an indent for forty boilers? Yes.
3429. Therefore you mean to say that with your own knowledge of the circumstances at that time, and in view of the fact that the order was given three months after you left the department, you consider that such an indent was wholly unnecessary? I do.
3430. You say that distinctly? Yes.
3431. Was there a quantity of boiler-plates in the store at Eveliegh at that time? Yes.
3432. At the time you left? Yes.
3433. These plates, I suppose were imported with the other material you have spoken of for the construction of the fifty engines by local contractors? No; the material was imported by my predecessor, Mr. Scott, in 1886 or 1887, largely for the purpose of repairing boilers. It would have been utilised, had I been permitted, for the repair of those boilers which were discovered to be defective.
3434. You mean that there was on hand a large quantity of boiler-plates, which had been imported for the use of the contractors who tendered to make the fifty engines? No.
3435. Let me finish. I understand you to say in answer to previous questions that the material for the manufacture of a number of engines had been imported? Yes; that was for new engines entirely. These are two different subject you are alluding to now.
3436. Just wait one moment. Then you mean to say that in addition to that material we have already spoken of which was intended for these new engines, there was a second quantity of boiler-plates? Yes; for repairs.
3437. Expressly imported for the use of the department in repairing boilers? Yes.
3438. And as a matter of fact you were proceeding with that work, using this material, and not the first-mentioned lot? Yes; the other material belonged to the contractors, and I could not touch it.
3439. That is to say it would have belonged to the contractors if they had gone on with the work? Yes; I could not have touched the material for repairing boilers without spoiling the sets.
3440. To make the matter plain, the material which was imported for the use of contractors was imported by the Government, and belonged to the Government until such time as the contractors commenced work? Yes.
3441. It was imported by the Government, was it not, to ensure obtaining a good quality of material, and because the Government could import it at a a lower price than the contractors? Yes.
3442. Then, in addition to that material you had a quantity of boiler-plates for the ordinary usages of the department? Yes.
3443. Now, did you at any time make any boilers at Eveleigh out of this material? Yes; if I remember correctly, there were two in hand at the time I left.
3444. That is, they would have been new boilers? Yes.
3445. Had not hydraulic machinery been put up for the express purpose of making boilers? For flanging plates.
3446. That is an operation which requires machinery of this kind? Yes; there was other hydraulic machinery for rivetting.
3447. What was the value of this hydraulic machinery? I suppose the flanging machinery would be worth about £4,000.
3448. And that was quite capable of making boilers? Yes; it could have been used. That was what it was intended for.
3449. Now, these boiler-plates you speak of were capable of being used only in a special set of boilers, or were they capable of being used in any boilers? Each was intended for its own particular class. Of course, when Mr. Scott indented for the plates he indented for those sizes which would suit the boilers which most needed repair. He knew from experience which required renewal first, and I presume he ordered plates accordingly. I never saw the plates myself, but I know they were there.
3450. Then I suppose if you had a stock of boiler-plates necessary for the purposes of the department you had a sufficient variety to suit the different classes of engines? To suit all the engines we had, of course. It is necessary to keep material in hand for that.
3451. Do you know, or can you ascertain, what boiler-plates were in stock. I do not mean as to the number, but as to the boilers that these plates would have been applicable to? The number of boilers, do you say?
3452. No. I want to know whether you can tell me, or whether you can ascertain, the quantity of boiler-plates of different sizes, and the engines to which those plates could have been applied? That information can be obtained from the official documents. The storekeeper could tell you better than I can. I do not know these facts myself. I cannot say how many plates or how many sizes we indented for.
3453. You say the information could be obtained from the stock list? Yes.
3454. And so far as you know there was a sufficient assortment of boiler-plates for everything likely to be required? Yes.
3455. For instance, if an engine had come into the workshops and required extensive repairs to its boiler, or even a new boiler, you would have been surprised if you could not find in stock the plates necessary to do the work? Yes.
3456. You would have expected the plates to be there on your requisition? If I had not got the material I required I should consider myself at fault.
3457. You would consider it part of your duty, as locomotive engineer, to see that you had sufficient material of that description in hand? Yes; a reasonable supply.
3458. And in saying that you would imply that when you occupied that position you had a sufficient stock? It was my impression at the time that we had sufficient.
3459. Would not these boiler-plates, the ordinary boiler-plates, answer for more than one class of engine, or must each class have special boiler-plates? Yes.
3460. There is no interchangeability? If you cut the plates to suit another boiler of course there is waste. The proper plan is to give the size of the plates you require to make complete boilers, and order a sufficient quantity for each class.
3461. Are there not a number of general sizes—stock sizes, or standard sizes? There is the merchant size of plate, of course, for odd jobs, and you would also keep a few of those on hand.

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3462. Therefore one lot of plates might be applicable to a considerable number of engines? Yes; you could cut them up, but that would lead to waste.
3463. I mean without unnecessary waste? It sometimes does occur that you can use a plate intended for one boiler on a different class of boiler.
3464. You speak of boilers that were in hand? Yes.
3465. Have any other boilers been made at Eveleigh besides the two just mentioned? Yes; I think so.
3466. Were they made by hand, or by this hydraulic machinery? They were hand riveted and flanged.
3467. Then it was perfectly possible to make boilers without this hydraulic machinery? Certainly.
3468. In fact you say that some have been made? Yes.
3469. Now as to plans for boilers, when you were in charge at Eveleigh, had you plans for making any boilers? Yes; we had plans in the drawing office for several classes of engines.
3470. I am talking of boiler plans? Yes, we had drawings.
3471. I suppose the boiler plans are included in the engine plans? Certainly.
3472. The engine plans include plans of every part? Yes.
3473. Therefore, you say there were plans for a number of classes of engines existing in the drawing-office? Yes.
3474. While upon this subject of plans, I will ask you whether it is not a frequent occurrence that plans of engines were supplied by the maker? Yes.
3475. For instance Messrs. Beyer and Peacock, and other firms who have built locomotives for our railways, sent out cases of plans relating to those locomotives? Yes.
3476. Plans which might be used here at anytime for duplicating portions? That was the purpose for which they were sent out.
3477. And you say that to your knowledge there were a number of such plans in existence? Yes.
3478. You have seen them? Yes.
3479. And the plans that were in existence were they sufficient to cover a considerable number of classes of engines in the service? Yes.
3480. Were they as a matter of fact plans which would cover the greater number of the most useful classes of engines? Yes.
3481. Now, if anyone has said that there are no plans for boilers that would not be correct? Certainly not.
3482. You know that of your own knowledge? Certainly.
3483. Supposing, that you wanted to make a boiler and you could not find, or did not get a plan for making it, how long would it take you to prepare the necessary plans for that boiler? About a week.
3484. And, I suppose, that during that week the work might have been commenced? Yes; if you had the material.
3485. Of course, I am presupposing that you had the material, and what I might wish to get at is this. If you wanted plans for a boiler, it would not involve a great delay to make them? No; it is not much of a job to make drawings of a boiler, especially if you have an old boiler to go by
3486. Providing you had the material the work might be gone on with while the plans were being prepared? Yes.
3487. That is, there would be no necessity to complete all the necessary plans for a boiler before the work of construction was actually put in hand? No; if there was great urgency.
3488. Now, suppose you discovered that you wanted a new boiler, and you had not got a boiler in stock, how long would be necessary until you could commence making that new boiler? As I said we could commence in a week.
3489. Then if you wanted such a large lot as forty boilers comprising these different classes, would there be any great saving of time in cabling to England for the whole lot to be sent out? I think not, if you had the material here in store.
3490. You could as a matter of fact start making them within a week? Yes.
3491. And do you say further that you could continue manufacturing as fast as you required them, and could put them into the engines? Yes.
3492. Quite as fast as you required them? Yes.
3493. Therefore, if forty boilers were specially ordered by cablegram on the score of urgency, you do not think that that reason is sufficient? No.
3494. You do not think it is a valid reason? No.
3495. You do not as a matter of fact think that it is true? Do not think what is true?
3496. That the reason of urgency was sufficient to justify such an order being sent? I do not think there was justification for sending such an order.
3497. You do not think so? No.
3498. *President.*] Had you sufficient material in store at that time to make forty boilers? Not for forty your Honor; I know there was a lot of material in store, but as to how many—
3499. You do not know how much? No; I do not know how many boilers there was material sufficient for, but I should think for a good many.
3500. What do you consider a good many? Twenty-five or thirty boilers. I believe there was material, at least I am given to understand, that there was sufficient material in store, ordered by Mr. Scott, for at least thirty or forty boilers.
3501. Do you know of your own knowledge the quantity of material in store? No, your Honor, only from what I heard.
3502. Who would know? The storekeeper, your Honor.
3503. That is Mr. Richardson is it not? Yes, your Honor.
3504. *Mr. Young.*] Mr. Midelton, I suppose the engines which required boilers in your time would be of different types? Yes.
3505. Therefore, you would require different kinds of boiler-plates? Yes.
3506. Plates of different sizes and dimensions? Yes.
3507. Did you know that this particular material was on hand? Yes; that was the reason of the indent being sent. Mr. Scott had plans prepared for the boilers he required most urgently, and an order was sent for plates to suit those requirements.
3508. *Mr. Schey.*] As a matter of fact, Mr. Midelton, it is the custom to keep in stock the different sizes of boiler-plates likely to be required? Yes of course, for repairs. 3509.

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3509. Now will you kindly look at this paper. [*Paper handed to Witness.*] What is it? "Railways. Indent for Locomotive Boilers."
3510. How many boilers are ordered in that indent? Six different classes.
3511. And the total number is? Forty.
3512. I think you will notice from the document that thirty of these boilers are applicable to engines previously obtained from Messrs. Beyer and Peacock? Yes, thirty boilers are ordered from Messrs. Beyer and Peacock and ten from Dubs and Co.
3513. It appears from the document then, that thirty of these boilers were intended to replace boilers in certain engines supplied by Messrs. Beyer and Peacock? Yes. And the other ten for engines supplied by Dubs and Co.
3514. The other ten boilers are to replace those in engines previously supplied by Messrs. Dubs and Co.? Yes that is it.
3515. Now looking at that indent, does there appear to be anything extraordinary about any of these boilers? What do you mean by extraordinary?
3516. Are there any fresh kinds of boilers, or are they referred to as duplicate—are they intended to replace boilers of engines then in existence? Yes; to replace boilers already running.
3517. Then that would be the same sort of boiler? Yes; they are classified somewhat differently now to what they were in my time; they bear a different number; but judging from the general description, I should say that they were intended to replace boilers in old engines.
3518. Can you identify the engines by the numbers stated in the indent? No, I cannot; these are new numbers. They used to be classified from the first number of the class of the engines.
3519. You do not know, without reference to the books of the department, what rotary numbers of the engines correspond with these makers numbers? No; I cannot positively say from this.
3520. You cannot identify them? No.
3521. But if the rotary numbers of the engines, the class numbers of the engines were stated, you would at once know all about the engines and boilers which were referred to? Yes.
3522. *Mr. Schey.*] I shall be able to complete this evidence later on, your Honor, when these boilers have been identified with the class numbers.
3523. *President.*] Was not that information supplied this morning?
3524. *Mr. Schey.*] Yes, your Honor, I believe it was put in this morning.
3525. *President.*] I remember handing a document to you, and I believe it contains this information.
3526. *Mr. Schey.*] I think your Honor is correct, but I have not had time to identify it, and frame my questions upon it.
3527. *President.*] It is a very short return, and I think you could run your eye over it in five minutes.
3528. *Mr. Schey.*] Very well, your Honor, I will try and do so, but I do not want to waste any time now. You have stated, Mr. Midelton, that there were drawings for boilers in existence when you were in the service? Yes.
3529. Did you, at any time, have any drawings made? Yes.
3530. If anyone has said or inferred that boiler drawings have been made since you left, implying that there were none prior to that time, it would not be correct? It might be correct in a way. There were not drawings for all classes of engines, but for a number of classes there were drawings.
3531. For some boilers you had drawings made yourself? Yes; for the new engines.
3532. I may tell you, Mr. Midelton, that great stress has been laid upon the terrible condition of boilers about the time you left the service. Were you not fully aware of the condition of locomotive boilers when you were head of the department? Yes.
3533. You were fully aware of it? Yes.
3534. You are quite sure that the condition of the boilers was fully known to you, and that nothing could be discovered afterwards? Nothing could be discoved, except what I had not seen. I appointed an inspector, and it was his duty to report to me, so far as he could, during the time at our disposal.
3535. Of course, as the head of the department, you would not be expected to climb into every boiler and examine it yourself, but otherwise you were fully alive to the necessity for a careful examination of these boilers? Yes; periodical inspection and special inspection.
3536. And the necessity for carefully looking after them, repairing them, and replacing them as might be necessary? Precisely.
3537. Did you, while you were in the department, endeavour to institute a more adequate inspection than had been in existence hitherto? I started it in 1883.
3538. You started what? A system of boiler inspection. When Mr. Scott was in England I inaugurated a system of boiler inspection.
3539. While Mr. Scott was in England, were you not temporarily in charge of the department? Yes.
3540. And you then initiated this system of boiler inspection? Yes; and it has been followed ever since.
3541. And afterwards, when you became head of the Locomotive Department, subsequent to Mr. Scott's retirement, did you then go carefully into the matter of boiler inspection? Yes; I appointed the best man I had for the purpose. He did nothing else but report, and he gave me many valuable reports about the condition of the boilers, reports which were highly interesting and important.
3542. Is he the boiler inspector now? No, he is dead. I appointed his successor.
3543. So that in your time then you must have appointed a second officer? Yes; I appointed the two men who have held the position.
3544. The other man you appointed is he still in office? I believe so.
3545. Did you draw up a code of regulations for this express purpose? Yes.
3546. Are those regulations still in existence? They were up to the time I left the department.
3547. And you consider that they were ample, and that they contained all that was necessary for this purpose? Yes; in any special case I made an inspection myself. My instruction was that the Inspector must report direct to me, and anything important I looked into myself.
3548. As a matter of fact, you personally inspected some of these boilers? Yes, many of them.
3549. Then you know well what was the condition of the boilers in April, 1889? Yes.
3549½. Now, if it is asserted that it was absolutely necessary in the interests of public life and safety to cable for forty boilers there and then, and within a month or so after you left office, you do not think

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that would be correct? I do not think it is a fair thing to say, because there must be some time elapse before the boiler-plates can be got out, whether they are made here or in England.
3550. Even if you got them you could not put the boilers into the engines at once? If there was any danger I would stop the engine running. Any defective boiler must be stopped at once. That was my instruction to the Inspector, even if the traffic was stopped.
3551. Then this cable indent for forty boilers was not necessitated by the circumstances of the day, if properly considered? I really do not think so.
3552. Were you in any way responsible for this indent? No, it was sent after I left.
3553. There was nothing about this indent up to the time you left the department? No.
3554. You were in no way responsible for such an indent being sent? No.
3555. Now, if any person has insinuated that you were mainly responsible for this indent that would not be correct? I cannot see how it could be, unless the reports I left were considered as indications of the necessity.
3556. Reports I believe were made to you as to the serious condition of some of the boilers, and you were fully alive to the necessities of the case? Yes.
3557. Now, as a mechanical engineer, Mr. Midelton, and one of experience in this particular branch of work, which do you think would be the quickest way of getting out these boilers, indenting them from England, or setting to work and making them here? The latter.
3558. You think they could be made more quickly here? Yes.
3559. Now, at the time when you were still in charge of the department, you were well acquainted with the state of the works? Yes.
3560. Was the machinery then in the Eveleigh shops so fully occupied in making repairs that it would have been impossible to make or construct any new boilers? No.
3561. It was not? No.
3562. If anyone has asserted that at that time the machinery was so fully occupied with repairs as to be entirely unavailable for constructing anything that is not correct? It might be his opinion, but I do not agree with him.
3563. But you are quite certain for yourself that that is not correct? There was a quantity of new machinery in the works which had not been erected.
3564. For instance you would undertake to make as well as repair? Yes, and glad to do it.
3565. Is it correct that the inspection of boilers was greatly neglected until Mr. Eddy arrived in the Colony? It was not in my time, it was not during the ten months I was in the department—just the opposite of neglect.
3566. During that ten months you speak of five were spent under Mr. Goodchap, the old Commissioner, and five under the new Commissioners? Yes, about that time.
3567. If Mr. Eddy has said that boiler inspection had been greatly neglected until his arrival, you say that is not correct? Mr. Scott can answer that better than I can, seeing that he had charge.
3568. I am talking about the time when you yourself were in office?
3569. *Mr. Eddy.*] I must ask, Mr. President, whether it is really permissable for Mr. Schey to be continually making assertions that I have said certain things which I did not say.
3570. *President.*] I did not hear Mr. Schey mention any names just now. Several times I have had to stop him because he was not stating the evidence as I understood it, but so far in the present evidence I have not heard him mention any names.
3571. *Mr. Eddy.*] He has asserted that I said that boiler inspection was completely neglected until the present Commissioners took office.
3572. *President.*] Will you point out, Mr. Schey, where Mr. Eddy has ever said that.
3573. *Mr. Schey.*] If your Honor will look at the minutes of Tuesday, 10th May, when Mr. Eddy was under examination you will see I put this question to him:—"Since you yourself have brought up this matter, will you tell me whether a boiler inspection was not initiated before your arrival in the Colony? Well, I should think that everybody possessing boilers would inspect them, but the business had been most seriously neglected." That is precisely the question I am putting to this witness, your Honor. A further question I put to Mr. Eddy was this:—"But steps had been taken before your arrival, and as a matter of fact boiler inspection was proceeding as fast as possible." To which Mr. Eddy replied, "I should say that boiler inspection had not gone on one-fourth as fast as it should have done prior to our taking office."
3574. *Mr. Eddy.*] That is quite a different matter.'
3575. *Mr. Schey.*] It is exactly what I am asking this witness.
3576. *President* (to Witness).] Here is a minute which purports to be written by you on the 1st April, 1889, upon the condition of locomotive boilers in the northern sections of the New South Wales railways. One paragraph says: "There is complete evidence of neglect, or error, or both, and it would seem that all the engines north of Singleton are in a dirty state, and their boilers badly filled, and the fire-boxes with an incrustation of a hard kind; specimen of such herewith."
3577. *Witness.*] That is the result of the inspection, your Honor, which had been made prior to the date of my report. You must bear in mind that the Northern line was treated as a separate railway altogether. It was under a separate superintendent until after the opening of the Hawkesbury Bridge; then I had charge of the section from Sydney. It was the boilers of the engines on the Northern section that I had the special inquiries made about.
3578. *President.*] Yes; this report refers to the Northern line.
3579. *Mr. Eddy.*] My evidence is completely borne out by that paper.
3580. *Witness.*] The inspection had been in operation on the Northern line previous to the minute being written.
3581. *President.*] Your report states: "I sent a special boiler inspector to Newcastle some time ago, and his reports were most surprising to me, and before he could do all that I wished he died. I have, since that event, sent another inspector, and he has discovered still more surprising facts." Then you go on to say that "there is complete evidence of neglect, or error, or both," &c.
3582. *Mr. Kethel.*] The date of that is some six months after the present Commissioners took office, is it not, Mr. Midelton —— ?
3583. *Witness.*] The inspection was under my direction all the time. I am only responsible for five months before the present Commissioners took office and for five months afterwards. 3584.

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3584. *President.*] Judging from your minute, at the time the report was made things were in such a state as to afford complete evidence of "neglect, or error, or both" as regards these boilers.
3585. *Witness.*] As regards the Northern line, your Honor.
3586. *President.*] Of course, your minute only refers to the Northern section.
3587. *Mr. Schey.*] Now Mr. Midelton, to return to these boiler-plates;—you say there were two lots in store, one lot imported for the contractors, and the other for the use of the department? Yes.
3588. I think you also said it was proposed to build ten or more engines? It was twenty-five by each firm, fifty in all.
3589. Those were the engines to be built by the contractors;—I am speaking of the amount of material you had in hand? I think we had material for five engines of each type.
3590. Was it afterwards proposed to make five of each type in the Eveleigh shops? How do you mean proposed?
3591. Was it afterwards proposed to build five engines each of the two classes in the Eveleigh workshops? No. I said this morning that in case the contractors failed to carry out the work it was to be completed in the Eveleigh shops. That is what was intended or understood.
3592. Among the material, I suppose, there would be a number of boiler-plates? Yes.
3593. Now, as to the quality of these boiler-plates, I may say it has been asserted that the plates lying at Eveleigh were not of sufficiently good quality to make boilers of.
3594. *Mr. Eddy.*] Who has asserted that the boiler-plates were not good enough to make boilers of? I have not heard it said within the course of this investigation. All these assertions are certainly most irregular.
3595. *President.*] No doubt it is very undesirable that the questions should be put in this form, but the form of the question has not much weight with the Commissioners. It is the answer we look at. (To Witness.) I notice, Mr. Midelton, that in your minute of the 1st April, you say, "I strongly recommend that the order for new locomotives, now being executed in England, be extended to twenty-five instead of ten, especially as it seems that the Atlas Company will not undertake the work of beginning their contract for twenty-five." There is a distinct recommendation by you.
3596. *Witness.*] When I discovered the state of the boilers I thought, in order to facilitate matters, it would be advisable to increase the order already sent to Dübs & Co. from ten to twenty-five engines. It was a complete surprise to me to learn the condition of the boilers on the Northern Line.
3597. *Mr. Young.*] What type or what types were the engines to be which Mr. Wearne and the Atlas Company had contracted to supply? The same as those alluded to by his Honor as being made by Dübs & Co., of Glasgow. The contracts were for engines of the Mogul class, which Dübs & Co., of Glasgow, were constructing for us, and the original Consolidation engine which we already had on the mountain section of the road, and which we are now importing—I mean the Baldwin engines which have just come to hand.
3598. Those were the only classes of engines which were being contracted for? Yes; the Mogul class and the Consolidation class, American type.
3599. Are they a good useful type of locomotive? They are the best I have had in my experience on the railways. I said so when the engines were introduced, and I repeat it now; and my contention is proved by the fact that the Railway Commissioners are importing similar engines now from America and England.
3600. *Mr. Eddy.*] The Railway Commissioners are doing nothing of the kind.
3601. *Witness.*] I beg your pardon, Mr. Eddy. The new 10-wheeled Baldwin engines are substantially the same as the engines which were made by Dübs & Co. The only difference is that the Baldwin has an extra pair of bogie wheels. It is merely a difference of name.
3602. *Mr. Young.*] Then I suppose a quantity of boiler plates was ordered, when you contemplated making these fifty engines, sufficient for twenty-five of each type? No, sir. The plates were not ordered for the whole fifty engines; we only ordered enough for five of each kind. That was the extent of the first order, to keep the manufacturer going, and as they progressed with the work it was intended to order more plates.
3603. Then there were only five boilers ordered altogether? Yes; five of each type.
3604. That is all that were ordered? Yes; so far as I remember.
3605. Have they been used? I believe they are being worked up at Eveleigh now.
3606. Have you kept any record of the prices of engines made here, and of engines of the same class made in England? I have not kept the matter personally, but of course it has been kept in the department.
3607. You have no knowledge of that? I have no particular knowledge. I should leave that matter to the officers under me.
3608. We have been given to understand that a large quantity of the boiler-plates imported are utterly useless. If it is correct, as you say, that plates sufficient for five boilers only were imported, and those are being worked up at Eveleigh now; where are the other plates comprising the immense quantity which are said to be useless? They must be in stock now.
3609. But what were they imported for? For boiler renewals.
3610. And for repairs? For repairs and renewals.
3611. Then it is not a fact that there is an enormous number of boiler-plates which are utterly useless? I cannot say that they are useless. I have not seen the plates myself. I do not know who manufactured them. There may be defects in them, but of course, I cannot say that they are absolutely useless.
3612. It has been said that the bulk of these boiler-plates could not be used in the present locomotives? I do not know how that can be. I did not order the plates. The only ones I am responsible for are the five which Mr. Wearne undertook to construct, and the five which the Atlas Company undertook to make.
3613. Now, Mr. Midelton, you said in the course of your evidence that you did not approve of engines being obtained from England—am I correct in that? I have always advocated what I have been taught, and that is to build my own engines if possible. All the great locomotive companies in England and America build their own engines as far as they can. They never go outside unless they are absolutely compelled.
3614. Assuming that it was decided not to construct engines in the Colony, but to import them from Europe, you think there are a certain number of makers whose tenders might be considered? Yes.
3615. I think you said there were about a dozen makers? Yes; a dozen in England, and about the same number in America.

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3616. If it were decided to obtain English engines, and you were asking for tenders for certain types would you leave anything to the maker and to his reputation? To a great extent you must, but I should draw out a very rigid specification and send complete drawings, as I did in the case of the Dübs engines. In that case complete drawings and specifications were forwarded, and, I believe, the engines have turned out admirably.

3617. In your experience of locomotives upon the railways, have you not met certain types which you consider better than others? Certainly.

3618. And they have been made by certain makers? Yes; there are the ten engines built by the Baldwin Company, and the corresponding ten built by Dübs & Co., Scotland.

3619. Presuming that you were inviting tenders in England for a certain number of locomotives for a specific purpose, (say) for express traffic, would you select the tender of any maker, even if his price was lowest? No.

3620. You would make a selection? If you will allow me, I will quote a case in illustration of this point. If I recollect rightly, a number of tenders were received for the "Scotch Yankee" engines, and I think the Vulcan Foundry Company, of Newton-Le-Willows, quoted a price less by some £5 per engine than any other tenderer. The question was put to me by the Chief Commissioner, and from my experience of twelve engines previously built by that firm, I recommended that the order should be given to Dübs & Co., in preference to the Vulcan Foundry Company, although the price was higher.

3621. Why? Because my experience of the Dübs engines led me to an opposite conclusion. I judged the capabilities of the two firms from my experience of locomotives on these railways. It was left to the Commissioners to decide the matter; I only gave them my opinion.

3622. You are acquainted with most of the principal makers, I presume? I am.

3623. And their construction? Yes.

3624. If the name of the firm was taken off an engine, or off a dozen different engines, would you, from your experience, be able to point out which was which? Yes.

3625. Why? Because of the design and general features. You could take the name off almost any engine made by an English firm, and I could give you the builder.

3626. You would know by the work? I should know principally by the character of the design.

3627. Is it a fact that most of these makers have some speciality of their own? You could hardly call it a speciality. It is a matter of design, like architects—one man designs an elaborate building, and another something plain and useful. It is a matter of design purely. As to the manufacture, I think all the firms I have named are good in that respect.

3628. But are there not certain makers in England to whom, although their price might be less than other makers, you would not consider it advisable to give orders? Yes. For instance, there are the little firms who have not made for Australia. I should be disinclined to recommend their productions, although they might cost less than those of other but better-known makers. I should prefer to go to a larger firm of repute rather than run any risks with the smaller maker, unless, of course, there was a stringent specification which would give me power to exclude the engines on their arrival if they did not pass my inspection.

3629. Suppose you were advertising tenders in England, knowing that you had certain types of locomotives on those railways, would it be advisable to give the order to a firm like Beyer and Peacock one year, and Dübs another year, and so on, and thus introduce the special types built by all these different makers? I think in such a case I should accept the lowest tender, because I consider each of these firms equally good. For instance, if Sharpe, Stewart, & Co. made the lowest tender, even although they had not built for our lines before, I should be inclined to give them an order.

3630. Then would you advise that we should have a great variety of types, simply in order to accept the lowest tender? Not a great variety; just the opposite.

3631. But under such circumstances as I have mentioned there would be a great variety, would there not? Not if the locomotives were built to drawings. I presume that you would have the engines made to drawings supplied by the department—drawings of your standard engines.

3632. But are they ever made from drawings here? The "Scotch Yankees" were made in that way.

3633. Is it not a fact that most of these makers have their own plans? All makers prefer to work to their own plans, but, so far I know, none of them object to work to our plans if we choose to send them.

3634. But would not the experience of these great makers enable them to turn out an engine with greater uniformity in its parts than if they were to build to plans supplied by people with less experience in the drawing office here? I think not, if the specification is good. It is equivalent to saying that no firms must have work but the large ones, and in such case the little makers would never be able to develop their trade and become big makers with that restriction upon them. Messrs. Beyer and Peacock commenced in a small way, but they have grown to be a firm of large dimensions.

3635. But is it not a fact that the competition between builders in England forces them to produce the best type of engine? No doubt competition exercises some influence, but I think you will admit if a firm (say) like Beyer and Peacock has amongst its members a gentleman who has had large experience of railways and locomotives, they are in a much better position than firms who have not that advantage. Mr. Richard Peacock was for a long time locomotive superintendent for the Manchester, Sheffield, and Lincolnshire Railway Co., a line which runs in front of his works now, and consequently he was the best man in England, I should think, to know what a railway would require as far as England is concerned at all events. The experience which he gained on that railway would enable him to judge as to what would be the best type of engine for any given line in that country. He might be less at home in regard to foreign railways, but still I should think he is a man you could put reliance in.

3636. Your advice is to have as few types of engines as possible? Yes. I have tried for that ever since I have been in the department. I endeavoured to reduce the number of types before, as is the case in America. Practically, the whole of the United States railways are run with four types—the American type, the Mogul type, the Consolidation type, and recently the ten-wheeler revived; in fact, it might be said that the whole 167,000 miles are worked by three types of engines. I should like to have seen our own railways worked in the same fashion, and I have been trying to secure that benefit from the moment I entered the department.

3637. *President.*] Would you not be more likely to get fewer types of engines if you limited your orders for locomotives to special firms? No, your Honor, I do not see that exactly.

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3638. Unless of course you sent your own drawings and specification? Yes; then the builder would be bound by what you sent. But in our case, unfortunately, we have taken the advice of the manufacturer, hence our large number of different types.
3639. That is in former times? Yes, of course, it is no better now under the present Commissioners, even they ——
3640. *Mr. Young.*] Is it not a fact that a person may be here for four or five years, and accustom himself to our locomotives, so that if he went to England at the end of that time he might find many improvements? With the great means of communication to-day, a man must be very ignorant if he does not know what is going on, not only in England but in America. Engineering literature is so good now that one can gain a capital idea of what is going on in the old country, and familiarise himself with all the improvements which have been effected all the world over; and improvements now-a-day are only matters of detail arrived at by long experience.
3641. *President.*] If you sent special specifications and plans to a manufacturer, would that not cause considerable delay in the manufacture of locomotives, I mean a greater delay than if you ordered a type of engine which this maker had previously supplied, or which he was in the habit of supplying in England? It would make a little difference in the time certainly, your Honor, but only very little. If they were very busy they perhaps would not take the trouble to take up your order as expeditiously as they otherwise might do. A manufacturer who is busy, and receives a design from a foreign country, would say, "Well, I am not anxious for this work, I will tender for it, but whether I get it or not is a matter of little concern." If he is not busy, then he will push forward with the work to your specification.
3642. But suppose there was an urgent need to get the locomotives as soon as possible, would it be a wiser course to send home special specifications and plans, or to get a type of engine which the firm were in the habit of making, and which they had already supplied to the Government? In all cases I consider the best course would be to send drawings and specifications of what is required.
3643. I am speaking of a case of emergency? In the case of emergency, and if you are willing to accept anything these makers—
3644. I am not talking about accepting anything? I have already quoted an instance, your Honor. In my minute of the 1st April, you will see that when we discovered that the boilers on the Northern line were so defective, I strongly recommended that the order for new locomotives, then being executed in England, should be extended from ten to twenty-five. I did that, your Honor, because the English firms were constructing the locomotives to our own drawings, and the course I proposed would expedite the work much more than any other steps which could be taken.
3645. *Mr. Young.*] Suppose you required an engine of a more powerful type, in the interests of economy, could you obtain such a locomotive more quickly, if it was urgently needed, by taking some well-known type of a first-class maker in England, or by supplying your own drawings? It is natural to build an engine of the type we have already received, and not such as you suggest.
3646. But I mean something of a stronger type? Unless there was a wide departure from the beaten track it would make very little difference which course you pursued. Of course, when a superintendent sends his own designs, all responsibility rests upon his shoulders. Mr. Thow himself is a great advocate of this, and I can turn up a letter written by him some ten years ago which will prove what I say. I quite agree with Mr. Thow in this matter, and however good the maker might be, I should prefer to send my own drawings and specifications.
3647. *President.*] That is, of course, assuming you have plenty of time, and there was no urgency, and you did not want a special type of engine? Yes, your Honor; but a railway superintendent ought to know what will suit his lines, and he ought to prepare his drawings accordingly.
3648. *Mr. Kethel.*] How long would it take to prepare drawings and specifications for an engine? There would be about eighty drawings in all to prepare, and of course it would depend upon the number of draftsmen you had in the office, and the amount of zeal they put into the matter. I think that the work ought to be done in six or seven weeks, if you had a good staff.
3649. *President.*] Take the average rate of Government work—how long do you suppose it would require to produce these plans? I hope your Honor does not intend to reflect upon the draftsmen.
3650. I am not reflecting upon anyone—I merely ask you to take the average rate of Government work, and not with any special pressure? Speaking of my own office at Evelegh, when the drawings were prepared for the "Scotch Yankees," I consider that the draftsmen worked quite as hard as those employed by any private firm here or in England.
3651. Well, how long did they take? I forget exactly how long it was, your Honor, but I think about eight weeks. However, the fact can be ascertained from the records of the department.
3652. *Mr. Young.*] Suppose it was required to introduce an engine which would draw 180 trucks up a 1 in 30 incline, to replace an engine drawing 120 trucks up the same grade, would it be likely that an office which had never before been called upon to design such a powerful locomotive, would make all the parts as proportionately as a large and well-known maker who had done similar work over and over again? It would be just the same for them as for us.
3653. But if the manufacturer had done the work over and over again? If he had done it once before, of course he could do it again much more easily than one who had not done the same class of work. Of course experience counts for something, but I assume you mean ——
3654. Would there be more likelihood of a mistake occurring in the parts of the engine in making plans for the first time than there would be in going to a first-class firm who had already constructed locomotives of the type you desired? There would be more likelihood of a mistake, certainly.
2655. *Mr. Sehey.*] Now, Mr. Midelton, do you know anything as to how the prices of material have ranged? I do not know how they range just now,
3656. When you were at the head of the department did you consider it part of your business to ascertain how the prices ranged of materials required for use in the department? Yes.
3657. Can you give me a general idea as to whether the prices of material required (say) in the manufacture of locomotives, such as iron, steel, coal, copper, ranged high or low, comparatively speaking, in the year 1890? Judging from Dübs's tender for the ten engines in the beginning of 1889, and the price of engines since then, there is an indication that materials went up in price between those periods.
3658. Judging from the price of the engines, you think the price of materials was high? Yes.

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3659. *President.*] I understand you to say that judging from the price given for the ten Dübs engines early in 1889, and the price subsequently given, materials ranged high? Yes, your Honor.
3660. *Mr. Schey.*] Take the years 1889 and 1890;—you think that materials had an upward tendency in 1890? Yes; I should consider so from the figures.
3661. When you were in charge at Eveleigh, did you accumulate a large quantity of useful material in in view of the probability of manufacturing engines there? I accumulated a very large quantity of scrap iron, wrought and cast.
3662. And other things also, I presume? Yes, everything likely to be useful in the manufacture of locomotives was collected and in heaps for future use.
3663. Do you know what has become of that material since you left office? I presume it has been sold. I saw a quantity of scrap material advertised for sale some little time ago.
3664. You say it was advertised to be sold? Yes; and I further noticed lately that the space upon which the scrap had stood was vacant.
3665. Taking that fact in connection with the advertisement, you consider that the material has been sold? Yes.
3666. What would be about the average value of scrap sold in that way? From £2 to £2 10s. per ton.
3667. What would be the value of it if you could make use of it? About the same value, I should think.
3668. But I mean if it were used in the directions in which it could be used;—how would the price of this material range if you required to get it for the manufacture of locomotives? You would have to give the ruling market price.
3669. Can you give me any idea of the average value of the material applied in that way? No; I cannot.
3670. Now, coming down to your removal from the department, Mr. Midelton, can you tell me the date when the intimation was first conveyed to you? 2nd April I think it was.
3671. Have you any papers concerning it? Yes.
3672. Can you give me the correct date? If I can find the paper I can give you the date.
3673. Have you not the paper with you? No; it is only a letter.
3674. And you cannot tell me without looking at the letter what the date was? It was the 30th March, 1889.
3675. In what form was the intimation made to you? I was in the Commissioners office talking about the condition of the boilers on the Northern line, as well as I can remember, and in the middle of the conversation Mr. Eddy told me that I had not exhibited the qualifications necessary to reorganise the department, and he handed me a letter embodying those sentiments. I asked what it meant, and he informed that it meant I was to give up to Mr. Downes the following morning. That is what took place, as near as I can remember.
3676. You mean to say that in the course of ordinary conversation concerning the boilers on the northern line Mr. Eddy suddenly intimated to you that you were to leave the department? Yes.
3677. And that you were to give over charge on the following morning to someone else? Yes, on the following morning to Mr. Downes, who was my assistant at that time.
3678. Was that the first intimation you had of the matter? Yes.
3679. The very first? Yes.
3680. Did you not ask the reason for such a sudden determination as that? I did.
3681. And what was the reason alleged? That I had not exhibited the qualifications necessary to reorganise the department.
3682. Did you seek to find out in what way you had been remiss? I asked the Commissioners to allow me to consider the matter and to see them again the next morning. Mr. Eddy said it was done, it was finished, it was ended.
3683. He refused to allow you any time to consider the matter? Yes.
3684. Did you get the letter then? Yes, it was handed to me by Mr. Eddy himself.
3685. It had been prepared beforehand? Yes.
3686. What did did Mr. Eddy say when he handed the letter to you? What I have just related.
3687. You were to receive some monetary recompense, I suppose? Oh, yes; I was to have £1,500 compensation for loss of office.
3688. And you asked until the following morning to consider the matter? Yes.
3689. *President.*] Mr. Schey, we have nothing whatever to do with the discharge of this witness.
3690. *Mr. Schey.*] I should have thought you had your Honor.
3691. *President.*] You cannot carry the examination any further, Mr. Schey, it has gone quite far enough. What have we got to do with the matter at all?
3692. *Mr. Schey.*] Well, your Honor, it is somewhat difficult to know what you have to do with.
3693. *President.*] With the second charge in the Commission, and nothing else, Mr. Schey.
3694. *Mr. Schey.*] Will you allow me to proceed, your Honor?
3695. *President.*] No, we think the examination has been carried quite far enough on that point.
3696. *Mr. Schey.*] Well, your Honor, I want to show that Mr. Midelton had become obnoxious to some persons.
3697. *Mr. Eddy.*] I hope, Mr. President, that for the sake of Mr. Midelton, you will stop this procedure.
3698. *President.*] I am sure Mr. Midelton can have no wish to drag these matters before the Commission.
3699. *Mr. Eddy.*] On the contrary, I think it is his object to bring these matters forward, and if they are allowed I shall have to go into some of the coincidences we have heard of as to Mr. Midelton's previous dismissal.
3700. *President.*] We have stopped the examination, Mr. Eddy. We cannot prevent Mr. Schey saying what he desires to prove; but we have decided that he cannot proceed further with this line of examination.
3701. *Mr. Schey* (to Witness).] Were you not at one time assistant to Mr. Scott? I was.
3702. Did not Mr. Scott go to England on one occasion? Yes.
3703. And during the time he was away you occupied his position did you not? I did.
3704. How long was he away? Fourteen months.
3705. When he returned did you not receive a complimentary letter and a bonus for the way in which you carried out the duties? I did.
3706. Now, when Mr. Scott went away to England and left you in charge, had you any reason to suppose that you had aroused any enmity on Mr. Scott's part? Slightly, but very slightly. 3707.

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3707. Did you get any evidence of any enmity within a short time after that? After what?
3708. After Mr. Scott's departure? No, how could I when he was out of the country.
3709. It is not for me to say how you could; but as a matter of fact did you afterwards see a defamatory minute which Mr. Scott had written? I saw it before then.
3710. And that was the reason you alluded to just now which led you to think that Mr. Scott had some enmity towards you? Yes.
3711. And you consider that from that time every endeavour was made to get you out of the department? I do.
3712. And that every advantage ——
3713. *President.*] We have already ruled, Mr. Schey, that you cannot go further with this matter. We have nothing whatever to do with the differences and squabbles which may have taken place in the department. They are wholly outside our inquiry.
3714. *Mr. Schey.*] Well, your Honor, I should have thought I had a good deal to do with them, considering that I am called upon to trace coincidences which have arisen between certain persons. I certainly think, your Honor, that I must necessarily proceed in this way if I am to trace those coincidences, and if you rule me out of order it is impossible for me to show what I desire to show.
3715. *President.*] We do rule you out of order, Mr. Schey.
3716. *Mr. Schey.*] I submit another question, your Honor, for your judgment. I desire to ask the witness whether he has ever seen evidence of any attempt to get the position he was holding at the time before there was any idea of him giving it up?
3717. *President.*] You can ask that question if you want to, Mr. Schey.
3718. *Mr. Schey.*] Well, I ask the question (to Witness.) During the time you were Mr. Scott's assistant, did you ever see any evidence of any person trying to get your position before there was any idea of it becoming vacant? When Mr. Scott returned from England he wanted an assistant. I was his assistant, and Mr. Alison Smith, who is now locomotive superintendent on the Victorian railway, and Mr. Thow's assistant, Mr. Roberts, who is Mr. Thow's successor in South Australia, both applied for my position as assistant to Mr. Scott while I was in it. When I was answering Mr. Scott's charges against me, I saw letters from both of those gentlemen.
3719. You know they applied? Yes.
3720. And at that time while you were in the position, and there was no idea of leaving it in your mind? Yes; not so far as I knew.
3721. Do you remember Mr. Thow going through the Eveleigh works to make a report on the rolling stock? I remember his coming to my office.
3722. You remember his coming to the Locomotive Engineer's office? Yes.
3723. I suppose it was to tell you what he wanted;—do you remember the time he made his report? Yes.
3724. Was that the first you heard of it? The first of what?
3725. Of Mr. Thow's being called upon, or asked or invited to make a report upon the railway stock? The first idea I had of his coming here I gained from the *Evening News*. I was travelling on the Northern line with the Railway Commissioners when I read the paragraph respecting his coming here.
3726. You saw it in the *Evening News*? Yes; I saw an announcement that Mr. Thow had been asked to come to Sydney to inspect the rolling stock.
3727. Surely you knew it officially before that? No; I did not. That was the first intimation.
3728. You say that you saw a notification in the *Evening News*;—did it state that he had been asked to do this? I forget whether he had been or was going to be, but there was an announcement that Mr. Thow was coming.
3729. But the matter was settled? Yes; as near as I can remember. At all events I asked Mr. Eddy at the time something about it. I asked him whether it was a friendly inspection, and I understood him to say it was. We were travelling on the Northern line at the time I mentioned the subject to the Chief Commissioner.
3730. Well, what happened next? It terminated at that.
3731–2. But what was the next intimation you got of this report? The next intimation was Mr. Thow coming to my office with a letter.
3733. What did he tell you? He brought a letter from Mr. Eddy intimating what was to take place.
3734. What was intimated in the letter? That he was coming to inspect the stock, and report.
3735. And you were to give him your assistance? Yes; I was to introduce him to the officers, and an officer was named who was to accompany him. I did not select the officer to go with Mr. Thow. He was already selected.
3736–7. Then you did not yourself show Mr. Thow round? No; the person whose name was mentioned in the letter did that.
3738. That was the officer who took Mr. Thow round the works and showed him the rolling stock? Yes; he took him over the line wherever he wanted to go.
3739. How long was he engaged in that? Six or seven weeks.
3740. And then he produced a report on the rolling stock? Yes.
3741–2. Did you see that report? No.
3743. Did not Mr. Thow consult you in the matter? He consulted me once, with Mr. D. H. Neale, who was present according to the Commissioners instructions, to decide upon standard types of engines for the future. Mr. Thow asked me what I wanted, and I said that he should begin. I thought as he was here to report that it was his duty to make some suggestion. He could see what I had done. He had decided what he thought were the best types of engines. Mr. Neale, when he was appealed to said, like a sensible man, that he had not been long enough in the country to give an opinion. I congratulated him on the expression, and then I said what I thought was the best type of engine. That is all I saw of Mr. Thow during the whole six or seven weeks.
3744. Did not you see him when the report was written? I never saw him, I was out of the department when the report was made public.
3745–6. When the report was made you were out of the department? Yes; I think that was how it occurred, at any rate I never saw the report until after I left the department, and was in print.
3747. Shortly after that I believe you got this information that you were to leave? Yes.
3748. And then in accordance with your instructions you handed over everything to Mr. Downs, and subsequently Mr. Thow took your place? Yes.

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3749. Now, Mr. Midelton, can you tell me from this document—[*handing witness a copy of the report*]—how many new classes of engines Mr. Thow recommended;—I mean classes different from those already in existence? The information is given on page 5.
3750. How many new or additional classes of engines did he recommend? He say he does not recommend any different classes, but tries to make out here that his ideas are consistent with the types of locomotives we had, but they are not.
3751–2. Are you acquainted with the general details of the engines which have since been introduced? Yes.
3753. And you know as a matter of fact the general design of the engines that have been imported since Mr. Thow took office? Yes.
3754. Do they correspond with his recommendation as contained in the report? No.
3755. Are there wide differences? In some cases there are wide differences, but not as a whole.
3756–7. Can you point out briefly the general differences;—I do not want to go in to small mechanical details; just mention the differences in design—take the first recommendation which has reference to an express engine? Mr. Thow says "As previously stated, a four-wheels couple engine is in my opinion better suited for the speed and conditions of your service than a six-wheels coupled machine. And having regard to the limitation of load per axle by your engineer, namely: 14 tons, the weight for adhesion in engines with four coupled wheels becomes 28 tons. The question to be dealt with, therefore, is the best means under your circumstances of utilising that amount of adhesive weight." While that is Mr. Thow's recommendation he has introduced a six-wheels-coupling engine for this very work.
3758. Is there any other difference? It is of totally different design.
3759–60. Is there any difference in the placing of cylinders for instance? Yes; the one is an inside cylinder, and the other is an outside cylinder engine.
3761–2. Therefore, the general difference between the two classes that you speak of is, that Mr. Thow recommended a four-wheels-coupled inside cylinder engine, and has brought out a six-wheels-coupled outside cylinder engine? Yes.
3763–4. Now, did you not yourself recommend a six-wheels coupled outside cylinder engine for this work? I did.
3765. Therefore, Mr. Thow's recommendation was adverse to your practice, was it not, when he recommended a four-wheels coupled inside cylinder engine? Yes; his recommendation was adverse to my practice.
3766–7. And also to your recommendation? Yes.
3768. Mr. Thow's practice on the other hand has been in accordance with your advice and practice? Yes.
3769. I suppose you consider that Mr. Thow is bearing testimony to the correctness of your views? He has gained experience since he has been here, and has found out who is right. When he wrote this recommendation he did not know.
3770. I understand you to say he recommends as many as five fresh classes, is that so? In answer to your question I consider that Mr. Thow has departed entirely from his recommendation in this report, and instead of reducing the number of types of engines he has increased them.
3771. How many new types of engines are there?
3772. *Mr. Eddy.*] Really Mr. President it is wearisome to sit here all day and not have five minutes business done. What has this Commission to do with the types of engines on the New South Wales Railways? Here is a man whom we considered unfit for his position, and he was removed, and now we are having a discussion as to his opinion of the types of engines adopted by the Commissioners, and the recommendations made by Mr. Thow. It was the Commissioners who decided what had to be done. We decided the types of engines to be adopted, and as to Mr. Midelton's opinion of Mr. Thow, and all that sort of thing, it is really painful to sit here and have to listen to it, and at the same time to know that not five minutes of relevant evidence has been given during the whole day in support of this charge. It is simply a discussion of Mr. Midelton's personal qualifications and personal history.
3773. *Mr. Schey:*] It appears to me that Mr. Eddy objects to the whole of the examination. He wants to stop it.
3774. *Mr. Eddy.*] What I wish to do is this Mr. Schey; I wish to get you put into the witness-box to give your evidence upon oath, and not to have you continually wasting time in the way you are doing now.
3775. *President.*] I do not see, Mr. Eddy, exactly how we can stop this evidence. It has been gone into, and gone into by Mr. Thow, and that being so, although I do not see that it is very pertinent to the inquiry, yet this question as to the introduction of a number of types of engines has been gone into, and I do not think that at this stage we can shut out further evidence upon the point.
3776. *Mr. Schey.*] I beg to point out, your Honor, that this evidence was given by Mr. Thow in reply to Mr. Eddy's cross-examination.
3777. *President.*] I have just mentioned the fact, Mr. Schey.
3778. *Mr. Eddy.*] But Mr. Thow was Mr. Schey's witness.
3779. *President.*] In one sense he was; but in another he was not. Of course he was Mr. Schey's witness, inasmuch as Mr. Schey called him; but he could hardly have been stated to have been brought here to prove Mr. Schey's case. I think you may ask the question, Mr. Schey.
3780. *Mr. Schey.*] I think the question I was asking at the time I was interrupted was as to the number of new classes of engines which have been framed. Can you give me any opinion upon that point, Mr. Midelton? Mr. Thow has introduced five new types, and somebody else two others.
3781. Then you mean to say that since the Railway Commissioners have taken office there have been seven new types of engines introduced? Yes.
3782. Now, is it not a fact that it has been perceptible for a number of years that there were too many types of engines altogether? Yes.
3783. And that the number of types ought to be reduced? Yes.
3784. Reduced to the most useful types we have? Yes.
3785. And that interchangeability of parts was a great desideratum in dealing with these matters? Yes.
3786. And you had fully recognised that? Yes.
3787. You had made a recommendation on the subject, I believe? Yes.
3788. Then it had not remained for the present Commissioners to in any way discover that? No; I think that everyone who has had to do with the railways has tried to reduce the types of engines.
3789. That is a matter common to all men who understand their business? Yes.
3790. And you had frequently in your time made recommendations of this kind? Yes; Mr. Goodchap and I went into the matter very fully.

3791.

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3791. And you say that the engines recommended in Mr. Thow's report have not yet been supplied? The express engine imported is decidedly different from the one recommended here. As I have pointed out the recommendation is for a 4-wheel coupled engine, and the imported engine is a 6-wheel coupled engine.
3792. Then the engines have not yet been imported? No. I may say in reference to this matter that Mr. Scott had some trouble about the types of engines. Mr. Scott and I fought this question out, and in 1884 I designed an engine which gave the greatest satisfaction. Mr. Scott also designed an engine which was intended to surpass mine; but it utterly failed on trial. I pointed out before the engine was built that it would not succeed, and the trial demonstrated the truth of my assertion. This appears to be a continuation of the same trouble.
3793. Can you tell me from the records how many engines there were under repair when you gave up charge at Eveleigh? The shop was full, but I cannot give you the number of engines. I forget the number of pits; I think it is between thirty and thirty-five.
3794. You would have to refer to the records at the department for information? Yes.
3795. Are there any exact records of these things kept? Certainly.
3796. A complete and proper record? Yes.
3797. Was a weekly return presented to the head of the department? Yes.
3798. Then if any person has said that the first exact record to be found of this matter was the 30th March, 1889, that is not correct? Records were sent to me in the usual course, as directed by myself, every week. Records of engines repaired and waiting repair all along the line. The present Commissioners introduced a different form, that is all.
3799. But there was at that time a proper record kept? Of course there was.
3800. Therefore if any one had said it was impossible to furnish a record before the date I have named, that is not correct? It is not correct.
3801. *Mr. Eddy.*] Before the Commission rises Mr. President; I wish to call your attention to the fact, that the minutes of yesterday's proceedings and of the proceedings of the previous day, contain to a large extent the extracts from newspapers which have been put in, but which you ruled could not be considered evidence. I which to submit to the Commission the question as to whether that matter should not be struck off from the minutes of proceedings, until such time as you have decided to admit it as evidence.
3802. *President.*] It has not yet been printed, Mr. Eddy. The short-hand writer's notes are minutes of the proceedings before the Commission, and I do not quite see how the extracts read by Mr. Schey in the presence of the Commission can be excluded from those minutes.
3803. *Mr. Eddy.*] But these were statements not made on oath, Mr. President, and I understood they were not to be included in the proceedings.
3804. *President.*] I do not see how we can exclude these extracts which were read, from the minutes of the proceedings, because they actually formed part of the proceedings of the Commission.
3805. *Mr. Eddy.*] Had I known that Sir, I should have pressed my objections very strongly. I should have demanded Mr. Schey be put in the witness-box and answer on oath whether he was not the writer of these articles which he has read. I know he is a voluminous writer to the press, and he may be responsible for some of the extracts which he has quoted.
3806. *President.*] We can take no cognisance of that, Mr Eddy. As I have said before Mr. Schey will have to go into the witness-box before this inquiry concludes, and then you will have an opportunity of asking him any questions you may think fit, in reference to this or any other matter you may think pertinent to the inquiry.

THURSDAY, 26 MAY, 1892.

[The Committee met at 11 o'clock in the Equity Court, Chancery-square.]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

3807. *President.*] We have received a letter from Mr. Eddy, saying that he is unable to leave his house to-day, as he has been suffering from a very severe cold; and he asks the Commission not to adjourn for that reason, but to allow Mr. Robert Smith, who appears as his solicitor, to cross-examine the witnesses called by Mr. Schey. We intend to accede to that request. We do not think that Mr. Schey can complain of the witnesses being merely cross-examined, that is, asked certain questions which Mr. Smith may consider necessary to elucidate the evidence. Further than that we think we ought not to go.
3808. *Mr. Smith.*] Of course, Mr. President, any questions I would ask at all would be always subject to your approval.
3809. *President.*] Of course.
3810. *Mr. Schey.*] Do I understand, your Honor, that Mr. Smith is to be allowed to cross-examine the witnesses in the place of Mr. Eddy?
3811. *President.*] Yes.
3812. *Mr. Schey.*] It will be within your recollection no doubt, your Honor, that I called Mr. Alexander Richardson, the Controller of Stores, but he could not attend, because he was unwell. I now learn that he is in attendance this morning. There are two or three questions I wish to ask Mr. Chambers, and as Mr. Middleton's evidence is likely to occupy some considerable time yet, perhaps, with your Honor's concurrence, I may first examine Mr. Richardson and Mr. Chambers, and get them off the list of witnesses.
3813. *President.*] Certainly, Mr. Schey, you can call those gentlemen.
3814. *Mr. Schey.*] I desire to adopt this course, your Honor, in order not to detain these gentlemen any longer. I will first call Mr. Richardson.

[Mr. Richardson on being called did not appear.]

3815. *President.*] I understand that Mr. Richardson has not yet arrived, but he will be here in a few moments. Perhaps you had better call, Mr. Chambers.
3816. *Mr. Schey.*] Very well, your Honor, I will call Mr. Chambers.

[Mr. Chambers on being called did not appear.]

3817. *President.*] Mr. Chambers is not here either, Mr. Schey, and, therefore, you had better continue your examination of Mr. Middleton.
3818. *Mr. Schey.*] Very well, your Honor.

Mr. Thomas Midelton called and further examined:—

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3819. *Mr. Schey.*] You are sworn, Mr. Midelton? Yes.
3820. When the Commission last sat I was asking you some questions about forty locomotive boilers, and I handed you the indent showing the boilers ordered by the makers' numbers, and you told me at the time that you could not identify these particular boilers by the makers' numbers, but that you could do so if I could get you the rotary numbers? Yes.
3821. Now, I find the first lot scheduled in the indent under letter "A" to be ten locomotive boilers for passenger engines to makers', 2,060; I find that 2,060 corresponds with the engines of 93 class; that is the rotary number of the class, is it not? I know the No. 93 class.
3822. I am identifying them from the papers received; you know the class of engine I am referring to Mr. Midelton? Yes; I know the No. 93 class.
3823. Do you know who the No. 93 class engines were built by? Yes; Beyer and Peacock.
3824. How many engines are there in that classs? I really forget. There are a good number.
3825. There are a good many of them? Yes; a great many.
3826. Ten boilers were ordered to replace boilers in this class of engine; do you know whether there were any plans in existence when you were in the Department belonging to this class of engine? Do you mean plans of the whole engine?
3827. Locomotive or boiler plans; plans of any sort? There were a few drawings. There were boiler drawings for that class and a few others, but not a whole set, as near as I can remember.
3828. You say there were drawings of the boilers for No. 93 class? Yes; and some were made in the Colony.
3829. Some boilers for this class of engine have been made in the Colony? Yes; and also complete engines.
3830. Complete engines have been made in the Colony of this No. 93 class? Yes.
3831. Who made the boilers for this class? Vale & Co., of Pyrmont and Auburn.
3832. If anyone has said that there were no plans from which No. 93 class boilers could be constructed, you say that is not correct? It is a mistake, certainly.
3833. You know there were plans in existence for that class of boiler? Yes.
3834. The next item on the indent, item "B," is for six locomotive boilers for goods engines to maker's No. 2,064; I see I have made a slight mistake, but it will not affect the correctness of your answer; I see that it is the 2,064 maker's number which corresponds with the 93 class. The only difference is that it refers to six boilers instead of ten; I think your answers will apply equally in either case?
3835. *President.*] Except that there were six boilers ordered instead of ten?
3836. *Mr. Schey.*] Yes, your Honor; item 2,064 having been identified with No. 93 class, I now ask you, Mr. Midelton, to take item "A," which is for ten locomotive boilers for passenger engines to maker's No. 2,060, which number I find is identified with engines of the 79 class; do you know the engines of that class; they are passenger engines? Yes.
3837. Who were they built by? The original engines were built by Beyer and Peacock; subsequently six were built by Dubs, of Glasgow, and some were also built in the Colony by the Atlas Company.
3838. All of the same class? Yes.
3839. There are ten of these boilers; do you know whether there were any plans in existence for this class of engine? I think there was a whole set of drawings for this class of engine. I am not quite certain, but I am nearly sure there was a whole set.
3840. Can you tell for certain as to the boiler plans? Yes; I am sure there were boiler plans.
3841. You are certain there were boiler plans? Yes.
3842. Have any of these boilers been made in the Colony for this class? Yes.
3843. You say they have? Yes; the Atlas Company made some, and also the engines complete.
3844. And consequently there would have been drawings prepared, even if none were in existence for them previously? Certainly.
3845. And therefore you assert that there were drawings in existence at the time you left the department for 79 class boilers? Yes.
3846. Now, take item "C"—two locomotive boilers for tank suburban engines to maker's No. 1910. That maker's number is identified with 158 class of engine. Do you know that class? Yes.
3847. Who were they built by? Beyer and Peacock—six engines only.
3848. You say there were only six of this class? Yes; only six.
3849. Do you know whether there were any plans in existence belonging to these engines? There was a general arrangement drawing. There was one drawing; I never saw more than one for this class of engine. It was a general drawing, showing the boiler and the arrangement of the engine.
3850. You say that there was a drawing showing the general plan of the engine? Yes.
3851. Would that contain particulars upon which a boiler could have been constructed? Yes.
3852. It did? Yes.
3853. Could the boilers have been easily constructed from that drawing? Yes; I think sufficient particulars could have been obtained from it. The data could have been obtained from that drawing to make a boiler.
3854. How long would it have taken, with that drawing in your possession, to have started to make these two boilers? How long what?
3855. You say there was a drawing in existence—a general drawing for the engines of the 158 class, and you further say that from that drawing data could have been obtained from which a boiler could have been easily made? Yes.
3856. Then I ask you now, how long would it have taken, having that drawing in your possession, to start to make these two boilers, for which this indent was sent? About a week.
3857. You could have started in a week? Yes.
3858. And completed them in how long? I mean in connection with other work—I do not mean setting everything on one side? In four months.
3859. Now, taking the next item, Mr. Midelton—item "D"—twelve locomotive boilers for goods engines to maker's No. 2,560. I find 2,560 is identified with the 205 class of engine;—do you know the 205 class? Yes.
3860. Who built them? Beyer and Peacock. The first engines of that class were made according to their design, like others referred to.

3861.

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3861. There have been others built to the same design since? Yes.
3862. Do you know whether there were any drawings in the possession of the department belonging to the 205 class of engines? Yes; I think there was a whole set.
3863. You think there was a full set? Yes.
3864. Can you speak with accuracy as to boiler plans for this class? I cannot positively say; but I am almost sure that there was a full set of drawings for that class of engine. I am nearly sure of it. Yes; I am quite sure of it now; there was a full set for this class.
3865. The next lot is item "E," six locomotive boilers for passenger engines to maker's No. 2150. 2150 is identified with engines of the class 255. The next item is "F," four locomotive boilers for passenger engines to maker's No. 1,780, and that number also is identified with engines of class 255. These two makers' No. are both identified with the 255 class of engines. Do you know the 255 class of engines? Yes.
3866. There are two lots, are there not, under that class number? Yes. There were six in the first lot.
3867. There is some slight difference in them, is there not? Yes; there is a great difference. One has a 17 and the other an 18-in. cylinder. The first six which were built were called the 255 class. Then the next lot, which are similar engines but with larger cylinders, are also called 255 class. The first lot were built by Beyer and Peacock, and the second by Dubs, of Glasgow. I call them three classes of engines, although they are all classed as one, because they are so much alike.
3868. Are not some of that class known as the 261 class? Yes. That is the difference between the two engines. One is a Dubs engine, and the other a Beyer and Peacock.
3869. I see that both these lots of locomotive boilers were obtained from Dubs and Co? You mean the 255 class.
3870. I find that both makers' numbers are identified with the 255 class. You know that class of engines Mr. Midelton; can you tell me whether there are any drawings in existence for these engines? Yes; there was a full set for the 261 class, the second order of the express class of engine.
3871. That was the second lot of the 255 class? Yes; that is the Dubs engine. There were drawings of those, but not of the first six engines made by Beyer, Peacock, & Co.
3872. That would probably correspond with maker's No. 1,780, which is the last number mentioned, and the 261 class? Yes. The 261 class is the Dubs engine, and they are called the 255 class because they are a similar engine in outline.
3873. I have given you all the classes of engines, and what you say amounts to this: that there were plans at the time you left the office in existence for nearly all the boilers I have mentioned? Yes.
3874. Many of them you are quite positive about? Yes.
3875. Prepared to swear to? Yes.
3876. And you say you are of opinion that there were plans for all of them? I think so, either complete plans or single drawings.
3877. Therefore, if any one has said there were no plans in existence from which these boilers could have been manufactured, you say unhesitatingly that is not correct? I do.
3878. I have already informed you, I think, that these forty boilers were cabled for because there was special urgency for them? Yes; I think so.
3879. The indent discloses that; the evidence discloses it?
3880. *Mr. Smith.*] There is no evidence to the effect that the boilers were cabled for?
3881. *Mr. Schey.*] I will turn it up.
3882. *Mr. Smith.*] As a matter of fact they were not cabled for.
3883. *President.*] Mr. Smith says that these boiler-plates were not cabled for, Mr. Schey.
3884. *Mr. Smith.*] They were ordered by letter, Mr. President, and subsequently, two or three months afterwards, a cable was sent to know when the boilers would be delivered.
3885. *Mr. Schey.*] I am not speaking of boiler-plates. I am referring to boilers.
3886. *Mr. Smith.*] Your examination for some considerable time has been confined to this subject, and you have been labouring under a mistake.
3887. *Mr. Schey.*] I understood that these boilers were ordered by cable.
3888. *President.*] No; they were ordered by letter; but a cablegram was sent some months afterwards, asking the question when they would be ready for delivery, or something of that kind.
3889. *Mr. Smith.*] Saying that they were urgently wanted.
3890. *Mr. Schey.*] I must ask your Honor to note that point. I want to go into it again, but I am not prepared at the present moment to turn up the particular place where this appears.
3891. *Mr. Kethel.*] I think it is question 1402, on page 50 of the printed evidence.
3892. *Mr. Schey.*] There is more about it than that. That merely says that the indent was sent to England for boilers. There is something further than that, and I ask that the point be noted, so that I may have the opportunity of looking the subject up and referring to it again. I cannot say at the moment where the evidence is. At all events, your Honor, it has certainly been stated that these boilers were urgently required.
3893. *President.*] Yes.
3894. *Mr. Schey.*] And that this was the reason why a special order was sent—that there was a special urgency, and that there were no plans in existence. So far as the plans are concerned, I have already dealt with that subject in the evidence of this witness. Now, as to the urgency. (To Witness:) The papers give the despatch of the order as the 26th June, 1889. That was some short time, Mr. Midelton, after you left the department? Yes.
3895. About three months? Yes.
3896. The paper goes on to show that the first of these boilers was received in May, 1890. That would be eleven months after the order had gone. The paper further shows that these boilers were not used until the 21st August, 1890, which would be fourteen months, within a few days, after the order was sent. Now, do ou consider, Mr. Midelton, that that shows any very great urgency? ——
3897. *Mr. Smith.*] I do not know, Mr. President, why this class of evidence ought to be gone into. It is merely taking up the time of the Commission unnecessarily. The document which Mr. Schey has gives all this information, and this witness is not called upon to give a report. It is for the Commission to deliver a report. This gentleman is now out of the service, and he cannot speak with any authority on this matter.
3898. *President.*] We have nothing to do with this witness's opinion, of course. We only want facts.

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3899. *Mr. Smith.*] But he is not giving you facts, Mr. President. Mr. Schey is giving him the facts, and he is simply saying "yes" or "no." Mr. Midelton has been out of the service for nearly two years.
3900. *Mr. Schey.*] I will be able to prove what I desire, your Honor, from this paper, which I will put in. The paper discloses, at all events, that in the case of these boilers the first was not received until May, 1890; that is eleven months after the order was sent, and they were not used until August, 1890, or fourteen months after the order was sent. There were two more used in the following month, and so on.
3901. *President.*] The document speaks for itself, Mr. Schey. There is no use putting words into the witness' mouth and getting "yes" or "no" from him.
3902. *Mr. Schey.*] But I want to ask a question upon it afterwards. At all events, only eight of these boilers were used up to the end of 1890, and that would be eighteen full months after the order was sent. (To Witness): Now, supposing these boilers had been made in the Colony—you have already said that you could have made them at the Eveleigh workshops, had you been allowed? Yes.
3903. Supposing these boilers had been made in this Colony, I suppose you could have made eight within eighteen months? Yes.
3904. In a much shorter time? Yes.
3905. In the papers it is disclosed that there were only thirty-three of them used up to the end of 1891; that is two and a half years after the order; the paper shows further that six of them had been used since the opening of the present year, 1892, and also that one of them is at present on hand still unused; the next month, June—we are close to it—will be three years since the order was sent; now six of these boilers, as I have already said, were not used until this year, and one is still on hand;—now, could the whole of these forty boilers have been made here in very much less time had they been required? Yes.
3906. Do you think from this report, which gives the dates when these boilers were put into service, that the Commissioners were justified in sending an order for forty boilers on the score of urgency?
3907. *President.*] We do not want to know what Mr. Midelton may consider justification or not.
3908. *Mr. Schey.*] But his opinion ought to be valuable, your Honor.
3909. *President.*] The Commissioners will determine that question on facts, and not on mere opinion. Mr. Midelton is no longer in the department.
3910. *Mr. Schey.*] He is an engineer, your Honor, and his opinion ought to be valuable on this point. (To Witness): At all events, Mr. Midelton, the whole of these forty boilers could have been constructed in a very much less time than they have been used up in? Yes.
3911. Very much less? Yes.
3912. I think you promised, Mr. Midelton, the other day to try and procure for me certain information as to the number of locomotives per 100 miles in Victoria? I have written for the information, but I have not yet received it.
3913. You also promised to obtain some statistics for me as to the traffic on the Great Eastern railway? I am looking that up.
3914. You have not yet obtained that information? No.
3915. Then as to the Canadian-Pacific railway;—do you know the *National Car and Locomotive Builder?* Yes.
3916. It is a high class technical journal, is it not, published in the United States? Yes.
3917. It is regarded as an authority, is it not, on the matters with which it deals? Yes.
3918. Does this journal not contain a directory of all American and Canadian railway companies? Yes.
3919. What issue of the paper is that [*handing paper to witness*]? April, 1892.
3920. That, I suppose, would be the last issue which has arrived in the Colony from America, considering that we are now only in May? Yes; I suppose it is.
3921. What page are you on? Page 25 of the advertisements.
3922. *Mr. Smith.*] Is that an advertisement? No; it is a directory.
3923. Is it a directory of the persons who advertise in that paper? No; it is a directory of the railroads in the United States, and it gives statistics as to the officials employed, the mileage, &c., and so on; but it is in the advertisement portion of the paper. It is a directory nevertheless.
3924. Do you know whether it is simply a list of persons who advertise in that journal? No; it has nothing whatever to do with the advertisements.
3925. *Mr. Smith.*] Let the President see it.
3926. *Witness.*] I may say, Mr. President, that the information contained in this directory is changed every month in order to ensure accuracy. Every increase in mileage is noted and announced there.
3927. *Mr. Schey.*] The directory is interleaved with the advertisements, your Honor, that is all. (To Witness): You have there, have you not, a directory, which contains information about a very large number of American and Canadian railway roads? Yes.
3928. It gives the mileage, the number of vehicles, the names of the staff, and so on, does it not? Yes.
3929. Do you see the Canadian and Pacific Railroad Company mentioned there? Yes.
3930. Will you kindly give me the information which is there conveyed about the Canadian and Pacific Railroad. I do not want the names of the officers. Give me the mileage and the number of vehicles? The Canadian Pacific has a 4-ft. 8½-in. gauge. There are 6,606 miles of road, 581 locomotives, 569 passenger cars, and 17,017 freight cars. Then follow the names of the officers.
3931. I suppose you have every reason to believe that that information is correct? Yes. The proprietors of this paper pride themselves upon having this list correct. They take great trouble with it, and it is published monthly and has been for years.
3932. You have given the mileage of 6,000 and some odd miles? Yes; 6,606 miles.
3933. The mileage over this Colony is a little over 2,000, I believe? Yes; 2,182 miles, I believe.
3934. So that the mileage of the Canadian Pacific is approximately three times the mileage of this Colony? Yes.
3935. And the gauge is the same? Yes.
3936. What is the number of locomotives? Five hundred and eighty-one.
3937. Do you know the number of locomotives now in the possession of our Railway Commissioners? I think it is 481.
3938. Including the new ones? I think the number is 481. At least, that is the number I saw in Mr. Eddy's official statement yesterday.

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3939. That is according to the last report? Yes.
3940. Then the Canadian Pacific, with nearly three times as many miles, have only about 25 per cent. increase in the number of locomotives? Yes.
3941. Now tell me again the number of freight cars? Seventeen thousand and seventeeen.
3942. Do you know the number of freight cars on the New South Wales road? I do not know at the present time.
3943. Would it be anything like that number? Very near, I suppose. There have been a great many made lately. I suppose all included it is very near that number now.
3944. Then that would indicate that providing that a proper service is got out of them the traffic of the two lines is somewhat approximate? The freight cars on the Canadian Pacific are double bogie cars, while ours are only 4-wheeled cars. The Canadian Pacific cars have twice the carrying capacity of ours.
3945. Then you would understand that the traffic is greater?
3946. *President.*] Mr. Midelton, is the number of miles open any test as to the number of engines required?
3947. *Witness.*] Yes, your Honor. It goes with the mileage and the traffic.
3948. Is not the traffic the principal factor in the question? Certainly, your Honor. The Americans try to get as much work and mileage out of their engines and cars as they can. That is the basis of their operations.
3949. What I mean is this. If one railway is 6,000 miles and the other 2,000, that fact alone is no test of the number of locomotives or carriages which are required, unless you know what the traffic is? As I said before, your Honor, the mileage and the traffic generally go together.
3950. But there are two items of course? Yes; the mileage and the traffic regulate the number of locomotives.
3951. *Mr. Kethel.*] Does that 6,000 miles you have referred to include the Transcontinental Line? It includes the main line and all its branches.
3952. *President.*] Do you know how often trains run across the continent? I do not.
3953. About twice a week, or something of that sort? Every day, I should say.
3954. Right across? Yes, your Honor; three or four trains from Montreal to Vancouver. This is a very important line. Some statistics appeared in the daily papers some few days ago about this line; it has an enormous traffic.
3955. *Mr. Schey.*] I will now hand in, your Honor, this copy of the statistics regarding the Canadian-Pacific Railroad. [*Document handed in.*]
3956. *President.*] Is there any objection to this, Mr. Smith?
3957. *Mr. Smith.*] None whatever, sir.
3958. *President.*] Then it will go in, Mr. Schey.
3959. *Mr. Schey.*] Now, Mr. Midelton, on the point as to the loads which various engines will draw. At the time you left the department what was the most powerful passenger engine in the Colony? The 60 class, of which there were six engines.
3960. What was the most powerful goods engine at that time? The American Consolidation engine.
3961. What class is that? The 131 class.
3962. Do you know the 304 class? Yes; that was the next most powerful passenger engine to the 60 class.
3963. Is the 304 class of engine as powerful as the 60 class? No.
3964. It is not? No; it is not.
3965. If any person has said that the 304 class of engine was the most powerful that would not be correct? It is a mistake. I might explain that the 60 class, of which we have six engines, were built for running the passenger traffic over the mountains many years ago. They were designed by Mr. Whitton and built by Robert Stephenson. They failed in doing that work, and I introduced the 304 class of engine to do the work, that being the next most powerful engine in the service to the 60 class. Hence, I suppose a mistake has been made in overlooking the 60 class of engine, as it has not been used for that work for some years. I apprehend that is how the mistake has arisen; but the 60 class is the more powerful of the two.
3966. Have you a list of the loads for these various engines over different sections? No; I have not. You will find that information in the official time-table, which can be obtained from the department.
3967. Can you not procure this information? I could get a copy of the time-table from Mr. McLachlan I suppose; the loads are all given there for every class.
3968. You say that you cannot tell me what loads these engines can draw over different sections? The 304 class would take 120 tons up 1 in 30. They have done so. The original engines.
3969. One hundred and twenty tons up 1 in 30? Yes.
3970. That is the 304 class? Yes.
3971. What would the 60 class take under the same conditions? They ought to take about 130 tons roughly speaking.
3972. Now as to those ten engines which were ordered on your recommendation from Dubs & Co., what class number are they? Three hundred and four class.
3973. They are the 304 class? Yes.
3974. And you give their loads as 120 tons over 1 in 30? Yes; but they could take none.
3975. Now take the Baldwin engine 131 class, what would she draw over the same section? I have heard Mr. Goodchap say that he took 200 tons up a 1 in 30 grade when the engines were first delivered some twelve years ago, in 1878 or 1879; I am not sure which. There was a dispute between Mr. Goodchap and Mr. Burnett about the load these engines would take, and I think a test was then made; at all events I have heard him say so.
3976. Do you know that that is the load, or do you merely say so because you heard Mr. Goodchap say so? I say that is what I heard, and it has been repeated to me a good many times. They are very powerful engines, and I should think they would take 160 tons now.
3977. Do you know the new engines which are being brought out? Do you mean the new Consolidation engines—the American engines.
3978. I mean the English engines—the last fifty ordered from Beyer and Peacock? Yes; I know them.
3979. Can you give me the loads which they will draw over the same section? No; I cannot, I do not know the boiler pressure.
3980. Could you work it out if you had the dimensions? Yes.
3981. If I get them will you work it out for me? Yes.

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3982. Now referring again to the proportion of locomotives to miles of railway, you stated in evidence I think, that the proportion here was 20·9? 21·9, call it 22.
3983. Can you give me the proportion at the time you left office? I think it was 17 then, I am not quite sure; I cannot exactly remember.
3984. You are speaking from memory only? Yes, I know it was less; it must necessarily have been less seeing that many more engines have since been imported and the mileage has not increased in proportion.
3985. Are you aware that Mr. Thow asked for twenty-five more locomotives six days after taking office? I never knew anything about that.
3986. Would it surprise you to know that he made such a request? No.
3987. Why would you not be surprised, did you know that they would be required? I think if he ordered them six days after he took office he was in a hurry to order engines.
3988. You think that if he asked for six more three weeks after that again, making thirty-one practically inside a month, that would be an extraordinary order for him to recommend? He showed extraordinary discernment, if he discovered all that in such a short time.
3989. As that was done immediately after you yourself were put out of office, you had a very good knowledge of what was then required? Yes.
3990. Do you think the circumstances at that time would justify such a large order being sent within a few months of your leaving office? How many was it?
3991. Twenty-five a few days after taking office, and six three weeks afterwards? What kind of engines were they?
3992. I cannot tell you. I do not think the papers give that detail? If Mr. Thow had increased the order which Dubs had already received for ten engines—if he had increased that order to the number you speak of, I think he would have been correct.
3993. *President.*] You, yourself, Mr. Midelton, recommended that the order should be increased from ten to twenty-five? I did on account of the failure of local manufacturers to go on with the contracts they had in hand. I thought it advisable to increase the order already given to Dubs. If Mr. Thow ordered a different class of engines I think he made a mistake; but I do not know whether he did or not.
3994. *Mr. Schey.*] Now, coming to these ten engines you yourself recommended, and of which you are speaking—prior to that order having been given was there not a big dispute as to which was the best type of locomotives to be used? There was a great deal of time unnecessarily wasted over the matter.
3995. But the time was wasted over the dispute which arose about the type of engine which should be adopted? Yes.
3996. Were not a number of tests made to see which engines were best? Yes, in June, 1887.
3997. Notably between some Mr. Scott introduced, and some of your own recommending? Yes. I put some engines known as the 304 class on the railways in 1885. Those engines gave the greatest possible satisfaction; but Mr. Scott recommended a different type to surpass mine. I pointed out to the Commissioner that it would be a mistake if these engines were built, and when they were built and delivered the Minister of the day insisted upon a test being made between the two engines. Mr. Roberts, Mr. Thow's assistant and successor in South Australia, Mr. Allison Smith, Locomotive Engineer in Victoria at the present time, together decided between the two engines, and decided in my favour.
3998. Then, tests for a suitable type of engine were made? Yes, in 1887, two years after the first engines were delivered.
3999. And certain experts were brought here, were they not, to conduct the tests? Yes; I have just described that.
4000. Did you give the names of the experts? Yes. Their decision I may say was further supported by the Locomotive Engineer of New Zealand. Three engineers really supported my view.
4001. Were these experts friendly to yourself? One was a personal friend of mine, Mr. Rotherham, the Locomotive Engineer of New Zealand. I had known him intimately for many years. But as to the other two gentlemen, they both applied for my position when I was under Mr. Scott, and I concluded from that that they were scarcely friendly to me.
4002. These three gentlemen reported in favour of the recommendation made by you? Yes, in favour of the 304 class.
4003. At that time the new engines which have since been procured on your recommendation had not been ordered. The trial was made with the old engines, was it not? Yes, the new ones were exactly the same class.
4004. The new ones were duplicates of the 304 class with certain improvements? Yes; there were a few modifications, but that did not interfere with the interchangeability of the engines.
4005. Then the tests having terminated, and the report having been delivered in favour of this particular class of engine, tenders, I suppose, were obtained for the supply of ten locomotives? Yes; for the manufacture of 25 of the same class in the Colony.
4006. And a number of tenders were received? Yes.
4007. Nine or ten? Not so many as that.
4008. The type, you say, had been well ascertained? Yes; the type was decided.
4009. And the price had been well ascertained by calling for tenders? Yes.
4010. And, therefore, if more engines were required it would have been a reasonable thing to increase the order for that particular class of engine? Yes, I think so, under the circumstances.
4011. It would have been a better course than sending orders without tenders to other firms for other engines? Yes; I think so.
4012. Do you know the first twenty-five engines which were brought here after the arrival of the Commissioners, and after you left office? Yes; I think they were tank engines, as near as I can remember.
4013. Are they repetitions of engines previously in service? They are said to be duplicates of the 93 class. I do not admit that.
4014. You claim that they are not so? I do.
4015. Now, if it is alleged that the order for these twenty-five engines was sent to expedite matters, and because of the urgency for locomotive power, would the course pursued expedite matters more than increasing the order for similar engines to those already delivered under your instructions? No, quite the opposite.
4016. It would not expedite matters? No. The way to expedite matters would be to increase the order, as I recommended from ten to twenty-five, seeing that Dubs had started on the work, and had the patterns and

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and everything on hand. The common sense view of the case would dictate that if the engines were wanted quickly the proper course would be to increase the order, and not to depart from the type, &c.
4017. You say the course adopted was not the best to procure increased locomotive power? Certainly not.
4018. If there was this great urgency there was a quicker method of obtaining the locomotives? Yes.
4019. Now something has been made out of the fact, or what is alleged to be the fact, that a number of these new engines were charged to capital account. Would it make any difference at all to the taxpayer whether these engines are charged to capital or to revenue account? Certainly.
4020. I mean as to the amount they have to pay. Would it make any difference to the taxpayer, in the long run, which account these engines are charged to? The taxpayer would have to pay for them in any case.
4021. The difference is one of accountancy, then? Yes.
4022. And it would make no difference as to the cost of the engines which account they are charged to? No; I think not.
4023. If, therefore, it has been stated that the fact that some of these engines are charged to capital account alters the basis of the matter that is not correct? I do not quite gather what you mean. I should say the best plan ——
4024. What I mean is this: Here are 164 engines purchased, and the statement has been made that eighty will be charged to capital account, and eighty-four to revenue. I do not know what is intended by the assertion particularly, but, as a matter of fact, whether they are all charged to capital or all charged to revenue, or half go to one account and half to the other, it would be just the same thing to the people of the country, who have ultimately to pay for them? Practically it is.
4025. *Mr. Smith.*] Practically, it is not.
4026. *Witness.*] But good management would pay for all of them out of revenue, and not out of capital.
4027. *Mr. Schey.*] Now, Mr. Middleton, what is meant by the transferring of engines to duplicate stock? I do not understand the term.
4028. For instance, it is said that the number of types of engines has been reduced by transferring certain engines to duplicate stock. What would that mean? I cannot see how the number of types can be reduced, unless you destroy some of them.
4029. *Mr. Schey.*] Your Honor will see what I am trying to get at. At page 56 of the evidence appears the following:—Mr. Thow is being cross-examined by Mr. Eddy, and Mr. Eddy says:—

> And it is not the usual practice in all well administered locomotive departments to break up or sell obsolete types, and to replace them out of working expenses? Constantly every railway department gets rid of its old and antiquated stock in that way either by breaking up or selling them.
> The Commissioners have sold some engines, I believe? Yes; several have been sold.
> A question as to the number of types has been raised. Did not the Commissioners direct special attention to that question when they asked you to come here three years ago, and report upon the rolling stock? Yes.
> And it has been the policy of the Commissioners to reduce the number of types since they came into office? Undoubtedly it has.
> Can you tell the Commission, roughly, what has been effected in that way? Perhaps I had better put another question first. These engines that are displaced by more powerful ones, are removed from the stock of engines supplied on capital account, and are treated as duplications are they not, if they are fit for further work? Yes.
> What do you use them for? We use them when the traffic is so great that our standard engines are more than fully employed, and we use them for such purposes as ballast or supplying emergency demands.
> Unimportant work? Unimportant work, certainly.
> And so long as they are capable of doing anything they are kept going? Yes; they are kept at work.
> Can you tell the Commission, keeping in view that we do not look upon these duplications as part of our stock, that these engines are simply put on one side to wear themselves out; can you tell the Commission to what extent we have reduced the number of types already? Yes; out of forty-two types that I mentioned in my evidence as showing small differences amongst the engines we have removed twenty-one by the placing of certain engines in the duplicate stock.

What I want to get at is this:—Does this statement really bear out what it seems to intend, that by calling a certain portion of engines "duplicate stock" thereby the number of types is reduced? You can only reduce the types by destroying the engines.
4030. So long as the engines are in service the types are in existence? Yes, so long as they are here.
4031. Therefore, this statement about the reduction of types by making them "duplicate stock" is nonsense? I may say with regard to the types of engines, that when I was in office, I stated over and over again that we had far too many types. At that time we had forty-two types of locomotives. I received a minute from the Commissioners of Railways, that is the present Commissioners, to the effect that that statement had been questioned—by whom I do not know—and I was called upon to demonstrate that we had forty-two types of engines; and I did it. Whether they have been reduced in any way other than by destroying the engines I do not know.
4032. *President.*] I understood that it was the intention of the Commissioners not to order any new engines of certain types, which they considered unsuitable, and that they put certain locomotives on one side to wear themselves out, and that in that way the number of types would ultimately be reduced?
4033. *Witness.*] Certainly the number of types would be reduced in years to come your Honor, when these engines are worn out; then, of course, these particular types will disappear.
4034. *President.*] In the meantime the engines that are not considered suitable are to be used in "off" works, so to speak, such as carrying ballast and traffic when the traffic is so great that the Commissioners are pressed for locomotives. Beyond that I did not understand Mr. Thow to go.
4035. *Mr. Schey.*] Undoubtedly, your Honor, when engines are worn out those types will no longer exist if they are not repeated.
4036. *President.*] To what extent they have already been worn out does not at the present appear, but I understand the scheme of the Commissioners to be what I have said.

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4037. *Mr. Schey.*] Undoubtedly the types will be extinguished when these particular engines are worn out, and that would appear from what this witness says.
4038. *Mr. Smith.*] You seem to be confusing the word specimen and the word type; if you speak of these as specimens of engines you are right, but when you speak of the number of types you are wrong.
4039. *President.*] I think it was stated by Mr. Thow that there were forty-two different types, consisting of very small variations, and I think he also said there were only twenty-seven really distinct types.
4040. *Witness.*] There are marked differences between the engines, your Honor.
4041. *President.*] Of course you know more about that than I do.
4042. *Witness.*] From the very first engine (No. 1), delivered in 1855, we have had altogether forty-nine types of engines, and I consider that the present administration has increased the number by seven more.
4043. *Mr. Schey.*] Speaking of the present time, according to the evidence, there are forty-two different types now in existence, showing, as Mr. Thow says, small differences, and of these forty-two types twenty-one have been removed "by the placing of certain engines in the duplicate stock"; that is what Mr. Thow says; but the engines will not be eradicated until these types are done away with.
4044. *President.*] Of course not.
4045. *Witness.*] Mr. Thow, in his report, recommended that the twenty engines of the 304 class should be allowed to wear themselves out, your Honor, but they are the very best engines we have.
4046. *President.*] In your opinion?
4047. *Witness.*] There is no doubt about it. It is not my opinion. The two gentlemen who made the tests gave that verdict.
4048. *Mr. Schey* (to Witness):] Then, although the engines spoken of have been put into what is called duplicate, the types still exist? Yes; certainly.
4049. And therefore the reduction spoken of is merely a form of words? That is all I take it to be. The engines are still in existence.
4050. The reduction of types is altogether imaginary until the engines are finally worn out and done with? That is my opinion and decision.
4051. Something has been said about train mileage; now, I ask you, Mr. Midelton, whether an increase of train mileage is necessarily evidence of good management? No; it is not.
4052. It is not? No; quite the opposite. There is evidence of that in Victoria at the present time.
4053. How do you mean? In that Colony the Commissioners have been removed, I believe, because they would not reduce the train mileage; they said it could not be reduced.
4054. They were ordered to reduce the train mileage? Yes; and they protested against it. The present Commissioners have reduced it, I believe, by 880,000 miles.
4055. Then it would be quite possible to have a large increase of train mileage without any large increase of profits? Yes; certainly.
4056. It does not necessarily follow that the increase of train mileage is profitable? No.
4057. It does not necessarily indicate an increase in the traffic? No; nor good management either.
4058. Then if anyone has produced an increase of train mileage to show that kind of thing, it is not a good indication? No; not unless the trains are filled. If the train mileage has been increased, and the engines and cars are fully loaded, then it would be justifiable.
4059. This increase of mileage might be gained with empty vehicles? Yes; every mile run is included in the mileage, whether the trains are full or empty.
4060. Then fifty empty trucks might give as much train mileage as fifty full trucks? Yes.
4061. *President.*] I think the Commission understand that Mr. Schey—there is no necessity to dwell upon it.
4062. *Mr. Schey.*] Alright, your Honor. (To Witness): Such things have been done, I believe, as taking credit for this increase, and trying to show that is due to good management? I do not know.
4063. Going back to this question of types;—was it not a constant complaint for many years that there was too many types of engines in the service? Yes.
4064. And did you not feel the difficulty as well as other people? Yes; ever since I started in the department.
4065. And did you make any effort to reduce them? I did. That was my constant endeavour from the beginning.
4066. Your constant endeavour was to get standards? Yes.
4067. And to reduce the number of types, and throw out those which were unsuitable? Yes.
4068. Do you remember tenders being called for forty-four locomotives some time in 1887? I do.
4069. They were forty-four locomotives recommended by Mr. Scott, were they not? Yes.
4070. These locomotives were never built? No.
4071. But an endeavour was made, was it not, to get the order without tender? Yes; the papers show that.
4072. *Mr. Smith.*] You know nothing but what appears in the papers?
4073. *Witness.*] No.
4074. *Mr. Smith.*] The papers are already in, Mr. Schey, and what is the good of asking this question? I must object, Mr. President, to such questions being put.
4075. *Mr. Schey* (to Witness).] You have seen the papers about the locomotives, have you not, Mr. Midelton? Yes.
4076. *President.*] If the papers give all the information, Mr. Schey, there is no use giving it again from this witness, because he says he knows nothing except what is in the papers. Of course if you want to found another question on this, that is a different thing.
4077. *Mr. Schey.*] I will ask Mr. Midelton who, at the time these locomotives were tendered for, was Minister for Works? I think Mr. Lyne was.
4078. At the time tenders were called? Mr. Lyne, the present Minister. I think the papers will bear me out in that.
4079. Were there not some new conditions introduced as to these engines? Yes.
4080. Whose conditions were they? The succeeding Minister's, Mr. Sutherland.
4081. There was a difference in the method of inspection and payment, was there not? Inspection and payment were to be made in the Colony, instead of in England.

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4082. Well, now, when these tenders were called for, they were called under the old and new conditions? Yes.
4083. Or, at all events, prices were given under both the old and the new conditions? Yes.
4084. Do you know whether there was any pressure brought to bear in England concerning these new conditions;—was there any deputation to the Agent-General of English manufacturers relating to this matter? There were a lot of leading articles and letters in the professional journals, and in *Engineering* especially. I particularly remember a leading article in *Engineering* to the effect that English contractors were disappointed with the conditions, or that they were anxious to know why the conditions had been altered from inspection and payment in England to inspection and payment in the Colony. There were a great many articles altogether, about twenty, I should think, and I may say I was pretty well rated in some of them. I was accused of trying to draw the order to America. My name was not mentioned, but that is what I understood.
4085. Then these new conditions created a considerable commotion amongst English manufacturers? Yes.
4086. Do you know whether there was a deputation concerning them from the English manufacturers? The papers indicate that. A deputation waited on the Agent-General about it.
4087. *Mr. Schey.*] I will hand you the papers, and perhaps you will be able to tell me from them what I want.
4088. *President.*] If the paper is in it will speak for itself. You have no need to ask this witness to give you the information.
4089. *Mr. Schey.*] Only certain portions of the paper have been put in, so far, your Honor.
4090. *President.*] You can put in any portion you like. If you have not put the whole paper in you can put it in, or any portion of it. There is no need for this witness to read what is in the paper if the paper itself is put in.
4091. *Mr. Schey.*] I want to get in evidence, your Honor, the portion which I consider ——
4092. *President.*] The way to get it in evidence, Mr. Schey, is to put in the paper.
4093. *Witness.*] Here it is, your Honor.
4094. *President.*] I do not want to see it. If it is put in as evidence I will read it, and that will be quite soon enough.
4095. *Mr. Schey* (to Witness).] You say there were a number of articles in *Engineering* relating to this matter? Yes.
4096. In which the strongest objection, I suppose, was urged against the new conditions? Yes.
4097. And a recommendation was made, was it not, against the new conditions; a recommendation for instance by the Agent-General? I do not know whether the Agent-General made any recommendation, but I know that the articles were very strong on this question of the alteration of the conditions.
4098. Does the paper show anything about it?
4099. *Mr. Smith.*] I object to that.
4100. *President.*] The paper will speak for itself, Mr. Schey. If there is any recommendation by the Agent-General it will be seen in the paper.
4101. *Mr. Smith.*] Besides, Mr. President, the witness was not there, and he cannot tell us whether there was any recommendation or not.
4102. *Mr. Schey* (to Witness).] You know the new conditions which Mr. Sutherland introduced? Only from the papers.
4103. But you knew what they were? Yes; inspection in the Colony.
4104. Would those new conditions have been of any advantage to the Colony?
4105. *Mr. Smith.*] I object to that. How can this witness answer such a question.
4106. *President.*] I suppose he could give his opinion, Mr. Smith?
4107. *Mr. Smith.*] He is on his oath, and how can he state a fact.
4108. *Mr. Schey* (to Witness).] I ask you, Mr. Midelton, whether these new conditions have been an advantage to the Colony? I think they would have been an advantage.
4109. Sir John Fowler is consulting engineer, is he not? Yes.
4110. And he receives a commission on all these locomotives and things which come out here? Yes.
4111. Therefore, the effect of the new conditions would have been that he would have lost that commission? Yes; I think so. If a final inspection were made here, Sir John Fowler of necessity would have lost his commission, because there would be no inspection in England.
4112. The effect of the new conditions would have been to deprive him of his commission? If he did not inspect, of course it would.
4113. Do you know what is the amount of commission on locomotives? Two and a half per cent.; I think those are the conditions.
4114. *Mr. Smith.*] Do you know? I do not.
4115. *Mr. Schey.*] If the average price of these locomotives has been quoted at £3,200, that would give a commission of £80 per engine, would it not? Yes; at 2½ per cent.
4116. That would give a total of £10,560 on 132. While you were in the service, Mr. Midelton, you were a constant advocate of the American types of engine, were you not? Yes.
4117. And also a constant advocate for building locomotives here? Yes.
4118. In which views you have been largely opposed by a number of other people in the department? By everybody, without exception.
4119. You consider, then, that you have become obnoxious to a number of people? That is self-evident, I think.
4120. You think there is evidence of that;—I think you were asked, when you were giving evidence previously, whether it was an extraordinary think that anyone should come here from Sir John Fowler's office;—do you not remember being asked that question? I do not remember that question exactly. Repeat it please.
4121. Whether there was anything extraordinary in anyone coming here from Sir John Fowler's office? I remember Mr. Young asking me some such question as that to which you have alluded.
4122. I think you replied there was nothing extraordinary in that? Yes.
4123. Do you think there is anything extraordinary in the number of different persons who seem to have come from there? It seems rather remarkable, that is all.
4124. I suppose it would be rendered remarkable by the fact that Sir John Fowler is consulting engineer for this Colony? Yes.

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4125. Therefore these facts would make a man's coming from there remarkable when it otherwise would not be? Yes.
4126. *Mr. Smith.*] Who are these men who came from Sir John Fowler's office;—are there any others beside Mr. Chambers and Mr. Thow? Mr. Chambers is one, but I do not think he brought any recommendation from Sir John Fowler.
4127. *Mr. Smith.*] The names I have mentioned are the only two.
4128. *Witness.*] Mr. Thow and Mr. Chambers; those are the two.
4129. *Mr. Smith.*] Mr. Chambers is out of the service now?
4130. *Witness.*] Yes.
4131. *President.*] Mr. Smith was explaining a "coincidence," Mr. Schey, by saying that there were only two officers from Sir John Fowler's office, Mr. Chambers and Mr. Thow, and that Mr. Chambers had left the service.
4132. *Mr. Schey.*] I do not think that is altogether correct.
4133. *President.*] I am only stating what Mr. Smith has said.
4134. *Mr. Schey.*] We have had something in evidence about a Mr. Haswell, who also had some connection with Sir John Fowler.
4135. *Mr. Smith.*] Is he dead?
4136. *Mr. Schey.*] I do not know.
4137. *Mr. Smith.*] Is he in the service?
4138. *Mr. Schey.*] I believe he is in the locomotive engineer's shop, at Eveleigh, and very much alive. (To Witness): Do you know Mr. Haswell? I do.
4139. Do you know whether he is alive? I know he was alive a little while ago.
4140. Where did you see him? I saw him in the street.
4141. Do you know where he is employed? Yes.
4142. Where? At Eveleigh, in Mr. Thow's office.
4143. And speaking of coincidences, there was also something about Mr. Burnett, so that Mr. Smith is not correct when he says that Mr. Thow and Mr. Chambers are the only two persons who have come from Sir John Fowler's office. I think it is an attempt to mislead your Honor in this matter. These coincidences have dealt with other people beside those mentioned.
4144. *To witness.*] Now you remember the time when the present Commissioners took office? I do.
4145. At that time you were in charge of the works at Eveleigh? Yes.
4146. Do you know anything as to whether an inventory of stock was made immediately prior to or at the time when the new Commissioners took office? If I remember correctly, Mr. Goodchap gave orders for an inventory to be made for the information of the new Commissioners. The minute passed through my office in the usual course, and the work was proceeded with.
4147. I see;—then you are aware that instructions were given for the preparation of an inventory? Yes.
4148. I mean such an inventory as would take place in making over the stock from the old to the new Commissioners? Yes.
4149. That would be a thorough stock-taking? That was the intention.
4150. And the inventory would contain a list of everything on hand then for the use of the Department? Yes.
4151. Do you know whether the inventory was prepared? I believe it was. I believe I completed it, and sent it in in the usual course; but I am only speaking from memory. I have some recollection of that sort of thing being done.
4152. I suppose the papers would go through your office in the ordinary way, without being detained? It was a matter I could not affect, one way or the other.
4153. Being an order by the Commissioner it would not be a paper which you would detain for your own special purposes? No.
4154. But you have every reason to suppose that such an inventory was made out, and it ought to be in the possession of the department? Yes.
4155. I think I have already asked you some questions with reference to the duplication of parts of Beyer and Peacock's engines? Yes.
4156. You have already given evidence on that point? Yes.
4157. As to whether they might have been used to obviate a large quantity of importations;—have you given evidence on that? Yes, I think I have.
4158. *Mr. Schey.*] Until I get the information promised, your Honor, that is all I have to ask this witness.
4159. *President.*] What is the information you mean?
4160. *Mr. Schey.*] Information as to locomotives in Victoria.
4161. *Witness.*] I have already written for it, your Honor, but I have not yet received a reply.
4162. *Mr. Schey.*] I have to supply the witness also with some data upon which he can work out for me certain engine loads, and until I get this I do not think I have anything more to ask him, but I shall recall him for that purpose.
4163. *Mr. Smith.*] Mr. Midelton, you know you were called here to give evidence about this second charge made by Mr. Schey? Yes.
4164. You are giving evidence on this subject? Yes.
4165. Have you read the second charge? Yes.
4166. You know what it is, I will read it to you. It is as follows:—

> That without first calling for tenders, and without any necessity on the ground of urgency, the Railway Commissioners ordered £500,000 worth of locomotive engines from England, which orders were given to specially selected firms, who had always been favoured in the past by the Government of New South Wales. That a certain "ring" or combination of persons or firms, mainly responsible for the appointment of the said Edward Miller Gard Eddy, as Chief Commissioner, had ensured that the said engines should be ordered from them, and that they obtained the order for the same through the said Edward Miller Gard Eddy. That the said Commissioners spent the said sum of £500,000 in the said purchase, not only without calling for tenders, but at a time when iron and other materials, and coal, were at higher prices in England than they had been for years theretofore.

4167. *Mr. Schey.*] Your Honor, I have already put in my objection to the form of the charge.
4168. *President.*] We have heard that already, Mr. Schey.

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4169. *Mr. Smith.*] Do you know anything, Mr. Midelton, that would justify such a statement; do you know anything of your own knowledge that justifies that statement. You are on your oath, and I ask you do you know anything. We will have your suspicions afterwards.
4170. *Mr. Schey.*] I object to that question, your Honor, on this ground, that I have already stated over and over again, that I did not make that statement as a charge, and therefore I think it is wrong that the witness should be asked whether he knows anything which would justify what I have already said. I did not make it as a charge.
4171. *President.*] Mr. Smith, can obviate that objection by using the word statement instead of charge.
4172. *Mr. Smith.*] I will put it to the witness in that way, Mr. President. (To witness): If Mr. Schey made that statement, do you know anything that would justify his doing so? No.
4173. Nothing whatever? No.
4174. Are you quite sure about that? You know nothing whatever that would justify his making that charge? Justify the making of what charge.
4175. Justify the statement that is here. I will give you plenty of opportunity for explanation. First, say whether you do or do not know anything which justifies the making of this statement. Perhaps you would like to read it through? You have just read it to me.
4176. And you have it in your mind? Yes, I have it in my mind.
4177. Do you know anything about it of your own knowledge? I really do not know how to answer the question.
4178. Well, you have got to answer the question, yes or no. If you say no, there is an end of it; but if you say yes, I am going to ask you what you know? Perhaps you had better ask me what I know.
4179. I shall ask my questions in my own way.
4180. *Mr. Schey.*] I must object again, your Honor. This is a most improper question to put to the witness.
4181. *President.*] It is a fair question, and is a proper question to get the witness to answer.
4182. *Mr. Schey.*] I bow to your ruling.
4183. *Witness.*] I am asked if I know anything to justify the making of such a statement.
4184. *President.*] Do you know anything of your own knowledge? Only what I have read—only what the papers indicate—that is all I know.
4185. *Mr. Smith.*] You know nothing of your own knowledge? No.
4186. You know nothing but what you have read? No.
4187. When you say what you have read, do you refer to those printed documents? Yes.
4188. And outside these documents you know nothing? No.
4189. Outside these documents have you ever seen any papers or other documents in the hands of anybody, which would justify the making of this statement? No.
4190. *Mr. Schey.*] I rise again to object, your Honor. Mr. Smith is asking "outside these documents"—to which documents does he refer?
4191. *Mr. Smith.*] To the exhibits brought in here.
4192. *Mr. Schey.*] That is all very fine, but how does the witness know what documents are put in as evidence?
4193. *President.*] That is an objection for the witness to take, and not for you, Mr. Schey. If the witness says he does not know what documents Mr. Smith refers to, it will be all very well; but it is not for you to object.
4194. *Mr. Smith* (to Witness)]. You have seen these printed documents, and you have heard them read out at great length for two or three days. You have been about the court a long time to give this evidence, and you yourself have a copy of this old document of 1864, which was given to you by Mr. Sutherland; therefore you are quite familiar with this matter. I think you told the Commission, when you first came here, that you had been studying this matter for years? Yes.
4195. I mean the way in which these locomotives have been supplied? Yes.
4196. You have made a special study of it? Yes.
4197. And you noted all the coincidences and peculiarities, and everything else, and you say that outside these papers you know nothing? Nothing.
4198. Now, if anybody has stated that he had evidence in his possession to prove these charges—that he had evidence, and that when the proper inquiry was instituted he would produce that evidence—do you know of anything besides these documents, which could be produced as evidence? No.
4199. *Mr. Schey.*] I object to this question, your Honor. No person has made this statement. Mr. Smith is proceeding to put a hypothetical question. You ruled me out of order because I put a question about a statement that I was assured had not been made. Now, the statement Mr. Smith has referred to has not been made by me.
4200. *President.*] Mr. Smith did not mention your name.
4201. *Mr. Schey.*] It has not been given in evidence before this Commission, your Honor.
4202. *President.*] I suppose what Mr. Smith was referring to was that passage from your speech of the 9th March, to which I formally referred.
4203. *Mr. Schey.*] Probably he is, your Honor; but I have already pointed out that that speech does not carry the interpretation that Mr. Smith is endeavouring to put upon it.
4204. *President.*] That is a matter with which the Commission have to deal, Mr. Schey.
4205. *Mr. Schey.*] But permit me to point out, your Honor, that the point to which Mr. Smith refers is not a matter of opinion, but it is a matter of fact which I offered to prove. If you turn to *Hansard*, you will see that that is ——
4206. *President.*] To obviate further objection, Mr. Smith, do not put your question in that form.
4207. *Mr. Smith.*] I put it in this form, Mr. President: If anybody has stated ——
4208. *President.*] You need not put it even in that form. Mr. Schey objects to that form, and it is better not to adopt it.
4209. *Mr. Smith* (to Witness).] Mr. Midelton, outside these official papers, have you seen any cablegrams, or letters, or telegrams—I do not ask where—but I ask you whether you have ever seen any letters, or papers, or memoranda, or documents which would suggest a statement similar to the one we are now investigating? No.
4210. Never? No.

4211.

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4211. And you say that after spending many years studying the subject? I have seen nothing but the printed documents.
4212. The documents that are put in here? I do not know whether they are put in. I mean printed documents, Government and Parliamentary printed documents, and newspaper articles, especially from *Engineering*, and general information. That is my answer to your question.
4213. Except that general information, have you seen anything which, in your opinion, would support this statement. If so, I want to know what it was? I think the statement is very severe indeed.
4214. Will you answer my question first? The statement read to me is very severe indeed. I should be very sorry to uphold such a statement as that. I do not presume that you wish me to give such evidence as that, Mr. Smith?
4215. No. I only want you to speak the truth? I am speaking generally from what I have read in the official documents for many years, commencing with the volume which fell into my hands by accident.
4216. *President.*] The charge is in reference to Mr. Eddy.
4217. *Witness.*] I have seen nothing more than the papers I have just alluded to.
4218. *President.*] Of course, that document of 1864 does not refer to Mr. Eddy? Not at all.
4219. What documents do refer to Mr. Eddy? I do not know of any, your Honor, except the recent papers about the locomotives.
4220. Would they justify this statement? No, your Honor.
4221. *Mr. Smith.*] Before you went into the witness-box to give evidence you had opportunities of seeing Mr. Schey? Yes; I have seen him.
4222. A good many times? Yes.
4223. And I suppose you fairly and honestly put at his disposal any material you had? Yes.
4224. For the purposes of this inquiry? Yes.
4225. And it is not from any fault of yours, or from your concealing anything, that Mr. Schey is not able to bring it out? No.
4226. So far as you possibly could, you have put everything at Mr. Schey's disposal? Yes; I gave him what information I thought would be of use to him in this matter.
4227. *President.*] Mr. Smith's question is as to whether you have really put before Mr. Schey all the information you had—whether you have kept back anything? I do not think I have, your Honor. We have talked in a friendly manner about this question of locomotives for years, and the manufacture of locomotives.
4228. *President.*] That is another matter.
4229. *Mr. Smith* (to Witness).] What I want to ascertain is this:—If anything has been kept back, you have not kept it back because you were acting under any feeling of terrorism—because you were afraid of anybody? No; I am not afraid of anybody.
4230. You have told all you know? Yes.
4231. Now, you have had a little experience yourself, have you not, about ordering locomotives? I do not think I ever ordered a locomotive yet. I made recommendations in the usual official manner.
4232. Were you not the man who brought the "Yankees" here? No.
4233. Did you not recommend them being brought here? No; they were here before I came. I upheld American locomotives.
4234. You upheld them? I may tell your Honor, now that Mr. Smith is on this subject, that the best locomotives we ever had in the Colony are the American locomotives imported long before I came into the country; and when I saw the working of these engines, I upheld them. I uphold them still. In 1885 I introduced another type of American engine, and that was all we required for working our traffic. I made my recommendations to Mr. Scott, and Mr. Scott gave the order for these engines, but I have been saddled with the responsibility and the odium of having thrown that order into the American market. That was done in *Engineering*. Do you allude to that?
4235. Yes. You said it was suggested that you had thrown this into the hands of the American manufacturers? That was insinuated in a leading article in *Engineering*.
4236. They intended to insinuate that you got a cheque back? I do not think they were so base as that.
4237. Did you ever hear of a gentleman in your position getting a cheque back from a manufacturer because he sent them an order or assisted them to get an order? No; I know it is common talk among certain people; but there is nothing in it.
4238. Among persons who are in an asylum or some place like that; but never amongst gentlemen? No.
4239. Not among members of the Institute of Civil Engineers? No.
4240. This is talk you might hear amongst a chain-gang, or something of that sort, but not amongst gentlemen? Yes; you might hear it amongst gentlemen.
4241. But a very extraordinary kind of gentlemen? Yes.
4242. Certainly not amongst members of the Institute of Civil Engineers? No.
4243. Nor of locomotive engineers? No.
4244. Now, if anyone had made this statement, would it be true about a professional man? Surely the honorable gentleman knows that when a large order is transmitted to these firms ——
4245. *Mr. Schey.*] I rise to object, your Honor.
4246. *Mr. Smith.*] Wait until I finish my question.
4247. *Mr. Schey.*] I object, your Honor, on the ground that Mr. Smith is proceeding to quote from a speech which your Honor has already ruled must not be referred to. Mr. Eddy tried to drag in the same quotation, but as it was delivered six months, before the speech upon which these charges were based, your Honor ruled that it was not admissible.
4248. *President.*] Do you recognise this quotation as your own, Mr. Schey?
4249. *Mr. Schey.*] I do.
4250. *Mr. Smith.*] The words are these, your Honor:——
4251. *President.*] If Mr. Schey objects, I do not think you ought to read the words, Mr. Smith.
4252. *Mr. Smith.*] The charge made, your Honor, is that whenever an order was received, by the following post ——
4253. *Mr. Schey.*] You have already decided, your Honor, upon this point, and Mr. Smith is trying to get behind your ruling.
4254. *Mr. Smith.*] I will not use the exact words; this is the quotation, your Honor ——

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4255. *President.*] I do not want to see it. Mr. Schey's objection is that you are quoting from another speech, and a speech that we have nothing to do with. On a former occasion Mr. Schey referred to this speech, and the Commission ruled then that he could not do so, seeing that we had to deal only with the speech delivered on 9th March; and if that is so you had better not go into this matter, nor do I really see that it is of great importance.
4256. *Mr. Smith.*] I do not want to put anything, Mr. President, that is objectionable. I will leave this speech alone, but I will ask Mr. Midelton this question, quite apart from the speech. It has reference to the allegations and charges against the honor and integrity of Edward Miller Gard Eddy, or the honesty and purity of his action in the management of the railways.
4257. *Mr. Schey.*] Your Honor, since Mr. Smith is drawing attention to the Commission, I will ask you whether that Commission is not limited to what was stated in the speech of the 9th March. If Mr. Smith is going to ask questions on this speech, I submit that I must be permitted to put in the whole of the speech, and to confine him to that speech.
4258. *President.*] The speech of the 9th March?
4259. *Mr. Schey.*] Yes.
4260. *President.*] It is in evidence; you put in a *Hansard*, containing this speech.
4261. *Mr. Schey.*] I do not remember.
4262. *President.*] But you did. In fact, I have read passages from it on two or three occasions.
4263. *Mr. Schey.*] What I want is this. If Mr. Smith is founding questions on a speech ——
4264. *President.*] I have upheld your objection, Mr. Schey, so far. I think Mr. Smith ought not to refer to any other speech than the one on the 9th March. Mr. Smith says now he will ask a question without reference to any speech, and I want to hear what his question is.
4265. *Mr. Smith.*] What I propose to ask is this: Whether the witness, from his own knowledge and his experience, would suppose that a gentleman in Mr. Eddy's position—or perhaps, I will not apply it to Mr. Eddy—would receive a tip for giving these orders. I do not care what way you put it.
4266. *Witness.*] It is an insult to my intelligence, and to the whole Court, to suggest such a question. I had no idea of any such thing. I have never said what you have read to me.
4267. *Mr. Smith.*] Certainly not.
4268. *Mr. Schey.*] I have not said so either.
4269. *Mr. Smith.*] Of course; you are only reported to have said so.
4270. *President.*] Mr. Schey, I understand that the Editor of the *Daily Telegraph* is here, and perhaps Mr. Smith will allow his evidence to be interposed at this stage.
4271. *Mr. Smith.*] Certainly, your Honor.

Mr. Lachlan J. Briant sworn and examined:—

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4272. *Mr. Schey.*] You are the editor of the *Daily Telegraph?* Yes.
4273. I beg to hand to you a cutting taken from the *Daily Telegraph* of November 26th, 1890. I want you to tell me whether that article is written by a member of the staff or whether it was contributed to the paper as a letter or correspondence? I believe it was written by a member of the staff.
4274. It is not correspondence? It is certainly not correspondence.
4275. From its character you think it was written by one of the staff? Yes.
4276. Now, if it is not incompatible with your journalistic position—I do not wish to put any force upon you—can you tell me who wrote that paragraph? I have been unable to discover who the writer was. This is an ordinary news item collected in the ordinary way by a member of the reporting staff. The manuscript is never kept for longer than six months, so that I have been unable to find out which particular member of the staff it was who obtained this information.
4277. And from the same reason, I presume you are unable to say from whence the information was obtained? Yes; because I do not know who got it.
4278. Are there no means by which it might be ascertained? I have not been able to ascertain. The news came in just as all the ordinary news of a daily paper comes in.
4279. Have you any objection to make a further effort to try and discover? Not the slightest.
4280. That is all I wish to ask Mr. Briant, your Honor, unless I can get the information I have asked for. I want to get the evidence of the person who wrote this paragraph. I think your Honor will agree with me.
4281. *President.*] It will not be necessary for Mr. Briant to come back and give you that information. If he obtains it he can communicate with the Secretary and save himself further trouble.
4282. *Mr. Schey.*] Certainly, your Honor.

Examination of Mr. Thomas Midelton resumed:—

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4283. *Mr. Smith.*] I think you were in Court, Mr. Midelton, when Mr. Schey stated the names of the persons who, in his opinion, formed this ring or combination? No; I was not.
4284. You knew Mr. Scott, did you not? Mr. William Scott?
4285. I do not know what his name was. He was formerly Locomotive Engineer? Yes; I knew him.
4286. You knew him? I did.
4287. Do you know whether he is now in any way connected with the Railway Department? I do not believe he is.
4288. You do not believe he is in any way connected with the New South Wales Railways? No.
4289. Do you think he has any connection whatever with Mr. Eddy? Only as a friend, I presume. I do not know anything else.
4290. Do you know if he is a friend? I do not.
4291. Then you know nothing about him. You know of no connection between him and the New South Wales Railways, and Mr. Eddy as the administrator or those railways? No.
4292. Do you know anything which would lead you to suppose that Mr. Scott was a party in the "ring" referred to in this statement? All I know is this. For some unaccountable reason Mr. Scott ——
4293. How many years ago was this? I am going to tell you if you will listen. I say that for some unaccountable reason since June, 1882, about a month after I was appointed under Mr. Scott, Mr. Scott appeared not to want me in the service.

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4294. He did not appear to want you in the service? No. Up to that time Mr. Scott helped me to get into the Railway service, recommended me, I believe. He said I was the very man he wanted; but for some reason which I do not seem to know even now ——
4295. You have never yet found out the reason? I have never discovered it.
4296. He seems to have found out something which you never found out? Apparently.
4297. But whatever he did find out seems to have satisfied him that he did not want you in the service? I think so.
4298. And the result is that both he an you are out of the service? Yes.
4299. And so far as you know, Mr. Scott no longer has any connection with it? So far as I know.
4300. Now, there is another gentleman, named the Hon. Sir Henry Parkes. Do you know of anything which would lead you to suppose that Sir Henry Parkes is now or was at any time a member of any "ring" or combination? No; but I know this from Sir Henry Parkes' speech in Parliament concerning myself. I did not know Sir Henry Parkes at the time he made the speech; but from what he said in Parliament, I could not then, and I cannot now understand what ground he had for saying what he did about me. I cannot understand how he arrived at the view of my not being qualified in his opinion for the position I held, although he was Premier of the Cabinet which appointed me. I cannot to this day understand why he said what he did.
4301. *President.*] What we want to get at, Mr. Midelton, is Sir Henry Parkes' connection with this alleged ring or combination? My impression, your Honor, if I may be allowed to express it, was this: Mr. Whitton was a friend of Mr. Scott and Sir Henry Parkes, and Sir Henry Parkes must have obtained his information from one of these two gentlemen. Whether this is the fact or not, I cannot say; but I am under that impression, and I am under an injustice, and especially from Mr. Scott.
4302. *Mr. Smith.*] That is in relation to your continuance in the service? While I was in the service.
4303. We are not now dealing with the "ring," who you believe got you out of the service? But I am dealing with it.
4304. I know you are; but I am now dealing with the "ring" referred to in this charge—the "ring" or combination of persons or firms in England for the purpose of getting orders for locomotives? Well, I know nothing about that.
4305. Do you know anything at all which would lead you to suppose or suspect that Sir Henry Parkes, either now or at any time in his political history, has been in any way connected with such a ring? No.
4306. Now, take the next gentleman, Sir Saul Samuel. I dare say you know him? No, I do not know him.
4307. He was here as a Minister of the Crown for some years? I have heard so.
4308. And he was then appointed Agent-General, and he has continued in that position for many years? Yes.
4309. Do you know anything, either officially or privately, or in any other way, which would lead you to suspect that Sir Saul Samuel was connected with such ring or combination? No.
4310. Do you believe, apart from what you may know, that he is so connected? I do not.
4311. You do not believe he is? No.
4312. Now take Mr. Burnett? Yes.
4313. I think you will remember that you have already informed the Commission that you were appointed by Mr. Burnett as his assistant when you first came here? That was his promise to me, but I was not appointed.
4314. For some unexplained reason he did not appoint you? It was not an unexplained reason. Mr. Burnett when he engaged me made the same remark as Mr. Scott, he said I was the very man he wanted, and he kept me some time before he started me at all. Then he asked me to start as a draftsman, which I consented to do. I was in that position some weeks, and then Mr. Burnett was suspended; but just prior to his suspension he said to me that he could not carry out his promise, and he would do what he could. That is the whole business.
4315. Quite so, but I am dealing with a ring not opposed to you, but opposed to this country, a ring which has been getting these orders for locomotives. Do you know anything which would lead you to suppose that Mr. Burnett was in any way connected with such a ring? I know that Mr. Burnett is back again with Messrs. Beyer and Peacock in the position of manager, I believe.
4316. He is a servant in their employ? He came from Beyer and Peacock's to this country on the recommendation of Sir John Fowler, and he has gone back again to the same place. That is all I know.
4317. That is all you know? Yes.
4318. I suppose if he is back there he would have a better knowledge of our locomotive requirements than any man who has not been in the Colony? Judging from my experience of Mr. Burnett he had not the opportunity while he was here to obtain the experience you allude to; but theoretically what you say is correct.
4319. Theoretically, having been here for some years, and knowing our permanent-way and locomotives, Mr. Burnett would be more likely to know own requirements than any other man? Yes.
4320. So far as you know he is now a paid servant of Beyer and Peacock? Yes.
4321. Except that he is a paid servant of Beyer and Peacock, do you know anything that would lead you to suppose that Mr. Burnett was connected with any ring? No.
4322. Not in any way? No.
4323. Do you, from anything you saw, or know, or suspect when he was in the employment of the Government, believe that Mr. Burnett was in any way in the employment of any ring? No.
4324. Now take Mr. Thow. We know that Mr. Thow was formerly in Sir John Fowler's office, and afterwards in South Australia. That fact is already in evidence? Yes.
4325. Do you know anything, Mr. Midelton, which would lead you to suppose that Mr. Thow is or was connected with any ring? No.
4326. Do you know anything which would lead you to suppose that at that time Mr. Eddy was proposed to be appointed—that is, in 1888, I think, and Mr. Thow was at that time Locomotive Engineer in South Australia—do you know anything which would lead you to suppose that Mr. Thow at that time was in a position to influence the appointment of Mr. Eddy? No.
4327. You have seen all the correspondence and heard a lot of talk? Yes.
4328. Do you believe that Mr. Thow had any influence whatever in the appointment of Mr. Eddy? No.

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4329. Have you any reason to believe that Mr. Thow at that time was connected with Beyer and Peacock in any ring or combination for that purpose? No.
4330. Now, of course, you know Sir John Fowler very well by reputation? I know him personally.
4331. Is he not an old man. What is his age. Is he nearly 80 years old? I do not think quite so much as that; but I should think he is over 70.
4332. As an engineer and bridge-builder he is the only man, is he not, who has received the title of baronet for his distinguished services? No.
4333. But he has been knighted many years? Not many years, I think it was in 1886.
4334. He was created baronet not many years ago? Yes.
4335. And he occupies a high position in the engineering world? He does.
4336. And he is a man of large means? Yes.
4337. Was he not the principal designer of the celebrated Forth Bridge? I beg your pardon.
4338. Was he not the chief designer? No, he gets the credit for it though. Sir Benjamin Baker, his partner, was the actual designer of the bridge; but Sir John Fowler being the head of the firm gets the credit. I have no doubt he did a great deal of work.
4339. You say he gets the credit for it because he is the head of the firm? Yes.
4340. Do you think he used Sir Benjamin Baker's brains a good deal? There is no question about it, that is the nature of the partnership.
4341. Very well; do you from what you know of Sir John Fowler, his position in society, the position he occupies in the engineering world, suppose that he is a party in any ring or combination? No; but I should like to add to that for your Honor's information, that when Sir John Fowler was in the Colony in 1886, I called on Mr. Whitton. I was under suspension at that time I may say on charges made against me by Mr. Scott. I had been under suspension for about twelve months, and I ventured to call on Mr. Whitton for the first time in my life. I sent in my card and I was ushered into his office, and we had a conversation on several important questions. While we were conversing Sir John Fowler entered the room. I was introduced to him, and he made these remarks to me. There was a little introductory matter, and then he said, "What is this trouble between you and Mr. Scott. Why did you alter the designs of the engines which he sent home in 1882?" I said, "Sir John, I was the head of the department; I was asked to advise, and I advised to the best of my ability, and that has turned out to be correct." Then Sir John Fowler said in effect, "If you were head of the department, you should have carried Mr. Scott's views out." "Well," I said, "seeing that Mr. Scott gave me no views before he left the Colony, I could not carry them out, and while I was *locum tenens* I did the best I could for Mr. Goodchap." After a few more words of conversation, Sir John Fowler said to me, "Now, Mr. Midelton, my advice to you is this, go and make it up with Mr. Scott." I said, "Sir John, considering that Mr. Scott has accused me, and I have waited twelve months, I think it is his turn to come to me and make it up if there is anything to make up; but I cannot for the life of me understand what I am charged with." That is all I know concerning Sir John Fowler, and it struck me then, and it has struck me many times since, that it was rather a remarkable expression of opinion from Sir John Fowler. I thought it was rather remarkable that he should suggest that I should go to Mr. Scott and make it up. I concluded from that that he knew Mr. Scott, but I do not know whether or not I am right in my assumption.
4342. Then so far as your knowledge of Sir John Fowler is concerned and so far as you have been able to find out by inquiry, you have no cause to suspect that he was connected with any ring? No.
4343. Now, as to the late Engineer-in-Chief for Railways—Mr. John Whitton. I did not know that you had ever met him, but it seems that you have? Yes.
4344. Do you know anything or do you suspect anything which would show that he is in any way connected with or ever was connected with any ring for ensuring orders for locomotives? No. I may say in addition to that, however, that it struck me from the time I met Mr. Whitton until he left the Colony that circumstances had occured to induce him to have a bias against me. There was evidence of a bias, not very strong in all probability, but still it existed and I feel it now.
4345. You were never an officer in his department, were you? No.
4346. He never had anything to do with you? Never.
4347. So far as your knowledge of him extends you have no reason to believe that he was in any connected with this ring or combination? No.
4348. I think, before we went to lunch, you practically said that so far as Mr. Eddy is concerned you knew nothing, except what might appear in these papers which are printed public documents, which would show or suggest that he was ever connected with any ring? Yes.
4349. I have gone through the names now,—Sir John Fowler, Mr. Whitton, Mr. Burnett, Mr. Thow, Mr. Eddy, Sir Saul Samuel, Sir Henry Parkes, and Mr. Scott; I am now left with the chief two criminals,—Messrs. Beyer and Peacock and Messrs. Dubs & Co.
4350. *President.*] Before you pass from this subject, Mr. Smith, I should like to ask Mr. Midelton a few questions. I should like to ask him to point out what documents he refers to as raising a suspicion in reference to Mr. Eddy's connection with this ring.
4351. *Witness.*] These are the gentlemen I should name, your Honor:—Mr. Burnett, Mr. Scott, Mr. Whitton, Sir John Fowler, Sir Henry Parkes, Mr. Eddy, Mr. Thow, and Mr. Dredge, the editor of *Engineering*. Those are the gentlemen who have their hand against me for some reason or other. That is all I know about it, your Honor.
4352. *President.*] That is not the question I am asking you. I am not asking you about your removal from the service, or any feeling of hostility to yourself personally. That is a matter we have really nothing to do with at present. The charge before us is a personal charge against Mr. Eddy, and you have told us that you know of nothing which would support that charge, except what appears in certain documents.
4353. *Witness.*] That is all, your Honor.
4354. *President.*] I want you to refer to the documents which you have in your mind when you say this? As regards Mr. Eddy it is more a matter of personal intercourse. I cannot understand why, from the very commencement he seems to have had some prejudice against me.
4355. I am not talking about prejudice against you, Mr. Midelton. I am talking of this charge against Mr. Eddy, that he is a member of a certain ring. Mr. Schey has named the gentlemen who, in his opinion, comprise this ring referred to in the charge, and among the persons named is Mr. Eddy. Mr. Smith has

asked

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asked you regarding all the others, and as to Mr. Eddy, you say that you know of nothing yourself, and that the only information you have on the subject at all is obtained from certain printed documents. Now I want you to specify what those printed documents are? They are Parliamentary papers and newspaper paragraphs, your Honor.

4356. Do you say that you take newspaper paragraphs as evidence of facts; do you say that or do you not? I read the newspapers, your Honor, and I judge what to believe and what not to believe. I believe some of the portions I read and some I do not believe.

4357. Have there ever been any paragraphs in the newspapers charging Mr. Eddy with being a member of a ring? I do not think Mr. Eddy is a member of a ring. I have said that before. All I can repeat is what I have just remarked, that these gentlemen were—

4358. Apart from your knowledge have you any suspicions whatever? None whatever.

4359. Then in point of fact there is nothing in the documents to justify the statement, that Mr. Eddy is a member of this ring, so far as you know? No; your Honor.

4360. *Mr. Smith.*] Now about Messrs. Beyer and Peacock. Do you know anything that would justify the idea that they were members of a ring. Who are Messrs. Beyer and Peacock—Do you know anything of them at all? I knew Mr. Richard Peacock very well.

4361. You knew him well? Very well. He gave me a position in his works some years ago.

4362. You were in Beyer and Peacock's employ? Yes. In 1871 I believe it was. I may say that both Mr. Peacock and Mr. Beyer are now dead. The business is being carried on by a son of Mr. Peacock's, but I do not know who else constitutes the firm.

4363. You say that in 1871 you were in the employ of the firm? Yes. I think it was about that time.

4364. Do you know anything of the firm, anything of the way in which they do their business which would lead you to suppose that they were, or are parties to any ring, for getting supplies of locomotives for this Colony? No. I do not.

4365. Nothing at all? The only thing I know is that Beyer and Peacock seem to have been particularly fortunate in getting the bulk of our orders. That is the only thing which appears to me; but that has reference to their business capacity.

4366. You have seen a good deal of their work here? Yes.

4367. And you do not think they are entitled to get the bulk of the orders judging from the locomotives they have supplied? I think other makers should get some of the orders.

4368. But their class of work? Their class of work is excellent. It could not be better I think. But if you turn to the papers you will find a list of English firms who tendered for certain locomotives.

4369. For the forty-four locomotives which were never supplied? Yes.

4370. No one got that order? No one; but the singular part of it is that the lowest tenderer did not get the contract although he was a good manufacturer. That I think is a remarkable coincidence.

4371. Neither did the highest tenderer get the contract; it was not given at all? No. But there was a recommendation in favour of Messrs. Beyer and Peacock made by Sir John Fowler.

4372. Was that by Mr. Eddy? No. I think that was in Mr. Scott's time.

4373. Before Mr. Eddy came to the Colony at all? Yes.

4374. And probably Mr. Sutherland was Minister at the time? Yes; Mr. Sutherland was Minister.

4375. And as Minister at that time he would have charge of this department? No. I think Mr. Lyne was Minister when these tenders were advertised. At any rate the papers will give you the information.

4376. But there was a Minister of the Crown at the head of this department, and yet some officer had the hardihood to recommend that the lowest tenderer should not be accepted? I think the recommendation emanated from Sir John Fowler.

4377. That will appear by these papers. Beyond the fact that in a case where they did not get the contract, although they were not the lowest tenderers, for that is what you say, you know nothing which would lead you to suppose that Messrs. Beyer and Peacock were parties to a ring? No.

4378. Anyhow if they were you are certain that Sir John Fowler was not in it? I do not believe he was.

4379. Do you know anything which would lead you to suspect that he was? No.

4380. You are a man who looks for coincidences? I am.

4381. Applying your principle of coincidences, would that lead you to suspect that there was anything wrong;—you say you were in the firm yourself? I was not in the firm. I worked in the shops and in the office. I do not call that being in the firm.

4382. At any rate, you were in the employment of Beyer and Peacock? Yes; I worked in the shops. I should very much like to be in the firm.

4383. Perhaps if you go on progressing you may yet arrive at that point of happiness? I hope so. If I remained with them, no doubt I should have been in the firm.

4384. So far as you know, and so far as you suspect or believe, there is nothing to indicate the existence of any ring or combination between Messrs. Beyer and Peacock and Sir John Fowler? I know nothing of the kind.

4385. You do not know of anything which would lead to that supposition? No.

4386. Can you indicate any other person among those I have mentioned or among those you have mentioned, who might constitute a ring with Messrs. Beyer and Peacock? I may say that I know Mr. Dredge and Mr. Maw, the editors of *Engineering*, the journal in which certain leading articles and letters appeared upon this locomotive question. I wrote to Mr. Maw in reference to certain of those articles, because the question was an important one, and it was being discussed in the engineering papers, both in England and in America. Mr. Dredge, I believe, was in Sir John Fowler's office prior to joining the staff of *Engineering*, and I can only come to the conclusion that Mr. Dredge agreed with the articles which appeared in his paper. I do not think Mr. Maw held the same agreement. Judging from what I know of him, I think Mr. Maw would be above that sort of thing. I think he took the hint I sent him, but evidently he was not all powerful, because articles appeared, and the drift of those articles, from the beginning to the end, seemed to me, for some reason or other, to be directed against myself. Of course I may be wrong, but that is the conclusion I arrived at.

4387. Your idea is that these English newspapers have some special reasons for objecting to you? There is no question about *Engineering* having a special reason. That is borne out by the fact that other journalists in London and America took up the question in my favour and without my knowledge.

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4388. Now, Mr. Midelton, we will leave your "ring" and go back to Mr. Schey's "ring";—do you know anything which would lead you to suppose that any of the persons named were in this ring with Messrs. Beyer and Peacock? No.

4389. Even this Mr. Dredge, who permitted these articles to be published, you do not suspect that he was in this ring with Messrs. Beyer and Peacock? No; but it might suit his ideas to write me down, and to urge that the orders should go to England. Of course it is natural for such gentlemen to uphold English trade.

4390. *President.*] I suppose you intend to imply that this opposition to you was in consequence of your advocating American engines in preference to English engines? Yes; I think that was it, your Honor.

4391. *Mr. Smith.*] And of course you are aware, Mr. Midelton, that the importation of American engines, even at the present time, has created a good deal of hostility? I may say in reply to that question, and I think Mr. Oliver, who is present, will bear me out in what I say, for he heard the conversation, Mr. Eddy forbade me to use the word "American." When we were going through the Eveleigh shops, I think it was on the second day after he arrived, Mr. Eddy said to me, "Mr. Midelton, show me the best class of engines we have in the service." I happened to point out a locomotive of the 304 class, one of the original American engines, and I judged from Mr. Eddy's manner that it was very offensive to him. At a later period I was travelling over the lines with the Commissioners, and when we were journeying from Blayney to Murrumburrah some little delay was caused in the watering of the engines, and I made the remark that if we had an American instead of an English tender we should not have been delayed. Mr. Eddy said, "Please don't use the word American again." To my exceeding surprise Mr. Eddy has lately imported a number of American engines.

4392. *President.*] It is a compliment to your views? I hope so, your Honor; I am pleased to know it.

4393. *Mr. Smith.*] I think we may now leave this question of the ring;—I do not think I can with advantage ask any further questions;—you told us, Mr. Midelton, that immediately after the present Commissioners came into office they directed that you were to do nothing without first submitting an estimate? There was a minute to that effect sent to me.

4394. Will you kindly look at this paper [*handing paper to witness*]; read through it, and see whether that is not a copy of the minute which was sent to you? No; I do not think that was the minute. It is very much of the same character, but I do not think it is the minute itself. The minute could be turned up, because it was copied in my letter book at Eveleigh. This seems to be a qualification of the terms. I am only speaking from memory, substantially this is the same. The original minute was addressed to me direct, and I looked upon it as a serious one, considering that the Commissioners had only been here for a few days [*reading the minute*]. No. This is not the one.

4395. You say that is not the minute? No.

4396. Just read it Mr. Midelton, be careful? "New Works. To the Local Engineer. The Commissioners direct that no new work, or alterations in existing work of any description, shall be carried out until the plan of such work, or works, bearing the signature of the head of the branch, has been duly submitted to and approved by the Commissioners. This is not intended to apply to works of ordinary maintenance. A.R., for Secretary, 1st November, 1888."

4397. Who was "A.R."? Mr. Alexander Richardson, the Secretary.

4398. You think that is not the minute which was referred to? Wait until I have read my own minute. Your Honor, may I read my minute which is attached to this?

4399. *Mr. Smith.*] I have no objection to put the whole of it in;—what is the date of Mr. Richardson's minute? 1st November, 1888.

4400. And what is the date of your reply? 21st December, 1888.

4401. That is nearly a month and twenty days afterwards? Yes.

4402. Now read your minute? I notice that the minute is endorsed: "Seen, T.M., 3rd November, 1888," that is two days afterwards.

4403. But your answer was not written until a month and twenty days afterwards? Yes; but I interviewed the Commissioners in the meantime. My minute is as follows:—"As I have experienced considerable difficulty in fully realising what the above order means, I thought it best to see one of the Commissioners respecting it, and to-day I succeeded in seeing Mr. Fehon, and stated to that gentleman that I understood the minute to mean as follows, and I beg to ask for a confirmation of the following: The last two lines inform me that 'this is not intended to apply to works of ordinary maintenance,' and I took two or three reports of cases of failure of engines to show Mr. Fehon the difficulty I should be in if I rigidly adhered to the major portion of the above minute. For instance, the valve spindles of the 373 class—the last twelve new engines from the Vulcan Foundry Company—are very defective in design, and give us a lot of trouble, and so do the injectors and other details about these engines. Now, if I am not to be allowed to remedy these defects, as my experience and teaching dictates, I should not be discharging my duties honorably and efficiently. My aim should be to remedy all defects, and make the train service perfect if possible, and this I can do if I am allowed the opportunity, but, if not, I must continue to make defective valve spindles, &c., &c., exactly like the standard supplied by the makers of these engines, and we must, therefore, expect delays to trains and breakdowns as at present. I am fully aware that some of my friends (?) have said I am given to making foolish alterations to engines, &c., &c." That alludes to Mr. Scott. He said I was foolish in making experiments.

4404. At that time Mr. Scott was out of the service altogether, was he not? Certainly,—I was in his place. "And other unkind and untruthful statements have been freely made by them as to my intentions and disposition, but I can assure the Commissioners that they will never find me venturing upon anything I do not thoroughly understand and can make a success, and my efforts and established work in the railway and tramway departments for the past eight years prove this. I understand the Commissioners to mean that whenever I propose to depart widely from the beaten track—such, for instance, as proposing to scrap ten engines and rebuild them—that I should make my proposals known, place them upon record, and get them approved before such work could be started upon, and I trust they will allow me to use my own judgment as to what shall be specially brought under their notice for approval in this way." That is my minute.

4405. *President.*] What view did the Commissioners take of it? Well, your Honor, after I wrote that minute, I heard no more about it. At all events, I got no explanation when I saw Mr. Fehon, and I remained with the understanding that I could not do anything without submitting plans, specifications, and estimates.

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4406. *Mr. Smith.*] I am merely putting these questions for the purpose of correcting your evidence;—Mr. Young asked you some questions about it, and your answers appear to be a little inconsistent;—that is the minute you referred to? Yes.
4407. Now you have said a good deal, Mr. Midelton, upon the question of the Government manufacturing locomotives at Eveleigh, or the Commissioners manufacturing locomotives at Eveleigh, you have said a good deal in your evidence above that? Yes.
4408. Are you aware that in the year 1887 the Cabinet, on a minute of the Hon. John Sutherland, absolutely refused to allow the Government workshops to be used for manufacturing locomotives? Yes.
4409. You are aware of that fact? Yes.
4410. That was in 1887? No doubt these papers will be familiar to you [*handing papers to witness*]? Yes.
4411. *President.*] Have they been put in?
4412. *Mr. Smith.*] Not yet, your Honor.
4413. *Witness.*] I do not think I have seen these papers before.
4414. *Mr. Smith.*] I will read a few passages with which you will no doubt be familiar. This is from a minute by the Secretary for Public Works, dated 3rd May, 1887, and the subject is "*Re* use of machinery at Eveleigh for supply of locomotives." Mr. Sutherland says, "I informed them"—this has reference to a deputation which was introduced to him in regard to the proposal to allow tenderers for the supply of locomotives the use of the machinery in the workshops at Eveleigh—"that the Government had no intention whatever of adding anything to their present heavy responsibilities with regard to the employment of labour; they were aware they had engaged twice or three times as many men as they should, and that this was prejudicial to the interests of the Colony." Again he says, "It had been taken for granted that we were to make the locomotives in our works, but I might say at once that no such thing was intended, and no such proposal had engaged the attention of the Government." Practically, that means that the manufacture of locomotives in the Government workshops could not for a moment be entertain. Mr. Sutherland also points out that the tenders for the manufacture of locomotives within the Colony ranged in prices differing from 58 to 64 per cent.
4415. *Witness.*] I have not seen that paper.
4416. *President.*] What is the paper, Mr. Smith?
4417. *Mr. Smith.*] I will put it in, Mr. President.
4418. *President.*] Was it submitted to Parliament, or what?
4419. *Mr. Smith.*] I do not know, your Honor, whether it was or not.
4420. *Witness.*] It looks like a Cabinet minute, your Honor.
4421. *President.*] But Cabinet minutes are not ordinarily printed.
4422. *Witness.*] I do not remember having seen or heard of it before.
4423. *Mr. Smith.*] I think it must have been referred to before, your Honor, because what I have been reading is printed with a report upon the tenders for the construction of locomotives made by Mr. Midelton. Mr. Midelton sums up the whole matter in his report. Perhaps he will remember that.
4424. *Witness.*] Yes.
4425. *President.*] This apparently forms part of a return.
4426. *Mr. Smith.*] Yes, your Honor; and Mr. Midelton's report upon the tenders for the construction of fifty locomotives seems to follow on after this minute. The one is numbered 968 and the other 969.
4427. *Mr. Schey.*] Might I suggest, your Honor, that the volumes from which these papers have been taken be produced not necessarily as an exhibit, but for my information.
4428. *President.*] What do they come from, Mr. Schey; some volume of Parliamentary proceedings?
4429. *Mr. Schey.*] I do not know, your Honor.
4430. *Mr. Smith.*] I think the documents have been paged for departmental purposes only.
4431. *Mr. Schey.*] Permit me to point out, your Honor, that these papers would not, in all probability, form part of a volume of Parliamentary proceedings. The Parliamentary Votes and Proceedings are all headed "Legislative Assembly of New South Wales," &c. These papers are not so headed, and they bear evidence to the that they belong to a volume of other papers. If they were headed "Parliamentary Papers" I should not ask for the volume to be put in; but headed as they are, I ask for the volume to be produced.
4432. *Mr. Smith.*] They do not appear to me to form part of a volume.
4433. *President.*] It would be well to have some explanation, Mr. Smith, because there may be other documents bearing on this subject.
4434. *Mr. Smith.*] I will undertake, your Honor, to put in the original documents, of which these are printed copies. I have only put them in now for the convenience of examining this witness. If there is a volume it shall be produced, but at any rate I will try and put in the originals.
4435. *President.*] It has been pointed out to me that a number of the other documents which have already been put in as exhibits are of the same character. Apparently they have been printed and numbered for departmental purposes, or something of that kind.
4436. *Mr. Smith.*] I suppose, Mr. Midelton, you are aware of the fact, apart altogether from these papers, that the Hon. John Sutherland in 1877, when he was head of the Railway Department, was entirely opposed to employing men to make locomotives at the Eveleigh workshops; and that that also was the policy of the Government when the Railway Act was passed? Yes.
4437. And that that also was part of the policy of Parliament? Yes.
4438. And that it was with that understanding the Railway Act was passed and the present Railway Commissioners appointed? I do not know that.
4439. But it was the policy of Parliament at the time? I cannot say.
4440. Now, about this question of the forty boilers;—a lot of questions were put to you on the understanding that the boilers had been cabled for? Yes.
4441. Of course, you do not know of your own knowledge whether these boilers were cabled for or not? I only know what I have read in the newspapers. It was my impression up to this morning that the boilers were cabled for.
4442. That impression has been corrected, and you now know that the boilers were not cabled for, but that an indent was sent in the ordinary way? Just so.
4443. You entered the workshops at Eveleigh in 1883, did you not? I entered the department in 1880.

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4444. Well, from that time until the time you left, how many new boilers were made at Eveleigh? I cannot say.
4445. Can you give us any idea? I know some were made there.
4446. Do you think five were made altogether? Not at Eveleigh.
4447. Not five in all those years? I know some were made there.
4448. Would you believe that three were made there? I cannot say.
4449. Will you swear that more than three were made there? No; I will not swear.
4450. You will not swear that more than three boilers were made during the years you were at Eveleigh? We were not at Eveleigh all those years; we have only been there since 1886. Some boilers were made in the old shops.
4451. Take the last five years you were in the department, from 1883 until 1888, how many boilers were built;—do you know of any being built? You have told me that three were made.
4452. But I want to know what is your idea? Considering that I was on the tramways from 1886 to 1888, I do not suppose it is fair to ask me what was going on at Eveleigh.
4453. You will not say I am wrong if I tell you that three boilers were built? I think about that.
4454. And during the same time how many locomotives were built at Eveleigh? None.
4455. How many pits for the purpose of building or repairing locomotives were there in the Eveleigh sheds altogether? About thirty, I think.
4456. Thirty-six, were there not? Something like that.
4457. How many engines had you waiting repair at the time the Commissioners took office—I mean approximately? I think about eighty-one.
4458. And of those eighty-one, how many would be standing in the pits;—what is the full number the pits would hold? Many of them were standing outside.
4459. Some were outside? There were eighty-one when I took charge, and there were seventeen when I left off, eleven months afterwards.
4460. How many of those engines were in the pits when you left;—how many of that seventeen? I suppose the pits would be occupied by engines under repair, and those which could not be accommodated in the establishment would stand outside.
4461. Were the pits fully occupied at the time you left office? Yes.
4462. Was it not a fact at the time you left office that the northern locomotives had just been inspected? No; the northern locomotive boilers, as I said before, had been inspected during the eleven months I was in office. That was previous to my leaving, and, of course, all the information was in the office concerning those boilers.
4463. Is it not fact that the greater number of the locomotives on the northern section, required repairing? The boilers, yes.
4464. Is it not a fact that you reported in February before you left office, that some of these boilers had not been inspected for from six to eleven years, and that the work had been sadly neglected? Yes.
4465. That was very serious neglect, was it not? It was.
4466. You had a man inspecting the boilers during the short time you were in office? Yes.
4467. And when you got his report you found that these boilers had been going without inspection for from six to eleven years? Yes.
4468. How many locomotives approximately were in that position? I think there were thirty on the Northern line out of seventy-six.
4469. Thirty out of seventy-six, you say, were in that position? Yes.
4470. Now, take the Southern and Western lines, were there a considerable number of boilers there waiting inspection? The boilers are always wanting inspection, if you inspect to-day you have to inspect again six months hence.
4471. Were there any considerable number of boilers which had not been inspected for twelve months previously? I do not think so, because the Inspectors had instructions to inspect these boilers, and report to me. Let me explain. The Northern line, as I said before, was treated as a separate line, and when I came into office in 1888, from my previous knowledge of the department, I thought the boilers on the Northern line were very defective, and I proved it to be correct by the inspection you allude to. It was a revelation to me to find such a serious condition of affairs.
4472. Were you in the habit of getting reports, showing the periodical inspection of boilers? Yes, from the inspectors.
4473. Did they report separately about each boiler? If it was a serious matter.
4474. Did they make separate reports? If it was a serious matter they made a separate report.
4475. That is if there was anything wrong? Yes; and the more serious, the more often I got the reports.
4476. Did you have periodical reports from the northern section during the ten months you were in office? No; that was a special job. The inspector I appointed to do the work did it expressly for myself, and he made his reports direct to me.
4477. He made reports direct to you? Yes.
4478. But had he been making periodical reports of his inspection of that section? I started him when I went back to Eveleigh from Randwick.
4479. That was about February, 1888? May, 1888.
4480. About five months after the present Commissioners came into office? About five months before they came into office.
4481. I think you have already said that in a properly conducted department boilers should be internally examined once in every six months? Yes.
4482. And if they needed repairs they should be sent into the workshops, and put into the pits and stripped? No.
4483. But, if they wanted repairs what would you do with them? It all depends on the nature of the defects. Suppose that something serious was discovered in a number of engines at Harden, the matter would be reported to me, and I should decide whether it was best to bring the engines to Sydney, or to repair them at Harden. If I brought them to Sydney, and the defects necessitated the boiler be taken out of the frame, I should ascertain if I had another boiler, because my object would be to get the engine on the line as quickly as possible.
4484. You would take the boiler out and put a new one in? I should put in either a new boiler or repaired old boiler, whichever I had of the same class, and turn the engine out as soon as possible, and repair that boiler with all expedition.

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4485. Now, for the purposes of these periodical repairs to the boilers, were boiler-plates necessary? Yes, certainly; we had a stock in store, we had a sufficient quantity on hand for all reasonable repairs.
4486. Are you sure you had a sufficient quantity? I am not sure; but I understand that was the case.
4487. In point of fact, you would have considered it bad management, if there was not a considerable reserve of boiler-plates for repairs? Yes; certainly.
4488. Now, had you a stock, over and above that necessary for reasonable repairs? I understood there was enough plates for forty new boilers.
4489. You understood there were enough for forty new boilers? When I was at Randwick, I heard that there were plates in store for forty new boilers; but the storekeeper could tell you the facts of the matter.
4490. You do not know whether there was this quantity, of your own knowledge? No; but I believe it was there.
4491. So far as your own knowledge goes, you only knew that there was a stock of boilers, sufficient for reasonable repairs? Yes; and also forty new boilers.
4492. But you did not know that of your own knowledge? I did not know either fact from my own knowledge. I sent to the stores for material, and if it was not there, I should be astonished, and steps would be taken to supply the material, or at least the storekeeper would take steps. That, however, rarely happens, especially in the matter of boiler-plates.
4493. There is generally sufficient stock to meet ordinary repairs, and when you refer to material for forty new boilers, you only speak of that from something that was told to you, and not from something which was in your own knowledge. You, as Locomotive Engineer, never considered it your duty to interfere with the storekeeper, and ascertain whether or not he had sufficient stock in hand? I always tried to keep myself in touch with the storekeeper, and with what he had in store. He sent periodical reports to me.
4494. Did you ever receive a report showing that over and above the ordinary boiler-plates for repairs, there was sufficient material for forty new boilers? I do not remember it.
4495. Then you did not keep in touch with the storekeeper. If he did not think it worth his while to tell you anything, you never concerned yourself to make inquiries? Yes, I kept myself posted.
4496. I think you said that thirty-one of the locomotives on the Northern line required new boilers? I said they required very heavy repairs. Some of them were very defective.
4497. And the usual mode of repairing would be to take out the boilers, and put in new ones and send out engines as quickly as possible? It would be my aim to turn out the engines as quickly as possible.
4498. If you had no duplicate boilers, that would necessitate putting in new boilers, would it not? It would necessitate putting in good boilers.
4499. Old or new boilers, if you had no duplicates? It may be possible to repair a boiler while the engine itself is being fixed up, and then the two could be turned out together.
4500. Now, as to the importation of these forty boilers, Mr. Midelton. Your information depended on something you heard in the tramway sheds, and which you never afterwards satisfied yourself about? I think I should have taken some steps to go to the store and see if the material was there; but whether I did or not, I cannot now remember. I think if I had heard there were plates in store for forty boilers, I should have gone myself, and made some inquiry.
4501. But you never did go? I cannot say whether I did or not.
4502. Would you undertake to say that the plates in store belonged to types of engines known as the 36, 44, 48, and 60 classes? I do not know what classes they were for.
4503. You say you do not know. I will not take up your time further, Mr. Midelton? The storekeeper can give you all that information, Mr. Smith. I am only speaking from memory.
4504. I think I understood you to say that it would not be desirable or economical to use plates suitable for one class of boiler for another class of boiler? It would not be advisable.
4505. It would not be economical or advisable? If you have plates for a certain type of boiler they should be used for that particular type; but of course, in a case of emergency, you would take any plate suitable.
4506. But in ordinary economical working you would never think of using plates prepared for one class of boiler for another class? Yes; I should. If it did not spoil a set, and if I saw a reasonable prospect of a fresh quantity coming in to supply the place of those I was taking, I would not keep a job idle for the sake of a few plates.
4507. But such a course would not be economical? It would not be an economical way, but if there is no waste there is no reason why the plates should not be used.
4508. If you wanted forty boilers, and you had no suitable plates, what would you do. Would you get the boilers in the ordinary way, by sending an order to Mort & Co., or Vale & Co., or the Lithgow Iron Works? No; because they would be as long in getting the material as I should myself.
4509. I do not quite understand you. Have not the Lithgow Iron Works produced iron of their own? No.
4510. Can they not make boiler-plates out of pig-iron? No.
4511. Then if you had sent an order to Mort & Co. or Vale & Co. they would have had to import the material? Yes.
4512. But would they not import the raw material, and make the plates here? The boiler-plates would be sent out whole.
4513. You would have them made at home by the English manufacturers? Certainly. Are you joking now, Mr. Smith?
4514. No. I want to know whether, in such a case as I have described, you would have to import the raw material or the manufactured boiler-plates? Do you seriously mean to say that you do not understand whether plates are made in the Colony or imported?
4515. I want to know from you whether you would make boiler-plates here? No; we do not make them here.
4516. *President.*] What you mean to say is, I suppose, that if boiler-plates were ordered through a local firm they would have to be indented for, and got out from England, instead of being directly imported by the Government.

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4517. *Mr. Smith.*] Quite so, your Honor, that is what I want to ascertain, whether, if these boilers were needed, you would import the boiler-plates direct or through Mort & Co. And I want to know, further, whether you would prefer to import boiler-plates made up into boilers or the single plates, and make them up into boilers here?
4518. *Witness.*] Considering that the freight on the plates would be less than on the boiler in bulk, I think the wiser course would be to import the plates.
4519. You would do that as a matter of economy? I think it is the best course to pursue.
4520. You would be guided by economy as to which is the cheapest? No; as to which is best.
4521. But which is cheapest would be best? Not necessarily; the best is not always cheapest.
4522. But does not the cheapest man supply the best locomotive? Not necessarily.
4523. Then in even the matter of the boiler the cheapest is not necessarily best? No.
4524. Now, if you wanted boilers you could make them more quickly from plates here than by importing the boilers direct from England? Yes.
4525. They could be made more quickly? If we had the plates here they could be made as quickly. The manufacturer in England has to get the plates just as we have. They are a speciality.
4526. But, if you imported the plates from England, would you be able to build a number of boilers as quickly as you could obtain boilers themselves from England? I believe more quickly. Even if you cabled to a manufacturer to make boilers he has to put his own work on one side, and he has to get the materials. He is precisely in the same position as ourselves, and, unless you give him a good price the chances are he will not care much about the work.
4527. Now, at the time you were in charge at Eveleigh, who was the foreman boiler-maker? Mr. Fernley.
4528. Do you know him at all? Yes.
4529. Is he a competent and suitable man? Yes.
4530. Fit for his work? Yes.
4531. And you would have acted on his reports? Not altogether.
4532. Do you think he was extravagant? No.
4533. You do not think he was extravagant? No.
4534. Do you recollect his making any report to you in December, 1888, pointing out the urgency for getting new boilers? I think it is very likely he would, but I do not remember.
4535. Why do you think it is likely? Because he knew the nature of the reports on the northern boilers as well as I did. I handed the reports to him to read because it was necessary for him to know what was the state of affairs on that line, as probably he would have to undertake the repairs. He could not know too much about it.
4536. You think it is likely that in 1888 he pointed out the urgency for new boilers? I cannot say whether he did or not.
4537. Will you undertake to say that it was not true? I do not remember Mr. Fernley ever coming to me and pressing me to get forty boilers, or indeed pressing me to do anything.
4538. But he pointed out the urgency for getting new boilers? I knew the urgency as well as he did.
4539. Will you undertake to say it is not true that Mr. Fernley, in December, 1888, pressed on you that it was most urgent to get forty or forty-nine new boilers? I have not the slightest recollection of his pressing such a matter upon me.
4540. You think it would be untrue? I can understand him saying it was necessary to go on repairing boilers and to manufacture some.
4541. I am not speaking about repairing boilers, but of the necessity there was for getting new boilers to make the repairs which were urgently necessary. You say your policy is not to keep a locomotive standing idle? Yes.
4542. And if you had no duplicates you would put in new boilers? Certainly. Sometimes an engine may come off the northern line for repairs, and we may have an engine of the same type from another line also in for repairs, and then I should try and fix up one which parts from the other, and get an engine on the line as quickly as possible instead of keeping the two standing idle.
4543. Is it not a fact that a number of these boilers wanted repairs? That is apparent, I think.
4544. And if you had no duplicate boilers in stock to take the place of those requiring repair, you would either have to put in a new boiler or keep the engine idle while the old boiler was under repair? Yes.
4545. And therefore it would be economical to import new boilers? It would be economical to have new boilers.
4546. What is the life of a boiler? It depends on the water that is used.
4547. But what is the average life? About ten years; but I should not say that a boiler was worn out in ten years.
4548. I suppose a boiler is an article which has to be replaced several times in the life of a locomotive? Yes, more or less; but it depends on the water used. I have known a boiler to wear out in four years.
4549. You say that the life of a boiler depends on the kind of water, the train miles, &c.? Yes.
4550. And the construction? Yes.
4551. If you had started at Eveleigh to build new boilers would you have required additional men? Yes, I think I should.
4552. In doing so would you have required to use any of the thirty-six pits? No; you do not want a pit to build a boiler.
4553. But to build locomotives? Not exactly. There are fifteen or sixteen pits in the paint shop which are idle, and they would have done admirably to build new engines on. You could have had sixteen engines in one row at once.
4554. This paint shop that you refer to, was it fitted for building locomotives? What do you call fitted for building locomotives?
4555. Was it fitted with the necessary machinery? It was fitted up, and could be used for building locomotives.
4556. Had it the necessary machinery in it? It had no machinery in it.
4557. Yet you say it was so fitted that it could have been used without machinery for building locomotives? Yes; the machinery was in the next shop close by.
4558. Then why did you not build locomotives? That minute would prevent anybody doing it.
4559. You did not build locomotives because the policy of the Government was against it? Yes; I was not allowed to build them.

4560.

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4560. At the time you left the Department were you keeping pace with the repair of engines? Yes; I was; very much more so than is done now.
4561. How many engines did you say there were on the northern line which needed repairs? Thirty-one out of seventy-six. You must bear in mind we have a splendid shop at Newcastle as well as at Eveleigh in which locomotives could be built if necessary.
4562. But you never have built locomotives there? No.
4563. How many years has that shop been erected? I cannot say; it was built before I came to the Colony. We have a splendid boiler-shop there.
4564. Have they built either locomotives or boilers? I think they have built new boilers there; in fact a good many.
4565. Now about the repairs of engines, how many locomotives during the ten months you were in office did you repair? I should think they would average four a week. That could be ascertained from the papers in the office. It is no use taxing my memory in this way. My efforts were to turn out six a week, and I did that the last two weeks I was in office.
4566. There is not a great difference between what you say and the information I have. I am told that 158 engines were repaired in ten months, that is about fifteen a month, while you were in office; very near to what you say? Yes.
4567. Does that include all the small repairs? That is exclusive of what is done in the running-sheds. There are heavy repairs done in the running sheds in addition to that.
4568. I am instructed—I do not know whether it is correct or not—that including all the small repairs in the running shed, the total number of engines repaired during the ten months you were in office was 158. Will you undertake to say that that is wrong? I do not think the running-shed repairs were included in my return.
4569. My return includes both. Will you undertake to say that I am wrong in stating that there were only 158 engines repaired, including all small repairs during those ten months? I think it is wrong, but I cannot say positively. The returns sent to me by the foreman of the erecting shop were for the erecting shop only. There were separate returns for the running shed. I do not see how the two could be embodied in one return, because the work was of a different character.
4570. Will you undertake to say that the repairs exceeded that number? I do not think the number you have given includes the small repairs in the running-shed.
4571. *President.*] That can be proved, I suppose.
4572. *Witness.*] Precisely, your Honor.
4573. *Mr. Smith.*] Now you said something, Mr. Midelton, in your evidence, about the number of locomotives per mile in England as compared with this Colony? Yes.
4574. I think you said also that you were employed on the North London Railway? No; on the Great Eastern.
4575. Were you not on the North London? No; but the Great Eastern Railway is very close to the North London.
4576. Do you know the mileage of the North London railway? I am putting this question, your Honor, just as a matter of accuracy. Mr. Eddy, by way of interruption, said that some of the English companies had as much as twenty times the number of engines per mile as we have on our railways, and I think Mr. Midelton was asked to ridicule that and to contradict it. I do not intend to press this matter further. I will ask him to look at these Board of Trade returns.
4577. *President.*] Would it not be simpler to put in these returns?
4578. *Mr. Smith.*] They are very bulky, your Honor, and it is scarcely worth while to put them in. [*Handing the document to witness.*]
4579. *Witness.*] The North London Railway is an exceptional line, your Honor; it is something like the elevated road of New York. It works an omnibus traffic of a train every three minutes, and the company have an exceptional number of engines. Perhaps I was a little bit in error in contradicting Mr. Eddy's evidence. I did not know the exact number of engines on that line, but they have plenty of locomotives. The test of the capacity of a locomotive is the mileage and the work it does.
4580. *Mr. Smith.*] We all know that; but you undertook to say that Mr. Eddy was entirely mistaken in what he said, and I ask whether, for their 12 miles of railway, the North London Company have not 103 engines? Very likely they have.
4581. Is not that more than forty times the number of engines we have comparatively? It is a great number for the mileage, undoubtedly, but if you compare our lines with similar lines I think the comparison would be more justifiable.
4582. *President.*] That is not the point in question. It is whether Mr. Eddy was exaggerating when he said that there were some lines with twenty times the number of engines we have. It appears that he was within the mark.
4583. *Mr. Smith.*] I think you also said, Mr. Midelton—this is only a small matter—I think you said there were only four types of locomotives in the United States?
4584. *President.*] Practically three, he said.
4585. *Witness.* I do not want to see the book you have, Mr. Smith. I say again what I said before about the types of engines, and I challenge you to disprove it.
4586. *President.*] Need we go into this question, Mr. Smith. All Mr. Midelton said was that practically the whole of the lines in America were worked by three types of engines.
4587. *Witness.*] Yes, your Honor, the whole of the 67,000 miles of railway are worked with three types of engines. We are adopting the same thing here.
4588. *President.*] Common sense shows that the fewer types and the more interchangeable they are the better.
4589. *Witness.*] The American types are the Consolidation, the Mogul, the Ten-wheeler, and what is known as the American; these are the four types now used.
4590. *President.*] Those are the four you mentioned.
4591. *Mr. Smith.*] While you are on this subject, Mr. Midelton, can you tell me whether our engines do as large a mileage in the year as the English locomotives? They do more; they ought to do more. I impressed upon my officers to get a heavy train mileage with a full load. Both Mr. Staugar and Mr. Loughry know that very well, and I may say that we got that mileage.

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4592. You know it has been a matter of complaint for years in the Railway Department here as to the deficiency of locomotive power? It is the commonest complaint all over the world. I never heard of a locomotive department yet that did not want engines.
4593. Some evidence has been given showing the average mileage per engine in the different countries of the world;—I think you said our mileage is about 20,000 per engine? It is something like 37,000, 50,000 in some cases.
4594. But in 1886 Mr. Goodchap pointed out that the mileage of our engines here, with the exception of the United States, was the highest in the world? Yes; he was quite right, and I wanted to make it higher.
4595. And it was nearly twice that of Germany? Yes; and that proves, I think, that we did not want any more engines.
4596. Then, what do you say about this remark by Mr. Rae, which is in the printed papers? "Thus in each of the classes we employed the smallest number of vehicles for the work performed; but instead of taking any credit for this result, I regard it as a proof that we are overworking our stock"? You can overwork a horse, but you cannot overwork an engine.
4597. That is your idea? It is.
4598. In this report by Mr. Rae, he further says: "The locomotive engineer writes—'Tramway motors and of the goods and passenger engines suitable for working steep gradients, twenty are running every day; and in some cases double shifts of men are put on them, and the same engines are worked day and night, which is a most destructive practice.'" Is that what you say? We were working the locomotives from early morning until late at night.
4599. The minute further states, "it will be seen, that this leaves five available at one time for repairs and emergencies.
4600. *President.*] Is this evidence, Mr. Smith; the papers show that?
4601. *Mr. Schey.*] What is the date of that?
4602. *Mr. Smith.*] 1871.
4603. *Mr. Schey.*] That is twenty-one years ago. Your Honor will appreciate at once what the power of locomotives at that date has to do with the power to-day.
4604. *Mr. Smith* (to Witness).] In your opinion that statement of the Commissioner of Railways is incorrect; you do not concur that it is not a desirable practice to work engines day and night? I do not.
4605. I do not want to go into your previous history, Mr. Midelton? I wish you would.
4606. You gave us a great deal of it? I should like the Commissioners to go a little further into my history, they seem remarkably anxious to do it, and I should like the country to know a little bit more.
4607. You gave us a long period of your history at the beginning, and to show that I paid some attention to it, I will ask you if you told this Royal Commission of all the appointments you have held? I do not think I did. I would like you to specify, seeing that you are so familiar with my history, and I will tell you anything you like.
4608. As a matter of fact you gave us to understand that you had considerable experience in England, and I think you said on the Great Eastern Railway? Yes.
4609. As a matter of fact, what was the position you occupied there? I was running-shed foreman.
4610. Were you not sub-foreman? I was running-shed foreman.
4611. Were you not sub-foreman—were you not shed sub-foreman? No; there were two foremen on the same level. I had the repairs, and the other had the running branch.
4612. That was a very important position, I suppose? It was a very important position—there is nothing like it in the Australian colonies.
4613. You left there, I think you said, in 1875? Somewhere about that.
4614. Is it not a fact that at that time you were in receipt of 12s. per day? I had £3 per week, and I would rather have that again than the best job in Australia.
4615. After that position did you not go over to Tasmania? Perhaps you had better go a little further into my history. There was something else before I went to Tasmania; there was something in between. Perhaps Mr. McLachlan can tell you all about it.
4616. Will you tell the Commission? I have no desire unless the Commission wish to hear it. I do not wish to tire the Commission with these things unless they want to hear.
4617. *President.*] We do not think it necessary, Mr. Midelton.
4618. *Witness.*] Considering that I was offered £500 a year to leave 12s. a day, and considering that I accepted it, I do not think that part of my history ought to be left out.
4619. *Mr. Smith.*] I am quite willing to leave this subject, Mr. President.
4620. *President.*] We do not want any more of it, it is simply wasting time.
4621. *Mr. Smith* (to Witness).] Do you know very much about the American railways? I do.
4622. Do you know the Pennsylvania road? Yes.
4623. How many types of engines have they got? I think to the letter "O."
4624. Have they not from letters "A" to "S?" Yes, something like that.
4625. Yet you say that they have only four types in America? I say that the American railways are worked by four types. If you turn to the statistics you will see that they are practically the same type. They may be of different sizes, but they are of the same types.
4626. *Mr. Smith.*] I do not think I have any more questions to ask, Mr. President.
4627. *President.*] I suppose you will re-examine this witness, Mr. Schey, after you have read through the evidence, and obtained your information.
4628. *Mr. Schey.*] Yes, your Honor.

Mr. Alexander Richardson sworn and examined:—

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4629. *Mr. Schey.*] I believe you are Comptroller of Stores, Mr. Richardson, in the Railway Department? Yes.
4630. And is it not a fact that previously you were in the Store Department, afterwards in the Commissioner's office, and subsequently back again to the Stores Department? That is correct.
4631. Your last position—the position you occupy now; is that of Comptroller of Stores? Yes.
4632. Are there two lots of stores kept at Eveleigh now, are the locomotive stores distinct in any way, or kept separate from other stores? No.

4633.

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4633. They are kept altogether? Yes.
4634. Were they always kept together in one lot? Always.
4635. Were there not several different stores, one or more dividing the locomotive stores in particular? There are now sub stores.
4636. And there are several lists of stores, are there not? No.
4637. Would there not be a list of the locomotive stores as distinct from the general and working stores or the permanent way stores? No.
4638. Was there never such a list? No.
4639. Do you know anything of an inventory that was made out about the time that Mr. Goodchap retired, and the present Commissioners took office? No.
4640. You do not know anything about it? I know there was no such document.
4641. Were you at the stores at the time? No.
4642. You were in the Commissioners' office? Yes.
4643. If any one has said that such an inventory was made you say it is not right? I do.
4644. You are quite sure of that? Yes, quite certain.
4645. If any person has said that there was such an inventory and that he helped to make it, that would not be correct.
4646. *President.*] Who has said that.
4647. *Mr. Schey.*] I understood Mr. Oakleigh in his evidence to state that, your Honor.
4648. *Mr. Kethel.*] I think Mr. Oakleigh said that he had to do with the making of an inventory in his particular store.
4649. *Witness.*] Mr. Oakleigh might have made some inventory of the sub-store he was looking after, but there was no general inventory made of the railway stores.
4650. *Mr. Schey.*] Was there not a stock-taking of any kind about the time of the change of administration? Not at the time of the change.
4651. Was there immediately prior to the change? No, several months afterwards.
4652. Was an inventory made then? Yes.
4653. Can you produce that inventory? I could, but I have not got it here because I was not asked to produce it.
4654. Is that inventory a separate document? It consists of books; there are books showing the inventory.
4655. But was the inventory made in the form of a separate document that went to the Commissioners? It always does. Stock is taken annually and the result submitted to the Commissioners and it would be taken in the ordinary course of procedure just about the time that the late Commissioner left office. But according to the paper you yourself read you will see that the Commissioner declined to have stock taken in the ordinary way—that is, the late Commissioner. He preferred to have it done later on by the present administration.
4656. *President.* In that stock-taking was there a list made of all the stores?
4657. *Witness.*] There is a list made, your Honor, in the form of books.
4658. *President.*] And that is submitted to the Commissioners?
4659. *Witness.*] They have complete returns of the stores.
4660. *Mr. Kethel.*] Are there books in existence showing the stock in hand? The ledgers are made up, and then an independent officer goes round all the stores and takes a detailed list on which he notes down the stores he finds which are worked out at a value and compared with the ledgers of the department; and that comparison showing whether there is a surplus or a deficiency in any item is submitted to the Commissioners for their information, and for their authority either to debit a department or credit a department as the case may be.
4661. That document is kept on record? I think every document could be furnished for the last twenty years probably.
4662. *President.*] That would show all boiler-plates and matters of that kind? Yes, everything.
4663. *Mr. Schey.*] Is that the document—[*showing witness a document*]—which you refer to as having been read? Yes, that is the one.
4664. You say that Mr. Goodchap declined to have stock-taking in the ordinary way? Yes, he says so there.
4665. I presume you know the contents of this document since you refer to it? I only know from hearing you read it.
4666. Is it not a fact that Mr. Rennie, the Auditor-General, proposed an extraordinary method of taking stock prior to the present Commissioners taking office? Yes.
4667. Was it not that which Mr. Goodchap objected to? He objected to that, but he made, as I understand it, a counter-proposition. He said he wished the stock to be taken. I think in that document he says he anticipated the Auditor-General and had already submitted a letter to the Minister suggesting that stock should be taken in a certain way, and that was by some person mutually agreed upon between the late Commissioner and the incoming administration.
4668. But what Mr. Goodchap, to was not the ordinary system of taking the stock? I do not say that he objected to take stock, but that he proposed that stock should not be taken at the usual time, and therefore no stock was taken before he left office.
4669. As a matter of fact, Mr. W. M. Jackson had been in the habit of taking stock? No, not in the habit of taking it.
4670. But he had been appointed to take stock? No.
4671. Had Mr. Jackson any function in relation to stock-taking? None whatever. Mr. Jackson was once asked to visit the Stores Department and report to the late Commissioner as to the way in which he found the business conducted; but he never attempted to take stock. The stock-taking would occupy three weeks; Mr. Jackson did not spend as many hours there. He simply went through the books, and generally into the conduct of the business, and submitted the report accordingly.
4672. He was connected with Lassetter & Co.? Yes.
4673. And in 1886 Mr. Goodchap appointed him to make this report? Yes; on that occasion only.
4674. And Mr. Jackson made a very favourable report, did he not? I believe he did.
4675. Does he not say in his report that he went minutely into the matter and reviewed at his leisure the whole of his investigations? He took notes, no doubt, and considered them afterwards.

4676.

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4676. Does he not say that he went into the method of issuing and comparing the dockets, and satisfied himself in every way as to the method in which the business was conducted? Quite so.
4677. Then after this minute by Mr. Rennie, Mr. Goodchap objected to the Auditor-General coming in at that period? He objected to the Auditor-General coming in at that period, because although repeatedly requested to deal with the question of Railway stores, he did not take the matter up.
4678. He goes on to say that he had anticipated the Auditor-General in this case "being fully alive to the special importance of an independent stock-taking of the stores on the present occasion when the transfer of the administration from the old to the new management is to be effected," and he says further that there was about £600,000 worth of railway stock on hand, and he would prefer that the stock-taking should be deferred till the new administration is appointed, and that some person mutually agreed upon between himself and the new administration could be appointed to check the stock, &c., That is what you refer to, is it not? Yes.
4679. I suppose some such person as is there referred to was appointed to check the stock, and see that it corresponded with the stock-ledger? The stock was taken later in the year in the ordinary way, by the staff that has always done the work before—that is the audit staff of the department—and shortly after that two gentlemen were appointed to take an independent stock, somewhat following out Mr. Goodchap's suggestion. Owing to the gentleman who had been nominated by Mr. Goodchap not being able to carry the work out it devolved on the Commissioners to appoint someone else to do the work, and they appointed the two gentlemen I have referred to.
4680. Then, as a matter of fact, Mr. Goodchap's proposal was never carried out? No.
4681. But stock was taken by the department, and afterwards by the other gentlemen? Yes.
4682. Now, I want a copy of that inventory made at that time of the stores; I also desire that the stock-taking may be produced here before the Commission.
4683. *President.*] Is there any difficulty in obtaining that?
4684. *Witness.*] No difficulty at all, your Honor, I can produce the books.
4685. *President.*] You may bring the books here or send them.
4686. *Mr. Smith.*] I do not know whether this witness should be asked to do that.
4687. *President.*] So far as I can understand the only question we have at present to deal with in connection with the stock-taking is as to the number of boiler-plates and boilers that were in stock when the forty boilers were ordered.
4688. *Mr. Smith.*] This witness has not yet been asked about that.
4689. *President.*] I do not know whether he can answer the question, Mr. Smith, but whether he can or not the information we want will be found in these books.
4690. *Witness.*] Your Honor, the inventory will not show the total number of boiler-plates. It will simply show the weight of the plates of each sort, for instance, B.B.H. boiler-plates, so many tons; Yorkshire plates, so many tons. It will not give the number of plates.
4691. *President.*] How can we arrive at that?
4692. *Witness.*] I think I can furnish the information, your Honor.
4693. *Mr. Smith.*] We will undertake to get that, sir.
4694. *Mr. Kethel.*] Are you aware, Mr. Richardson, how many tons of plates are used for the various classes of boilers? I cannot tell you that accurately, but the information can be easily given.
4695. Perhaps the department will furnish us with that information. What I want to know is how many tons of a certain class of boiler-plates it takes to construct a boiler?
4696. *Mr. Smith.*] The foreman of the boiler-makers, Mr. Fernley would be the right person to give you that information; also Mr. Howe, the foreman of the workshops, and Mr. Thow, the Locomotive Engineer,
4697. *Mr. Schey.*] This is not a matter for Mr. Fernley; he is a boiler-maker. This is purely a matter of accounts in the department.
4698. *President.*] The witness tells us, Mr. Schey, that the books will not show us the number of boiler-plates in Store at the time. They will only show the number of tons; but the witness says he could furnish us with the information.
4699. *Mr. Schey.*] If Mr. Smith intends to produce evidence to that effect, I have no objection; but what I want is the store-book itself.
4700. *President.*] Mr. Richardson says he will produce that.
4701. *Mr. Schey.*] I want the book produced, so that I may inspect it for myself, and for my own satisfaction.
4702. *Mr. Smith.*] We have no objection to produce the book; but I have explained that if it is produced, it will be of little service to the Commission.
4703. *President.*] It is a question for Mr. Schey. He desires to see the book, and there can be no obeection, I presume. What use he will make of it, is another matter
4704. *Witness.*] Shall you want me to bring the book, your Honor, or may I send it?
4705. *President.*] You may send it by some other officer, if you like; but probably the book may be required for several days.
4706. *Witness.*] That is of no consequence, your Honor.
4707. *Mr. Schey.*] I daresay that if, as Mr. Smith says, the book will be of little use when it is produced, I will be able to get some officer of the department who can interpret it.
4708. *President.*] At any rate you will see the book, Mr. Schey.
4709. *Mr. Schey* (to Witness).] How long was it after the Commissioners took office that you became Comptroller of Stores? I was appointed on 1st April, 1889, and the Commissioners took office in 1888.
4710. That will be about five months? Yes; about that.
4711. Was this stock-taking carried out before you were appointed Comptroller or afterwards? Before.
4712. And at that time you were in the Commissioners' office? Yes.
4713. Do you know whether, shortly before the present Commissioners took office a quantity of material for building engines was indented from England? The material was indented for the contracts that were then let.
4714. There were two contracts, were there not, for fifty engines? Yes.
4715. And in connection with those proposals a quantity of material was indented and imported, was it not? Yes.
4716. Do you know for how many engines material was imported? For ten engines.

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4717. That is five each of two classes? Yes.
4718. Can you tell me whether the order was duplicated afterwards? Not that I know of. There is no material in duplication of it; but I do not quite understand your question.
4719. This is what I mean. An indent was sent and a quantity of material imported, sufficient for the manufacture of ten engines, being for five each of two different classes? Yes.
4720. After that was not another order sent for sufficient material for ten more engines—five each of two classes? No. If the order was sent, which I do not believe it was, it was never executed.
4721. You do not know that any indent was prepared for that? I do not think there was, but I cannot answer positively. I cannot answer positively that there was not because it was intended that these engines should be gone on with, and it is probable that there was such an order prepared.
4722. *President.*] But you say it was never carried out? No.
4723. *Mr. Schey.*] You are not prepared to say that the second indent was not sent for materials for ten more engines? It could not have been sent, or if it was it was cancelled afterwards, because the material was not supplied.
4724. *Mr. Kethel.*] Was any of that material issued to the contractors? Yes.
4725. And what became of it ultimately? Some of it was manufactured, but I think it all ultimately came back into the hands of the Commissioners.
4726. *Mr. Schey.*] You say some of it was manufactured? Yes.
4727. Some of it was supplied to Mr. Wearne? Yes.
4728. And sometime afterwards it came back to the department? Yes.
4729. Some manufactured and some unmanufactured? Yes.
4730. And the balance of the material, I suppose, has either been used in the ordinary way or it is still in stock? There is a quantity of it still in stock, and a quantity has been used.
4731. You have promised to forward to the Commission the store-ledger? Yes, the stores and stock returns.
4732. I think I heard Mr. Smith ask you also to send a list of the boiler plates then in stock? No; he asked me to mark the page.
4733. But I ask you to be good enough to have a list made, taking the date of this stock-taking, whenever it was, of the quantity of the boiler-plates in stock, the boiler-tubes, rivets, stay-bolts, and all things necessary to make boilers.
4734. *Mr. Smith.*] I object altogether, Mr. President, to Mr. Schey's ordering this witness. I do not know whether he is competent to do what is requested of him.
4735. *President.*] Mr. Schey is not ordering the witness.
4736. *Mr. Smith.*] It will take a long time to prepare this list, your Honor, and I do not know whether this witness is competent to prepare such an inventory.
4737. *Mr. Kethel.*] Could it not be taken from the book itself?
4738. *Witness.*] It will not be in the book, sir, and I am not at all sure that I can get the information.
4739. *Mr. Schey.*] Mr. Smith has said that I cannot understand the book even if I get it, and I ask Mr. Richardson to allow one of his clerks to take out the amounts from the stock-book of all the boiler materials on hand at this date. I do not think this will be a very big matter, your Honor.
4740. *Witness.*] I am not sure that the information can be given, and I will tell you why. We have books of stock returns—what we call fair copies; but the number of plates would be taken down in a rough list, and I am not at all sure that I can put my hands on that rough list; but if you desire it I will see what can be done.
4741. *Mr. Kethel.*] Cannot we judge by the weight of the plates in stock? Yes.
4742. If we had the gross weight, and also the weight of a plate, I think we should be able to arrive at what we want? Yes.
4743. *Mr. Schey.*] It would be a strange thing if a department like this could not tell what stock they had in hand when an inventory has been taken. Surely it cannot be any trouble to them to give us this information?
4744. *President.*] The witness says he can tell us the gross weight in stock and the average weight of a plate also, and from that information we shall be able to obtain what you want, Mr. Schey.
4745. *Mr. Kethel.*] I think you said, Mr. Richardson, that you were appointed Comptroller of Stores some five months after the present Commissioners took office? Yes.
4746. Were you not Railway Storekeeper many years ago? Yes.
4747. For how many years were you Storekeeper? I was Storekeeper from 1873 to 1883; I was then appointed Superintendent of Stores from 1883 to 1886, that means thirteen years in charge of the stores' Department, and now I have been in charge of the stores for three years longer—or sixteen years in all.
4748. So that when you resumed charge of the stores on the last occasion you were quite conversant with all the methods of keeping stock? Entirely.
4749. *President.*] What witnesses have you to call, Mr. Schey?
4750. *Mr. Schey.*] I have to complete Mr. Midelton's examination and also the examination of Mr. Chambers.
4751. *President.*] And then you will close your case?
4752. *Mr. Schey.*] Yes, I think so; but I have some papers I desire to put in.
4753. *President.*] Will you get them ready at once, so that there may be no further delay?
4754. *Mr. Schey.*] Yes, your Honor; I will endeavour to prepare them immediately, and put them in to-morrow.

FRIDAY,

FRIDAY, 27 *MAY*, 1892.

[*The Commission met at* 11 *o'clock in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

4755. *Mr. Smith.*] We have handed in the store books, your Honor, which were referred to in the evidence yesterday. To my mind they do not give very much information. They show the quantity of boiler-plates certainly, and subsequently a witness will be called who will state how many boilers could be made out of that quantity, in case the Commission should think it requisite. I am told the total amount of boiler-plates is approximately sufficient for the construction of thirty boilers.
4756. *President.*] I see.
4757. *Mr. Smith.*] I may also mention, your Honor, that I received this morning a letter from Mr. Eddy, stating that he is still confined to bed by his cold, but he hopes to be here on Monday, and he does not wish the proceedings to be stayed on his account.
4758. *President.*] Very well, Mr. Smith, we will act on the suggestion. Mr. Schey, Mr. Smith has just handed in the stock returns you were asking for.
4759. *Mr. Schey.*] Of course, your Honor, I shall require an opportunity to look over them. Your Honor will see that it is impossible for me to scrutinise these books in five minutes, I may say that I still press for the return which I asked for yesterday.
4760. *President.*] What return is that?
4761. *Mr. Schey.*] It is a return of the boiler-plates, bolts, rivets, and tubes in stock at that time.
4762. *President.*] I understand there is a witness coming from the department who may possibly give that information. I think you will find from the books already put in the information you require as to the boiler-plates in the Eveleigh workshops and also in the workshops at Newcastle.
4763. *Mr. Schey.*] But these returns, your Honor, do not profess to give correct information; only approximate.
4764. *President.*] We are told that the information is as near as they can give it.
4765. *Mr. Schey.*] But, your Honor, if stock was taken there ought not to be any "as near as they can give it" about the matter.
4766. *President.*] I understand that stock was taken by weight, that is the plates are stated in tons, and they can only state approximately how many boiler-plates that is equivalant to.
4767. *Mr. Schey.*] I further notice, your Honor, that the return has only reference to plates and not to other portions of boilers.
4768. *Mr. Kethel.*] You will find the other portions in other parts of the books, Mr. Schey.
4769. *Mr. Schey.*] Undoubtedly, and therefore I require either sufficient time to go through the books and take out the information myself or the department might supply me with the information I desire, in which event I shall still require time to go through the books and verify it.
4770. *President.*] Very well, Mr. Schey. I am given to understand by Mr. Allen, the secretary, that you have taken from the bundles of papers that were handed in certain documents that you desire to put in evidence.
4771. *Mr. Schey.*] I have taken nothing, your Honor.
4772. *President.*] You have extracted from the papers certain papers which I understand you want to put in evidence.
4773. *Mr. Schey.*] I have collected certain, your Honor, which I desire to put in if you will allow me. I will put them in one by one presently.
4774. *President.*] There is no necessity to put them in one by one, Mr. Schey. If you say these are the papers you wish to put in evidence we will accept them.
4775. *Mr. Schey.*] I do not want to go through them, your Honor, any more than to give the numbers and to state briefly what I intend to have taken from the documents. I should like now to call Mr. Chambers.

Mr. James Chambers recalled and further examined:—.

4776. *Mr. Schey.*] When you were in the witness-box last, Mr. Chambers, I asked you to prepare certain information from data which I then furnished you with. Have you prepared that information? Yes. Mr. J. Chambers. 27 May, 1892.
4777. Have you the list of questions I then gave you? I have the list.
4778. *President.*] You have answered all the questions as they are put there, Mr. Chambers? I answered some of them on the last occasion, your Honor, and some I said I was not prepared to answer, as they had not been exactly indicated on the paper. I am prepared now to answer any question in regard to the hauling capacity of locomotives.
4779. *Mr. Schey.*] I think you answered the first question I put to you about the 205 class, did you not? I did.
4780. And you also gave me an answer as to the other class which was more powerful? I stated which was the most powerful goods engine on the line when Mr. Thow assumed office.
4781. Then I asked you some questions in reference to passenger engines? Yes.
4782. Did you give all the information? No; but I am prepared to give it now.
4783. That is to say, you are prepared to give me the information I asked you to prepare? Yes.
4784. Will you give me the information as you have it? I think I have already stated the hauling capacity of the locomotive known as the "Scotch Yankees."
4785. I think you did? I have got it here if I did not give it. I can give it as I have it now.
4786. Read it as you have it now? I wish to explain, first, that there are two sections of line involved in the severe gradients included from Picton to Hill Top, and as I was asked, first of all, only to give the capacity of locomotives over the section between Picton and Thirlmere, which has the lesser gradient of the two sections, I thought it might save trouble if I calculated the hauling capacity over the more severe grade going to Hill Top, and therefore I have done both. It may be useful information, and it may save me being called again. The proper maximum hauling load of the "Scotch Yankees," on the section from Picton to Picton Lakes, would be 151½ tons.

4787.

Mr. J. Chambers. 27 May, 1892.

4787. What grade is that? The worst grade in that section is 1 in 40. This engine, on the grade of 1 in 30 involved in the Hill Top section, would haul 103½ tons. Then I propose to state what was the proper maximum working load on the same sections for the new locomotives, the fifty recently obtained from Beyer, Peacock, & Co.
4788. That is one of my questions? Yes; they are called the "P" class. The maximum working load for these engines on the 1 in 40 ought to be 196 tons, and on the 1 in 30 it ought to be 138 tons.
4789. And the difference between fast and slow goods? That is rather arbitrary. As I said before, I believe that three-fourths of the maximum load for a slow train would be sufficient for a fast train.
4790. Have you given the loads for the other class you mention as being more powerful than the 205 class? I have got the most powerful class in existence on the railways when Mr. Thow took office. That is the 131 class, known as the American Consolidation goods. The proper load for that upon the 1 in 40 section of line would be 190 tons, and of the 1 in 30 131 tons.
4791. Have you any further information? Yes; I have some further information. At the time Mr. Thow assumed office there were two other classes of goods locomotives more powerful than the 205 class then in existence on the lines, two classes of old locomotives. They were respectively known as the 48 class and the 60 class. I have calculated the proper working loads for both these classes; but I wish to explain that in the matter of locomotives there are two elements to be considered—the one is the tractive power of the locomotive and the other is its adhesive force. A locomotive without sufficient adhesion on the rails, no matter if it had an unbounded amount of tractive power, would be worthless. There are proper proportions for both the tractive power and the adhesive force, and I have calculated accordingly the loads for the 48 class, the 60 class, and the 373 class, which is a passenger engine, manufactured by the Vulcan Foundry Company. For the 48 class I find the proper maximum load to be, on the 1 in 40, 177⅓ tons.
4792. *Mr. Smith.*] Is that the 48 class? I may have made a mistake in the number. I am referring to the eleven goods engines built by Stephenson, with cylinders 19 in. x 26 in., and 48-inch wheels. Forty-eight may be the correct number. The maximum load for this engine on the 1 in 30 would by 128 tons. The maximum load for the 60 class, which was originally intended as a passenger engine, but has generally been used for goods purposes, would be, on the 1 in 40 grade, 166⅔ tons, and on the 1 in 30, 119½ tons. Then the 373 class, which is a passenger engine, and would be called an express here, I suppose, its proper load on the 1 in 40 would be 116½ tons, and the 1 in 30. 76¾ tons.
4793. Is that all you have there? Yes.
4794. Have you any objection to putting those papers in? I should like to write the information out purposely for the Commission, because I have made several other calculations which might be confusing. I will make a copy of this and put it in.
4795. Now, Mr. Chambers, concerning these forty boilers; since you were here last we managed to identify the makers' numbers with the departmental class numbers; I will take them in their order, as these are only six mentioned in the indent; item "A," the first on the indent, is ten locomotive boilers for passenger engines to maker's number 2,060;—that maker's number is identified as engine-class number 79? We had complete working drawings for that engine, including boiler, tender, and everything about it.
4796. Do you know whether any boilers have been made of that class in the Colony for any engines? A few boilers of that class were necessarily manufactured by the Atlas Engineering Company at the time they had a contract to supply, I think it was, twenty-five locomotives to the department. They only supplied a few engines, and then the contract was cancelled.
4797. I suppose they had plans from the department at that time for that class of engine? Yes; these plans, your Honor, I might explain, were printed on vellum, this permitting of photographs being readily taken, and thus securing exact *fac similes*.
4798. The next is item "B," six locomotive boilers for goods engines to maker's number 2,064; 2,064 maker's number is identified with 93 class of engines;—had you plans for that? We had complete working drawings of that engine.
4799. That would include boilers and everything? Yes.
4800. The next item is "C," two locomotive boilers for tank suburban engines, to maker's number 1,910, which is identified as engine-class No. 158;—can you tell me anything about that? We had no working drawings for that class.
4801. Had you any drawings at all? We had one general drawing, but it was not sufficient for the purpose of making boilers.
4802. Could not the drawings necessary for the boilers have been prepared from that general drawing with very little trouble? Not from that drawing alone. The dimensions of the boilers would have to be taken.
4803. The next is item "D," twelve locomotive boilers for goods engines to maker's number 2,560. 2,560 is identified with engine-class No. 205. Can you tell me whether there were plans for that? We had a complete set of working drawings of that engine.
4804. They were complete? Yes, there was everything complete.
4805. These were Beyer and Peacock's engines, were they not. I mean classes 79, 93, 158, 205? Yes; and 79 class has also been made by Messrs. Dubs, of Glasgow.
4806. That was a duplicate order? Yes.
4807. Item "E," six locomotive boilers for passenger engines to maker's number 2,550? Might I interrupt you to say that of 79 class, which were built both by Beyer and Peacock, and Dubs, we had complete working drawings from both firms.
4808. Now, item "E," maker's number 2,150, which is identified with engine-class No. 255. Can you tell me whether there were any drawings for that class? We had no working drawings of the six engines built by Messrs. Beyer and Peacock, and which are included between the numbers 255 and 260.
4809. Let me give you the next item "F," which is for four locomotive boilers to maker's No. 1,780. Both items "E," and "F," are identified with engine-class No. 255. Are there not a lot of engines known as class 255 which are also known as class 261? Yes.
4810. And of the first lot which we were speaking of, you say there are only six engines altogether? Yes; and they were supplied by Beyer and Peacock.
4811. I suppose there are more engines in the second lot? Yes; there are a large number. I have the numbers here. All the rest were supplied by Dubs & Co., and we had complete working drawings for them, but not for the six Beyer and Peacock engines.

Mr. J. Chambers. 27 May, 1892.

4812. How many were there in the second lot? There were numbers 261 to 264, and 265 to 284 inclusive.
4813. How many engines would that comprise? There would be four in the first lot, and twenty-one in the second lot.
4814. And for this number you say you had complete working drawings? Yes.
4815. *Mr. Schey.*] That is all I have to ask this witness your Honor.
4816. *Mr. Smith.*] Now, Mr. Chambers, you have made some comparison between goods engine No. 131, and the Beyer-Peacock engine? Which Beyer-Peacock do you mean, 205?
4817. I mean the fifty express engines. You have made a comparison, have you not? Yes.
4818. *Mr. Schey.*] I do not think any comparison was instituted. The witness has simply given certain figures.
4819. *Mr. Smith.*] Allow me please. (To Witness:) You have made a comparison between those engines have you not? Yes; in so far as I have taken out the proper working loads for both of them.
4820. Is the Beyer-Peacock engine an express passenger engine? I do not call it an express engine, I call it a heavy passenger engine. It certainly is not an express.
4821. Then the other engine of the 131 class, is that an express engine? No; I call it a heavy passenger engine.
4822. It is not a goods engine? Do you mean the 131 class?
4823. Yes, Is that not a goods engine? Yes; I have made a mistake, that is a heavy goods engine.
4824. And your comparison is between what you call a heavy passenger engine and a heavy goods engine? No, I do not intend any comparison in that way. My comparison was intended as between what is known as the Scotch Yankees and the fifty new Beyer and Peacock engines, if there is any comparison at all.
4825. What is the class-number of the Scotch Yankees? I think they are known as the 436 class. I think they were built by Dubs & Co.
4826. And the 304 class, who were they built by? They were manufactured by the Baldwin Engineering Company of Philadelphia.
4827. If anyone here has stated that the 60 class was the most powerful engine, would that be correct? Without reference either to goods or passenger, and simply as an engine.
4828. If anyone here has stated that, it would not be correct? No.
4829. Suppose Mr. Midelton had said so? It would not alter the fact.
4830. You are only a draftsman, Mr. Chambers? I am a mechanical engineer.
4831. Mr. Midelton was your superior officer, was he not;—if he yesterday said here that the 60 class built by Stephenson was the most powerful engine in the service, that would not be correct;—I suppose you know the 60 class? Yes.
4832. Was it the most powerful engine on the line? The most powerful passenger engine, that is a different thing.
4833. But would it be correct? Well, so far as power goes, it would have been correct, for passenger engines.
4834. But not for hauling goods? Certainly not.
4835. Now you have just referred to the classes of engines for which there were drawings;—if anyone has stated that from the drawings in existence for the 158 class new boilers could easily have been constructed within a week, would that be correct? Do you say for the 158 class?
4836. If anyone stated the other day that from the data in the possession of the department drawings for boilers could have been prepared within a week, would they have been correct? That is too short a time for getting out working drawings for boilers.

Mr. Thomas Midelton recalled and further examined:—

Mr. T. Midelton. 27 May, 1892.

4837. *Mr. Schey.*] You were asked some questions yesterday by Mr. Smith as to the preference—I think that was the word he used—which has been shown for particular firms. Now, you have a fair knowledge, have you not, of the locomotives on our railways, which have been supplied in the past by different firms? Yes.
4838. And certain firms, I believe, have had a larger number of orders than other firms, have they not? Yes.
4839. For instance, Messrs. Beyer and Peacock, have they had a much larger number than anyone else. I mean prior to the Commissioners coming here? I think so.
4840. A considerably larger number? Yes; they have had the largest number of orders, I believe.
4841. And next to them Messrs. Dubs & Co., I suppose? Yes, I think so.
4842. *Mr. Smith.*] You do not include tramway motors in that, I presume? No; I am only speaking of main line engines, of locomotives.
4843. *Mr. Schey.*] A good deal has been said, has it not, in times past about the number of engines procured, especially from Messrs. Beyer and Peacock?
4844. *Mr. Smith.*] I object to that question. I want to know when it was said, where it was said, and by whom it was said.
4845. *President.*] Mr. Schey, we have nothing to do with what has been said. If you submit facts, we will consider them; but we do not want to know what people have said.
4846. *Mr. Schey.*] It is impossible for me really to get every tittle from different places by what is termed legal evidence. I think the question I am putting to the witness is a perfectly fair one.
4847. *President.*] We do not think so.
4848. *Mr. Schey.*] Very well, your Honor, I will put another question; but I regret that I should be prevented from asking questions which I consider essential to my case. It appears to me to be a very large interference indeed with my right to put questions and to elicit information, and I exceedingly regret it. (To Witness): Having in mind the large orders given to Messrs. Beyer and Peacock before the present Commissioners arrived in the Colony, would it be a fair thing to say that they appeared to be a specially selected firm? I do not say selected.
4849. I do not ask you to say so. I ask you whether it would be a fair thing to say? They certainly have had the bulk of the orders; but I do not know whether they have been specially selected. I cannot say that.

Mr. T. Midelton. 27 May, 1892.

4850. In getting the bulk of the orders, have you any knowledge as to whether Messrs. Beyer and Peacock have always got those orders by open tender, or have they received them without tender? I do not know that. The only advertisement I ever saw calling for tenders for locomotives was for the forty-four engines, which have been alluded to a good many times during the course of this inquiry.
4851. *Mr. Smith.*] But which were never supplied.
4852. *Witness.*] I concluded from that fact that all previous orders were advertised in the same way. I saw an advertisement in the English papers, and I concluded that all previous orders were advertised in the same way.
4853. *Mr. Schey.*] As a matter of fact, with your knowledge of the orders Messrs. Beyer and Peacock have received—I am speaking of course of the time previous to the Commissioner's coming here;—would you think that that firm has been specially favoured in the number of orders they have received? They have had the bulk of the work.
4854. Then in relation to the engines which have been supplied since the present Commissioners have taken office, is it not a fact that the largest portion of them have been supplied without public tenders? I do not know that. I do not know whether they have been supplied with or without public tender. But judging from what I have seen and from what I have read I do not think tenders were called. However, on this matter I know nothing beyond what has been shown in court.
4855. *Mr. Smith.*] You say you know nothing more than has already been shown in the court? Quite so.
4856. *Mr. Schey.*] You have also been asked something about the price of material, Mr. Midelton. I suppose the prices of material about the time these orders were given were high in England? In the beginning of 1890, I believe the prices went up.
4857. You were also asked something as to the urgency for those locomotives. In your opinion was the urgency sufficient to warrant such a large order?
4858. *Mr. Smith.*] I object to Mr. Midelton's opinion on this subject. What have we to do with that?
4859. *Mr. Schey.*] I think, your Honor, Mr. Smith has already asked this witness some questions on the same subject, and I suppose there is no objection to my asking similar questions.
4860. *President.*] You can ask the witness's opinion, Mr. Schey, for what it is worth.
4861. *Witness.*] Do you say you want my opinion, Mr. Schey?
4862. *Mr. Smith.*] Opinion about what? State the question distinctly, Mr. Schey.
4863. *Mr. Schey.*] Perhaps I had better look up you questions in the evidence, and then we shall have the matter correctly.
4864. *Mr. Smith.*] While Mr. Schey is looking up this evidence, your Honor, perhaps I might put in one or two documents containing information requested by Mr. Schey. Here is a memorandum of the detailed parts of locomotives ordered from English makers, and including freight and all charges. I think there are 132 shown altogether. [*Document handed in.*]
4865. *Mr. Schey.*] I cannot find the evidence just now, your Honor, that I desire to refer to and I will leave it for a moment. (To Witness): You were asked for your opinion on certain matters in connection with this charge. You were asked whether you knew anything outside these papers? Yes.
4866. Have you seen all these papers; do you know what papers there are? I do not know what papers are there.
4867. Then when you said, "outside the papers," what papers were you referring to;—were you referring to some other papers you had seen? Yes.
4868. And you did not assume that these were all the papers? I have not seen those papers. I cannot tell unless I look at them.
4869. And you are not able to say that you have seen all these papers? No.
4870. Neither do you say that you have not seen other papers which are not in here? No.
4871. You were asked whether outside of these documents you had any knowledge of certain persons being concerned in a "ring," and of course you said, no. You have no knowledge of such a thing? No.
4872. But now coming inside the papers you have seen. Have the documents which you have seen from time to time suggested such a thing to your mind as any alliance or coincidence between persons whose names have occurred through them, and whose names have been mentioned here to you? I, yesterday named several gentlemen who appeared to have had their hand against me ever since I entered the department.
4873. I am not asking as to yourself? That is all I know.
4874. I am asking you as to the supply of locomotives? I said yesterday that these gentlemen were against me for some reason or other, and the only reason I could gather was that I was in favour of American engines after I had had experiences of them in this Colony. The articles which appeared in *Engineering* seem to me to be directly levelled at myself for entertaining opinions in favour of American engines. That is all I know about any ring.
4875. But the names of a number of persons were mentioned to you one by one yesterday by Mr. Smith? Yes.
4876. And you were asked whether, outside the papers you had read, you had any knowledge of any combination between those persons? I say I have not.
4877. I ask you now whether, from your reading of the documents, it has appeared to you that there was ground to suppose that any alliance existed between these persons? Yes; some of the articles ——
4878. *Mr. Smith.*] Refer to which they are?
4879. *Witness.*] I am speaking of articles in *Engineering*.
4880. *Mr. Smith.*] I think this document dealing with the railway locomotives and which has already been made an exhibit contains a number of articles, and perhaps the witness will point out those he refers to. I think they are all printed here.
4881. *Witness.*] No, Mr. Smith, they are not all printed there.
4882. *President.*] I think Mr. Midelton's answer is a very plain one. What he says is that the only ring he knows of is a ring that was opposed to him personally. (To Witness): Is that not so? That is my answer, your Honor.
4883. Beyond that you know of no ring or combination? No.
4884. Nor have you a suspicion of any? No. I cannot understand why that existed, except for the reason I have already given.
4885. *Mr. Schey.*] I should be very much obliged, your Honor, if you would let me get my answers myself. It is very kind of Mr. Smith to interfere in this way to prevent me getting the answers I want.

4886.

Mr. T. Midelton. 27 May, 1892.

4886. *Witness.*] [*Looking at document.*] I have not seen all these articles, Mr. Smith. I have not seen them in this printed document before, but I have seen some of them in their original state.
4887. *Mr. Schey.*] I am not asking you about that document, Mr. Midelton. I am referring to documents which you yourself have seen and read. I believe you have said you have read a number of papers, and that you have studied this business for years? Yes.
4888. Very well. Now then, outside the documents, you say you have no knowledge of any ring or combination? No.
4889. Now, will you answer this question;—from your study of the documents which have come before you at various times, did you at any time form an opinion that there were coincidences between these persons named which gave colour to the suggestion of an alliance between them in relation to the supply of locomotives for this country? Well, my opinion was, after reading the documents, that there was such an alliance as you allude to. Sir John Fowler and Mr. Whitton are gentlemen whose names appear very frequently in the official documents and Parliamentary papers, and it seemed to me that there was an alliance just as you remark. I know nothing more than that.
4890. Just so. Of course, you have no knowledge of such a thing? No.
4891. At the same time you formed the opinion that the facts as they appeared to you from the documents which you have read support such a hypothesis? Yes; I formed that opinion, certainly.
4892. You have formed that? Yes, it is only an opinion. I cannot tell you anything more than that.
4893. You were also asked if you had seen me a number of times;—as a matter of fact have we not been on very friendly terms for years past? Yes; and I have been friendly with many other gentlemen in the city.
4894. Therefore, of course, you have seen me frequently on all sorts of matters? Yes.
4895. Long before this matter cropped up? Yes.
4896. And long before it was thought of? Yes.
4897. And even before I was a member of the Legislative Assembly at all? Yes.
4898. Now, stress has been laid upon the documents;—are there any documents there, so far as you know, which belong to you? No.
4899. As a matter of fact have I not supplied you with many Parliamentary returns and documents that have come into my possession as a Member of the Assembly? Yes.
4900. And, therefore, you have obtained a number of documents from me from time to time? Yes.
4901. You were also asked whether you felt terrified to give evidence—of course, you do not? Not in the slightest degree.
4902. As a matter of fact, you consider that everything which could have been done to injure you has already been done? Yes.
4903. All that could be done to ruin you has been done? Yes.
4904. And, therefore, you are not in any further terror? No.
4905. You were also asked as to whether you had not introduced American engines to these lines, and I think you said "No"? Yes; I did.
4906. Is it not a fact that the American engines were on the line before you arrived in the Colony? Yes; two classes of engines were.
4907. When you arrived in the Colony, I believe you had a very great opinion against American engines? Yes; I was prejudiced.
4908. Were you not sent by Mr. Burnett to report upon certain American engines which were then on the lines? I was.
4909. And you went with a great prejudice in favour of English engines? I did.
4910. And afterwards you came to the opinion that American types of locomotives were the best? I was sent by Mr. Burnett to investigate the running of the Consolidation engines on the Mountains. I arrived at Penrith, and that was the first time I saw an American Consolidation engine. That was in the latter part of 1880. Mr. Burnett's instruction was to investigate the running of these engines, and to report direct. I spent about a week on the Mountains, and I reported to Mr. Burnett direct and verbally; and I had his hostility from that day unfortunately. I spoke in favour of the engines in accordance with the facts I had discovered. I was just as much startled as he was, and I considered that from that day to this Mr. Burnett has been hostile to me.
4911. Then it was the performances of these American engines which led you to report in their favour? Yes.
4912. And that report, and your adoption in favour of American types led Mr. Burnett to have a different opinion of you? Yes; he endeavoured to remove me after that. He made things very unpleasant.
4913. You ascribed his hostility to that cause only? I did. I can think of no other reason.
4914. Prior to that did not Mr. Burnett promise you promotion? Yes; he was very friendly to me indeed; he promised me promotion.
4915. A great deal of stress was laid by Mr. Smith on the high character of members of the Institute of Civil Engineers. You are not prepared to say that because a man is a member of the Institute of Civil Engineers that he is necessarily a gentleman, and above anything wrong? I do not think it is a fair question to put.
4916. But Mr. Smith endeavoured to get you to say so yesterday? I would rather not answer the question.
4917. But the mere fact of a man belonging to any society does not necessarily guarantee his gentility? I think that goes without saying.
4918. Now, you were also asked whether Mr. Scott has any connection with the railways now;—you said that so far as you knew he has not? Yes, that was my answer.
4919. And that he could have no possible connection with the other persons named? Quite so.
4920. But in the past, in former years, when he was on the line, you are not prepared to say the same thing? I know Mr. Scott is a great friend of Mr. Whitton's, and, like Mr. Burnett, he was very friendly to me until I saw virtues and advantages in the American engines. Then he turned round like Mr. Burnett. I have heard officers in the department say, in 1880, when I spoke in favour of American engines, the best thing to do is to run them on a temporary line to the Heads into the Pacific Ocean.
4921. *Mr. Smith.*] I suppose that was your opinion until you saw them at work? How could I form an opinion on a thing I had never seen. The first time I saw an American locomotive was when I got to Penrith.

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Penrith. I saw Rogers' engine in Melbourne twelve months previously, so that I had formed a partial opinion.

4922. *Mr. Schey.*] You were further asked, Mr. Midelton, in reference to Sir Henry Parkes and his connection with Sir John Fowler, and I believe you said you had no knowledge of any combination between these gentlemen? I only know they are friends from documentary evidence.

4923. You have no knowledge of any ring existing? No.

4924. At the same time you have observed an apparent close friendship and connection between these gentlemen in various ways? Yes; I have noticed that. For instance, the papers referring to the North Shore bridge and other matters show that Sir Henry Parkes has supported Sir John Fowler and Mr. Whitton throughout.

4925. Sir Henry Parkes has spoken of Sir John Fowler as a personal friend? Yes; he has spoken in very high terms of Sir John Fowler and Mr. Whitton always, so far as I can gather from documentary evidence.

4926. You were also asked about Sir Saul Samuel, and although you do not say that you have any knowledge of his being concerned in such a ring as has been spoken of so many times, still his name has occurred from the papers which you have read from time to time.

4927. *Mr. Smith.*] In what way has his name occurred? What do you mean to imply by that?

4928. *Mr. Schey.*] I am implying nothing. I am merely asking the witness a question. It ought to be perfectly plain to you as it is to the witness.

4929. *Mr. Smith.*] It is not plain to me.

4930. *Mr. Schey.*] I regret that it is not plain to you, because I cannot make my question any plainer. I am asking a direct question; there is no implication whatever. (To Witness): You are aware, I suppose, that Sir Saul Samuel has been for a long time Agent-General? Yes.

4931. For a longer time than usual? ——.

4932. *Mr. Smith.*] How does the witness know that?

4933. *Mr. Schey.*] I think your Honor had better give Mr. Smith the right to conduct my case at once. Perhaps he will then be able to get from this witness all he wants.

4934. *Mr. Smith.*] I have already got from him what I want.

4935. *President.*] You are asking this witness a question he cannot possibly answer. You ask him if Sir Saul Samuel has been Agent-General longer than any one else.

4936. *Mr. Schey.*] No, your Honor, I did not ask him that.

4937. *President.*] What was the question then?

4938. *Mr. Schey.*] I asked him if Sir Saul Samuel had been Agent-General longer than is usual.

4939. *President.*] Very well. Do you know that of your own knowledge, Mr. Midelton?

4940. *Witness.*] I can only give an opinion based upon a comparison with other colonies, your Honor.

4941. *Mr. Smith.*] You mean that he has been Agent-General longer than usual compared with the other colonies? Yes.

4942. *Mr. Schey.*] You know from your reading, I suppose, that Sir Saul Samuel has had the strong support of Sir Henry Parkes? Yes, that is my opinion or impression from what I have read.

4943. Have you not read of attempts being made to recall Sir Saul Samuel, and of their being resisted by Sir Henry Parkes? I do not remember that.

4944. Have you not read of such things? I do not remember anything about recalling Sir Saul Samuel. I think something was said a little time ago, but I do not recollect distinctly.

4945. You were also asked about Mr. Burnett and his connection with this combination. I ask you whether Mr. Burnett did not exhibit a great predilection for Beyer and Peacock's locomotives? Mr. Goodchap pointed that out, I think, very clearly in the papers upon the six tank-engines.

4946. *Mr. Smith.*] What did he point out? It is all in these papers. Mr. Goodchap's minute to Cabinet about Mr. Burnett's removal points to the fact related by Mr. Schey. That is all I know. Mr. Burnett is spoken of by Mr. Goodchap in far more severe terms than he referred to me.

4947. *Mr. Schey.*] To your knowledge was not Mr. Burnett hostile to American locomotives? Yes.

4948. Decidedly? Yes.

4949. And although you did not make any assertion as to this ring, still it has appeared to you from your reading that Mr. Burnett was employed by Messrs. Beyer and Peacock prior to his coming to the Colony? Yes, he was there; that is also in the papers.

4950. And you are also aware that he is also in Messrs. Beyer and Peacock's employ now? I have heard so on very good authority; I have no reason to doubt it.

4951. It has been given in evidence as a matter of fact; and these things have appeared to you a basis on which to raise the idea of an alliance, have they not? I do not know what else it could be called but an alliance. As I said before it seemed to me a curious coincidence.

4952. And, in your opinion, although you do not make any charge, these same coincidences and this apparent alliance would extend also to Mr. Thow, would they not? Yes, Mr. Thow comes from Sir John Fowler's office. He has said so himself; and seeing that Mr. Thow was put into my position after I was removed, I look upon that as an extraordinary fact. I do not know how you can look at it in any other way. I do not know what I was removed for.

4953. You were also asked about Mr. Whitton, and of course without any knowledge of any combination, still you have knowledge from your reading, and from his hostility to a number of persons who appear to have interfered with his desires? Yes.

4954. Several of whom you think have been got out of the service? I think the Parliamentary papers referring to Mr. Thomas show that. He seems to have fared similarly to myself.

4955. He was treated the same as you? Apparently, judging from papers that came into my hands quite by accident.

4956. He was also hostile to Mr. Goodchap? Who was—Mr. Thomas?

4957. No; Mr. Whitton? Yes; I think that is recorded by Mr. Goodchap.

4958. As a matter of fact, your reading leads you to suppose there is ground for saying that certain persons have been got out of the service because of this hostility? That appears to me to be the case.

4959. In your previous evidence you made some reference to *Engineering*. Who is the editor of that paper? There are two editors—Mr. Maw and Mr. Dredge.

4960. Who is Mr. Dredge beyond that; is he an employee, or was he an employee of Sir John Fowler's? Yes; I have heard he was.

4961.

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4961. And you think it is another curious coincidence that this journal, edited by Mr. Dredge, an old employee of Sir John Fowler's, should specially urge that orders for locomotives should flow in one particular direction. I believe the journal has advocated that? If I may be permitted I should like to say what was stated in one of the leading articles in *Engineering*. It appeared on 24th February, 1888, and the sum and substance of the article was this:—It objected to the altered conditions sent home in the first advertisement; that has reference to the forty-four locomotives. The article ridiculed my proposal to make engines at Eveleigh, and stated that "It gave support to the general belief that influences are at work to divert orders for locomotives which, it is clear, must go out of the Colony into channels to which they could not possibly go if matters were allowed to run a free and unfettered course." The Commissioners report for 1886 was also quoted, and the Locomotive Engineer's reasons and statement that more engines were required for economically working the traffic.

4962. *Mr. Smith.*] What is the date of that article? 24th February, 1888. It is a leading article in *Engineering*. The words I have quoted occur in that article, and I do not know who else they refer to if it is not myself. I had just proposed previously to manufacture locomotives, as I had always done from the very beginning—to manufacture locomotives in our own shops, just as is done in England and America by railway companies.

4963. *Mr. Schey.*] This journal, *Engineering*, edited by an old employee of Sir John Fowler's—did it not exert extraordinary efforts in relation to these locomotive orders? The articles were all in that direction.

4964. A considerable number of them? Yes; there were a lot of articles at that time and letters also from well-informed persons, evidently in the Colony. In fact, Mr. Maw wrote to me and told me that some of the information had come from well-informed people. I do not quite remember whether he said they were in the Colony or not.

4965. This journal was continually, issue after issue, referring to this subject? Yes; they seemed to be vexed that the conditions had been altered.

4966. *Mr. Smith.*] You are only speaking of what appears in these articles? Yes.

4967. And they are all in evidence, are they not? I do not think so.

4968. *Mr. Schey.*] Are they all in evidence, Mr. Smith?

4969. *Mr. Smith.*] You put them in.

4970. *Mr. Schey.*] So far as I know there is no article from *Engineering*. Of course it is quite possible that in one of the documents which have been put in there may be articles from *Engineering*, but so far as I know they have not been put in.

4971. *President.*] I have a document before me, Mr. Schey, which has been put in by you. It is an exhibit in this inquiry, and it ——

4972. *Mr. Schey.*] Did your Honor not ask me to specify the pages of that document which I desired to put in, and, as a matter of fact, did I not specify the pages? I have no acquaintance with any part of the document which contains articles from *Engineering*. As I say they may be included, but if so, I am not aware of it.

4973. *President.*] I do not know exactly what is put in, Mr. Schey. I only know that this is a document produced by you as an exhibit, and put in evidence.

4974. *Mr. Schey.*] Quite so, your Honor, I admit that I put the document in, and the passages I desire the Commission to take notice of are marked. (To Witness.) In some of these articles, at all events, Mr. Midelton, was not some very plain language used to the Premier of the Colony, then Sir Henry Parkes. Was he not practically told what he must do in this question? ——

4975. *Mr. Smith.*] I object to this class of question altogether. If the witness likes to point to any passage in an article, he can do so; but he cannot give his opinion in this way.

4976. *Mr. Schey.*] Very well, I will ask the witness to point out an article.

4977. *Witness.*] I think a portion of one of the articles referred to the head of the Government. Whether Sir Henry Parkes was intended or not, I do not know.

4978. *Mr. Schey.*] I believe Sir Henry Parkes was the head of the Government at that time? Yes; he was head of the Government in 1888, and the article I allude to indicated that it was necessary to take some steps to rearrange the Locomotive Department. That was practically the sum and substance of the article referred to. All this occurred while the locomotive question, as it was called, was being discussed in the English and American papers. They all took it up.

4979. Have you not seen references in the Colonial Press to these particular articles, in which they were characterised as "impertinent"? Yes; there was some reference to that effect in the *Evening News*. They published a paragraph which contained very much the views I hold myself, and if I remember rightly, they made use of the word "impertinent," and so also did some of the American newspapers.

4980. You say the *Evening News* published some strong articles upon the question, and characterised the English articles as impertinent? Yes; I think I remember something in the *Evening News* to that effect respecting engineering.

4981. Now, Mr. Midelton, when you spoke of the documents on which you had formed your opinion, you referred to a quantity of Parliamentary papers, reports, newspaper articles, and other documents of all kinds that have come under your notice? Yes; all kinds of printed matter, such as you have named.

4982. And, as a matter of fact, have there not been a large quantity of documents which have come under your notice in relation to this matter? Yes.

4983. And in some of them, very strong views have been expressed, and especially in articles in the Press of this Colony? Particularly by the English Press. Some of the Colonial papers have republished the articles from the English papers.

4984. Have not some of the Sydney papers passed severe condemnation upon various portions of this locomotive business? Yes; I think I was roundly condemned by the Press generally.

4985. I am not asking whether you were condemned—I am asking whether this matter of supplying locomotives, the appointment of the new Commissioners, Mr. Whitton, and these other various things—whether they had not been strongly condemned from time to time by the Sydney Press? Yes; I have seen leading articles to that effect.

4986. In various papers? Yes.

4987. In the Sydney *Daily Telegraph*? Yes.

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4988. The *Evening News*? I do not read that paper regularly; but I think I have seen some articles in it.
4989. The *Star*? Yes.
4990. The *Sunday Times*? Yes.
4991. Now, as to the forty-four locomotives you were asked something about by Mr. Smith. Have you not seen a recommendation in the papers from Sir John Fowler and Sir Saul Samuel, that the order should go to Messrs. Beyer and Peacock? ——
4992. *Mr. Smith.*] If he has, let him point it out.
4993. *Mr. Schey.*] Very well, give him the paper. [*Document handed to witness.*] These are schedules of tenders. There is some correspondence in front? Yes; this refers to the forty-four locomotives.
4994. I ask you whether there is a recommendation amongst those papers from Sir John Fowler and Sir Saul Samuel to give the order for these locomotives to Messrs. Beyer and Peacock, and to Messrs. Dübs & Co.? Yes. Here is Sir John Fowler's letter, dated 19th April, 1887.
4995. *Mr. Smith.*] Read it.
4996. *Witness.*] Sir John writes:—"I have gone very carefully through the details of the tenders, plans, and specifications of the locomotives. Of the various plans which have been sent in, six firms do not tender on the altered or new conditions, and the difference between the original and new conditions is in some cases large—namely, as much as £464 per engine. This is excessive. About £150 would, perhaps, represent the money value of the different modes of payment and cost of shed room. There is the interest on the deferred payment, the commission to the financial agent in the Colony, and the exchange in sending Home the money, &c. In the instance where the large increase is made, I think the manufacturers have put down the difference to compensate for risk of rejection in the Colony. The lowest tender under the new conditions is, as previously stated, that of Messrs. Neilson & Co.; but no plan has been sent with the tender, and before any acceptance of this tender it would be absolutely necessary to have plans and details to be approved, so that we may know what they propose, as Messrs. Neilson have not hitherto made engines for the New South Wales Government. If it be a question of excellence of manufacture I should recommend that the goods engines be given to Messrs. Dübs, and the passenger engines to Beyer and Peacock, who have made similar locomotives for the Colony, and have always given satisfaction in their work. Also, that payment be made in England in the usual manner, the price being respectively £2,265 for the goods engines at Sydney, and £2,495 for the passenger engines at Sydney. The Newcastle delivery is £25 each more."
4997. *Mr. Schey.*] Is that Sir John Fowler's letter? Yes; it is signed "John Fowler."
4998. Is there a letter from the Agent-General to the same effect? There is a letter above this dated 22nd April, 1887, from the Agent-General for New South Wales to the Secretary for Public Works.
4999. Does it contain any recommendation;—I do not want to hear the whole of it, but if there is any recommendation, read that to the Commission? Perhaps I had better read the whole of it: "In accordance with your instructions, as conveyed to me in your letter 86–140, of the 11th January last, and the Hon. the Colonial Secretary's telegrams of the 5th March last and the 4th instant respectively? I have invited tenders from the Continent, America, and the United Kingdom for the forty-four locomotives required by the Government. Tenders were received at this office on the 12th instant and on the 14th idem. I informed the Honorable the Colonial Secretary by telegram as follows: '*Re* locomotives, Four tenders received from United states of America; three from Continent; twenty-two from England; eleven according to original and twelve to new conditions. Six informal. English tenders lowest and very close. Neilson's lowest according to new conditions, but without designs—passengers, £2,375; goods, 2,245. After further examination of tenders I will telegraph again.' On the 19th instant I further telegraphed as follows: 'Tenders locomotives. Large difference between old and new conditions to cover possible rejection, risks, and deferred payments; six firms not tendered under new conditions. Consider Government best served (Dubbs) £2,165; passenger (Beyer) £2,495—payment in England as hitherto. Believe Beyer would take £100 less.' I have now the honor to forward for your information the inspecting engineer's letter of the 21st instant having reference to the analysis of the tenders received, together with schedules for each kind of engine."
5000. *Mr. Schey.*] Then Sir John Fowler and Sir Saul Samuel both expressed themselves against the new conditions?
5001. *Mr. Smith.*] I object to that question. The witness cannot say anything more than appears in the document.
5002. *President.*] The letters which have been read will speak for themselves.
5003. *Mr. Schey.*] Yes, your Honor. (To witness:) As a matter of fact, are there not two tenders mentioned in the schedule lower than either Dubbs' or Beyer and Peacock's? Neilson's was the lowest tender.
5004. Is there not another lower tender. Is not Sharpe, Stewart, & Co.'s tender lower? That is the next highest to Neilson's.
5005. But it is below Beyer and Peacock's? Yes.
5006. Stress has been laid on the fact that Neilson and Co. had never made locomotives for this Colony? That is pointed out in the letters I have just read.
5007. As a matter of fact they had not the chance?
5008. *Mr. Smith.*] They did not submit designs, did they? I do not see what there is in that. I do not see how they could give a tender without there being a design of some kind. If I understand the case correctly, we sent specifications and drawings with the orders, and the tenders were submitted upon those drawings. At any rate that is my understanding of the case.
5009. *Mr. Schey.*] A minute was handed to you yesterday from the Railway Commissioners as to the limitation of your powers? Yes.
5010. And Mr. Smith made a point of the fact that you did not reply to that minute for a month and twenty days, did he not? Yes.
5011. As a matter of fact, did you not note the minute as soon as you received it? Yes; I noted the minute as soon as I received it, and I went to see Mr. Fehon about the matter, he being the Commissioner immediately at hand at that time. I believe I showed that gentleman drawings of some little matter I had in hand at the time in reference to the 373 class of engines, and I put the question to him whether, in view of the minute I had received I should cease work or proceed. I got no satisfaction either in the shape of "yes" or "no"; hence the delay in my reply. I thought I should have been

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able to get a reply from the Commissioners on the subject, but I did not get one either verbally or in writing; the matter was left open. The minute I wrote in reply was after the interview with the Commissioners, and of course that occupied some time. There was a matter in connection with the 48 class of engines; I think it had reference to the brake gear, and Mr. Thow was instructed to report upon it while I was in office, which, under the circumstances, was not altogether etiquette; in fact, I thought it was a great insult.

5012. The minute sent to you was to the effect that you were not to do certain things? Yes; I was not to do ordinary repairs without first consulting the Commissioners. When I interviewed Mr. Fehon I thought the alteration I was about to make to the engines was a very necessary one, and not in the nature of repairs, and I treated it in that way.

5013. Now, having received that minute from the Commissioners, and having noted it, that was all your duty compelled you to do? Yes.

5014. It is not necessary, unless you have something to say, to frame any reply to a minute of instructions? No.

5015. Therefore, it is no evidence of neglect on your part that you did not reply to this minute, as pointed out by Mr. Smith, for some time afterwards? I do not consider it neglect.

5016. If you had simply noted the minute and returned it, that was all that was required? I noted it and took it back to the Commissioners myself, which was an even better course.

5017. Now, you were asked also as to the refusal of the Government to allow locomotives to be made in the Eveleigh workshops; is it within your knowledge that there was a difference of opinion between the members of the Government on that point? I believe there was.

5018. *Mr. Smith.*] But you do not know for a fact? I do not. I know this from Mr. Sutherland, that a resolution was adopted by the House, at the instance of Mr. Fletcher, to manufacture locomotives in the Colony. It did not say in our own workshops, but the House decided to manufacture locomotives in the Colony on account of the distress which then existed; and, seeing that such a resolution had been passed, I urged the Minister, as I had done all along, to commence the work in the Eveleigh workshops, but he objected.

5019. *Mr. Schey.*] Sir Henry Parkes was Premier at that time, was he not? Yes.

5020. I think a number of papers were shown to you regarding that matter? Yes.

5021. Do you know whether those papers contain a strong minute by Sir Henry Parkes that such a thing as making locomotives would not be considered for one moment? I believe that was pointed out to me yesterday in the papers.

5022. That was a minute by Sir Henry Parkes, if I remember correctly? I remember Sir Henry Parkes saying in Parliament that he would rather see the Eveleigh works rot than see locomotives built there, and of course that expression influenced me a great deal.

5023. You knew Mr. Sutherland, the Minister for Works, intimately, did you not? Yes.

5024. And did he coincide with that view? With what view?

5025. The view of Sir Henry Parkes, that engines should not be made there? I do not think he did.

5026. *Mr. Smith.*] Have you not seen a paper in which he says he did concur in that view? As I understand it, Mr. Sutherland proposed that the manufacturers should have the use of the machinery.

5027. *Mr. Schey.*] Is this one of the papers you showed the witness yesterday, Mr. Smith? [*Producing document.*]

5028. *Mr. Smith.*] Yes; that was one of the papers.

5029. *Mr. Schey.*] I notice that the last item on this paper says:—"Cabinet agrees to fresh tenders being invited as suggested by Mr. Sutherland.—H. P., 10/11/87." "H. P.," I presume, stands for Henry Parkes. What I want to get at is the continuation of this story of the locomotives. I believe fresh tenders were called for, and some were received; but I want the papers showing all the negotiations up to the time of the final breaking down of the Colonial contracts, and up to the time when these orders were sent to England. Those are the papers I want, your Honor.

5030. *Mr. Smith.*] I believe those papers have already been put in. I think you will find all you require in the document headed "Railway Locomotives, further papers respecting fifty locomotives made in England."

5031. *Mr. Schey.*] I may here remind your Honor that I asked for the production of the volume from which certain papers had been extracted. I do not see that volume here yet.

5032. *President.*] Mr. Smith, have you ascertained where the papers came from which we discussed yesterday?

5033. *Mr. McLachlan*] (Secretary for Railways). I believe they came from a bundle of miscellaneous papers. If I remember correctly, the numbers upon them were very high—968, and 969. I think those numbers indicate that the papers were before the Executive Council.

5034. *President.*] Then they were not taken from any volume; they were marked for departmental purposes.

5035. *Mr. McLachlan.*] They were marked for the Executive Council.

5036. *President.*] These papers, Mr. Schey, have apparently not been taken from any book or volume, but from a bundle of miscellaneous papers which were numbered in this way for the Executive Council.

5037. *Mr. Schey.*] Yes, your Honor. Your Honor will see that these are not Parliamentary papers, so that I could not have obtained possession of them; and as they apparently are only part of a series of papers, as they only extend to a certain date, there must be other papers in continuation of this matter. It is certain that fresh tenders were invited, and consequently, there must be some other papers in the bundle referring to the tenders, and I desire to have those papers produced. (To Witness:) However, knowing Mr. Sutherland as you did, Mr. Midelton, and being intimately acquainted with this locomotive question, have you any reason to believe that it was Sir Henry Parkes who overruled Mr. Sutherland in this matter? Yes.

5038. You feel sure about that? I cannot feel sure, but that is my impression.

5039. Now, you were asked further, as to the department making boilers. Great stress was laid on that fact, I believe? I perhaps may be allowed to point out, in reference to this question of the locomotives, and in order to make matters quite clear, that contracts were let to Mr. Wearne and the Atlas Company. I presume those are the papers you are alluding to, Mr. Schey?

5040. There is no dispute about the letting of the contract, but I want all the papers in continuation of this

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this subject and the construction of locomotives. Now, you were asked yesterday, Mr. Midelton, something about the department making boilers. How long had the Eveleigh works been opened when you left the department? About two years, I think.

5041. Prior to that time the whole of the work done by the department was conducted at Redfern, was it not? Yes; at Redfern, and Newcastle.

5042. But, so far as the Sydney portion was concerned, that was done at Redfern? Yes.

5043. Were not those shops at Redfern very small and inconvenient? Yes.

5044. And it was because of the want of accommodation, was it not, that the Eveleigh works were designed? Certainly.

5045. And afterwards built? Certainly.

5046. And therefore for many years there would have been no opportunity to do work which might be done now at Eveleigh? No.

5047. How long do you think it took to get things in working order, and the machinery in proper running after the Eveleigh works were erected? I cannot say, but it would depend who was at the head of the department, and how it was handled. One man might take two years, and another twelve months.

5048. Do you know how long it did take? No, I had nothing to do with it. I was at that time reorganising the department at Randwick.

5049. You were at Eveleigh I believe for five months before the present Commissioners took office? Yes, that was all.

5050. And you say you were reorganising the works? I had been reorganising the Tramway department.

5051. I mean after you left the tramways and went to Eveleigh? Yes, I commenced the same thing at Eveleigh.

5052. Then if it was necessary for you to reorganise the Eveleigh works, they must not have been arranged in the most economical and the best fashion? Not by any means. I started to rearrange the machinery, and what I did is still as I left it. I should have gone through the whole works had I remained there, and rearranged them.

5053. I suppose it would be a matter of some time after you took charge of the works before they would have been in proper running order? Yes, it would have been some time before they were arranged to my satisfaction. It would have taken about two years, doing the work gradually.

5054. And therefore you were unable to do a variety of things you wished to do? Yes, but not what I should like.

5055. Was there not some hydraulic machinery for boiler making at Eveleigh? Yes.

5056. How long had that been up when you left the works? It was put up two years before I went there.

5057. Was it running? It was used for small jobs, but not used as it ought to have been. It was designed for flanging plates and it has not been used for that purpose at all. The hydraulic plant for riveting has been constantly in use.

5058. Because the department had only made three boilers. I think that was the number mentioned by Mr. Smith—in a number of years that does not imply by any means that they were not able to do more when you left the works? Oh, dear no.

5059. Nothing of the kind? It is no criterion at all.

5060. You think they were well able to do more? Yes.

5061. And the fact that three boilers had only been previously made had nothing to do with the matter? Nothing at all.

5062. You were also asked about making locomotives. I think you were asked whether any locomotives had been made by the Government while you were in the works? Yes.

5063. And you said no? Yes.

5064. But locomotives had been built by the Government had they not? Yes.

5065. Prior to your coming to the Colony? I believe No. 10, and No 76, and some others of the same class were built; at any rate they bear a plate stating that they were built at the Railway Works, Redfern.

5066. Therefore, you do not intend to convey the impression that no locomotives were ever built by the Government, but only during the period you were in office? Certainly.

5067. I think you were also asked some questions about the number of engines that were under repair and waiting repair at the time you left office? Yes.

5068. Did you not work the repairs greatly down during the ten months you were at Eveleigh? I did. I used every endeavour to work the engines to their utmost efficiency, just as I had previously done with the tram-motors. When I went to the Randwick sheds there were thirty-eight motors and twenty-four boilers awaiting repairs, and when I left there were twelve to the good.

5069. Have you any data as to the success which attended your efforts? I was going on very well indeed, I think up the time the Commissioners sent me the minute to which I have already referred. Then I was entirely daunted.

5070. During the ten months you were in charge you say you greatly reduced the number of repairs? Yes.

5071. You mean by that, that there were fewer engines awaiting repair? In may, 1888, there were eighty-one engines awaiting repair, and when I left the office I believe the number was seventeen. That was in eleven months, and I think the documents will bear me out in what I say.

5072. You claim, therefore, that you were more than overtaking the work? Yes; I was going on very well.

5073. And if you had overtaken the work you would then have been able to cope with the work as it came in, and afterwards with anything that was required in the way of construction? Yes.

5074. A point was also made by Mr. Smith as to the number of pits at Eveleigh, and you were asked whether you could do anything in the way of making, if all the pits were full. Must you necessarily conduct every portion of locomotive building over a pit? No; there was not a single pit in Beyer and Peacock's works when I was there.

5075. And yet they built locomotives? Yes, did nothing else.

5076. You were also asked as to the shops there. Now is it not a usual thing in all large establishments to make various parts in different shops devoted to that special purpose, and then to assemble those parts in the erecting shop? Yes, in a well conducted shop everything is done according systematically; the idea is to divide labour as much as ever you can.

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5077. And therefore, it does not follow that a shop which has no machinery in it—a point which Mr. Smith laid some stress upon—could not be utilised for erecting locomotives? I say, the shop at Eveleigh was eminently suitable for erecting locomotives after the wheels were under the engine.
5078. All the machinery would be done in adjacent shops? All the necessary appliances were in the next bay.
5079. All the machining would be done in shops specially devoted to that class of work? Yes.
5080. And therefore, it is ridiculous to claim that unless the pits were empty nothing could be done? It is not ridiculous from Mr. Smith's point of view, because he is not supposed to know anything about these matters.
5081. But from the point of view of a person who understands anything about it, such an assumption is ridiculous? I should think so.
5082. I believed Mr. Smith laid stress upon the state of the locomotives on the Northern line. Was not the Northern line for many years an entirely separate line? Yes; it was treated as though it were in another country. There was a separate Superintendent, and although he was subject to the Chief Superintendent he had to work alone.
5083. There was an entirely separate staff? Yes; up to the time the Hawkesbury bridge was finished and opened.
5084. There were no means, until the Hawkesbury bridge was opened, of bringing locomotives down from Newcastle except by shipping them? I sent some locomotives over the Hawkesbury River on a punt.
5085. That was at the time the bridge was under construction? Yes, just before the bridge was opened; there was some reason or necessity for doing it.
5086. But it was not until the bridge was constructed, and the line was opened right through, that there was any facility for dealing with the locomotives on the Northern line? No.
5087. And, therefore, it is not to be taken as evidence of neglect on your part that the engines on the Northern line had got into the state they were? Certainly not; nevertheless, I was credited with it.
5088. What was the date of the report on these northern boilers? There were several reports.
5089. I mean the one upon which Mr. Smith commented, and in which your inspector referred generally to the condition of things? My inspector made a report on each boiler, which I studied and investigated.
5090. How long had you had charge of the Northern line when that report was made to you? About six months.
5091. And, therefore, you could not have neglected the boilers on the Northern line, seeing that you were not in charge? Quite the opposite of neglect. I did all I could to find out their condition.
5092. As soon as you were given charge you commenced this work? Yes, the very first thing.
5093. How many locomotives were then on the Northern line? Seventy-six, I think it was.
5094. That would be a much smaller number than for either the Southern or Western lines? Very much.
5095. Now, you were also asked about some material which was imported for the use of contractors to build locomotives;—I understand that there were two contracts for twenty-five engines each of two classes? Yes.
5096. And I think you said that materials for five engines of each of these two classes, that is ten engines in all were imported and were lying at Eveleigh before you left? Yes.
5097. Do you know whether that order was duplicated? I do not remember. I think it was; I am not sure.
5098. I ask you this, if that order was duplicated it would mean that material was indented for another ten engines, five of each class? Yes.
5099. And, consequently, there would be material for twenty engines lying at Eveleigh ready for use when you left? Yes.
5100. *Mr. Smith.*] And if it was not duplicated there would not be material for twenty engines? Exactly so.
5101. *Mr. Sekey.*] I am asking you, Mr. Midelton, whether, in your knowledge, that order was duplicated? I believe it was, but I cannot say positively. That could be found out by reference to the storekeeper.
5102. If it was duplicated it would be during your term of office? Yes.
5103. You were also asked as to your knowledge of the quantity of boiler-plates that were in stock;—you, yourself, did not personally keep a list of all the boiler-plates you had in stock? No.
5104. Being the head of a large department of course you left these details to your officers? Precisely.
5105. And there was an officer, or there were officers whose duty it was to look after the stock? Yes.
5106. And if the workshops requisitioned for a boiler-plate, or a number of boiler-plates, it was the duty of those officers to issue the material, and note the fact? Yes.
5107. And they would be in possession of the knowledge of how the stock stood? Precisely.
5108. And if at any time the stock was going below its normal state it would be their duty to report, I suppose? Yes; they would call my attention to the fact, of course.
5109. And as soon as the stock got low some more boiler-plates of the necessary sorts would be obtained? Yes.
5110. In which case, a recommendation would be made out, and if it was approved, the material would be obtained in the ordinary way? The indent would be made out by me and sent to the Commissioner. He would approve, and it would be sent forward in the usual course.
5111. And the material would come into stock, provided all these things were done as they should be, in such time as to maintain the proper amount of stock in hand? Exactly.
5112. And although you did not personally know the exact amount of material in stock you have every reason to suppose that there was a proper stock on hand at the time mentioned? I have.
5113. If there was not, it would be evidence of neglect on the part of your officers? Yes.
5114. For which, if you were in the position, you would call them to account? Certainly.
5115. Do you know, or have you any knowledge, of a lot of boiler-plates which were imported by Mr. Scott? I remember, on one occasion, when turning over the Commissioners' report, I think it was when I was at Randwick, I noticed that a quantity of material had been ordered, apparently for repairing locomotive boilers.
5116. Was it a special quantity? Yes; it was a special quantity, in anticipation, I suppose ——
5117. Have you any idea of the amount? I have not now, but it can be seen in the report.
5118. Was it a large or small amount? I think it was for the thirty boilers already alluded to. I think

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Mr. Scott's intention was to repair or make thirty boilers, and to keep up the duplicates so as to have a good stock of boilers ready for the engines when they came in for repairs.
5119. You say you saw a record of this in one of the Commissioners' reports? Yes.
5120. That would be, I suppose, that the material would be imported? Yes.
5121. Beyond that, had you any knowledge that it was imported? No.
5122. You have not seen it? I do not know whether I saw it in the Store or not.
5123. I suppose there were a variety of things in the store, and you would not be able to identify these particular plates? There was such a quantity of material about that I could hardly say what it was intended for.
5124. Now, as to the use of boiler-plates, I presume it would be perfectly competent, although a boiler was of a particular size, to use a plate for the same sized boiler, even although they were in different engines? Certainly, if there was no waste in cutting up. You can use a plate for anything you like so long as there is no waste.
5125. I suppose it depends on the size and the design being the same? Yes.
5126. You were asked about the cheapness of such a thing, but I suppose the cheapest practice is not always the best practice? I answered that question yesterday.
5127. You say it is not, at all events? The cheapest is not always the best, of course.
5128. Now, as to the repair of locomotive boilers, I suppose a locomotive would not stand idle while its boiler was being repaired. For instance, suppose a locomotive came in and wanted its boiler repairing, would you take the boiler out and leave the locomotive standing idle while the necessary repairs were being made? I should put another boiler in, if I had one, and it would be my duty to have one.
5129. So that if an engine came in needing repairs you would take out the old boiler, put in a good one and send the locomotive out at once? Yes; that would be my endeavour. The same thing would be done in regard to the wheels.
5130. And other things too, I suppose? Yes; the object would be to get the locomotive on the line again as soon as possible.
5131. And you would go on repairing the parts you had removed for the next engine which might come in, and so on? Yes.
5132. How long would it require to take the boiler out of an engine to put in a repaired one and turn the engine out again?
5133. *Mr. Smith.*] That is, if you had a repaired one.
5134. *Mr. Schey.*] Oh, of course. You could not put in a repaired one if you had not got it. If you had not got a tongue you could not talk so much to the Court.
5135. *Witness.*] What is the question?
5136. *Mr. Schey.*] How long would it require to take a defective boiler out of an engine, put in a repaired boiler—provided, of course, that you had one—and set the engine running again? It varies with the type of engine—it might be four, six, or seven weeks.
5137. If you had to keep the engine idle until the repairs had been executed, a considerable amount of time would be wasted? I have known a boiler to stand for three years before it was decided what should be done with it.
5138. *Mr. Smith.*] Not in this Colony.
5139. *Witness.*] Yes, Mr. Smith, in this Colony; while I was at Randwick.
5140. *President.*] I think this matter is going a little bit too far. The last hour has been wasted by questions with which the Commission have nothing to do. Go on, Mr. Schey, and finish this examination as quick as you can.
5141. *Mr. Schey* (to Witness).] You were also asked something about the North London Railway? Yes.
5142. I believe a return was handed to you of the number of locomotives per mile owned by that railway. I believe you are acquainted with the North London Railway, are you not? Yes; I was close to it fifteen years ago.
5143. Is it not a fact that the North London trains run over a number of miles of railway not owned by that company? Yes.
5144. Have they not communication with the Great Eastern Company? Yes. I find on reference to papers that Mr. Smith was slightly wrong in the figures he quoted yesterday. The North London Company, in July last, had eighty engines and 17 miles of road. That is the main line proper; but they work 135 miles of road altogether. I obtained this information from *The Railway News*.
5145. Therefore it is not in any way a comparison as to the number of locomotives to produce the number of miles owned by the company itself, and to set that against our lines and our locomotives. No such comparison can be instituted? I do not think it is a fair comparison in any way whatever.
5146. Because, although the company referred to only owns about 17 miles, it runs over 135 miles? Yes.
5147. That is the common English practice, is it not? It is with the metropolitan lines.
5148. Then, again, the traffic on the two roads is vastly different, is it not;—is there any comparison between the suburban traffic on the North London line and the suburban traffic here? Not the slightest.
5149. I suppose many times more trains would leave the Broad-street terminus than they would Sydney? Considerably more.
5150. Do you know how many trains leave every hour there? I think they run about every three minutes, morning and evening.
5151. But there are several sets of lines, and the trains have to pass each other? Yes.
5152. If it is stated that there are seventy trains an hour leaving Broad-street, do you think that would be correct? I think there may be that number at certain times in the day.
5153. But, at all events, there is a very heavy traffic? Yes.
5154. And no comparison can be instituted between that traffic and our traffic? No.
5155. I think you were also asked something as to the mileage run by the English engines, and a comparison was made between the mileage run by our engines;—if I remember correctly I think you said that our engines did a greater mileage? Yes; and it is quite right that they should.
5156. Is it not a fact that in the United States the trains run a much heavier mileage than in England? In the United States every master mechanic gets as much useful work as he can out of his engines, and consequently the locomotives there run many more miles than they do in England.

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5157. *Mr. Smith.*] Have you had any experience in America? No, I have not been there; but I know that what I am stating is true It is not necessary to go to America to know that.
5158. *Mr. Schey.*] Do the United States companies run their engines a greater number of miles per year than the English companies? Yes; I believe it is 40,000 as against 20,000—just about double.
5159. And they are well able to conduct their business in that way? Yes, they do it.
5160. And therefore it is no criterion because the English locomotives run so many miles that ours are not able to do the same? On the contrary.
5161. You say we are able to run them here as they do in America? Yes; we ought to be. I did it.
5162. You were also questioned as to the Great Eastern railway and your position there;—how many engines had you in charge when you were with that company? One hundred and fifty-two, 22 of which were under repair.
5163. And that is a number of years ago, and therefore your position was not the small sub-position that some people would like to make out? It is a higher position than any of the colonies can offer me at the present time. They have not such a position to offer.
5164. *Mr. Smith.*] They are all filled up, I suppose? I do not mean that, Mr. Smith. If they were not filled up they could not offer me a position like that. Our running-shed at Eveleigh is not a patch on the one I had charge of. It is a big shed certainly, but it is not what I have been accustomed to.

William Alexander Oakley recalled and further examined:—

Mr. W. A. Oakley. 27 May, 1892.

5165. *Mr. Schey.*] When you were last giving evidence some question arose about an inventory or list of stores. Some difficulty has arisen since concerning the same matter, and I wish to ask you two or three questions further upon that matter. You, yourself, at the time we were speaking of stated that you made a certain list or inventory of stores, that is, there was a stock-taking? Yes.
5166. That was shortly after the new Commissioners took office? There were two lists, one before and one after.
5167. Then there were two lists really. Very well. You, yourelf, at that particular time, were in charge of one particular portion of the stores? Yes; in charge of the locomotive stores, in No. 15 shop.
5168. You were in charge of the locomotive stores? Yes.
5169. Was that store separate from the others? Yes, it was separate.
5170. A separate building? Yes, a separate building altogether.
5171. Then the lists you referred to had to do with the locomotive stores you were in charge of? Yes; certainly the one I was in charge of.
5172. Do you ever remember yourself, or with assistance, making a list of the stores contained in that particular building? Yes.
5173. You do? Yes.
5174. And that list contained, as far as was obtainable, all the locomotive stores? Yes; all the material in our stores.
5175. You, yourself, got up that list? No; I had a clerk under me who made it up.
5176. That is what I say. You, yourself, personally or with assistance made this list? I supervised the making of this list. I had four or five men in the store engaged in the work.
5177. And what were these men doing? Weighing up the material, and shifting the material and classifying it.
5178. Unpacking it? Yes; unpacking it, and classifying it.
5179. Counting it? Yes.
5180. Did you give the numbers of the goods? Yes; and most of it was weighed.
5181. And you had four or five men doing this work? Yes.
5182. And you, yourself, had the list made up under your own supervision? Yes.
5183. And you saw it completed? Yes.
5184. Was this list a rough memorandum or a properly-completed document? It was a properly-completed document.
5185. On that document were there values attached to a number of the items? No; only the weights.
5186. And in some cases the numbers? Yes.
5187. What I want to get at is this. It was not a rough memorandum simply for the purpose of the stores; it was a proper document? I cannot say as to that. It was a list of the material in the stores.
5188. It was a clean-written document? Yes.
5189. And was forwarded on? Yes.
5190. You positively swear that such a document was prepared under your supervision? Yes.
5191. *President.*] That will do
5192. *Mr. Schey.*] Your Honor, I want that document.

James Cahill sworn and examined:—

Mr. J. Cahill. 27 May, 1892.

5193. *Mr. Schey.*] What are you? A draftsman.
5194. At the Locomotive Engineer's Office, at Eveleigh? Yes.
5195. Were you in that position in the year 1889? I was.
5196. When I asked the Secretary to call you I asked him to request you to bring the drawing-book for that year with you;—have you brought it? Yes.
5197. Have you got it in Court? Yes.
5198. Will you turn to the commencement of the year 1889;—by the way, does that book show the drawings prepared at the Drawing Office, and, in cases of blue prints being made, does it show what were made and whom they were given to? A separate book shows the blue prints.
5199. This book will show the drawinge that were made at that time? Yes.
5200. Will you turn to the commencement of 1889 and tell me whether any drawings were made for any boilers? I have got the commencement now—January.
5201. I want it from 1st January, 1889, up to (say) July of that year? It is a long list to go through.
5202. As a matter of convenience, will you get out the information and send it to the Secretary of the Commission? It may take me a quarter of an hour to wade through these lists.

5203.

Mr. J. Cahill. 27 May, 1892.

5203. *President.*] Perhaps you can do it here? Yes.
5204. Then go down and do as Mr. Schey requires.
5205. *Mr. Schey.*] At the same time I also wish to ascertain whether any blue prints were made of these drawings, not necessarily of the drawings made in that year or of any that were in stock; whether any were prepared, and, if so, whom were they handed to, with the date? Very well.
5206. *Mr. Schey.*] I have a number of papers to put in, your Honor.
5207. *President.*] Before you put the papers in, Mr. Schey, the Commissioners wish to ask you a few questions; you will be good enough to go into the box.
5208. *Mr. Schey.*] Yes, certainly, your Honor.

Mr. Schey sworn and examined:—

Mr. Schey. 27 May, 1892.

5209. *President.*] It is stated in this charge into which we are now inquiring, "That a certain ring or combination of persons or firms are mainly responsible for the appointment of Mr. Eddy as Chief Commissioner of Railways." You, in answer to a question which I put to you on a former occasion, gave the names of the persons whom you considered to form that ring or combination? In the first place, your Honor, I have already stated that I do not regard the words as embodied in the charge contained in the Commission; I do not regard that as the charge made by myself.
5210. Then I will pass over the words in the Commission and take the words reported to have been used by you in a speech which you made on the 9th of March from your place in the Assembly? I admit the use of the words.
5211. The words which you used in that speech, as reported in *Hansard*, are as follows:—"The ring of which I have already spoken, and who are mainly responsible for the Chief Commissioner's appointment, made sure, &c." I will deal with the latter part of the statement afterwards. These are the words reported in *Hansard* as having been used by you, and the words we have to consider in this charge in the Commission are:—"That a certain ring or combination of persons or firms are mainly responsible for the Chief Commissioner's appointment." See that the words in the charge in the Commission are the very words used by you in your speech of the 9th March. I ask you now to state the names of the persons who, in your opinion, formed that ring or combination? I do not charge any person with being a ring or combination. I have already stated that I do not regard those words as a charge made by me. I regard those words as an inference drawn from certain facts on which I based an opinion, and I did not at that time intend to charge, nor do I at the present time charge, any persons with being a ring for that purpose.
5212. And who are the persons that you refer to as a matter of opinion in this statement? That is, those persons who were mixed up, in my opinion, with the affair.
5213. That is those who are mainly responsible for the appointment of Mr. Eddy. Will you mention the names of those persons? That is an opinion only.
5214. I ask you to name those persons? Yes, your Honor—Sir Henry Parkes, Sir John Fowler, and Mr. John Whitton, so far as that part of it is concerned.
5215. When I asked you the question on a former occasion you mentioned these names:—Sir John Fowler, Mr. Whitton, Mr. Burnett, Mr. Thow, Mr. Scott, Mr. Eddy; Sir Saul Samuel, and Sir Henry Parkes? I omitted Sir Saul Samuel. I admit I did mention these names, but that was in regard to the general matter. That is the opinion I did express, and I now express, but your question relates to one particular part of the charge.
5216. I am dealing with the charge step by step. There are two statements in the charge—one is that this ring or combination of persons or firms was mainly responsible for the appointment of Mr. Eddy as Chief Commissioner, and I asked you to name the persons whom you charged with being mainly responsible for the appointment of Mr. Eddy as Chief Commissioner? I do not charge them; but I gave it as an opinion.
5217. Will you then mention the names? The names I mentioned before, with the addition of Sir Saul Samuel;—that is, Sir Henry Parkes, Sir Saul Samuel, Sir John Fowler, and Mr. Whitton.
5218. Then you do not charge Mr. Burnett, Mr. Thow, Mr. Scott, and Messrs. Beyer and Peacock with being mainly responsible for the appointment of Mr. Eddy as Chief Commissioner of Railways? I do not make such a charge against any person.
5219. But is it your opinion that they were responsible for the appointment of Mr. Eddy? No; I do not think they were all responsible for Mr. Eddy's appointment.
5220. Then there are only four persons whom you consider responsible for that appointment? No; I do not admit that; there may be other persons.
5221. Will you name the other persons? No; I am not in a position to name them. I have said that in my opinion the persons whom I have named were mainly responsible for the appointment of Mr. Eddy, but there may be others that I know nothing about.
5222. That you know nothing of? Certainly.
5223. Well, we may pass them by;—well, now as to these other persons you named the other day, do you say that they are not in any way responsible for the appointment of Mr. Eddy? I do not say that they are not.
5224. Have you any evidence that they are? No. I have no knowledge that they are.
5225. Of course, Sir Henry Parkes was no doubt responsible in so far as he was premier at the time;—in what way do you say that Sir Saul Samuel was responsible for the appointment of Mr. Eddy? I do not say that he was responsible, I merely say that I held that opinion.
5226. And on what ground did you form that opinion? On the ground of the correspondence that passed between the Colony and England referring to this appointment.
5227. Do you know, as a matter of fact, that at the time of Mr. Eddy's appointment Sir Saul Samuel was not acting as Agent-General of the Colony, and that Sir Daniel Cooper was taking his place? I do; that was one of the facts that led me to the conclusion I arrived at.
5228. That led you to the conclusion that Sir Saul Samuel was responsible for the appointment of Mr. Eddy? Yes; that he had something to do with it.
5229. In what way? In this way—I am merely stating opinions, of course, your Honor.

5230.

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5230. *President.*] I want your opinion, and your opinion on oath? Well, it appeared to me, when Sir Daniel Cooper was acting Agent-General, and that Sir Saul Samuel was first of all on his way from England to New South Wales, that about that time, as far as I can remember, there was a statement made in the public press that the Government had taken no step in regard to the appointment of a new Chief Commissioner, and further—of course, your Honor, I am only speaking now from memory, I have not the papers before me—and that the Government would take no step in regard to the appointment until Sir Saul Samuel arrived in the Colony. As far as my memory serves me, after that Sir Saul Samuel did arrive in the Colony, and I think I am correct, I am only speaking from memory, in saying that at the time of the Chief Commissioner's appointment, Sir Saul Samuel was in the Colony; and as an old occupant of the office of Agent-General, and I believe a personal friend of Sir Henry Parkes it was only reasonable, to me at all events, to suppose that Sir Henry Parkes and Sir Saul Samuel would have some communication about the matter. Then it appeared to me—I am speaking merely of what appeared to me, and I do not swear to anything as a fact.
5231. You are swearing to what did appear to you? I am swearing that this appeared to my mind undoubtedly, but not as to the facts—merely that I apprehended them to be facts. It appeared to me, from a perusal of the correspondence, that Sir Daniel Cooper had made some recommendation to Sir Henry Parkes of some gentleman whom he considered fit for the position of Chief Commissioner, and a statement of that kind, or something of that kind, appeared in the public press. At all events, Sir Henry Parkes was challenged in Parliament concerning the matter, and a debate lasting, I think over two nights, but at all events a considerable debate, took place on the fact that Sir Henry Parkes had sent a message to Sir Daniel Cooper in which he declined the nomination which was made by Sir Daniel Cooper as acting Agent-General, and suggested that there was already a person in the Colony with great experience, &c., &c. It appeared to me from these papers that this recommendation of Sir Daniel Cooper's was refused, and no reason was given for the refusal. There are blanks in the papers which I have already asked shall be filled up concerning this other gentleman who was spoken of, and afterwards—in a very brief period—I understand Mr. Eddy was appointed. I think that is a relation of the facts as I understand them.
5232. Do you know, as a matter of fact, whether Sir Saul Samuel was out here at the time the appointment of Mr. Eddy was made? I am not in a position to swear to that, but I am strongly of opinion that he was; I cannot say positively.
5233. Before you made this charge in Parliament, had you seen the papers in reference to Mr. Eddy's appointment? Yes; they were laid before Parliament—that is, certain papers were laid before Parliament and I have put these in as evidence. If you will give me the papers, I will show you. I am not quite sure whether they are in evidence.
5234. Oh yes, they are in evidence? Yes; I think I drew your Honor's attention to the blanks. The paper was laid before the Legislative Assembly, and ordered to be printed on 21st June, 1888. At that time, as I have already explained, a debate took place in Parliament on the matter, and at that time I was a member of the Assembly.
5235. Keep that paper in your hand. Does that paper disclose any connection whatever between Sir Saul Samuel and the appointment of Mr. Eddy? No; I do not think it does.
5236. Does it refer to any connection of Mr. Whitton or Sir John Fowler with the appointment of Mr. Eddy? Well, that is a matter of opinion, your Honor.
5237. It is not a matter of opinion, it is a question of fact. Does the paper that you refer to disclose any connection or inference regarding any connection between Sir John Fowler or Mr. Whitton and the appointment of Mr. Eddy? With Mr. Whitton, no; but in a letter (the second on the paper) dated from the Colonial Secretary's Office, Sydney, 4th April, 1887, and signed Henry Parkes, No. 3, appear these words: "It occurs to me that Sir John Fowler might probably be able to suggest some gentleman of ability in connection with the Great English railways who could offer you advice in your inquiries," and so on.
5238. Will you read the rest of it. I want to get all it does say regarding Sir John Fowler? I think that is all it does say.
5239. Did you know of anything, except what appears in that paper, at the time you made this speech on 9th March, anything connecting Sir John Fowler with the appointment of Mr. Eddy? No; I had no knowledge of anything else.
5240. And you say there is no mention there of Mr. Whitton as being connected with the appointment? No; but knowing that Mr. Whitton was Sir John Fowler's brother-in-law, of course the connection appeared to me in that way.
5241. Only in that way? Only in that way as far as I know. I may say that about that time there were a number of articles in the public press in which something of the same kind was stated. I put in, I think, an article from the *Sydney Morning Herald* in which the writer says that Mr. Whitton had tried to get the position of Chief Commissioner of Railways himself.
5242. But that would not induce him to recommend Mr. Eddy if he wanted to get it himself? That, to my mind, does not follow.
5243. Oh, does it not. Is there any other way in which you say these four gentlemen were mainly responsible for the appointment of Mr. Eddy. Have you told us the whole story? Well, so far as that part of it is concerned I think I have—that is, so far as my memory serves me in regard to this particular portion of the statement only.
5244. We have dealt so far with that portion of the charge which alleges that a certain ring or combination of persons or firms were mainly responsible for the appointment of Mr. Eddy as Chief Commissioner of Railways. The charge then goes on to say that this ring, which was mainly responsible for the appointment of Mr. Eddy, had ensured that the said engines should be ordered from them, and that they obtained the order for the engines through Mr. Eddy? I do not recognise that as my charge.
5245. You have stated that several times, Mr. Schey, but we have to deal with this charge as it is presented to the Commission? But that does not make me accept it.
5246. *President.*] That is another matter. You said that this ring, in your opinion, had insured that these engines should be ordered from them? No; I did not say so.
5247. Then I will turn back to the report of your speech in *Hansard*. This is what you are reported to have said in *Hansard*:—"The ring of which I have already spoken, and who are mainly responsible for the Chief Commissioner's appointment made sure that these locomotives would be ordered from them"? Just so.

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5248. Well, what is the difference between that language and the language of the charge in the Commission? You are asking me to say that it was so, while I keep pointing out that it was an inference and not a charge. It is a matter of opinion, and not a matter of fact.
5249. We will deal with it as a matter of inference and not as fact;—you say that this ring had insured that the engines should be ordered from them—from whom? From the persons who were connected with the business, in my opinion.
5250. Connected with what business? Well, your Honor, you see the whole case extends over many years, and this series of coincidences have cropped up during the series of years.
5251. I am not dealing with a series of years, but with the charge or inference against Mr. Eddy, and it is in reference to the action of Mr. Eddy only that I am dealing with the matter. You say that this certain ring, which was mainly responsible for the appointment of Mr. Eddy as Chief Commissioner of Railways, had insured that the engines should be ordered from them;—now I ask you who are "them"? I say, all those persons who manufactured engines, and who have been preferred, in my opinion, in the past.
5252. Would you name the firm you refer to? The firm there referred to would be Messrs. Beyer and Peacock.
5253. Then the inference would read in this way, namely, that a certain ring or combination of persons who are mainly responsible for the Chief Commissioner's appointment had insured that the engines should be ordered from Messrs. Beyer and Peacock? I do not say that I draw the inference in that way.
5254. Would you say how you do draw it? I keep on complaining that this charge is not framed in the way I intended—it is not as I put it, and I am not able to infer what I did not name.
5255. You cannot say that is not the way you put it, because I have read the very words you uttered in Parliament? I admit the words.
5256. Then what do you mean by the words? What I have already explained.
5257. Then you mean, as I say, that the ring insured that the locomotives should be ordered from Beyer and Peacock, or was there any other firm? I have already explained the matter before—that, in my opinion, Messrs. Beyer and Peacock specially, and in a secondary way Messrs. Dübs & Co., of Glasgow, have been favoured in the past in connection with locomotive orders, and therefore any inference that was drawn would relate to both, and in this case to Messrs. Beyer and Peacock.
5258. In this case, the word "them" refers to Beyer and Peacock? Yes; in a sense.
5259. In what other sense? Of course, in speaking of these people, it is not only Beyer and Peacock. In my mind there was sufficient evidence to warrant the idea that certain persons had some sort of alliance between them in relation to this matter. In Beyer and Peacock's case it would be only in reference to the supply of locomotives.
5260. I must ask you to give a direct answer to my question. What you said was that a ring insured that these locomotives should be ordered from them, and I ask you what you mean by the word "them"? The word "them" used as an inference—I say again I did not say that it was so—would refer to Beyer and Peacock.
5261. Yes; and now in what way do you say that Sir John Fowler, Mr. Whitton, Sir Saul Samuel, and Sir Henry Parkes insured that the order for these locomotives should be given to Messrs. Beyer and Peacock? I did not say that they had insured such a thing, but in venturing that as an opinion, it appeared to me from the coincidences which had gone through the business for a number of years, that that was practically the destination to which a large number of the contracts must go—that is how it appeared to me.
5262. Now, you have given a great deal of evidence, and you have occupied the time of the Commission for, I think, nearly eleven days on this point, and I ask you now—I do not ask you what opinion you held at the time you made your speech in Parliament—what evidence have you produced that this "ring" insured that the engines should be ordered from Messrs. Beyer and Peacock? I have no evidence, except what I have already produced in the way of documents.
5263. Now, I ask you what there is in these documents to prove that opinion or inference? That is a matter of opinion, your Honor. The contents of these documents lead me to that opinion, but they may lead someone else to a different opinion. That is all I can say in answer to your question. I have given you whatever evidence was in my possession.
5264. Do you still adhere to that opinion? I have not seen any reason to alter it yet.
5265. Now, I want to know whether this inference or opinion that a certain ring or combination of persons or firms were mainly responsible for the appointment of Mr. Eddy is what you intended to convey by the first inference or opinion that the appointment of Mr. Eddy, as Chief Commissioner, was due "to occult" reason? I do not understand that question, your Honor.
5266. In short, I want to know whether this statement about the appointment is the same in the second charge as in the first. In the first charge which we have to consider, it is stated, "That the appointment of the said Edward Miller Gard Eddy, as Chief commissioner, was due to 'occult' reasons, which suited private persons, but were not for the welfare of the country." We want to know whether that statement, inference, or opinion, means the same thing as the second charge; that is, that a certain ring or combination of persons or firms were mainly responsible for the appointment of Mr. Eddy? As an opinion, it was arrived at undoubtedly on the same ground.
5267. Do you consider there is any difference between the two. When you use the term "occult reason," the occultness is rather more apparent than reason. What are we to understand by "occult" as applied in this case? "Occult," I take it, is secret.
5268. Then "occult" reasons means secret reasons. Referring to a combination of persons or firms being responsible for the appointment of Mr. Eddy, I take it that the opinion was arrived at on the same ground in both cases? Yes, practically, one is a continuation of the other.
5269. One is an extension of the other? Probably.
5270. We do not want any "probably," I want to know whether it is as I say? I can only give you the words that are there, your Honor.
5271. Yes, but do you mean the same thing by the one charge as the other? I say that I do not recognise that they are my charges.
5272. I will not use the word charge, I will call it statement or opinion. Is this statement, inference, or opinion, in the first charge, the same as the statement, inference, or opinion in the second? They were arrived at on the same grounds.

Mr. Schey. 29 May, 1893

5273. I did not ask you that; I asked you whether they are the same? As far as the difference of words will permit, they are no doubt the same. They come from the same ground work, and one would probably be, in my opinion, a continuation of the other.
5274. What do you mean by a secret reason, do you mean a reason you did not know yourself, or a reason the public did not know, or a reason known to you and not known to the public? I meant a reason probably not known to anyone except certain persons.
5275. Who were they? I could not say. If I knew who the people were, the reason would not be "occult" to me any more.
5276. When you say that this ring ensured that the engines should be ordered from them, and that they obtained the order through the Chief Commissioner without tenders being called for in the usual way, what do you mean by that, what do you intend to imply by that? That in my opinion these people had obtained a large order from the Commissioners for locomotives.
5277. Do you mean merely to state the fact that they had obtained this order, or is there anything implied in the inference, because you say that this ring was responsible for the appointment of Mr. Eddy. Then you go on to say——Yes, your Honor, but that is only an inference; I decline to say that.
5278. Then you say they got the order through Mr. Eddy. Do you imply by that anything against Mr. Eddy, or merely state as a fact that they got the order through him? Not necessarily. I do not know the secret workings of the department. I have already been refused some of the correspondence on the ground that it is secret, and if I cannot obtain the information now while before the Commission it follows that I would have far less opportunity before; and therefore I am not in a position to say what was done.
5279. I am not asking you to say what was in your mind when you spoke, but I want to know what you now intend to imply by this statement? How can I now intend to imply anything by a speech that was delivered some months ago?
5280. I want to know whether you consider you have any evidence now, because you may not at that time have had all the evidence you have now? It depends upon the way in which you use the word evidence. If you ask me if I had any ground to arrive at at the opinion I did, I say yes.
5281. I admit that the word evidence has had a rather curious interpretation before this Commission. Do you still adhere to that opinion—the opinion you have expressed in reference to the order? I adhere to the opinion that Messrs. Beyer and Peacock have had a large order for locomotives.
5282. Nothing more? Well, that they have had some favour in getting it.
5283. Do you imply that Mr. Eddy is to blame for that? I am not in a position to allocate the blame to any person.
5284. You have two or three times said you do not recognise this charge as yours, and you have once or twice said you do not recognise the language? No, your Honor, I admit the language. I admit that I used the words recorded in *Hansard*.
5285. Is there any way in which you would wish to express what you intend otherwise or in any other language than that used in the Commission? Well, your Honor, in my speech reported in *Hansard* of the 9th March, I said, in addition to the words your Honor has already quoted, "I have felt it my duty in discussing this matter before to make certain charges against the Railway Commissioners. I have asked certain questions from time to time, but I am sorry that the Colonial Treasurer has allowed himself to be drawn into giving me evasive answers." Your Honor will see that I sought to obtain information, but was unable to do so. I went on to say, "I have been told that my charges were vague, indefinite, and intangible. I shall now proceed to put those charges into such a definite tangible form that nothing of the sort can be said again. First of all I say that the Commissioners have spent this huge sum upon locomotives without calling for tenders in the usual way, and that this sum of money has been spent at a time when iron and other material and coal were at a higher price in England than they had been for years." That is what I said.
5286. But that does not touch what you have previously stated? That was only inference, as I said before.
5287. It does not touch the inference I spoke of before, and as to which only the Commission has been asking you questions? Of course, that is not my fault, I asked that my charges might be investigated, but, instead of that, my inferences have been formulated into charges and put in the Commission, that is my opinion.
5288. But the words you used on that occasion are these:—"The ring of which I have already spoken, and are mainly responsible for the Chief Commissioner's appointment, made sure that these locomotives would be ordered from them, and they got the order through the Chief Commissioner without tenders being called for in the usual way" Those are the very words you used on that occasion. You say these words only meant an inference or opinion? I say that I inferred that.
5289. *President.*] I have no further questions to ask.
5290. *Mr. Smith.*] I would like to ask a few questions, your Honor.
5291. *Mr. Schey.*] Before Mr. Smith proceeds with his examination I would like to say, your Honor, that I have no solicitors or lawyers to watch my interests for me. I have already been warned that an endeavour is to be made to draw me into some admission or other on which a prosecution for perjury can be founded. Having that in my mind, and also the fact that I have no legal adviser, I must ask your Honor if you will be good enough to prevent any improper question from being put to me.
5292. *President.*] You may depend, Mr. Schey, that I will take very good care of that, and that no unfair advantage will be taken of you. I may, however, remind you of this, that the most skilful counsel in the world could not bring you into any danger of perjury so long as you swear to the truth.
5293. *Mr. Smith.*] Your Honor, as I am only allowed here to examine witnesses, and to generally watch the interests of the Commissioners during the absence of Mr. Eddy, perhaps it would be as well that I should not cross-examine Mr. Schey, but that that may be left for Mr. Eddy if he should desire to ask Mr. Schey some questions later on.
5294. *President.*] Perhaps it will be as well to do as you say, Mr. Smith. (To Mr. Schey) Mr. Smith does not wish to cross-examine you now, but if Mr. Eddy when he comes back here wishes to ask you a few questions you will go back into the box for the purpose.
5295. *Mr. Schey.*] Undoubtedly.

Mr. Cahill recalled and further examined :—

Mr. Cahill. 29 May, 1892.

5296. *President.*] Have you the figures that were asked for? Yes, your Honor.
5297. *Mr. Schey.*] Well, Mr. Cahill, were any boiler plans prepared in the office during the first seven months of 1889? That is from January to July, 1889, there were no boiler drawings at all.
5298. Between those dates were there any boiler drawings blue printed? I have only a record of one, on the 25th of February, 1889, when a blue print was made of drawing No. 1,309, and sent to the Secretary for Railways.
5299. Do you know the class number of the engine? Yes; No. 304.
5300. That is the only boiler plan, blue printed, within the period you mention? Yes; that is all the books show.
5301. I will ask you afterwards to take out the same information for the other five months of the year and send it to the Secretary. I do not desire to take up the time of the Commission unnecessarily? As regards the blue print, I have been through the book for the year 1889, and I cannot find any more.
5302. *President.*] The other information you can obtain very likely without leaving the court? That is the drawings made from July to the end of the year.
5303. Yes? Very well, your Honor.

5304. *Mr. Smith.*] In the earlier part of the proceedings some correspondence was asked for by Mr. Schey, who said he would like to see the correspondence which had passed between Sir Henry Parkes and Mr. Eddy. It was mentioned that Mr. Eddy had received a letter from Sir Henry Parkes, while he was on his way out, and I think the matter was referred to at the banquet to Mr. Eddy before he left for England? These are the letters.
5305. *President.*] Are they printed? No; they consist of an original letter from the Principal Under Secretary. But, perhaps I might read them, they are not long. The first letter is dated Colonial Secretary's Office, Sydney, 29th June, 1888, and is addressed to Mr. Eddy, it reads as follows:—"Sir, I forward by this mail a copy of the last Report on the Railways of this Colony, and also the last Report on the Railways of Victoria, and I send with these a copy of the *Sydney Morning Herald*, containing an article on your appointment. It is right that I should inform you that one newspaper here has in a very marked manner entered into the advocacy of Mr. Goodchap's claim for the Chief Commissionership, but I feel quite justified in assuring you that your appointment to this important position is viewed with general favour. I have the honor, &c., Henry Parkes." To this Mr. Eddy, writing from Glasgow, in August, 1888, replied as follows:—"Dear Sir Henry, I beg to acknowledge the receipt of your communication, dated 29th June, covering a copy of the last report on the railways of New South Wales, and also a corresponding report on the railways of Victoria, together with a copy of the *Sydney Morning Herald*. I also have to thank you for your remarks regarding the newspapers, and I am pleased to learn that my appointment is viewed with general favour. I leave by the 'Austral' on 31st instant. I have the honor, &c., E. M. G. Eddy." On the 10th July, a further letter was sent to Mr. Eddy by Sir Henry Parkes, which reads as follows:—"Sir, I forward for your information a map showing the railways of this Colony (marked black) now completed and open to traffic; also the lines of extension projected (marked red). This may be of interest to you in considering the new field of your future labours. I also forward a volume on the 'Wealth and Progress' of the Colony, which will afford you the latest information. It has been found necessary to amend the new Railway Act in two particulars—(1) to postpone the date of its coming into force until after your probable arrival, and (2) to increase the salary of the Chairman of the Board of Commissioners to £3,000. The division on the second reading was, Ayes, 37; Noes, 3. I have the honor, &c., Henry Parkes."
5306. The only other letter was one addressed to Mr. Eddy by the principal Under Secretary, and dated 4th October, 1881. This letter reads as follows:—"Sir, I am directed by the Colonial Secretary to transmit herewith an agreement between Sir Daniel Cooper as Acting Agent-General on behalf of the Government of this Colony and yourself, in connection with your appointment as Chief Commissioner for Railways. I have the honor, &c., Critchett Walker, Principal Under Secretary."
5307. These are the originals, excepting one case, where the letter is a press copy. In connection with certain documents relating to the appointment of Mr. Eddy, one sheet of correspondence has been put in. I now desire to put in the whole of the papers relating to the matter. They include a printed copy of the agreement under which Mr. Eddy was engaged, and the whole of the official correspondence on the subject. Mr. Eddy also handed in for the perusal of the Commission some correspondence with the Inspector of the Board of Trade, Major Marindin, and if the Commission considers it desirable that that correspondence should be referred to, I will have great pleasure in putting it in.
5308. *President.*] We did not wish to put it in before without seeing what Mr. Eddy wished, because at the time it was handed to the Commissioners, Mr. Eddy said it was private correspondence; but if you are now willing that it should be handed in ——
5309. *Mr. Smith.*] There is nothing in it but what we are willing to put in. The correspondence commenced with a private letter from Major Marindin, in which he wrote asking Mr. Eddy if he would be willing to be nominated for the position of Chief Commissioner.
5310. *President.*] I should be glad if these letters were publicly before the Commission, because then he will have practically the whole of the correspondence relating to Mr. Eddy's appointment before us, and Mr. Schey will be able to see them.
5311. *Mr. Smith.*] It will be only fair to Mr. Schey, if your Honor thought fit, and I do not think there is any breach of privacy with the gentlemen with whom the correspondence took place, if they are read in Court.
5312. *President.*] I have the documents locked up in my room because they are private documents. I will release them after the Commission rises to-day.
5313. *Mr. Schey.*] I desire to make two remarks about these documents that have just been put in. The first is that the letters read by Mr. Smith, as having passed between Sir Henry Parkes and Mr. Eddy, are just ordinary office documents; they are not in Sir Henry Parkes' handwriting, but of course they are signed by him. I think they are all office documents, and the contents are of most ordinary nature; but Sir Henry Parkes, speaking of this matter himself at the banquet, given to Mr. Eddy prior to his departure for England, said, according to the newspaper report ——

5314. *Mr. Smith.*] I object to Mr. Schey reading any further extracts from newspapers at this period. He has already taken up too much time, and tried the patience of the Court too far.
5315. *Mr. Schey.*] There are only about four lines to read.
5316. *Mr. Smith.*] I object to Mr. Schey even reading one line. If he has any evidence to give let him go into the box and give it, but I object to his reading anything that cannot be made evidence.
5317. *President.*] What is the document you want to read?
5318. *Mr. Schey.*] I asked that certain correspondence which has taken place between Sir Henry Parkes and Mr. Eddy, should be put in. Mr. Smith has put in certain correspondence, and Sir Henry Parkes has himself given a description of the correspondence which I want, and the two do not tally at all. What I desire to read is a report in the *Sydney Morning Herald*, giving Sir Henry Parkes' own words regarding this correspondence. It is contained in about seven lines of print.
5319. *President.*] In what way did Sir Henry Parkes make a statement;—did he make it in Parliament?
5320. *Mr. Schey.*] No. When Mr. Eddy was leaving this Colony, there was a banquet tendered to him, and at that banquet Sir Henry Parkes made a speech, and in that speech he said a certain thing about this correspondence. This is reported in the *Sydney Morning Herald*, and it was this that made me ask for the correspondence. The correspondence produced is of the ordinary office variety.
5321. *President.*] Mr. Smith, I think it would save time if the objection were withdrawn?
5322. *Mr. Smith.*] Very well, your Honor.
5323. *Mr. Schey.*] The date of the report is Saturday, 5th August, 1891, and it relates to a banquet to Mr. Eddy on the previous day. At that banquet Sir Henry Parkes said, referring to Mr. Eddy—"I claim to have made his acquaintance, in a certain way, before anyone else in Australia. Mr. Eddy will recollect—I have no doubt that he recollects it vividly—that he received letters from me before he left England, and at different stages when on his way here, in which I told him of the adverse criticism he would have to face." You will see that this correspondence produced is in no way like what Sir Henry Parkes speaks of. The other remark I have to make is in relation to the Parliamentary document about Mr. Eddy's appointment. Mr. Smith has told you that only one sheet had been put in, and has insinuated that the one I put in was not complete. If your Honor will turn to it you will see that what I put in was a complete document in itself, and is not merely a portion of a document. It now appears to me—it did not occur to me before—that this second document has been issued, and I have not noticed it; but the document I have put in is complete in itself, as laid before the Assembly, and ordered to be printed.
5324. *President.*] Do you wish to put in any more papers, Mr. Schey?
5325. *Mr. Schey.*] Oh, yes, your Honor, I wish to put in a number of papers. The first is distinguished as Schedule 3, No. 11; Colonial Secretary's number is 89; 15, 29, of 11th February, 1889. It is a cablegram ex-Agent-General, referring to the type of engines known as the "Scotch Yankee." It shows that tenders were called in England and America, and nine tenders were received, and Messrs. Dubs & Co. ——
5326. *President.*] You need not tell us what the papers contain, Mr. Schey.
5327. *Mr. Schey.*] I only want to tell you what the papers are, and what I am putting them in for, it is very brief.
5328. *President.*] It does not appear like it.
5329. *Mr. Schey.*] The next is Schedule 4, No. 2. Further correspondence in reference to engines, a Parliamentary paper ordered to be printed on 18th August, 1863, showing charges made about these very same matters, I think in this case by Mr. Dalzeil, who at that time was a Member of the Assembly. The next is No. 5——
5330. *President.*] If you hand the documents in, Mr. Schey, the Secretary will mark them with consecutive numbers, and you will be able to know what papers you have put in evidence. It is merely wasting the time of the Commission for you to go on giving us the contents of the papers as you are now doing.
5331. *Mr. Schey.*] Does your Honor refuse me the privilege of reading these?
5332. *President.*] I do. It will be sufficient for you to hand the documents in, and have them marked as exhibits. [*Mr. Schey here handed in a number of documents relating to departmental matters.*]
5333. *Mr. Schey.*] There are some papers here, your Honor, which I hope you will allow me to make a brief remark upon. Here is an article in the *Daily Telegraph* of 26th November, 1890, on "Railway traffic.—Breaking the Colony's record.—Difficulties that beset the Commissioners, &c., &c." Attached to that are returns furnished by the department, showing that on that date ——
5334. *President.*] You need not read it, Mr. Schey. The document will speak for itself, and the Commissioners will read it.
5335. *Mr. Schey.*] Will your Honor not allow me to say what the document contains, or what it shows?
5336. *President.*] I have no doubt you want the document to show what the document does show, and the Commissioners will read it. It is a waste of time for you to go on as you are now doing.
5337. *Mr. Schey.*] It appears to me that it is a waste of my time to come before the Court at all. I am simply precluded from doing anything except throwing a lot of documents down, and leaving the matter in that form. There is an extract from the *Sydney Morning Herald* relating to locomotive boilers, in which it is pointed out ——.
5338. *President.*] You need not tell us what the document is about. Simply handed it in. [*Mr. Schey here handed in a number of articles and newspaper extracts relating to matters connected with the railways.*]
5339. *President.*] Does this close your case, Mr. Schey?
5340. *Mr. Schey.*] I think these are all the documents I have, but before I close I wish to say that there are two or three papers which have not been furnished. One has regard to all the locomotives that have been delivered in the Colony, and when and where obtained. I believe that has been handed to the Commission, but I have not had an opportunity of seeing it, and I would like to have a chance of going through it.
5341. *President.*] Yes, Mr. Schey, it has been handed in.
5342. *Mr. Schey.*] I have not seen it. There is another return giving the dates of the delivery of engines since the Commissioners took office.
5343. *President.*] That was handed in this morning, I think.

5344. *Mr. Schey.*] I think not, your Honor.
5345. *President.*] Did you not prepare a document of that kind, Mr. McLachlan.
5346. *Mr. McLachlan.*] We handed in some particulars this morning, but I do not recollect the information that Mr. Schey is now asking for.
5347. *Mr. Schey.*] Mr. McLachlan himself promised to give the information I now indicate when he was under examination on the 9th of May.
5348. *Mr. McLachlan.*] That promise related to some six locomotives, and as Mr. Thow gave the information on the next day I did not bother any further about it.
5349. *Mr. Schey.*] I meant the whole of the locomotives.
5350. *President.*] What is the information you want to get, Mr. Schey?
5351. *Mr. Schey.*] The dates of the delivery of all the locomotives since the present Commissioners took office.
5352. *Mr. McLachlan.*] We will be able to give that in the morning. There is no objection.
5353. *President.*] That is on Monday?
5354. *Mr. McLachlan.*] Yes.
5355. *Mr. Schey.*] Then there is a copy of the advertisement and tenders received for tram motors.
5356. *Mr. McLachlan.*] That was handed in the next day.
5357. *President.*] Yes, Mr. Schey, I am told that that has been handed in.
5358. *Mr. Schey.*] I have not seen anything of it. Then, again, Mr. Thow promised to furnish a list of his recommendations to the Institute of Civil Engineers, and this has not been put in.
5359. *President.*] A list of what?
5360. *Mr. Schey.*] A list of the gentlemen who recommended his appointment as a member of the Institute of Civil Engineers.
5361. *President.*] What have we to do with that?
5362. *Mr. Schey.*] Perhaps nothing, perhaps a great deal.
5363. *President.*] But you must satisfy the Commission as to what it has to do with the matters we are inquiring into.
5364. *Mr. Smith.*] I object altogether.
5365. *President.*] It certainly will not be put in, unless you give some valid reason why it should be included in the evidence.
5366. *Mr. Schey.*] If you allow me to see it I can soon tell whether it is of any importance or not.
5367. *President.*] But we want to be satisfied first that you were justified in asking for the information. You might just as well ask a man the names of his Godfather and Godmother. We certainly will not ask him to put this information in unless you throw some more light on the subject.
5368. *Mr. Schey.*] Very well your Honor. The next matter I wish to inquire about is a list of the loads of engines over the section from Penrith to Mount Victoria, which was also promised.
5369. *President.*] I understand that that will be supplied.
5370. *Mr. Schey.*] If I can have permission to see the documents and returns under the custody of the Secretary between this and next Monday, I will be satisfied for the present.
5371. *President.*] Very well, I understand then that, subject to these documents to which you have referred, you have closed your case. (To Mr. Smith): Does Mr. Eddy wish to give any evidence in regard to this charge?
5372. *Mr. Smith.*] Mr. Eddy has been already examined on this charge, but he will be very glad to again appear and give evidence on Monday morning before the Commission, if you think he can supplement his former evidence in any way. He has already given evidence, but he is quite in the hands of the Commission. He is very anxious to give evidence, but at the same time does not wish to delay the Commission if they should regard anything further from him as unnecessary.
5373. *President.*] It is not a question of delay in a matter of this kind, that is really pertinent evidence. Perhaps if Mr. Eddy could be here on Monday, the Commission might wish to ask him one or two questions merely for the purpose of giving him an opportunity to make certain clear statements.
5374. *Mr. Smith.*] Mr. Eddy writes, "I think it would be well now for me to give the whole country a simple statement regarding my appointment, so as to effectually stop the whole thing."
5375. *President.*] The object of the Commissioners in asking Mr. Eddy to go into the box would be to allow him to make his own statement with regard to his appointment. Possibly one or two questions would be put to him with a view to enable him to give distinct answers.
5376. *Mr. Smith.*] And Mr. Eddy when he goes into the box will be prepared to answer any questions on cross-examination without the slightest reservation, and if Mr. Schey wishes to have counsel he may.
5377. *Mr. Schey.*] Mr. Smith has given me a very gratuitous concession. I have already stated that I am not in a position to employ counsel, and if I were I would not do so because I do not see why I should be called upon to incur such expense. In any case if I had not better counsel than the one representing the other side I could do better myself.
5378. *Mr. Smith.*] In a case like yours, you can far better look after it yourself.
5379. *President.*] I understand, Mr. Smith, that you do not intend to call any witnesses?
5380. *Mr. Smith.*] We have no further witnesses this afternoon
5381. *President.*] But you will consider the question between this and Monday. I may mention that we will be only too glad to close the case altogether in regard to this charge and go on to the next charge.
5382. *Mr. Smith.*] I really do not want to call any further witnesses except Mr. Eddy, and the case may be considered closed, subject to Mr. Eddy being called on Monday.
5383. *President.*] Very well. Then, in all probability, the whole of the inquiry as to the second charge will be closed on Monday early. You merely wish to put in certain documents, Mr. Schey, and Mr. Eddy would like to make a statement in the box. Will you be prepared, Mr. Schey, to go on with the next—I hardly like to call it charge—on Monday next?
5384. *Mr. Schey.*] I think so, your Honor.
5385. *President.*] I will read you the charge:—"That the reports and returns furnished by the Railway Commissioners and placed before Parliament from time to time do not always contain a true statement, and that thereby members of the said Assembly are frequently misled into believing that the state of affairs was much more satisfactory than it really is." The whole gravamen of that charge is that the Commissioners have put before Parliament certain statements that were not true.

5386. *Mr. Schey.*] Not necessarily so.
5387. *President.*] Well, what is the inference from these words?
5388. *Mr. Schey.*] Well, your Honor, they may have suppressed some important information.
5389. *President.*] Oh, of course, the statements are not true if there is a suppression. Will you put in on Monday the reports and returns which you say are untrue? If you put in these returns and reports, and then prove that they are untrue, that is all that is required to be done on that charge.
5390. *Mr. Schey.*] Well, your Honor, I will be able to commence it, at any rate.
5391. *President.*] It ought not to take very long.
5392. *Mr. Schey.*] No. I want Mr. Hall, the Chief Accountant of the Railway Department, called in connection with that charge.
5393. *President.*] Do you wish him called for Monday?
5394. *Mr. Schey.*] Yes.
5395. *Mr. Smith.*] As these other nine charges are departmental charges rather than against Mr. Eddy personally, and as attendance at this Court has cut very much into the time of the Chief Commissioner, he has asked me to take charge of the conduct of the case, and it is desired, if your Honor pleases, that this may be done, and that the Commissioners may appear only as witnesses when called upon if the Commissioners see fit.
5396. *President.*] We would be only too glad if it could be done, but if Mr. Schey is not able to appear with legal assistance I think it would hardly do for you to appear and for the Commissioners to absent themselves.
5397. *Mr. Schey.*] Your Honor, I press my objection again against the employment of counsel on the other side.
5398. *President.*] Very well, Mr. Schey, I will remember what you have said. It has been suggested that Mr. Eddy himself need not personally attend because these charges are levelled just as much against the other Commissioners as against him. Any one of the three Commissioners might attend, not necessarily always the same one.
5399. *Mr. Smith.*] The difficulty is this: the Commissioners have a great deal of office work, and one of the Commissioners is now conducting the case before some other Board of Inquiry.
5400. *President.*] That is the Baldwin Commission; that is very nearly over.
5401. *Mr. Smith.*] I do not know whether it is, and Mr. Oliver would not be able to give the necessary time himself. Of course, the Commissioners are a corporate body, and one can hardly appear for the others. What I would suggest is that I will not take up any more time than I can help, and I will endeavour to arrange for one of the Commissioners to be here.
5402. *Mr. Schey.*] When I told your Honor that I had other employment to attend to outside, your Honor told me that I must put everything on one side.
5403. *President.*] We have not had occasion to make any similar remarks to the Commissioners yet, Mr. Schey.
5404. *Mr. Schey.*] No, your Honor; but I am only urging that the Commissioners should be treated in the same way as I was.
5405. *President.*] I think, Mr. Smith, that some one of the Commissioners ought to be here personally, not necessarily Mr. Eddy or any one of them, but the time of the Commissioners must yield to the present inquiry. I hardly think that these other charges will last as long as the second charge.
5406. *Mr. Smith.*] Very well, your Honor. I would like also to say, regarding this second charge, that possibly it might be considered desirable to call one or two witnesses to speak about these forty boilers if the Commission see fit. It will not take many minutes, as they will only be asked one or two questions.
5407. *President.*] They may be asked a great number under cross-examination. What is the character of the evidence?
5408. *Mr. Smith.*] It is merely to set matters right regarding these boilers, and also in regard to certain newspaper paragraphs.
5409. *President.*] We do not want any evidence in regard to newspaper paragraphs.
5410. *Mr. Smith.*] The particular matter I refer to is about the forty boilers that were imported. It has been alleged here, and at the present time it might appear to the Commission to be left open in the evidence, as to whether there was not only the material for the ordinary supplies, but also material for forty new boilers on hand, and that this fact was overlooked, and that material was sent for forty other boilers.
5411. *Mr. Schey.*] Who alleged that?
5412. *Mr. Smith.*] You alleged it.
5413. *Mr. Schey.*] Your Honor, I did nothing of the sort, and I challenge Mr. Smith to show that any such allegation has been made.
5414. *Mr. Smith.*] As I understand the allegation of Mr. Schey—I admit that I have some difficulty in always understanding him—it was, that in addition to the ordinary supply of boiler plate for repairs, there was sufficient boiler plate in stock for thirty or forty boilers, and that that was not used.
5415. *Mr. Schey.*] I ask your Honor to bind Mr. Smith down to the evidence.
5416. *President.*] How does this question arise, excepting indirectly? The charge relates to ordering £500,000 worth of locomotives.
5417. *Mr. Smith.*] I quite agree, your Honor, that it has nothing to do with the inquiry, and that is why personally, I would not seek to put evidence in; but it is possible that Mr. Eddy may wish to clear the matter up.
5418. *President.*] Well, you will consider it between this and Monday.
5419. *Mr. Smith.*] Yes, your Honor. We are in a position to give evidence to show that if such a statement were made—I am at a loss now to say whether it was made or not—it was an untrue statement.
5420. *President.*] We have nothing to do with that unless the evidence itself is tendered.

MONDAY,

MONDAY, 30 *MAY*, 1892.

[*The Commission met at* 11 *a.m., in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

5421. *President.*] I understand you still have some documents that you wish to put in, Mr. Schey.
5422. *Mr. Schey.*] Yes, your Honor; I wish to put these documents in:—Load tables for the Western Line (I only refer to one section, Penrith to Mount Victoria, but I put the document in as it is at hand); a list of boiler plates furnished by Mr. Richardson, and statements commenting thereon, with a summary of my own attached; returns showing percentage of engines to miles open in the different colonies, furnished by Mr. Thow; and dates of the arrivals of engines since the present Commissioners took office, furnished by the department. I think that is all. I have a list yet to look over to make sure that all the papers are in that I applied for, but that is all I have at the present time.
5423. *President.*] Then, subject to your searching through the papers, that closes your case now.
5424. *Mr. Schey.*] Yes; and subject to my cross-examination of the witnesses that may be called on the other side.
5425. *President.*] Of course; but I mean so far as you are concerned?
5426. *Mr. Schey.*] Undoubtedly, your Honor.
5427. *President.*] There has been some reference to the papers as to Mr. Eddy's appointment, which were handed into the Commission. I have brought them into the Court now. They consist of two sets of papers, one of which contains certain private letters which Mr. Eddy has laid before the Commission. I do not know whether Mr. Eddy wishes these letters to be kept private, or that they should be put in evidence.
5428. *Mr. Eddy.*] Mr. President ——
5429. *Mr. Schey.*] May I make one remark, your Honor, before the papers are put in. I would draw your Honor's attention to the fact that Mr. Eddy declared that there were no papers relating to his appointment.
5430. *President.*] The papers that Mr. Eddy referred to are private letters that were written to him in England, and have nothing to do with the actual appointment itself; they are the private letters which Mr. Eddy showed to the Commission. The other documents that are before the Commission are documents which have been supplied by the departments—not by Mr. Eddy, but by the different departments in connection with his appointment. I find that in the paper which was laid before Parliament, and to which you have referred, the whole of that correspondence is set out, with the exception of certain references to two gentlemen, whose names were mentioned in connection with the appointment to the Chief Commissionership, and those names were omitted in the Parliamentary returns, and we think that those names ought not to be disclosed. It is not fair to those gentlemen that it should appear that their names were submitted for the appointment, but were not accepted by the Government. Nothing would be gained by mentioning their names. They were merely mentioned incidentally, and as soon as mentioned the persons were not considered desirable by the Government. With that exception all the correspondence is in the printed document.
5431. *Mr. Schey.*] I was not speaking of that document, your Honor. I was speaking of the fact that Mr. Eddy, in the witness-box, said that there were no papers in connection with his appointment—that is to say, that he had no papers, and that subsequently he proffered some papers on the subject to the Commission.
5432. *President.*] He did no such thing, as you would have seen, had you listened to what I said. I said that Mr. Eddy did not produce the papers with reference to his appointment, but that they came from the different departments that were concerned in such appointment.
5433. *Mr. Schey.*] It will be within your Honor's recollection that, at an early stage of this inquiry, Mr. Eddy said there were no papers—said that he had no papers in connection with his appointment—and I think two day's afterwards—I am speaking from memory—Mr. Eddy tendered your Honor some papers which he proposed to put in. I asked that they might be in evidence, and you said you would consider the point. Those are the papers I am referring to.
5434. *President.*] So far as my memory serves me, the only papers handed to the Commission belonging to Mr. Eddy are those I speak of—correspondence between that gentleman and Major Marindin.
5435. *Mr. Eddy.*] Mr. Schey's statement, sir, is a deliberate untruth. I made no statement of any such character in speaking about my appointment. So far as my recollection serves me, Mr. Schey asked on the occasion he referred to for copies of letters of recommendation and matters of that sort, and I said there were no letters of recommendation, that the position was offered to me, and that there was nothing in the shape of a letter of recommendation in connection with my appointment in existence.
5436. *President.*] These are the only papers that were in your possession. [*Referring to the private correspondence.*]
5437. *Mr. Eddy.*] Yes, those are the only papers I had in my possession. Here is what the report says. At page 31, question 767, Mr. Schey said:—"And there was no reference or recommendation or document of that character bearing Sir John Fowler's name amongst the papers which were submitted concerning your appointment to this colony." My answer to that was—"I had no papers or recommendations or document of any kind regarding my appointment. My fitness for the appointment was ascertained from people beyond even your reproach. I was simply asked 'will you accept the appointment?' I said 'No.' Subsequently I was asked again if other terms would induce me to leave England, which I did not wish to do, and then I named my own terms. Therefore it did not require any recommendation or document or anything else." I think that is quite clear, sir.
5438. *President.*] Then Mr. Eddy I will ask you about these letters of Major Marindin. Have you any objection to these documents being put in as evidence.
5439. *Mr. Eddy.*] I have no objection to their being put in, sir, but I should like to hand them in on oath, so that there may be no mistake about their appearing in the report which will go forth to the public.
5440. *Mr. Smith.*] I would draw your Honor's attention to the circumstance that Mr. Eddy was not here

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on Friday evening, and when the Commission adjourned, there was one point which you asked me to consider. The charge says, "Without calling for tenders and without any necessity on the ground of urgency the Railway Commissioners ordered £500,000 of locomotive engines from England, and orders were given to specially-selected firms." Outside of that a lot of evidence has been given here about the purchase of forty boilers, and so forth. But perhaps I had better leave it to Mr. Eddy.

5441. *Mr. Eddy.*] I gathered sir, that the cross-examination of Mr. Schey was postponed until to day for my attendance and I have read all that has passed since I have been away. I have also of course had an opportunity of hearing all that passed before I was compelled to be absent. And in my opinion Mr. Schey has not advanced one iota of evidence to justify his charges. But Mr. Schey not having the manliness to confess that he had not even a shred of evidence——

5442. *Mr. Schey.*] May I ask, your Honor, is Mr. Eddy summing up in the case.

5443. *President.*] He is not.

5444. *Mr. Schey.*] May I ask what he is doing?

5445. *President.*] He is addressing the Commission; he is making a statement.

5446. *Mr. Schey.*] Well, your Honor, every time that I tried to make a statement I was stopped.

5447. *President.*] Indeed no, Mr. Schey.

5448. *Mr. Schey.*] I thought Mr. Eddy was to give evidence in the witness-box, your Honor.

5449. *President.*] Mr. Eddy will go into the witness-box, I have no doubt.

5450. *Mr. Eddy.*] I am on oath, Mr. President. I was saying that Mr. Schey, not having the manliness to confess to the Commission that he did not possess a single shred of evidence with which to support his charges, has wasted the time of the Court for eleven days with coincidences, and inferences, and opinions on all kinds of extraneous matters; and looking at the difficulty, Mr. President, which I saw you had in trying to fix him to any point on Friday, I thought I should only be wasting the time of the Court if I attempted to put one single question to him. Therefore, I will not put any questions to him, but simply leave the Commission itself to put any further questions it may deem it necessary to ask. Passing from Mr. Schey, sir, I would point out that a great amount of time has been taken up with regard to an order placed by the Commissioners for forty boilers. Mr. Schey's witnesses have made grave mis-statements and mis-representations regarding the want of urgency of these boilers, and also as to the capacity of the shops of Eveleigh for making the boilers in question. Now, several of our officers are in the Court, and we are prepared to place them in the witness-box to give you actual reliable facts in regard to the extreme urgency of ordering these boilers at the time we ordered them, and also to completely disprove the statements of Mr. Schey's witnesses in regard to the ability of the shops to carry out the works, and also as to the plant and materials being in the Colony for the work had it been decided to carry out the works here. As, however, in my opinion, the boiler question is not one for this Commission to inquire into at all, the charge being of my having "placed certain orders in England for £500,000 worth of locomotives without calling for tenders," I submit that the boiler question has only been raised by Mr. Schey as a blind in connection with his charge, because he has not one iota of evidence to bring before you. Therefore, before placing these witnesses in the witness-box I would like an expression of opinion from the Commission as to whether they wish to hear any further evidence on the question. So far as the Railway Commissioners are concerned we would prefer to put the witnesses forward who will in the most emphatic way disprove the misrepresentations made before you by Mr. Schey's witnesses, but looking at the question of time we are quite prepared to waive our right to do so.

5451. *Mr. Schey.*] May I say one word before you decide the question.

5452. *President.*] We have decided in your favour in so far as we think evidence ought to be given on the subject, because it might be contended that if these boilers could have been made in the Colony there would not have been the same urgency for ordering the locomotives from England.

5453. *Mr. Schey.*] I was about to ask, your Honor, that the evidence which Mr. Eddy speaks of should be tendered, and to remark that a question of time in a matter of this kind should not be allowed to weigh.

5454. *President.*] We have ruled on the point, Mr. Schey.

5455. *Mr. Eddy.*] The witnesses shall be put in the witness-box. I only ask that Mr. Smith may be allowed to examine them, so as to relieve me from the duty, because I am very anxious to get away from the Court as soon as I can. I feel that it would be unwise on my part to remain here longer than I am compelled to.

5456. *President.*] Mr. Eddy, if you are not able to stay longer in the Court it would be very desirable if you could go into the witness-box and make the statement you desire to make before leaving. We can then go into the question of the urgency of ordering these boilers.

5457. *Mr. Eddy.*] I was going to ask you to allow me to do that, sir, after you had given your decision.

Mr. E. M. G. Eddy further examined:—

5458. *President.*] You are already sworn, Mr. Eddy.

5459. *Witness.*] In regard to my appointment to the position which I think it an honor to hold in spite of all the slander which I have been subjected to, the first communication I received was from one of the railway inspectors attached to the Board of Trade. I may perhaps explain to the Court that the Board of Trade exercises a very considerable control over the working of the railways in Great Britain, and that the Board employs three Royal Engineer officers as inspecting officers to report on all questions which the Board has authority from Parliament to deal with in connection with the railways; and by this means those gentlemen come in continual contact with the leading officers of the railway service throughout the kingdom. Major Marindin, R.E., C.M.G., is one of the three inspectors, and Sir Daniel Cooper, who was acting as Agent-General at the time, appeared to have adopted the wisest possible plan of obtaining, from unbiassed and effective sources, information as to the qualifications of the officers engaged in the practical working of the railways in Great Britain. These communications, of course, I should have treated as entirely private had it not been for my hands being forced in regard to my appointment in the manner they have been. It was at the point when those letters, which I will read presently, ceased, that

Mr. E.M.G. Eddy. 30 May, 1892.

Mr. E. M. G. Eddy. 30 May, 1892.

that I was placed in direct communication with Sir Daniel Cooper, and the papers in possession of the department, and which perhaps I had better read part of presently, show the conclusion of the matter. The first letter addressed to me by Major Marindin was this. It was dated 15th May, 1888:—"Dear Mr. Eddy,—The Agent General for New South Wales asked me a few days ago to advise him in the selection of a man for the new post of Chief Commissioner for Railways for that Colony. Salary, £2,500, to be raised if services are satisfactory. Term of office, seven years; only removable by Parliament, *i.e.*, not by Ministry. I took the liberty of mentioning your name (together with two others), as men whose services the Colony would be fortunate to obtain, if willing to go. The Agent-General now asks me to write to you on the subject, and to inquire whether you will take the post if offered to you, subject, of course, to the arrangement being satisfactory. If your answer be in the affirmative, I fall out of the negotiations, and you will doubtless hear direct from the Agent-General, who, I may say, does not wish to advertise the appointment if he can get a good man without doing so. Please understand that this letter is to be considered entirely private.—Yours truly, F. A. MARINDIN."

5460. *President.*] Was that the first intimation you had that you were spoken of for this appointment? The first communication of any kind that there was such a position vacant, or that there was such an appointment likely to be made. I replied by return of post, dated Glasgow, 16th May, 1888:—"Dear Major Marindin,—I am obliged for your letter of yesterday's date. Looking at my position in the railway service in this country, I do not think it would be a wise step on my part to go abroad for a salary of £2,500 per annum. Would this salary be increased if I agreed to consider the question? Another point in connection with the appointment would be the question of competition. I could not agree to enter into competition for it in any way, and I think you will readily see why it is necessary to make this stipulation when you consider my position here. Of course our respective letters will be looked upon as strictly private and confidential.—Faithfully yours, E. M. G. EDDY. Major Marindin, C.M.G., R.E." On the 19th May he replied to me, saying:—"Dear Mr. Eddy,—I did not in the least expect that the New South Wales appointment would tempt you, but I was so sure that you were the best man for the place that I thought it as well to give the Colony the off chance of getting you. The Agent-General cannot at present, at any rate, go beyond the £2,500, but he is, I think, quite disposed to ask for authority to offer more if he finds that he cannot get a really good man for the less sum. I have no doubt that should he obtain authority for a higher salary he would wish to reopen negotiations with you. There was no question of competition in your case. I may say that I quite agree with your view that with your prospects it is not good enough.—Yours, &c., F. A. MARINDIN. P.S.—The Agent-General will not mention a word to any one about our correspondence." I acknowledged this as follows:—"Dear Major Marindin,—Yours of the 19th to hand, and I pass the subject from my mind. Many thanks to you for the kind feeling shown towards, faithfully yours, E. M. G. Eddy." On the 31st of may, this further letter came:—"Board of Trade, 31st May, 1888. Dear Mr. Eddy,—My excuse for writing to you again in reference to the New South Wales Commissionership will be found in the following extract from a letter I received this morning, from Sir Daniel Cooper, Bart., Acting-Agent-General for that colony. 'I will ask you kindly to communicate again with Mr. Eddy, to see if he will take the post if offered. If I know his terms I can telegraph to Sydney and ascertain whether they are acceptable. There will be no other name mentioned in competition with Mr. Eddy, and when I recommend him it will be for the Government to take or refuse him before treating him with any one else. If he is accepted, no one can complain.' I should, of course like to see Mr. Eddy if he can come south, and I will let him know when and where he can meet me.' The meaning of all this evidently is that Sir Daniel Cooper is anxious to secure you, if he can get you, and is prepared to ask the New South Wales Government to accept you on your own terms; if not too high, of course, and to improve upon the offer they have made originally. I cannot see any objection to your saying what would tempt you or replying that you are not inclined to go at all. I have told Sir Daniel Cooper that I have written to you. Of course any letter you may write will be kept strictly private. Yours truly, F. A. Marindin." I replied to that letter on 1st June, from Glasgow. "Dear Major Marindin,—I am obliged for your letter of yesterday's date. In accepting an appointment abroad, I shall have to overcome two or three very strong oppositions on whatever terms I go, and undoubtedly I should be acting foolishly to go unless the salary is a good one. Money, generally speaking, is not, I believe, so valuable in Sydney as here, so that too has to be considered. The position, however, has attractions for me as I take so much delight in my work, and I can see how in a country which will owe much to the judicious management and extension of its railways, I could be of great service to the Colony and also obtain credit for myself. Without pledging myself absolutely to accept the position I will go so far as to say I should feel strongly inclined to do so if the salary is increased to £3500 per annum with a seven years' engagement, any future advance being left open, results being the element to influence the Government regarding it; or £3,000 per annum to begin with, with an agreement for an advance of £1,000 at the end of two years." Then I put in a footnote about going to London for some meeting and asking him to meet me. At this point Major Marindin dropped out of the negotiations. Subsequently I was placed in communication with Sir Daniel Cooper, and I had a meeting in London with him, and he sent this cablegram to Sir Henry Parkes. (I am now quoting from the printed document.) "London, 5th June, 1888. Confidential. Seen E. M. G. Eddy to-day. He was twenty years in London and North Western. Last eighteen months at Caledonian. Think he is the man you require." Then he goes into some personal references, and continues,—"Am sure he is fully qualified; will not go for less than £3,000 to commence with, and promise of increase if services are satisfactory. Could leave end of September, strongly urge you to appoint him. (Signed) DANIEL COOPER." On the 6th June, Sir Henry Parkes wired back to him.—"Engage Eddy at £3,000. Question of increase must be left open in considering engagement. HENRY PARKES." Then follows a telegram from the Acting Agent-General to the Colonial Secretary:—"London, 8 June, 1888. Eddy has accepted Chief Commissionership at £3,000 per annum, with increase if services satisfactory to colonial Government. Can leave September next; Colonial Government to provide free passage for himself, wife, and child. Send copy of Act appointing Commissioner. I will prepare agreement, DANIEL COOPER.—A return cable was received from the Colonial Secretary on the 9th June, the following day as follows.—"Sydney, 9 June, 1888. *Re* Eddy.—In agreement the Colony cannot be committed to further increase of salary—must be left to justice of Government and Parliament. Passage out will be provided. Copy of Act will be sent.—HENRY PARKES." On 14th June a cable was sent from Sir Daniel Cooper to the Colonial Secretary:—"London, 14 June, 1888. Have closed with Eddy; £3,000; increase of salary left to justice of Government and Parliament. Sir Richard Moon, Chairman, and Findlay, General Manager, of London

and

and North-western, assure me, Eddy is very best man you could have selected in Great Britain.—DANIEL COOPER." Then the following letter from the Acting Agent-General to the Colonial Secretary, on 31st August :— Mr. E. M. G. Eddy. 30 May, 1892.

The Acting Agent-General to The Colonial Secretary.

Re appointment of Chief Commissioner of Railways.

Sir, 5, Westminster Chambers, Westminster, S.W., 31 August, 1888.

With reference to the telegrams that have passed between yourself and this Department in regard to the appointment of Chief Commissioner of Railways under the Government Railways Act, 1888, I have the honor to forward herewith copies of correspondence between Mr. Edward Miller Gard Eddy and myself in relation to his appointment, authorised by your telegram to me of the 6th June last, as follows :—"Engage Eddy at three thousand. Question of increase must be left open in considering engagement." It was considered preferable that Mr. Eddy should enter into a formal agreement as Chief Commissioner. I therefore instructed Mr. Want, the solicitor, in London, to the Government, to draw up this document for execution by Mr. Eddy and myself on behalf of the Government of New South Wales. The part executed by Mr. Eddy I forward herewith, together with his letter to me, having particular reference to the understanding as to the future increase of his salary. You will doubtless remember, in regard to the increase of salary, that your telegram is distinct that this point must be left open in considering the engagement. While Mr. Eddy consented to this, and also that in the agreement the Government should not be formally pledged to increase his salary, he, nevertheless, accepted the position of Chief Commissioner upon the distinct understanding that, should his services hereafter prove to be satisfactory to the Government, an increase in the salary should be made ; and I desire to call your express attention to this, which is specifically referred to in the correspondence enclosed. I append copy of a letter addressed to me by Mr. Findlay, the General Manager of the London and North-Western Railway, having reference to Mr. Eddy's fitness for the position of Chief Commissioner of Railways of New South Wales.

I have, &c.,
DANIEL COOPER.

P.S.—Mr. Eddy leaves to-day for Sydney in the s.s. "Austral."

Sir Daniel Cooper's letters and my replies are as follows :—

[*Enclosures.*]

My dear Mr. Eddy, 5, Westminster Chambers, London, S.W., 6 June, 1888.

In continuation of my note of last night, in which I informed you that I had telegraphed to the Government in Sydney, strongly recommending your appointment to the Railway Commissionership, at a salary of £3,000 per annum to commence with, I am pleased to say that I have this afternoon received a reply from my Government in the following words :—"Engage Eddy at three thousand. Question of increase must be left open in considering engagement.—HENRY PARKES, Premier." I shall be glad to hear from you, at the earliest possible moment, whether you are prepared to accept this appointment, in order that I may again telegraph to Sydney for the information of my Government. I need only say that, for the reasons I stated to you at our interview yesterday morning, how glad I should be if you can arrange to accept the offer of the New South Wales Government.

Yours, &c.,
DANIEL COOPER.

E. M. G. Eddy, Esq., Myross, Aytoun Road, Pollockshields, Glasgow, N.B.

To that letter I replied from my club in these terms :—

My dear Sir Daniel, Constitutional Club, Northumberland-avenue, 8 June, 1888.

Referring to your letter of 6th June, and confirming our conversation of this afternoon, I beg to state that I accept the appointment of Chief Commissioner of Railways to the New South Wales Government at a commencing salary of £3,000 per annum, it being understood that if the result of my management of the railways is found satisfactory the salary will be increased. I will arrange with the Caledonian Company to be free at the end of August. The question of passage money, agreement, &c., I am sure I may leave in your hands.

I am, &c.,
E. M. G. EDDY.

Sir Daniel Cooper, Bart, &c.

Then a telegram appears, which I will read, but I think it has been put in before :—

Telegram from the Agent-General for New South Wales to the Colonial Secretary, Sydney, 8 June, 1888.

Eddy has accepted Chief Commissionership at £3,000 per annum, with increase if services satisfactory to Colonial Government. Can leave in September next ; Colonial Government to provide free passages for himself, wife, and child. Send copies of Act appointing Commissioners. I will prepare agreement.

My dear Mr. Eddy, 5 Westminster Chambers, London, S.W., 11 June, 1888.

With reference to the offer I made you on the afternoon of the 8th instant, on behalf of the New South Wales Government, of the appointment of Chief Commissioner of Railways of the Colony, and to your letter of that evening confirming our conversation, in which you state that you accept the abovementioned post at a commencing salary of £3,000 per annum "it being understood that if the result of my management of the railways is found to be satisfactory the salary will be increased," I would point out that it would be impossible for me, under existing circumstances, to insert a clause in your agreement to the foregoing effect ; but if you are content to leave any future increase of salary to the justice of the Government and Parliament, I accept your letter at once. The Colonial Government will provide free passages for yourself, wife, and child to Sydney. Will you kindly reply to this at once.

Yours, &c.,
DANIEL COOPER.

E. M. G. Eddy, Esq., &c., Constitutional Club, Northumberland Avenue, W.C.

That letter being addressed to my club in London, and I having returned to Scotland, it did not reach me for two or three days, and I telegraphed to Sir Daniel Cooper on the 14th June, 1888 :—

Letter of 11th only reached me this morning. I agree to proposal regarding the future.—EDDY, Glasgow.

I wrote on the same day :—

My dear Sir Daniel, Caledonian Railway, Glasgow, 14 June, 1888.

Confirming my telegram, your letter of the 11th instant only reached me this morning. I agree to leave my future increase of salary to the justice of the Government and Parliament, as you propose. I am glad to learn that the Colonial Government will provide free passage for myself, wife, and daughter to Sydney,

Believe me, &c.,
E. M. G. EDDY.

Sir Daniel Cooper, Bart.

Then on 29th August, which I think was about the date on which I signed my agreement, I wrote :—

Dear Sir Daniel, Constitutional Club, Northumberland Avenue, 29 August, 1888.

In signing my agreement regarding my appointment to the position of Chief Commissioner of Railways in New South Wales, I have done so, subject to the understanding come to between us, regarding the future increment of salary, as shown in my letter of 8th June, and your reply of the 11th of the same month, viz., that although what I originally stipulated for cannot be embodied in the agreement, £3,000 per annum is not to be considered the permanent salary. Any future increase, however, is to be left to the justice of Government and Parliament.

I have, &c.,
E. M. G. EDDY.

Then there is a letter from Mr. Findlay, now Sir George Findlay. He was engaged on committee work at the House of Lords, and had intended to go to see Sir Daniel Cooper with me, but important business

Mr. E. M. G. Eddy. 30 May, 1892.

business caused him to have to leave the House of Lords, and he could not, therefore, go; but he wrote this letter to the Agent General:—

House of Lords, 8 June, 1888.

My dear Sir,

I had intended to have done myself the pleasure of calling on you with Mr. Eddy this afternoon to congratulate you on the selection you have made, in him, as Chief Railway Commissioner for New South Wales. I have known him pretty nearly his whole railway service, which has been principally with the London and North-western Railway Company. I have the highest opinion of his practical knowledge and ability, and of his integrity, and I honestly believe no better selection could be made. I write this, as I am prevented from accompanying Mr. Eddy to-day; but at some other opportunity I hope to have the pleasure of telling you personally what I have now very shortly written.

Yours, &c.,

GEORGE FINDLAY,

General Manager, L. & N. W. Ry. Cy.

Then follows a copy of the formal agreement into which I entered, and which I do not think it is necessary for me to read. These papers that I have read, Sir, constitute the whole of the correspondence relating to my appointment to the position which I now have the honor of holding. There were no letters of recommendation nor any influence of any ring, or any individual in regard to securing the position for me, and I think the correspondence itself should almost prove the tenor of the whole matter.

5460–1. *President.*] Had you yourself any communication with Sir John Fowler in regard to your appointment? Not one word of communication, and I did not see Sir John Fowler prior to accepting this position, after I was first communicated with on the subject. I did not see him prior to accepting it, and I did not see him after accepting it until immediately before I left England, and then as my own Company was so much interested in the question of the completion of the Forth Bridge, of which Sir John Fowler was the engineer, I took the opportunity of writing to Sir John Fowler and asking him if he would make an appointment to show me over that work. I saw him at the Forth Bridge, and went over the works with him, and that was the first and only time that I saw Sir John Fowler in connection with—I cannot say in connection with New South Wales—but after having entered into negotiations for this appointment.

5462. Had you any communication with Mr. Whitton in connection with your appointment in any way? I did not know of the existence of Mr. Whitton until Sir John Fowler informed me that he had a sister in New South Wales, and that she was married to Mr. John Whitton.

5463. Had you any communication with Sir Saul Samuel in the matter? None whatever, he was not in the country at the time.

5464. Had you any communication, that is directly, with Sir Henry Parkes in reference to your appointment, Mr. Eddy? The only communications I had with Sir Henry Parkes that I am aware of until I met him in the Colony, were two letters which I placed before the Commission, and which perhaps you will allow me to read, they are most simple letters.

5465. *Mr. Smith.*] They have been read.

5466. *Witness.*] Sir Henry Parkes simply wrote to me as far as my memory goes, in the first place sending me a copy of the Railway Map of New South Wales, and a copy of the last annual report, and the last annual report of the Victorian railways, feeling that as I had accepted the position of Commissioner for Railways, I would be much interested in receiving information of this kind so as to post myself up in such matters.

5467. What I mean is, had you any communication personally with Sir Henry Parkes in respect to your appointment to the position which you now hold? None whatever.

5468. Mr. Eddy, I should like to ask you one or two questions more, because the charges which have been made against you are rather vague and appear to be more matters of inference or opinion, and it is difficult to say how far those inferences may extend. Therefore it has occured to me as being only fair to ask you one or two direct questions at this stage. You will understand the motive I have in so doing? Certainly sir.

5469. The first question I wish to ask you is this: Before your appointment were you either directly or indirectly interested in any of these firms of locomotive builders which have been named, such as Messrs. Beyer, Peacock, & Co., Dubs & Co., Neilson & Co., Kitson & Co., or Sharp, Stewart, & Co.? Not in any way whatever. Neither had I any knowledge of any of the people connected with any of those firms. I will explain to you why. In my position on the London and North-Western Railway I was directly concerned in the working of the traffic, and the question of ordering locomotives and matters of that kind would be dealt with between the Chief Locomotive Engineer and the Chairman of the Company or General Manager. I had no need to know anything concerning them. But, as a matter of fact, the London and North-Western Railway Company for many years have manufactured their own locomotives at their own works at Crewe. They have manufactured now more than 3,000 engines. After I went to Scotland the Caledonian Company was in the same position, that is to say they were able to build their own locomotives, and had spent a large sum of money in the preceding few years to enable this to be done. Therefore you will see I had no real personal knowledge of any one in connection with any of the locomotive firms named in this inquiry prior to my accepting the position of Chief Commissioner for Railways for New South Wales.

5470. Did you apply to any of these firms or any member of any of these firms to interfere on your behalf in reference to your appointment to the office of Chief Commissioner? Certainly not. You will see by the papers I have put in that there was no necessity for it. The position was offered to me.

5471. You did not apply? I did not. As I have already said there was no necessity for me to do so, because I was asked to take the position.

5472. Do you know of your knowledge or otherwise whether the firms mentioned or any member of them did interfere with reference to your appointment to your present position? Not the slightest knowledge; and I may say that the correspondence was conducted in such a strictly confidential manner that even my most intimate friends in the railway world knew nothing of it until I had really committed myself to the acceptance of the appointment.

5473. Now in selecting these firms or in recommending these firms or any one of them for the manufacture of these locomotives was there any understanding of any kind between you and these firms or any member of them beforehand? Certainly not, I had no personal knowledge of them either.

5474. Did any person or any ring or any combination of persons interfere in any way so as to ensure hat Messrs. Beyer, Peacock, & Co., or Dubs & Co., should get the orders for building locomotives? Not in the slightest degree.

5475.

Mr. E. M. G. Eddy. 30 May, 1893.

5475. In giving the orders for these locomotives to Messrs. Beyer, Peacock, & Co. or Messrs. Dubs & Co., what in your opinion was the necessity for dispensing with tenders? I do not consider that we did dispense with tenders.
5476. I thought in the case of some of them you said there were no tenders called? Prices were asked for from certain firms and that I consider was calling for tenders. In one or two other cases prices were asked for from certain firms who had built practically the duplicates of the engines which we required; but, as the papers that have been put in will show, even then discussion arose in regard to the matter of prices. As a matter of fact, there was no absolute placing of orders with any firm without the prices being under review by the Agent-General and by the Railway Commissioners.
5477. Would you explain what steps are taken when it is considered desirable to send out an order for locomotives—that is to say, an order sent outside the Colony, what steps are usually taken in such cases? We prepare——
5478. What do you mean by "we?" I am speaking of the Railway Department. Plans are prepared in the department for the type of engine required, as a general rule. An exception was made in the case of an American firm, they supplying their own specifications and drawings. When we send to England, plans and specifications are supplied by the department, and prices are asked to be submitted by certain firms.
5479. How do you send these orders? The orders are sent by the Railway Commissioners in a communication addressed to the Agent-General through the Minister for Railways.
5480. That is what I want to know;—the plans are prepared by your direction—that is, the direction of the Railway Commissioners? Yes.
5481. And when these plans are prepared they are forwarded to the Minister for Railways? Yes; and then a letter is addressed to the Agent-General telling him what the department have decided upon.
5482. Then in reality the Railway Commissioners are the body to decide such matters, and the decision they arrive at passes through the Minister for Railways to the Agent-General in England for him to act upon it? Yes.
5483. The Minister for Railways is the Colonial Treasurer, I believe? Yes.
5484. And he acts on the direction contained in the letter from the Railway Commissioners? Yes; and then the Agent-General sends the result of his inquiry or action back through the same channel—that is to say, we receive the communications from the Agent-General through the Minister for the department.
5485. Then, every step taken by the Railway Commissioners is made, at any rate, with the knowledge of the Government? Most certainly. We have, for instance, to consult the Treasurer as to whether he has the necessary funds. Certainly we get our votes from Parliament, but then we make a practice of being in the closest touch with the Treasurer, for it would not do to commit the Treasury to a large expenditure, unless we knew that the money was available to meet our necessities.
5486. Is the matter made a Cabinet question? No; the Railway Act places the expenditure in the hands of the Railway Commissioners, but, of course, as business men, we consult with the Treasurer as to whether the time is an opportune one for incurring the liability.
5487. And was that course pursued in connection with the orders spoken of in the charge? In every instance.
5488. In connection with the question of orders for locomotives being sent to England, and as arising out of that the order for a certain number of boilers, do you wish to say anything, Mr. Eddy, as to the capacity of the workshops at Eveleigh, that is, in addition to what you have said already? I think it is beyond the question, sir; but, as you have decided to hear evidence on that point, the witnesses to be called will bring a good deal of information on that point before you; but I would like, sir, as the ring of individuals has been given by Mr. Schey, and there are several individuals whom you have not named, I would like to state——
5489. I did not name them simply because Mr. Schey in his evidence eliminated all except the four whose names I have mentioned. But, of course, if you wish to add more you can do so.
5490. *Witness.*] Well, perhaps as it was not stated on oath sir, I think we may treat it in the way we have been compelled to treat a number of other things which Mr. Schey has said. But Mr. Schey did make some allusion to Mr. McMillan, and I would certainly like to state what my knowledge of Mr. McMillan has been, because that gentleman was referred to in such a manner as to insinuate that he had something to do with my appointment. Mr. McMillan's visit to England some years ago was referred to, and it was insinuated that I must have come to some arrangement with him at that time. As a matter of fact, I did not know Mr. McMillan until after he became a minister of the Crown, in March, 1889, in Sir Henry Parkes' Government. When he was gazetted as a Minister I had to ask my colleagues who Mr. McMillan was. That, I think, effectually disposes of the insinuation that there must have been something between Mr. McMillan and myself before I came to the Colony. Mr. McMillan became Minister for Railways, and throughout the whole time he held that office he acted as the champion of the Railway Act, and stood in the most loyal manner by that Act in its integrity; and I suppose it is in consequence of that that Mr. Schey wishes to infer there must have been some collusion or secret understanding between us.

[*Mr. Eddy then left the box.*]

5491. *Mr. Schey.*] Am I permitted to ask Mr. Eddy a question, your Honor?
5492. *President.*] Yes, Mr. Schey, certainly.

[*Mr. Eddy re-entered the witness-box.*]

5493. *Mr. Schey.*] I think, Mr. Eddy, you said that the first letter you read from Major Marindin on the subject of your appointment was the first that you heard about New South Wales requiring a Chief Commissioner for railways? Yes.
5494. Now, as to the locomotive which were purchased from Beyer, Peacock, & Co., I refer to the fifty heavy passenger engines, I believe they are not yet all delivered, are they? No.
5495. And they are not duplicate of any engines that have been previously on the line, I believe? No.
5496. Is it a fact that a letter was written from the Railway Commissioners some six months ago, asking Messrs. Beyer and Peacock to delay sending the remainder of that order? I should like to know who the traitor is that gave you that information?
5497. I beg your pardon? I say I should like to know from what surreptitious source you obtained the information.

5498,

Mr. E. M. G. Eddy. 30 May, 1892.

5498. *Mr. Schey.*] This remark of Mr. Eddy's your Honor, goes to show the amount of injustice he desires to subject me to in this matter. As a matter of fact, this information to which I have referred is contained in the departmental papers I have put in, and which your Honor would not allow me to tell you the contents of. In fact, the papers were supplied by Mr. Eddy himself, and therefore could not have been surreptitiously obtained by me.

5499. *President.*] Proceed Mr. Schey.

5500. *Mr. Schey.*] Is it not a fact that such a request was sent home, after these fifty engines being ordered as a matter of special urgency? Certainly.

5501. And the engines were ordered as a matter of urgency? I should like to see the papers in the first place. I should also like to explain to the Court why I made that remark. It was because Mr. Schey has been in surreptitious communication with a number of our people at various times to try to draw them away from their allegiance to the department. He has in many instances succeeded, and has obtained information which it is most improper should be in his hands. That is why I made the remark as to the mode in which he had obtained his information in this particular instance.

5502. The paper is marked No. 17 of schedule 4, and the letter I refer to is a letter signed by Sir Saul Samuel dated 19th February, 1892. It quotes a reply received from Messrs. Beyer and Peacock, in which, quoting a passage from a letter, they say, That in accordance with the wish of the Commissioners in Sydney, they would retard, as much as they possibly could, the delivery of the last twenty of these fifty engines. That is the letter I refer to, and I suppose you will admit, Mr. Eddy, that this was done? I should have liked to see the paper, but for the purpose of getting on with this inquiry I will admit that such a letter was sent. The reason was this: In consequence of the considerable time that would elapse in getting these powerful engines from England and the approach of the wool season, when we should have been left in a state of blockade if we did not get engines from other sources, that we ordered other engines from America, and they were received in the Colony in time for the wool season. Then later on the Colony fell on troublous times in regard to money matters, and it was quite clear that the construction of new lines would not be pushed on with as rapidly as we anticipated when we placed the orders for all the locomotives. We, therefore, asked the Agent-General to arrange with Beyer, Peacock, & Co., if possible, to retard the delivery of the engines in question.

5503. *President.*] Then you do not want to see the paper now? No, your Honor; I understood Mr. Schey to say it was a printed paper in the first instance.

5504. *Mr. Schey.*] And these fifty locomotives were not tendered for, were they? They were tendered for in the way that business people obtain tenders. Prices being submitted from several leading firms, and these having been duly considered, one firm would be ordered to supply the engines; but in consequence of there being people about who are always seeing coincidences, and things of that kind, we had to adopt another course.

5505. That is a matter of opinion, of course? Oh, yes. I would point out to your Honor, that if you inquire into the method adopted by firms like the Colonial Sugar Company, you will see that they adhere as far as possible, to doing business with firms which have supplied them with excellent machinery in the past without going round to a number of other firms. In this matter three firms were dealt with, namely, Beyer, Peacock, & Co., Dubs & Co., and Neilson & Co.; and if you look at the papers, you will find how jealous the Railway Commissioners were in keeping out of the hands of Beyer, Peacock, & Co. For example, when the Agent-General, at the suggestion of Mr. Thow, or Mr. Thow direct, cabled to us asking that Beyer, Peacock, & Co. might make out the plans, I am under the impression that the Railway Commissioners cabled back that the work was to be done elsewhere and paid for, so that the Commissioners, in deciding where to place the order, would be completely free from any question of the plans having been worked out in the office of any one of the firms.

5506. But in relation to these engines, you say three prices were obtained, namely, from Beyer, Peacock, & Co., Dubs & Co., and Neilson & Co.? I said three firms were dealt with, and there were three sets of prices; but Mr. Thow recommended against Neilson's price being considered, because he said there were certain things in Neilson's plan which he could not recommend.

5507. Just so; and the matter, therefore, lay between Beyer, Peacock, & Co., and Dubs & Co.? Yes.

5508. And Beyer, Peacock, & Co., got the order? No, not at the price sent out to the Commissioners.

5509. There was a reduction of £100 per engine, was there not? The Railway Commissioners considered the price submitted by Beyer, Peacock, & Co., making due allowance for the excellence of their work, rather high, and we cabled back that they could have the order if they reduced the price on the 50 engines by £100 per engine; and that if they would not accept that, I believe we advised that the Agent-General should place the order with Dübs & Co.

5510. And they did reduce the price? Yes, and got the order.

5511. And I believe the price of Beyer, Peacock, & Co. was still considerably above Dübs & Co. for the same engines—I may tell you that Mr. Thow has given that here in evidence? But perhaps, Mr. Thow has not given you something more, and that is, that the time of delivery was different in the case of Beyer, Peacock, & Co. and Messrs. Dubs & Co. We wanted these engines urgently, our traffic was in need of engine-power in all directions, and each one of these engines would be a saving to us roughly, at the rate I think of seven or eight hundred a year; and therefore a considerable saving would be effected the quicker they were put upon the line.

5512. And that question of urgency determined the order to some extent? Almost wholly.

5513. *President.*] Beyer, Peacock, & Co. could deliver earlier than Dübs & Co.? Yes.

5514. *Mr. Schey.*] But was there not something further—was not the price to Beyer, Peacock, & Co. increased afterwards? That was for extras which Messrs. Dübs & Co. would also have required to be paid for, had they got the order in the same manner. Dübs & Co. had a number of other engines to build for us.

5515. Had not Beyer, Peacock, & Co.? They had a few, but only a few. We had twenty mineral tank engines to place as well. With regard to the time of delivering these engines, in the case of Beyer, Peacock, & Co. they were to begin delivering at Liverpool in the month of May, whilst Dübs & Co. would have delivered in August following. By the delivery in May, and allowing three or four months to get the engines out here, some of the engines would be placed on the line in time for the wool season; whereas the delivery in August would have brought the engines out at a time when the great need for their service had passed away, to some extent at all events.

Mr. R. M. G. Eddy. 30 May, 1892.

5516. Then the difference in the time of delivery between the two firms was approximately three months? Yes.
5517. What year were the engines to be delivered in? 1891. The order was placed in 1890.
5518. And the delivery by Beyer, Peacock, & Company would commence in May, 1891? Yes.
5519. And that three months' difference in the time of commencing delivery was the main determining cause of their getting the order? I have given my answer.
5520. Just so; you said it was. And prior to the end of the year you asked that this same order, of which the urgency was so great, might be delayed by nearly half of the engines being kept back as long as possible? The order was given on 22nd October, 1890, and it was late in 1891 that we made the request you refer to.
5521. And before the order was given you knew the time the engines were to be delivered. You have already stated that? Yes.
5522. And within twelve months of the giving of the order you asked that the balance of the engines—in fact, nearly half the order—might be delayed as long as possible? Since you are so very ready in remembering things that took place thirty years ago, perhaps you will recollect that there were financial difficulties for the Colony.
5523. Undoubtedly? Then do not waste more time.
5524. I ask you the question; I ask you if you sent such a letter?
5525. *President.*] You have already asked it several times, Mr. Schey, and it has been answered.
5526. *Mr. Schey.*] I know it has, your Honor; but the Chief Commissioner stated that all these railway matters go through the Minister; but the Minister has no control.
5527. *Mr. Smith.*] Mr. Eddy has said nothing of the sort.
5528. *Mr. Schey.*] I think he did.
5529. *Witness.*] I have not said anything of the kind. The notes will show what I have said.
5530. *Mr. Schey.*] Very well. I have no further questions to put to Mr. Eddy.

Mr. Thow called and further examined:—

Mr. Thow. 30 May, 1892.

5531. *Mr. Smith.*] You have been already sworn, Mr. Thow? Yes.
5532. I want to ask you some questions on the subject of the forty boilers ordered from England. Do you produce the plans, which were in the office at the time you took charge, of the boilers for classes 79, 93, 158, 205, 255, and 261. Are these the classes? There are three sets of plans here which were in the office before the forty boilers were ordered, one belonging to 79 class, another to 93, and the third to 205 class. Each of these contains three plans, two of them belong to the boiler and the fire-box, and the other to the smoke box of the engine. As far as the boiler and fire-box drawings are concerned they are skeleton drawings, and do not show details, and they are not sufficient for any contractor to make boilers from. I have also two sets of plans here, one is for the 79 class of engine which we had prepared.
5533. That is prepared since you took charge? We prepared them for the order for boilers which we had expected to have made in the Colony, either by contractors or by ourselves, and they show more fully the details we required, and are complete and fit to send to contractors to make boilers from; but notwithstanding the fact that I had in my hands the three original drawings for this class of engine, already referred to, the draftsmen had to make a set of plans and make complete specifications, so that we might be in a position to order boilers from outside firms, or even to make them ourselves, if required. There is another set of plans here which have been supplied to us by Dübs & Co. to illustrate the boilers that they made, part of the forty that were ordered. Now this set is complete.
5534. These have come to your hands since? Yes, since we received the boilers. They belong to class 255 and class 261. This set of plans, which we got from Dübs & Co., instead of containing three original plans as the other sets contain, have really got eighteen. The set of plans which we have prepared in our own office contain twelve, and these are sufficiently few to enable any firm to build boilers such as we require.
5535. How long did it take your office to prepare the plans of 79 class? The draftsmen were engaged on them, I think, about twenty-five or twenty-nine days. I forget the exact time; but I know they were fully employed during that time in getting them out.
5536. Was that twenty-nine consecutive days—what time elapsed between your giving the order for the plans and getting them out of the hands of the draftsmen? I think it was about a month.
5537. *Mr. Kethel.*] Was that the regular staff? Yes, most of them are there now.
5538. How many had you on this work? I think there might be three or four men at work on the plans.
5539. *Mr. Smith.*] You are aware that there were boilers built in this Colony—that is of the 79 class? Yes, some were built by the Atlas Company—three, I think.
5540. Do you happen to know how those boilers were built, seeing they had no plans? The Atlas people built eight engines of that class, and of course they had the advantage of any plans we possessed in the office; but in addition they actually had an engine, the department gave the company an engine, and permitted them to take it to pieces, and copy it in its different parts, each part being a model from which they had to work.
5541. They built from the model of an engine which they pulled to pieces, and as soon as they had done the work I suppose they put the engine together again? Yes; they put it together, and we took it from them when they were finished with it.
5541½. Now, were these modifications introduced into these new boilers? Yes; considerable modifications. In the 79 class, for instance, there were originally 107 tubes. We enlarged the heating surface of the boiler by putting 191 tubes into it. In the 158 class, of which we had no plans, there were originally 164 tubes, and the new boilers contain 176. In the 93 class the original boilers had 166 tubes, and the new boilers have 193, as well as an alteration of the fire-box, making the insertion of this larger number of tubes possible. The 205 class of boilers originally had 189 tubes, and this was enlarged to contain 210 tubes, and the fire-box was strengthened with the addition of a mid-feather to permit of greater boiler pressure. The 255 class of boiler was similarly enlarged. It had originally 186 tubes, and the new boilers now contain 209. It was also strengthened with a mid-feather in the fire-box to allow of greater boiler pressure.
5542. For these modifications would new drawings be necessary? Certainly.
5543. You had only what you produce? Yes.

Mr. Thow. 30 May, 1892.

5544. But new drawings would have been necessary for these boilers, to show the variations? Yes, certainly.
5545. Now, with these modifications, was it easier to have got the new boilers from home? Certainly; in point of time it was a great advantage to get them from home.
5546. And if you had ordered the material for these boilers and tried to build them here, would it have taken a much longer time—can you give any idea of that? I believe that we should have been greatly delayed by ordering the material instead of the boilers, because the material would only have arrived here about the same time as the boilers themselves. I may explain that at that time, when we ordered the boilers, the English market was extremely full of work, every maker being fully employed; and we knew in that case that orders going from the Colony would have to wait the convenience of orders from makers at home. The makers at home send their men to the different rolling-mills, and they probably stay there until they receive the material which has been ordered from these firms. We are at a disadvantage when the market is busy in that way, and we took that into consideration when we ordered these boilers. It appeared to me that by ordering the boilers we should get them probably as quickly as if the material were ordered and the boilers made in the Colony.
5547. *President.*] What would be the cost;—would it be cheaper to make them in England than in the Colony? The cost would be very much less making them in England, undoubtedly.
5548. *Mr. Smith.*] It is stated that you had a number of boiler-plates in stock? Yes.
5549. Have you in your possession a list showing in detail the boiler-plates that were in stock? Yes. This is a document which bears date 1st August, 1889. It was prepared for my information by one of my office assistants, and it shows that at an earlier date—on the 12th March, 1885—thirty sets of iron boiler-plates were ordered from England. These thirty sets are for six different classes of boilers, two of which are concerned in the order for the forty boilers given on my recommendation; the other four are not concerned at all. There is the 79 class, and eight sets of iron boiler-plates were ordered for that class, and six sets of iron boiler-plates for 93 class. Then, at date August, 1889, when this document was prepared, the sets of iron boiler-plates for these two classes had dwindled down from fourteen to seven. The material had been taken out in the meantime for repairs, and there still remained at that date—August, 1889—five sets for the 79 class, and two sets for the 93 class. Then, subsequent to that indent for thirty sets of iron plates, there was also another order for copper plates and tubes, dated 8th February, 1886.
5550. The present Railway Commissioners took office in October, 1888? They did.
5551. *Mr. Schey.*] I would ask for a later list than that, which I understand is dated February, 1886.
5552. *Mr. Smith.*] I would ask you to allow me to deal with the witness;—you are not cross-examining him.
5553. *Mr. Schey.*] But I submit, your Honor, that he is dealing with matters that took place three years before the Commissioners took office.
5554. *President.*] He is tracing the history of the matter from that time on. Proceed, Mr. Thow.
5555. *Witness* (proceeding).] This indent of 8th February, 1886, is for copper plates and brass tubes, and it also deals with a number of classes of engines. There are no less than nine, but only two are concerned in the indent for forty boilers, subsequently given—classes 93 and 205. The copper plates ordered for these two classes are merely a few—not a complete lot; they are simply a few special plates for the purpose of repairing the existing boilers. So there is no connection whatever between the indent of 8th February, 1886, and the preceding one of March, 1885. I have no doubt that both these indents were got up for repairing purposes. But at the time we gave the order for the forty boilers, we had not these complete sets of plates, both iron and copper, in store; we had not got complete sets of material in the store out of which we could manufacture any of them. We had, as I have shown, five sets of iron plates for the 79 class, but we had no copper; and we had two sets of iron plates for the 93 class, but no complete sets of copper plates.
5556. *President.*] Do you say that you had not the means to manufacture these boilers with the material in hand? I should have considered it quite impossible, your Honor.
5557. *Mr. Smith.*] Will you hand in the list of the 1st August. Does that give all the particulars you have referred to in your statement? Yes; that shows all I have dealt with in my statement. [*Document put in.*]
5558. As I understand it, of the original fourteen sets, there were only seven sets of plates left, and those were not suitable for making new boilers, but for effecting repairs to existing boilers? There were seven sets of iron plates only. They would have been quite suitable for building new boilers or repairing old ones; but we had not complete sets of copper plates.
5559. And if you had ordered copper and used it up, you would have been without plates for making repairs to other boilers of the same classes? Yes; we should have exhausted the stock, and had to import other plates for repairs that were required.
5560. You have a great many boilers now awaiting repairs, I believe? I think there are twenty-six.
5561. That is inside the Eveleigh workshops? No, outside, waiting to be taken in hand. We have a number inside the works undergoing repair; but there are twenty-six outside which we have not been able to touch up to the present time.
5562. And in order to repair these, it is necessary, in some cases, to use new plates? Yes.
5563. Have you got a list showing what stock of boiler-plates you have on hand at the present time—the reduced stock? I do not think I have a list of that kind.
5564. *President.*] I do not think it is necessary to get that.
5565. *Mr. Smith.*] Very well, your Honor. (To Witness): Of course in that you have not referred to the material imported for the two classes—five engines of each class that were to be built by colonial workmen? No; that was a distinct matter.
5566. That was a distinct matter? Yes; they were for the 131 and 304 classes—specially ordered for those two classes.
5567. And have you those still? Yes; with the exception of some that we have taken out of the store and put together at the Eveleigh works for the 131 class—four new boilers for the 131 class.
5568. Then, over and above this boiler stock, there was no material in hand for the thirty or forty boilers referred to? Certainly not.
5569. Now, from the time you gave the order for these boilers, has your boiler shop been as full of employment

employment as possible in the ordinary way? Yes, it certainly has. Mr. Thow.

5570. That is in the matter of repairing I mean? Yes; in the matter of repairing.

5571. Since you have taken charge have you made any new boilers? No; we have not completed any since I took charge. There were a few which had been ordered by my predecessor, Mr. Scott, and they had either been completed before I took charge or were nearly completed. 30 May, 1892.

5572. How many? I think, altogether, at different times, he may have ordered seven. Some of them were very small boilers for shunting engines—little things; but the only boilers that have been ordered since I took office are the four which are at present being made out of the plates you have referred to.

5573. That is for the 131 class? Yes.

5574. How long have they been in hand? I think about nine or ten months.

5575. Are they near completion now? No; I should say they are scarcely two-thirds completed yet.

5576. Something has been said about there being accommodation enough at Eveleigh to build locomotives, or at least build boilers in addition to the repairing work done there. Is there such accommodation? No; that is quite incorrect. There is not accommodation to build boilers in addition to repairs with any thing like the speed that we require them.

5577. *Mr. Smith.*] I do not know whether the members of the Commission propose to exercise the power given to them under the Commission to inspect the Eveleigh workshops and see for themselves, as far as possible, the accommodation there provided. But that will be a matter for subsequent consideration, I suppose.

5578. *Mr. Schey.*] I beg to urge upon your Honor that that be done. I think it highly desirable that the Commission should see for themselves. But in the event of their going I should like to accompany them.

5579. *Mr. Smith.*] That might possibly deter the Commission.

5580. *Mr. Schey.*] I trust your Honor that there will be no objection to my doing so.

5581. *President.*] We say nothing about that at present, but we will consider the matter of inspecting the workshops.

5582. *Mr. Smith.*] Well, Mr. Thow, do you consider that there is sufficient accommodation at Eveleigh, without putting aside the necessary repairs, to build new boilers? Certainly not. We have had an instance of it in these four boilers which have been in hand for so many months. Repairs have really been put to one side in order to push on with the construction of the four new boilers which were wanted for a special reason.

5583. Have you all the machinery at Eveleigh to construct these four new boilers? No; we have not got the machinery which is necessary for them entirely; we were obliged to send some of the plates to Mort's Dock to be rolled in the proper shape, as we had not rollers in our own place large enough to deal with them.

5584. Do you consider it would have been an economical mode of working to put aside repairs, and construct new boilers? No; I do not think so.

5585. Something has been said about altering the paint shop;—could that have been done economically, so that the paint shop could be converted into a new boiler constructing establishment? No; it is not suitable for that certainly. It might be utilised so as to give more room for repairs of engines and tenders, but we should have to expend a large sum of money in putting cranes and machinery into it to make it a useful shop. It has never been fitted up for the purpose of dealing with engine repairs.

5586. It could not have been used right away? Oh, dear no; not economically. I do not say engines could not be repaired there, but it would be at such a cost as to be unjustifiable in any way.

5587. Now the next point I would like to ask you is, as to whether you know the amount of space which is required for building machinery of this kind;—for instance, a good deal has been said about the North London Co.'s repairing establishment, and it has been said that it is not as big as the works at Auburn;—what have you to say on that point? I was through their shops, that is the shops of the North London Railway, not very long ago. They are not very large workshops, but they stand on an area of 10 or 12 acres, if not more. The buildings, however, and the accommodation, that is the means of doing their work, are very much larger than at Vales of Auburn—I should think five or six times as large.

5588. You would not be surprised to know that it was even ten times as large? I would not. I have not made any accurate comparison, but I should say that they are at least five or six times as large.

5589. I happen to know that they are ten times as large, but I did not know whether you knew it or not? No; I do not.

5590. With respect to the urgency of getting these boilers, what was it;—had you duplicate boilers for these classes of engines at the time? We may perhaps have had one or two duplicates, but they were required, and in addition there were engines running with boilers, which I considered it not wise to continue in traffic. And that was the reason why we were obliged to take the quickest possible means of getting other boilers for these engines. I considered it necessary for the safety of the public that those boilers should be taken out of the service, and trustworthy ones put in their place. For the economical working of locomotives it is necessary not to keep them idle while boilers are being built.

5591. I think this was explained by Mr. Midelton;—when you take an engine off the road in that way, you are supposed to have a duplicate boiler ready to put in the place of the old one, so as to put the engine on the road again? Yes; that is the way.

5592. And then you repair the old boiler? Yes; for any other engine of the same class that it might be required for.

5593. And it was because that there were no duplicates of this class of boilers that it became a matter of urgency to send home the order in question? Yes; there was not a sufficient number. I think we had one or two duplicates, but not enough.

5594. It has been suggested here that as soon as the new boilers came, which were urgently required, you ought to have brought the engines in, and taken the old boilers out and put the new ones in? I should have been glad if we could have done that, but the engines were wanted on the road, and we could only take those engines out of traffic that were really unfit for further service. We could not possibly take engines out of traffic and keep them idle while the new boilers were being put in, because we had not a sufficient number of engines to work the trains.

5595. Comparing the work done by the locomotives of this Colony with that done in England, can you tell me whether our locomotives do more or less? Our locomotives have been more employed than is usually

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usually the case in England. For instance, on the English lines locomotives will run, perhaps from 1,800 to 2,000 miles per month. Here we have been running from 4,000 to 5,000, and in some cases up to 7,000 miles per month. That is due to the fact that we have not the requisite number of engines to conduct the work of the country.

5596. It has been stated here that it is an economical system to work engines day and night;—do you agree with that? No; I do not agree with that. An engine requires rest just as much as a horse, or any other power which produces labour.

5597–8. And why do they want this rest? Because there are always a few minor repairs and attentions required to engines after they have been at work.

5599. And it is more economical to attend to those repairs than to allow them to go on? It is with locomotives as with other matters; "a stitch in time saves nine."

5600. Is there not a special kind of attention which an engine requires regularly? Yes; they must have their boilers washed out very frequently.

5601. How often? In some districts we require to wash out the boilers after every round trip. That is if an engine leaves its own station and returns to its own station it requires to have its boiler washed out; and if that is not done the water is of such a character that the next time the engine goes out the boiler primes, and the engine is not able to take the load.

5602. *President.*] What do you mean when you say that the water is of such a character? I mean, your Honor, that it contains lime, magnesia, and other impurities, which cause accumulations in the boiler if the water is not changed, or the boiler is not cleaned.

5603. *Mr. Kethel.*] I suppose these foreign substances form a scale on the inside of the plates? Yes; an incrustation takes place on the plates, and that is the reason, the great reason, for washing out the boilers frequently. Unless we gave that attention to the boilers, the engines would not be able to carry the loads they ought to carry.

5604. *Mr. Smith.*] Do you manage to keep each driver to his own engine? No; we have not been able to do that as yet; we have not sufficient locomotives—in fact, nothing like sufficient. Even since the new engines came to hand, only in very few cases are we able to keep one engine for the same driver. We do in a few cases, and in some very special cases we have always kept an engine in the hands of one set of men. For instance in running the express between Goulburn and Sydney, that being special work, and requiring very great attention, we have managed to keep the engines in the hands of one set of men; but that does not apply to the other sections of work. Latterly we have been able to get the new engines attended to, as a rule, by two sets of men.

5604½. I suppose the less the number of men who tamper with an engine in that way the more economical is the working? Certainly; each man should have his own engine; that is the proper way of working.

5605. Now, this washing out of the boiler—is that a long process;—what time does it take? From twelve to eighteen hours. An engine goes in hot, and the water must be allowed to cool down or, at all events, the boiler must be allowed to cool down before cold water is put into it. If that is not done the boiler is much injured or distressed in its joints. Sometimes we have been obliged to do this in face of the risk of injury to the boiler—we have been obliged to wash out the boiler and put in cold water sooner than we should do.

5606. Of course, there has been a large introduction of engine power since you took charge of the Locomotive department? Yes; to a considerable extent.

5607. And at considerable expense? Yes.

5608. Do you look upon that expenditure as economical or extravagant? I regard it as a most judicious expenditure, and one which will lead to considerable economy.

5609. Is it at the present time producing economical results? Yes; for instance, our large engines are being worked at very much less cost than the two engines which were formerly required to do the same amount of work.

5610. Is it economical both in the wages and in the train miles run? In the consumption of force and wages.

5611. But not necessarily in the train mileage? No; that does not come into the question. But there is another great advantage which I might mention, and that is the keeping of time. Our trains now keep very much better time as worked by a single engine than when they were worked with two.

5612. Of course, this using of one engine in the place of two is not a novelty of yours; you are quite aware that it was suggested by Mr. Midelton long ago? Every one suggests it who has the work in hand.

5613. I may tell you that, from the Parliamentary papers put in during Mr. Midelton's examination that fact appears, and I only want to elaborate it. Have you assisted to work out the saving, the annual saving, by the use of one of these larger engines as against two smaller ones? I have not worked it out, but I should think it is considerable. It must be at least £600 or £700 a year.

5614. *President.*] That is for each engine? Yes, your Honor; for each engine.

5615. *Mr. Smith.*] The saving effected by each of the large express engines? Yes.

5616. So that if one of those engines cost £3,500, it would pay for itself by the savings in about five years? Yes, undoubtedly.

5617. *Mr. Schey.*] You were asked some questions, Mr. Thow, about boiler plans, and I believe you put some in? Yes.

5618. And I think I understood you to say that with the exception of one lot which contained, I believe you said, about eighteen drawings—with that exception there were no other plans sufficient for the preparation of necessary drawings? No; I did not say that. I said that the eighteen plans alluded to represented boilers which had been made under the indent for the forty boilers, and I also said that of the 79, the 93, and the 205 classes, we had only three original drawings, and I further said that those drawings were quite insufficient for the purpose of making boilers.

5619. They were quite insufficient for contractors to make boilers from? Yes.

5620. Were they quite insufficient for you to make boilers from? Yes; they were insufficient for us.

5621. There was no data upon the plans from which you could have prepared the necessary information to construct the boilers to? Not without making other plans.

5622. Just so. But the data was on those plans which would have enabled you to make any other drawings you required? No; I could not expect any firm of boiler-makers to make boilers from the plans we had in the service at the time I speak of.

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5623. You say that no firm could have made boilers from those plans? I do not think it would have been treating any firm properly to ask them to make boilers from those plans without giving them other information.
5624. That is not the question I ask you. Did those plans contain sufficient data from which you yourself, or your draftsman, could have made the requisite drawings? Yes; we did ultimately. We made a set of plans containing twelve, which I have handed in, they were prepared to make the 79 class of boiler from.
5625. I presume there were other plans in the department besides those you have produced, from which you could have made boilers? No; these are the plans concerned in the forty boilers which were indented for. There are no others.
5626. Beyond the plans which you have produced here, there are no others of any kind which could have been used for making any of the boilers concerned in that indent for forty boilers? With the exceptions I have already mentioned in my evidence, we had a set of plans in the office relating to boilers which were ordered for the 255 class or the 261 class. We had sufficient plans from which we might have made boilers in the Colony for those classes but for no others.
5627. Then, in addition to the plans you have just spoken of and those you have put in, you say there were no plans from which some of these forty boilers might have been made? I have said that we had only one set of plans from which boilers could be properly made.
5628. And those, I believe, related to the seventy-nine class? No; they related to the 255 or the 261 class. There were not sufficient plans for the 79 class.
5629. That is in addition to those you have put in? Yes; the plans for the 255 class are in addition to those I have put in.
5630. Then, besides the plans for the 255 class and those you have put in, there were no other plans at all which would have sufficed to make any of these forty boilers? There were none to my knowledge.
5631. You say there were none? I say there were none to my knowledge. I have not seen any. I do not think there were any. I have never heard of any.
5632. Did you inquire whether there were any? Yes; I have inquired.
5633. Then, having taken every means to find out, you assert that there are no others? I say there are no other plans to my knowledge.
5634. I think, in one of your answers to Mr. Smith, you made some reference to an engine which was lent to the Atlas Company, and which I believe you said was taken to pieces? Yes.
5635. I suppose that was done to enable the company to obtain patterns for the different parts? It was done to enable them to make engines. They had eight locomotives to make, and in addition to the plans we possess we handed over to them an engine to use as a model.
5636. It would be by no means necessary to pull an engine to pieces to enable you to build a boiler? It would be necessary to take the boiler out of the frame.
5637. To put another one in? In building another to it.
5638. If you had a plan? Not if you had complete plans.
5639. If you had complete plans it would not be necessary to take the boiler out for such a purpose? It would not.
5640. As a matter of fact, it would be an extraordinary course to pursue? In the absence of complete plans it is necessary to have something else, and the next best thing is to have a model to work to.
5641. I say that is not the usual course to pursue? It is a very unusual course where opportunities are given to have engines made in the proper way.
5642. If you had proper plans could you not make a boiler much more easily than taking an engine to pieces in that way? I do not think so, because it was not a question of making boilers in the case I allude to, it was a question of making engines complete. That is the reason the Atlas Company were given the use of this engine. We did not give them an engine in order to make a boiler, but in order to construct a complete locomotive.
5643. That is what I am saying. Putting the engine on one side, if you wanted to make a boiler it would be much easier, if you had the data from which to prepare plans, to construct a boiler to those plans than to take an engine to pieces for such a purpose? Undoubtedly; that is the proper way of doing it.
5644. I think you mentioned in your evidence certain differences which exist between the boilers which were indented for and those it was intended they should replace? Yes.
5645. There were differences in each case, were there not? Yes.
5646. More or less? Yes, more or less.
5647. Therefore, the boilers were not really duplicates of those they were intended to replace? Not exactly; there were the differences I have already mentioned.
5648. And as a matter of fact, the boilers indented are not duplicates and they were not ordered as duplicates? I have said there were certain differences. In other respects the boilers are duplicates of those they are intended to replace.
5649. But those respects form considerable differences in some cases, do they not? Not considerable.
5650. Was not the heating surface increased in one or two cases? Yes.
5651. And in one case the fire-box was altered. That would be a considerable difference would it not? In two cases the fire-boxes were altered.
5652. That would mean a considerable difference? I do not consider it a considerable difference.
5653. In any case the boilers were not exact duplicates? No.
5654. And to make them new drawings would be required? I did not say so. I said that to make them full and complete drawings would be required.
5655. I understood you to say in answer to Mr. Smith, that even if the drawings had been in existence, it would have been necessary to make fresh drawings for these boilers? So far as these particular differences are concerned.
5656. And you say the differences were not very great? No.
5657. And therefore the preparation of drawings would be a very small matter? Yes, so far as the differences were concerned.
5658. Just so, the other parts were alike? Yes.
5659. Therefore, as the differences were not very great the drawings required would not be large ones? The drawings to show these differences would not have been large ones, but I am telling you that we had not the necessary drawings for the boilers.

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5660. That is not the question I am putting to you. You say that if the drawings were in existence fresh drawings would have been necessary to show the differences? I said so far as these particular differences were concerned.
5661. And these differences you say were not large ones? Yes.
5662. And therefore, the new drawings to be prepared would not be a very great matter? I have told you distinctly that we had no drawings from which to build the original boilers, and therefore it was necessary to prepare drawings for the original boilers containing the differences. Or if that was not done, it would have been necessary to prepare other drawings showing those differences.
5663. I quite understand that. The question you were asked by Mr. Smith was if the drawings had been in existence. I am putting my question on exactly the same presumption. If the drawings had been in existence the other drawings necessary would not have been a great matter? They would not have been a great matter.
5664. I think you also said that if the material for the boilers had been ordered, it would probably not have been supplied in a less time than the completed boilers? I said that was my belief.
5665. You think the completed boilers could be obtained in the same time as the raw material? I believe the boilers were obtained in almost the same time as the raw material would have arrived here.
5666. Do you know the time in which they were supplied after the order? I think I can tell you.
5667. Give me the date when the first boiler went into store? The first boilers were received by the stores in May, June, and July, 1890.
5668. And they were originally ordered, were they not, in June, 1889? Yes.
5669. Then the first boilers were not delivered until eleven months after the orders were given? Yes, in about that time.
5670. You do not think that the raw material could have been obtained in less time than that? I do not think it is at all likely, judging from our experience. We find that it often requires from twelve to eighteen months, and sometimes as much as two years after an order has been given for the delivery of material.
5671. Then, it is rather a slow process No doubt it is, but still it happens thus.
5672. Although these boilers were delivered, the first of them in May, it was not until a considerable time afterwards that any number of them were used? Quite so. We were not able to apply them very rapidly.
5673. As a matter of fact, only a very few were employed within the same year in which the first boilers were delivered? I think a good many were used.
5674. I am talking of the close of 1890?
5675. *Mr. Smith.*] All this information has been given in the form of a return.
5676. *Mr. Schey.*] Then, why did you ask any questions on this subject this morning?
5677. *Witness.*] I think that at least eight of the boilers were put into use in 1890.
5678. *Mr. Schey.*] Then, as a matter of fact, the boilers were here long before the exigencies of the department would allow you to use them? They were not here before we wanted them.
5679. But they were here long before they were used? Yes, the material must be here before it can be used. We often have material in store six months before we use it. It is necessary to have it.
5680. As a matter of fact, some of these boilers have only been used this year? Yes.
5681. And I believe there is still one on hand? Yes, there is still one on hand.
5682. Now, I observed that you put in a return of the boiler-plates in stock on 1st August, 1889, did you not? Yes.
5683-4. Was stock taken at that time? No; I do not know that any stock was taken, except so far as regards the boiler-plates.
5685. You sent out for the information? I sent out to see what boiler-plates we had in stock suitable for boiler repairs or boiler purposes.
5686. Can you tell me from that list whether the stock in hand in August was anything like what it was in November and December, 1889? Yes; I think the stock I mentioned as being in store on 1st August, 1889, would be in store in December of that year.
5687. Was there no more in store on that date? I do not think so.
5688. About how many tons would that be you mentioned? I think you are talking of another matter altogether. The plates which I mentioned as being in stock were plates out of which boilers might be manufactured if we had other plates to make the complement. There were a number of other plates specially obtained for repairs, and they are not shown in the list. We very often get half plates for ordinary repairs, and no doubt we have some of them in stock, in addition to those I have already mentioned as being suitable for, and as being part of, the indent on which boiler-plates were subsequently ordered, either for repairs or constructing boilers.
5689. About how many tons of boiler-plates on an average go to a boiler? A large boiler will weigh from between 8 to 10 tons.
5690. But that is not all boiler-plate? No, but it is all boiler material.
5691. I suppose it includes at least 2 or 3 tons of other material besides plates? It includes the tubes.
5692. And other things, does it not. What would be the average weight of plates in a boiler? There would be 6 or 7 tons of iron boiler-plates.
5693. I mean exclusive of fire-box, tubes, ferrules;—in fact, I want the weight of plate alone? Three or 4 tons.
5694. You are not in a position to say that there were not nearly 300 tons of boiler-plate on hand about the time you have mentioned? You had better question the storekeeper about that.
5695. If the storekeeper says there was close upon 300 tons of the boiler-plate in hand at that time you are not prepared to dispute his statement, I suppose? I should fancy he would know what he was talking about.
5696. You remember, do you not, the two contracts entered into for making locomotives in the Colony; I think they were for thirty locomotives? I have heard of them.
5697. And a quantity of material was intended, was it not, to make some of those locomotives? Material was indented for a quantity of boilers.
5698. A quantity of material of all sorts? No; I think the indent was chiefly confined to boiler-plates.
5699. Sufficient for how many locomotives? For five of each of two kinds.

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5700. Do you know whether that indent was repeated or duplicated? I do not think it was.
5701. I may tell you that I have already put in a paper from the department which states that the indent was repeated;—now, that being so, the material obtained would represent ten engines of each class? Yes.
5702. Now what material was specified for these boilers? I think it was steel.
5703. Then, if these two indents were sent, there would be sufficient steel boiler-plates on hand to make twenty boilers? Yes; of two classes.
5704. *Mr. Smith.*] What are those two classes? One hundred and thirty-one and 304.
5705. *Mr. Schey.*] That material would be included in the two indents I have spoken of presuming they were sent? No doubt the material was got by indent.
5705½. If these indents were executed that would mean that there would be sufficient steel boiler-plates for the manufacture of twenty boilers? Yes; of a special kind.
5706. But the material would be here? Of course it would.
5707. That material would not be included under the head of iron-plates or copper-plates? You must ask the storekeeper about that, but I rather think it would. In giving his stock of boiler-plates I think he would include steel as well as iron.
5708. Take the B.B.H. boiler-plates, would they be steel? No.
5709. Or the Lowmoor? No.
5710. Or the Leeds? No; I do not think so.
5711. Then the steel boiler-plates would probably be in a separate list? The storekeeper would no doubt be able to give you full information. I cannot; I have not seen any paper put in.
5712. Now, Mr. Thow, when you took charge at Eveleigh were there any boilers then under construction in the shop? I am not quite sure, but I fancy there were some not completed.
5713. That would be in course of construction? Yes.
5714. Do you remember whether they were iron or steel? Iron, I think.
5715. Do you remember any steel boilers being under construction? I do not, except those which we now have under construction. We are at the present time building four steel boilers.
5716. I am asking you of the time you took charge? I do not think there were any at that time.
5717. Do you remember what was done with the boilers which you say were then unfinished? If my memory serves me right, I think they were completed and applied to the 93 class of engines.
5718. Are you prepared to say that there were not two steel boilers partially completed at that time? I am not aware of them.
5719. Are you prepared to say that there were not? I am not aware; I have given you all I know, and if that information is not sufficient I can only regret that I am not able to furnish you with fuller particulars.
5720. Are you making any steel boilers at the present time? Yes; I have already told you that we have four in hand.
5721. None of these, I presume, are boilers which were commenced some years ago and now being completed? No.
5722. They are fresh orders? Yes; the boilers are intended for the 131 class, and we imported the plates some time since.
5723. Then as to the paint shop to which some reference has been made;—I think I understood you to say that it might be used as an erecting shop? I said it might be used as an erecting shop if we put the necessary machinery into it, cranes and other appliances.
5724. Is there any proposal now, or was there a proposal a little time ago to use the paint shop in connection with building locomotives? No.
5725. Or to use it for tenders? Yes; there is a proposal to use it for tenders. If we adopt it the work will be done at considerable loss, because we have not got the machinery to deal with the tenders in the cheapest possible way; but our needs are so great that we are obliged to put up with that loss, and to use the paint shop as an erecting shop for tenders.
5726. Then it is proposed to use the paint shop for the purpose of dealing with tenders? It is intended to.
5727. To an ordinary layman who does not understand your technical terms a tender, I suppose, would appear to be part of a locomotive? Well, I suppose I must say yes. I should have thought, however, that with your extensive railway knowledge you would have had no need to put such a question.
5728. I am not going on my knowledge, but on the knowledge of a layman, who does not know these technical terms? Then it is the tender of a locomotive.
5729. And they always go together? Sometimes.
5730. You were asked some questions about the North London Workshops at Bow. Are you aware that the description of these shops given by the witness spoken of applied to years ago? I know nothing about what a witness has said. I saw the shops myself.
5731. You were asked whether you could describe the size of the shops? Yes; and I did describe them as far as I could.
5732. Undoubtedly; but I suppose you are not prepared to say that the shops were the same size fifteen years ago as when you saw them? I am not prepared to say so, but I think they were the same size, and for this reason: I know that for several years the North London locomotive stock has not been increased. It has consisted of about eighty locomotives for several years.
5733. But several years and fifteen years are widely different terms? That depends.
5734. The term several does not generally include as much as fifteen years? I do not intend it to mean fifteen years ago.
5735. And you still think that the quickest possible way of getting those boilers was to indent them as they were indented? I am sure of it.
5736. They could not possibly have been supplied more quickly in any other way? They could not, in my opinion.
5737. I suppose you know the new engines, the 304 class. I think they are known as the Scotch Yankees? Yes.
5738. Do you know what they will draw? I think I have already given you that information.
5739. *Mr. Smith.*] I object to these questions, Mr. President. This is a part of Mr. Schey's case which I have not gone into. Mr. Schey has closed his case, and I do not think he should be allowed to reopen it in this way.

5740.

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5740. *President.*] What was the question?
5741. *Mr. Smith.*] It was as to what some engine or other could draw.
5742. *Mr. Schey.*] I am simply going to ask a question on one put by Mr. Smith himself, and I am only putting it in a slightly different way. Mr. Smith asked about the new engines, and their powers, and so on, and I simply want to put one question on the same subject.
5743. *President.*] Put that one question, Mr. Schey.
5744. *Mr. Schey.*] I ask you, Mr. Thow, whether the engines spoken of would draw a train large enough for all ordinary purposes on our lines? Where?
5745. Over any part of it? No; they will not draw what the Commissioners require them to draw over the heavy parts of the road.
5746. That is not the question I am asking you. I ask you whether they will not draw as big a train as we can fill? You must examine the traffic officers on matters of that kind. I have nothing at all to do with train filling.

Mr. Henry B. Howe sworn and examined:—

Mr. H. B. Howe. 30 May, 1892.

5747. *Mr. Smith.*] What are you, Mr. Howe? By profession I am a mechanical engineer.
5748. And what situation do you fill in the railway service? I am general works manager at Eveleigh.
5749. Have you been there for many years? I have been some twenty-eight years in the service.
5750. You have complete charge of the Eveleigh workshops? I have.
5751. And I suppose you have been in these shops ever since they were opened? No, sir.
5752. At what time did you go there? I took charge in May, 1889.
5753. You say you have been altogether twenty-eight years in the service? Yes.
5754. Do you know anything about the importation of forty boilers? I think I remember the circumstances.
5755. Do you remember about the time when the order was given? I think, as near as I can remember, it was in June, 1889.
5756. At that time was there accommodation in the Eveleigh shops to enable you to have built a number of the boilers ordered in that indent? No.
5757. You say there was not accommodation at that time? There was not.
5758. At that time you had not sufficient accommodation to build those boilers? Not to have built any of them and keep pace with the repairs, considering the state they were then in.
5759. How long, supposing you had then started to build these boilers, how long do you estimate would have been required to construct the whole forty? Do you mean and continue the repairs?
5760. Yes, and do the necessary repairs? It would run into a matter of years, I should think.
5761. Do you mean four or five years? Three or four, or more.
5762. Would that work have interfered with the necessary repairs to other locomotives? The repairs to boilers would have been stayed.
5763. And even by staying the ordinary repairs it would have taken you three or four years to build these new boilers? Yes; I may say that a quantity of repairs are standing at the present time in consequence of our building four boilers in the shops.
5764. Are you aware how many new boilers have been built at Eveleigh? Some five or six, I think; but not during my time.
5765. How many have been finished in your time? I have completed two or three in my time.
5766. Were those boilers commenced before your time? Yes, before I took charge at Eveleigh.
5767. Do you know as a matter of fact about what date they were commenced? I cannot say.
5768. How long did they take to build. Have you any idea whether they were built in a few months or was it a year or two? I think they were in hand about eighteen months.
5769. At any rate they were in hand for a considerable time? Yes.
5770. And the four boilers you are now building have they been long in hand? Nearly ten months.
5771. I think you said that even that work interfered with the repairs? It does, and for this reason: When we utilised the forty boilers, which have already been spoken of, other boilers were taken out of their frames to make way for the new boilers, and of the number which were removed twenty-six are now standing in the yard waiting for accommodation and the opportunity to deal with them.
5772. Twenty-six of that number? Yes. Twenty-six are now standing in the yard for want of accommodation.
5773. Now as to the accommodation at Eveleigh, something has been said about the paint shop being utilised. Of course you know the paint shop, and perhaps you can explain to the Commission whether the shop could be used with the machinery now in it for the purpose of building boilers? It could not.
5774. Will you say why? There is no accommodation; there are no means of lifting; there are no appliances.
5775. I suppose if the members of the Commission went out there you could show them the paint shop, and the appliances, and explain the whole matter to them? I may state that we have already in the paint shop, and they have been there for some months past, two boilers undergoing repairs, simply because there is not room in the boiler shop. We also have three engines standing in this shop undergoing minor repairs which could not be done in the running shed. In addition to these we have six tenders. We have been utilising the paint shop for some time for tender work, because there is not sufficient accommodation in the erecting shop to deal with tenders.
5776. As it stands to-day, is the Eveleigh shop fitted with machinery suitable for building boilers or locomotives? Boilers could be built there provided we had nothing else to do.
5777. But they could not be built there, I understand, without putting aside other and necessary work? That is so.
5778. And is that other work more urgently wanted? It is.
5779. Can you tell us whether, at the time the forty boilers were indented, there was an urgent need for more boilers? It was undoubtedly an urgent matter.
5780. What would have happened if the boilers had not been imported? We should have had to have stopped a number of engines.
5781. You had not duplicate boilers for a number of locomotives? We had not. I may tell you that when the Hawkesbury Bridge was opened, within a fortnight we changed some seventeen engines, and turned out good ones to replace them.

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5782. Those were from the Northern district? Yes; we took away seventeen engines which needed repairs, and replaced them with seventeen in good order, and which had passed through the shops. If the Commission visited Eveleigh, I think I could show them some of the boilers which we removed at that time for the purposes of repair.
5783. Something has been said of the way in which the work was proceeded with previously. Do you know whether, at the time Mr. Thow took charge, a number of valuable locomotives were standing idle for want of boilers? Yes.
5784. What class were they? At that time there were six of the 131 class.
5785. What is that? The old American consolidation engine.
5786. A heavy goods engine? Yes; an engine then considered to be the most powerful goods engine in the service. There were six of them standing in the running shed.
5787. How many locomotives were there of that class? Eleven in all.
5788. And of those eleven six were standing idle? Yes; were standing idle in the running shed waiting to be dealt with in the way of having a new fire-box put in. The boilers required to be taken out of their frames, the old fire-boxes cut out and new ones put in to replace them.
5789. How long were they standing there? For some months, I believe.
5790. Were they standing there at the time Mr. Throw became Locomotive Engineer? While he was in charge they were standing there for a considerable time.
5791. Two or three months or more? Possibly.
5792. You say, then, that out of eleven of the most powerful goods engines in the service six were standing idle for want of boilers? Yes, or extensive boiler repairs.
5793. In the proper course of management ought you not to have had in stock duplicate boilers for those engines? I might say that some duplicate boilers were obtained. There were four I believe, but that was before I took charge. They had been put in and the old boilers had been dealt with to replace some of the six then standing.
5794. Of the eleven four had been replaced with new boilers, and the others were left standing for months? Yes.
5795. Have you got any returns of the number of locomotives standing idle at that time? Yes; I have a return here which shows the following engines: 134, 135, 136, 137, 140, 141.
5796. And there were also two Baldwin passenger engines, Nos. 105 and 130, waiting for new fire-boxes? Yes.
5797. That makes eight in all? Yes.
5798. What is now being done to those locomotives? They have since been put in order, and they are now all in service. In addition to that we have one of the old boilers repaired and waiting as a spare one.
5799. *President.*] During all the time you have been at Eveleigh have the works been fully manned? Yes, your Honor, so far as conveniences would allow.
5800. And during that time have the works been fully occupied in effecting repairs? Yes, your Honor.
5801. And have you been able to keep pace with the requisite repairs? We have not, your Honor.
5802. And am I to understand from that that it would not have been possible to utilise the Eveleigh works for manufacturing boilers for locomotives up to the present time? Not up to the present time if we must keep pace with the repairs.
5803. *Mr. Schey.*] I think you say, Mr. Howe, that you took charge of the Eveleigh workshops in May, 1887? Yes, on the 20th May, 1889.
5804. And for some years before that you were in the Tramway Department? I was transferred from the railways to take charge of the tramways while Mr. Downes was in America.
5805. You were in the tramways for some years? Nearly six years.
5806. And you were then transferred to take charge at Eveleigh? Yes.
5807. You say it would have taken three or four years to make the forty boilers in addition to carrying out the ordinary repairs? It would.
5808. The forty boilers were ordered in June, 1889, were they not? I believe so.
5809. That will be three years next month? Yes.
5810. Of course if you had made them at Eveleigh you would have put them into use as they were completed. There would have been no need to wait until they were all finished? We would not require to bring them all into use at once; possibly circumstances would prevent that.
5811. What I mean is this that during that three or four years you speak of as the boilers were made and turned out from time to time they would be put into use? Yes, we might have made one now and again and put it into use, but as I said before that would have been done at the expense of other and necessary work. I object to start to build new work when so much repairing requires to be done, and I have pointed that out to the Chief Mechanical Engineer.
5812. But your estimate of three or four years was given on the supposition that the repairs would be proceeded with at the same time? Possibly; but I would not confine myself to three or four years. I should require a little time to think over the question before giving a definite answer.
5813. At the same time if you had no repairs but went straight on with new work a less period would be required? Undoubtedly.
5814. I understood you to say that a small number of boilers were made before you went to Eveleigh? Before I took charge at Eveleigh three boilers were made for the 93 class.
5815. And any others? Two for some small tank engines 29 and 31. Those boilers, however, were not used in the engines because the engines were becoming obsolete; but they have been used for stationary purposes since.
5816. And from that time until lately you have built no other boilers? None.
5817. But now there are some under construction? Yes.
5818. *President.*] Four, I think you said? Yes, your Honor.
5819. *Mr. Schey.*] Were the Eveleigh works opened very long before you went there? I believe they were opened in 1887.
5820. Towards the end of 1887? I think so, but I cannot tell you positively.
5821. And the boilers you speak of were made before you went there? Yes. I might tell you that, although the works were opened at Eveleigh, there was still some work being done at Redfern in the way of repairs.

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5822. The transference was not made all at once? No.
5823. You say you have now four boilers under construction? Yes.
5824. And they have been under construction for ten months? Yes.
5825. And you say you have twenty-six engines now standing awaiting repair? I have twenty-six of the old boilers to repair which were removed from engines and replaced by new boilers out of the indent of 40.
5826. They are awaiting repairs, then? Why would they be removed if they did not want repair?
5827. Some of them I believe you said are now in the paint shop? Two of them are there undergoing repair.
5828. And some tenders? Yes.
5829. And there are some engines standing there also awaiting repair? Yes; there are some waiting accommodation in the yard.
5830. You feel that the work of repairing is a very urgent matter; it is pressing on you very seriously? Certainly it is.
5831. It is important that the work should be done as early as possible? Repairs must be carried out by all means.
5832. There is so much of this work on hand as to preclude your doing anything more than is being done at present? I think so.
5833. The shops are working up to their full capacity? They are.
5834. Will you tell me whether the Eveleigh shops are working five or six days a week? They are not working six, but they are working more than five. They are working six days less four hours.
5835. There is no work done on Saturday mornings? No; the remainder of the time is made up during the week.
5836. *Mr. Smith.*] They work forty-four instead of forty-eight hours a week? Yes.
5837. *Mr. Schey.*] As a matter of fact they work on the first five days of the week and not on Saturday? As I said before, the time is made up during the week.
5838. And this step was taken, I believe, to permit of the men having a half-holiday on Saturday, and they now get a whole holiday? It is a whole holiday at present.
5839. You say the works are full? The works are as full as they can be.
5840–50. Are they as full of men as they can be? Yes, to profitably employ them. We do not want men treading on each other's heels.
5851. How many less men are there now than there were three months ago? I cannot tell.
5852. I am speaking of men generally, I do not mean mechanics or labourers, but men in the proper sense? I cannot say at present. The nature of repairs was so urgent that we had to crowd in men wherever we could, in order to get the work out of hand, but since then a number of the extra hands have been dispensed with; they were only casual labour.
5853. And therefore might easily be dispensed with? They were dispensed with; in fact most of them were employed for not more than six months.
5854. Can you give me any idea of the number dispensed with during the last three months? I cannot just now.
5855. Are you prepared to say that the number does not exceed 300?
5856. *Mr. Smith.*] I object to Mr. Schey going into this kind of evidence, your Honor. It has nothing whatever to do with the charge; and it is not asked for the purpose of testing this witness's credibility. I submit that the question is wholly irrelevant, and it is merely wasting the time of the Commission.
5857. *Mr. Schey.*] The question is quite pertinent, your Honor, inasmuch as Mr. Smith himself asked the witness whether the Eveleigh works were fully manned; and if I remember rightly your Honor put a similar question.
5858. *President.*] Your question refers to what is taking place at the present time. The question I asked, and the question I understood Mr. Smith to ask, had reference to the time when the witness took charge of the Eveleigh Works, and the time when the orders were sent to England for additional locomotives. The number of men employed at Eveleigh now has nothing whatever to do with the matter before the Commission.
5859. *Mr. Schey.* You said something, I think, Mr. Howe, to the effect that at the time you went to Eveleigh, there were among the engines standing idle a number of the 131 class? Yes, the old consolidation engine.
5860–70. Were boilers indented for them? Some were previously indented for, I believe.
5871. Among the forty boilers we have been speaking of? No.
5872. *Mr. Schey.*] I desire, your Honor, that the Department will put in the Commissioners' Annual Report for 1888.
5873. *Mr. Smith.*] Mr. Schey has closed his case, and we do not intend to put in any more evidence at his request.
5874. *Mr. Schey*] Your Honor will see, by reference to some of the returns, that the staff at Eveleigh was largely reduced about that time, and therefore I think the evidence I am asking for is pertinent and relevant. I am sorry that Mr Smith, at this stage, should endeavour to shut out any evidence.

Mr. Edward Fernley sworn and examined:—

Mr. E. Fernley. 30 May, 1892.

5875. *Mr. Smith.*] What are you, Mr. Fernley? I am foreman boiler-maker at the Eveleigh works.
5876. How long have you been in that position? For five years.
5877. Then you were foreman during the time that Mr. Midelton was locomotive engineer? I was.
5878. Do you remember the time when the present Commissioners entered office? I remember it very well.
5879. Do you remember calling attention to the want of boilers? I do.
5880–90. Was it your particular business to direct attention to that matter? It was part of my business.
5891. Whom did you see on the subject? I sent a number of requisitions through Mr. Park, then works manager, to Mr. Midelton, suggesting that some fifty-two boilers should be supplied to meet the requirements of the various classes of engines. Fifteen I suggested should be made at Eveleigh, provided that the opportunity presented itself, and the remaining forty or so should be procured elsewhere.

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5892. You suggested that fifteen boilers might be made at Eveleigh, and the balance of the fifty-two imported? Yes; procured wherever they thought fit.
5893. Did you see Mr. Midelton yourself on this subject? I did not.
5894. But you sent a number of requisitions to him? I did; in the usual way.
5895. Do you remember what year that was in? I think it was about the 21st December, 1888.
5896. It was before Christmas, 1888? It was.
5897. In your opinion, as the head of that particular department, the need for boilers was a pressing one? Undoubtedly it was, or I should not have made the requisitions I did.
5898. Do you know whether at that time there was sufficient material in hand to build these forty boilers and to do ordinary repairs? I know there was a quantity of Monkbridge iron in store, which was ordered some years previously to make some twenty or twenty-five sets of boilers.
5899. Was that all in hand, or had it been partly used up? Some few plates had been taken out, but not a great quantity, up to this time. To correct myself, I may say that previous to this I received an order from Mr. Scott, then Locomotive Engineer, in answer to a requisition I forwarded to him before the repairs became so extensive, and I thought I had an opportunity of proceeding with a few new boilers. I received an order to proceed with three new boilers for the 93 class.
5900. What year was that—about? As near as I can remember, I think I commenced work on the 7th May, 1887.
5901. Do you remember when those boilers were finished? I think it was about eighteen months or so afterwards; but from the 7th May, when I commenced to make the boilers, to the time one was used, must have been at least two years.
5902. Was the building of those boilers entirely carried on during Mr. Midelton's time? No.
5903. It was commenced under Mr. Scott? The order was received by me from Mr. Scott.
5904. Was the work commenced in Mr. Scott's time? Yes.
5905. And it was finished in Mr. Midelton's time? If the boilers were finished in Mr. Midelton's time very little was then done to them.
5906. I suppose you had to put the work on one side frequently to enable you to cope with the repairs? Continually.
5907. So that during Mr. Midelton's time very little progress was made? Very little progress was made.
5908. During Mr. Midelton's time did you receive any order to build new boilers? I never received any order from Mr. Midelton to build new boilers.
5909. Or from anyone else during his time? No, nor from anyone else during his time.
5910. Now, do you remember when the Hawkesbury bridge was completed a number of engines coming over? I do.
5911. What did you find about them? I found them in a very bad state, and I at once reported to Mr. Midelton.
5912. You say they were in a very bad state? Yes, in a very bad state; so much so, in fact, that I recommended to Mr. Midelton that some of them should be stopped on the road, as I considered they were not safe running.
5913. Can you tell me anything about the American consolidation engines, the old 131 class? I know a little about them.
5914. Do you know whether any of that class were standing idle for want of boilers? At what time?
5915. At the time Mr. Midelton gave up charge? Yes; I think there were six or eight engines standing in the shed.
5916. How long had they been standing there? I cannot say; but I believe they were in the shed before I became foreman.
5917. So that they were standing idle when Mr. Midelton himself took charge? They were standing idle when Mr. Midelton came there as Locomotive Engineer.
5918. And did they remain idle all the time he was in charge? Yes; beyond that time.
5919. And they were standing idle for want of boilers? For want of new boilers or repairs to boilers. They were standing because their boilers were so defective that they could not run any longer.
5920-30. So that you had a great deal of locomotive stock standing idle for want of boilers? Yes; we had a lot stopped.
5931. Could you have built these fifty-two or forty boilers in the Eveleigh shops? Do you mean the forty boilers we sent home for?
5932. Yes? Of course we could have built them, but we should have taken some ten or twelve years to get through the work judging from the state of repairs at the present time.
5933. Judging from the present state of repairs, you think it would have taken you ten or twelve years to build that quantity of boilers? Of course, I cannot say exactly how long it would have taken, but certainly it would have occupied a considerable time.
5934. If it has been stated that they could have been built in eighteen months,—what would you say to that? Well I should think that the man who made the statement really did not know what he was talking about; at any rate, he could not possibly have known the capacity of the Eveleigh shops.
5935. Have you some idea of the capacity of the shop which would be required to build these forty boilers in eighteen months? Yes; I think I have.
5936. You think the man who states that this work could have been done in eighteen months does not know what he is talking about? He would not be speaking with any knowledge of the capacity of our shops. It is impossible for the boilers to be built in the country in eighteen months.
5937. Do you mean in the Colony altogether? I mean to say this, that if Mort's Dock Company, and Mr. Vale's works, and the Eveleigh works were all combined, these forty boilers could not be made in eighteen months.
5938. You feel sure about that? I am confident about it as a practical boiler-maker.
5939. You are quite certain about having seen a requisition for these boilers in December, 1888? Most decidedly; I have copies in my office.
5940-50. You know you had boiler-plates in hand for two classes? What classes?
5951. The 79 and 93 classes? Yes; I think we had plates.
5952. And all the other necessaries? At what time?
5953. Up to June, 1889? For what number of boilers?

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5954. For a number of boilers ordered amongst the forty? I cannot say whether we had sufficient copper plates or not, but I think we had sufficient iron plates.
5955. You had iron plates for how many boilers? I cannot say for certain, but I know that we had some for both classes. I think we had three sets for the 93 class. I think we took three sets out for the three boilers we made, and that left about three more in part. I cannot say from memory how many sets we had for the 79 class.
5956. It has been stated here to-day that there are twenty-six boilers awaiting repair? That is perfectly correct, and there are thirteen in my shop.
5957. That is, twenty-six waiting repair and thirteen under repair? Twenty-six waiting to receive new copper fire-boxes. The majority, I suppose, will most likely want new iron tube-plates, which simply means half a new boiler.
5958. And then you have thirteen under repair? I have thirteen receiving fire-boxes, and there are four new steel boilers under construction, for which I received an order in August last, and which are about 60 or 65 per cent. finished.
5959. You say those steel boilers are about 60 per cent. finished? Yes; 60 or 65 per cent.
5960–70. When did you receive the order? In August last, and I commenced a few weeks after I received the order, and as soon as I could get the material out of store.
5971. That is about nine months ago? Yes.
5972. And at the rate you are going you will have them finished by about the end of the year? I hope so.
5973. When the order was given for the forty boilers was there more stock in hand than was necessary for ordinary repairs? Yes; there was more than was required for ordinary repairs.
5974. That was in 1885? I believe so.
5975. I think you have already said that you find that the building of these new boilers interfered very much with the ordinary repairs? Yes, very materially.
5976. And do you find it an expensive thing to build new boilers in this way? Most decidedly.
5977. Will you explain why? Yes. I receive orders, say from Mr. Howe, that a certain class of boilers is required. I am obliged to get the material, and see that there are the men requisite to carry out the work.
5978. I suppose you have to keep men going to and fro between the work of constructing and repairing? Yes, exactly; and therefore I would sooner build new boilers than repair them at any time.
5979. *Mr. Schey.*] You say, Mr. Fernley, that when Mr. Midelton took charge you had a large quantity of repairs in hand? Yes; we had heavy repairs, and they were increasing.
5980–90. You had heavier repairs when Mr. Midelton took charge than when he left? Yes.
5991. *Mr. Smith.*] And they are still increasing? Yes.
5992. *Mr. Schey.*] I suppose a good deal of repairs had accumulated because of the want of accommodation at the Redfern shops, and before you removed to Eveleigh? Exactly.
5993. A lot of work had been left to be dealt with when you settled at Eveleigh? Yes.
5994. Consequently, when you got into the new shops and got to work all these back repairs had to be dealt with? That is the case.
5995. And therefore the amount of repairs then dealt with was considerably in excess of the ordinary current repairs? The repairs in the past.
5996. You were coping with the repairs that had accumulated? Exactly.
5997. And if you could have overcome the accumulation, the ordinary current repairs would not have been so great? I do not clearly understand your question.
5998. I understand you to say that prior to removing to Eveleigh there was an accumulation of work on hand? Yes.
5999. And you endeavoured to cope with that work when you entered into the new shops? Yes; as much as we possibly could.
6000. Consequently, you were doing more work than would come in in the ordinary way of repairs? In the past.
6001. But you were taking up what had accumulated in the past? Exactly.
6002. And if you had picked up all these accumulations and completed them, and got the repairs down to the ordinary run coming in, there would not have been anything like so much for you to do? I could not keep them down; that was the difficulty. The repairs were constantly increasing.
6003. You say that when the Northern line was taken over a lot of engines came in which required new boilers? Yes.
6004. And you had some duplicate boilers in stock which were used so far as you could use them? Yes; so far as we could use them.
6005. As fast as you got them into the frames you got the engines out again? That was the place for them.
6006. You say there were some engines of the 131 class standing in the yard in Mr. Midelton's time? There were.
6007. For want of boilers? Yes.
6008. You are acquainted with the forty boilers indented from England? Yes.
6009. Amongst those boilers were there any for the 131 class? None whatever. We did not need any.
6010–20. How was that? We had four duplicate boilers belonging to the 131 class.
6021. You had some in stock? We had four duplicate boilers in stock belonging to this particular class, and one had received a new fire-box and was completed and ready for going into the frame at the time these forty boilers were ordered, and I had two other new fire-boxes made ready to put into other old boilers when they were lifted out of their frames. Having those four duplicate boilers, there was no necessity for any further duplicates being ordered when the indent for the forty was sent away.
6022. *Mr. Smith.*] And, as a matter of fact, none were ordered? None were ordered.
6023. *Mr. Schey.*] The engines which were spoken of as being idle were not idle then because there were no boilers to put in them? I do not think you understand what I have said. I have told you that we had four duplicate boilers, but they were so bad in their fire-boxes that they had been taken out of their frames and replaced by four other boilers. Then I took this work in hand, and as we repaired the boilers engines were brought out of the shed and the repaired boilers were put into them; and by that means the number of duplicates was kept up by the boilers which were repaired from time to time as they could be brought into the shop.

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6024. Now as to the amount of stock, a quantity was ordered by Mr. Scott, was it not? Certainly, twenty-five sets I believe, and we took three sets out of that lot for boilers for the ninety-three class.
6025. Each set is sufficient to make a boiler, I suppose? Yes; but we had not copper sufficient to make them all into boilers.
6026. But these were iron plates, and therefore there were as many boilers really as there were sets if you could have made them up? I tell you we had no copper to make the boilers.
6027. But as far as regards the plates you had sufficient material? Yes; as I required a plate to make a new boiler I should take it out of stock and use it as was required either for repairs or building new boilers.
6028. *Mr. Smith.*] That completes our evidence Mr. President.
6029. *Mr. Schey.*] Is it intended to allow me to make a summary of the case?
6030–40. *President.*] In what way?
6041. *Mr. Schey.*] I mean a summing up your Honor.
6042. *President.*] We don't think it is either necessary or desirable. You have put in all your evidence; and most of your evidence as it was put in was commented upon by you, and that evidence will have to be considered by the Commission; but we don't want to hear you sum up.
6043. *Mr. Schey.*] Then I understand you refuse me permission?
6044. *President.*] Yes. The whole of the evidence on the second charge I take it is now closed.
6045. *Mr. Smith.*] With regard to the third charge it states "That the reports and returns furnished by the Railway Commissioners, and placed before Parliament from time to time, do not always contain a true statement, and that thereby members of the said Assembly are frequently misled into believing that the state of affairs is much more satisfactory than it really is." I would point out, Mr. President, that the charge as here made is most indefinite, and before I or Mr. Eddy could undertake the cross-examination of witnesses it would be necessary in this particular case for Mr. Schey to go into the box, and state what reports and returns he refers to. I think you will see, Mr. President, that it is necessary in the first place for Mr. Schey to go into the box and give the Commission particulars of the reports and returns to which he intended to refer when he made this charge in his place in Parliament.
6046. *President.*] You will find, I think, that the fourth charge is really only a repetition of the third. It is, "That in the said reports and returns the receipts are unduly inflated by showing as revenue sums which the said railways do not actually receive."
6047. *Mr. Schey.*] I think, your Honor, that the third and fourth charges might very well go together.
6048. *President.*] I think so too. Then I think it would be very desirable if you, Mr. Schey, would state what the returns are that you refer to. Will you go into the box please, we wish to ask you a few questions.
6049–59. *Mr. Schey.*] Certainly, your Honor.

Mr. Schey further examined:—

Mr. Schey. 30 May, 1892.

6060. *President.*] You are sworn, Mr. Schey? Yes, I was sworn.
6061. Now, Mr. Schey, will you tell us what the reports were which you referred to in your speech in Parliament? Under this charge I shall only take two cases as specific cases, and use them as types.
6062. We cannot allow that, Mr. Schey; we cannot allow you to take two cases as types; you must go into the whole of your case.
6063. *Witness.*] I am not prepared, your Honor, to produce every return which is incorrect.
6064. *Mr. Smith.*] I want to know which returns it was that you referred to in Parliament? I will produce two.
6065. Will you state which they are, please? The Annual Reports of the Railway Commissioners for the year ending 30th June, 1890, and the Annual Report of the Railway Commissioners for the year ended 30th June, 1891.
6066. Those are the only two reports and returns? I propose to confine my attention to these two documents.
6067. And to what particular parts of them;—take the report for 1890, and give us the paragraphs or pages you desire to refer to? Very well, take the first document and turn to page 57. The part I refer to is headed, "List of concessions granted to the staff since the Commissioners took office."
6068. Do you refer to the whole page? I am speaking of the large edition of the report; there are two editions, a small and a large one.
6069. *President.*] Are they the same? I believe they are the same, but I have not compared them in each case.
6070. Is that all you intend to refer to in this document? I only intend to refer to three points.
6071. What are the three? The first is paragraph 5. "Fettlers' time to count from the time they were inside the railway fences and starting for work." I may say that I have been repeatedly informed, and I have every reason to believe that the information was correct, that this concession has not been granted.
6072. Is there any other paragraph? The next is part of paragraph 7. "Gangers allowed one quarter day's pay for walking their lengths on Sundays, and also supplied with tricycles." I say that that concession was not made by the present Railway Commissioners, as stated in this report, but it was made by Mr. Goodchap prior to the present Commissioners taking office.
6073. *Mr. Smith.*] Will you kindly state the paragraphs in Mr. Goodchap's previous reports in which that concession is mentioned? I cannot do that.
6074. Do you allege that it was reported to Parliament previously? I am unable to say that, but the document I hold in my hand is, as I have before pointed out, headed, "List of concessions granted to the staff since the Commissioners took office." That is a definite statement, and below it there is the paragraph I have read relating to the supply of tricycles.
6075. What is the next paragraph? The next one is a matter of some doubt. It is paragraph 11, which reads, "Wages of workmen in shops more equitably adjusted." In this case of course it will depend entirely upon the interpretation of the words "equitably adjusted." In my opinion the wages have not been adjusted as is intended by this paragraph to suggest to Parliament. That is the gravamen of this matter.

6076.

Mr. Schey. 30 May, 1892.

6076. *President.*] The paragraph you refer to is "Wages of workmen in shops more equitably adjusted?" Yes, your Honor. And in this, as I said before, there is a matter of opinion involved. It is as to the meaning of the word "equitably." I understand the paragraph to mean that the men had obtained certain things which had been denied them before, and as a matter of fact that their wages had been increased because the heading of the document is "List of Concessions granted to the Staff since the Commissioners took office." If wages were not increased there would be no concessions.

6077. *Mr. Smith.*] Now on this matter of opinion will you tell us in what respects you allege that this matter impugns or impeaches the honor or integrity of Mr. Eddy or the purity or honesty of his administration? I have not said any such thing, nor do I intend to say such a thing. Mr. Eddy may reduce wages without it being any reflection upon his honor or integrity.

6078. But how far does the reporting of it in this way impugn or impeach Mr. Eddy's integrity? That is a matter of opinion.

6079. *President.*] Those words form no part of the charge, Mr. Smith.

6080. *Mr. Smith.*] Very well, your Honor. Now, what is the next matter you have to allege, Mr. Schey? That is all from this report.

6081. *President.*] The whole of your charges are contained on page 57? Yes, the whole of them are on that page, your Honor.

6082. You don't impugn anything else in that report? No, your Honor.

6083. *Mr. Smith.*] Now take the 1891 report? On page 1 of the small edition, under the heading of "General Remarks," appear these words:—"The general money result may be stated shortly as follows:—Total traffic, railways and tramways, £3,267,271; total expenditure, railways and tramways, £2,071,050; net profit, £1,196,221, being an increase in that net profit over last year of £184,081, and making an accumulated increase in net profits paid into the Treasury during the past three years of £782,999." Turning now to page 3, there is a paragraph near the middle of the page commencing "The revenue." It is as follows:—"The revenue derived from working the lines during the year was £2,974,421, and the expenses amounted to £1,831,371, or 61·57 per cent. of the gross revenue (a decrease of 5·12 per cent since we took office), leaving a net revenue of £1,143,050 towards paying interest upon capital, or a return of 4.11 per cent. upon the total debenture capital outstanding, and 3·60 per cent. per annum on the total cost of the railways opened for traffic. Working expenses for the year increased by £165,536 (48·49 per cent. of the increasad traffic), leaving an increased net result of £175,799.

6084. *President.*] What objection do you take to that statement? If you will permit me, your Honor, I will proceed to show the objections I desire to take. On page 11 there is a paragraph near the centre of the page which reads, "The amount charged for the carriage of the materials for the Works Department for ten years 1878 to 1888 amounted to £658,694, or an average of £65,869 per annum; it will be seen, therefore, how unnecessarily the capital cost of the railways has been increased and the revenue inflated. For the past three years the freight on materials of the same class amounted to £24,839, or an average of £8,276 per annum." Turning now to page 32 of Appendix 5, which is "A Statement of Account of the Expenditure and Revenue for the year 1891, with comparisons for 1890 and 1888," the amount of revenue there shown is £2,974,421, and the expenditure is shown as £1,831,371. The balance shown as net profit is £1,143,050. In my opinion that statement does not contain the whole of the truth, and it is calculated to mislead Parliament in dealing with the state of affairs. Of course I am giving that as my opinion. It is distinctly shown here that the balance of net profit is £1,143,050. Now, turning back again to page 3, it is there stated distinctly that the net profit is equal to 4·11 per cent. upon the total debenture capital outstanding, and 3·60 per cent. per annum on the total cost of the railways opened for traffic. The reason I have for stating that this is not a fair return will be found on page 39, Appendix 8, "Railway Loan and Debenture Account—Lines opened for traffic, June 30, 1891." Your Honor will see about half way across the table a column headed "Interest payable, year ending June 30, 1891." That column shows the total interest payable for that year to be £1,102,000 11s. 3d. Turning back again to the Account of Revenue and Expenditure, in Appendix 5, the balance of net profit there shown must, in my opinion, be reduced by the amount of interest due, namely, £1,102,000. If that amount were deducted the balance of net profit, as I understand the matter, would be shown as £41,050.

6085. *Mr. Smith.*] Who pays the interest of railway capital? I suppose the people of the country do.

6086. Do the Commisioners pay it or does it come from the consolidated revenue? I cannot tell you; I don't think that is a pertinent matter. Certainly the railway accounts should be chargeable with the interest on the money they are using.

6087. *President.*] Is that not a question as to the mode of keeping accounts rather than an error or any misleading on the part of the Railway Commissioners? In my opinion that statement is calculated to mislead Parliament. That is all I have to say now.

6088. I can only say you give Parliament little credit for intelligence if that is so? I may say I have had some years experience, your Honor.

6089. Of course I know nothing about the matter, I am merely taking your own statement? It has appeared to me, your Honor, that the matter is not generally understood. It appears that instead of producing a return of 4·11 per cent. upon the total debenture capital outstanding, and 3·60 per cent. per annum on the total cost of the railways open for traffic, the profit really is 1·475 per cent., or approximately 3s. for each £100 of capital.

6090. Are we to understand, Mr. Schey, that the whole of these two charges resolve themselves into this question, that the amount payable for interest ought to be deducted from the amount shown as balance of net profit—are we to understand that? You are to understand this, your Honor, that where the report says that the net return is 4·11 per cent. upon the total debenture capital outstanding, and 3·60 per cent. on the total cost of the railways open for traffic, I do not consider that to be a correct statement; and where the return shows the balance of net profit to be £1,143,050, I don't consider that a correct statement, because I conceive there is no net profit unless the amount of interest payable on railway capital is deducted from it.

6091. That was my question—that is what these charges really amount to? That is what I understand them to be, your Honor.

6092. Are there any other matters in the report of 1890? Yes, your Honor, as to the inflation of railway receipts I have something more to say about that. It appears to me, and I have been informed that many charges are put in the revenue account for which no money is received.

6093.

Mr. Schey. 30 May, 1892.

6093. Will you point some of them out Mr. Schey? Yes, your Honor. The report I may say in one portion already read lays stress upon the amount charged for the carriage of material for the Works Department. Now, it appears to me that if the amount charged for the carriage of materials is accounted for as revenue that is unfairly done. I do not think it represents what I should call a fact, because if the amount is added to the revenue it has to be paid in addition to the Works Department which uses the material. I am speaking more particularly, your Honor, of the material used in the construction of new lines. In addition to that I am informed that charges are made for the carriage of railway material for repairs, reballasting, relaying, and so on; and if these charges are added to revenue it appears to me to be unfair. It appears to me to be an inflation of the revenue inasmuch as either we do not receive the money at all, as in the case of the Railway Department carrying for itself, or in the case of the Works Department, a corresponding amount is paid to the persons who do the work, and it means the same thing in the long run. If a £1,000 worth of work has to be done, and there is a £100 for freight to be paid, the work will cost £1,100, if we credit it with the freight, and £1,000 if we do not; and if that £100 is put in as revenue I say it is an unfair inflation of the returns. I am further informed, your Honor, that certain employees of the department are allowed to have a certain amount of stores conveyed to them free of charge, but while that is done a charge is made for the freight and entered on the books. For instance, if a man such as I speak of, receives a package of goods on which the freight would amount to 5s. he would pay nothing, but in the books of the department would appear an entry of 5s. received for that carriage. If that is done, your Honor, I maintain it is an undue inflation of the revenue. Then there are other services which, I am informed, are also performed by the Railway Department for which no money is received, and yet which are credited to the revenue. For instance officers of the various departments travel over the railways in the course of their official duties, and in some cases passes may be issued, or in other cases vouchers which may be exchanged at the railway stations for tickets; and those vouchers are presented periodically to the department, by which they are issued, and credit for, the amount of the vouchers is taken as revenue by the Railway Department. Now, although the department has earned the money, as having actually performed a service, still it does not receive the money inasmuch as that service is for a member of the staff or for another department.

6094. *Mr. Smith.*] It amounts to this then, that if the Equity Office charges fees to the Government Department they have no right to do so? I did not say anything of the kind, but it appears to me that if these services amount to a sum of £20,000 a year and no cash is received, but the £20,000 is shown as a portion of the receipts and revenues of railways—it appears to me that the revenue is unduly inflated by the Commissioners by that amount.

6095. *President.*] Is it not the practice of all Government departments to do that in order to keep their books as books ought to be kept? I am unable to say, absolutely.

6096. But they charge one another, do they not? So far as I can understand, it is the practice.

6097. I mean the practice is not limited to the railway service? I do not think so.

6098. It is the practice in all departments? It may be, your Honor.

6099. *Mr. Smith.*] Is it not the same in the Government Printing Office? I do not know how far this practice exists in the Government Printing Office, because if I remember rightly when the Government Printing Office vote was under consideration in Parliament just lately, I challenged the service performed by that department for the Railway Department, and I was then assured that a vote was taken by which a monetary consideration was made.

6100. You were told that the Railways were charged? I was told that a vote was put on the estimates for that purpose, and I understand that there is such a vote for the printing of tickets for the Railways and Tramways, and in the case of the Post Office for postage stamps.

6101. You were told that the Government Printing Office charges the Railways for their printing? That the Government Printing Office has a vote to cover certain things which are supplied, but whether they charge in every case is a matter I am not prepared to say. I am only dealing with things I know.

6102. Are these all the returns you wish to refer to under charges three and four? I think that is all I have to allege. Of course your Honor will understand that a person having been in Parliament for a number of years many things come before him from time to time which leave an impression upon him and help him to form his conclusions, but if he is challenged to produce proof of certain things he can only produce that which at the time appeared to be producible. There may be other things which have helped him to form an opinion, but which he cannot produce at a moment's notice.

6103. *President.*] We have not to deal with that person: we have to deal with a specific charge before this Commission. And are we to understand that these are the only matters you have to allege under charges three and four. Have you any evidence in support of those charges? I do not know that I have any evidence beyond the documents covering that part of it.

6104. You merely put in these two reports? No, your Honor, I shall have a little more to put in.

6105. Then what is the rest of your evidence? Part of it will consist of a statement, and then I desire to put in two newspaper paragraphs also bearing on this matter.

6106. Will you put them in at once? Very well, your Honor. As to the first point raised, that is as to the fettlers' time, I propose to call no one in support of that for reasons which I need not state.

6107. Then as to the next matter, about the supply of tricycles? As regards that, your Honor, I may say that I remember personally interviewing Mr. Goodchap, and I remember that Mr. Goodchap granted the concession which is here taken credit for by the present Commissioners. In proof of this I beg to put in two copies of the *Railway and Tramway Review*. One is dated September, 1888, and the other September, 1889. The first paper contains the paragraph which states that tricycles for the northern gangers are about to be delivered, and your Honor will notice that the date of the paper is before the present Commissioners took office, and I may say that the information contained in the paragraph was obtained from the Railway Department at that time. The paragraph in the second copy of the paper is the report of a deputation to Mr. Eddy, in which this matter of the supply of tricycles is brought under his notice and it is pointed out to him that some of the men had obtained the tricycles and others had not. Mr. Eddy, in reply, said that they were ordered and would be issued as soon as possible. I think that goes to prove, your Honor, that this matter had been dealt with prior to the present Commissioners arriving, and therefore this could not justly be notified to Parliament as a concession granted to the staff since the Commissioners took office. In the other case, I can only state that statements have been made to me from time to time, and it is within my knowledge, that what is called an equitable adjustment of

wages

Mr. Schey. 30 May, 1892.

wages has in some cases been downwards instead of upwards; and that being so, I contend that what is conveyed to Parliament by the phrase "equitable adjustment," especially under the heading "list of concessions," is altogether wrong." As to the other matter, to which I have already drawn your Honor's attention, I desire afterwards to call Mr. Hall, the chief accountant, and obtain evidence from him.

6108. That is as to the report of 1891? Yes, your Honor.

6109. And as to the report of 1890 you do not call any further evidence? No, your Honor.

6110. But as to the report of 1891 you wish to call Mr. Hall, the accountant? Yes, your Honor.

6111. Very well; we will do that to-morrow.

TUESDAY, 31 *MAY*, 1892.

[*The Commission met at* 11 *a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

6112. *Mr. Schey.*] I beg to put in the 1890 Report of which I spoke yesterday, your Honor, or rather, one marked in the same way as that I was quoting from. The other I have not yet finished marking, and that I will put in as soon as I have marked it. I will now call Mr. Hall.

Mr. Thomas Hall sworn and examined:—

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6113. *Mr. Schey.*] You are the chief accountant in the Railway Department, are you not? Yes.

6114. And as such, of course, have charge of the whole of the accounts of the railway service? Yes.

6115. You were in Court yesterday, I believe, and therefore heard what was said with regard to the accounts? I did not hear it all, but I have read it since.

6116. You have read the newspaper account of it? Yes.

6117. Now, as to these accounts, is it not a fact that there are certain services which are performed by the Railway Department for which no money is received? In what respect?

6118. Is it not a fact that the Railway Department perform certain services for which they receive no money? If no money is actually received an equivalent for money is received.

6119. An equivalent for money, you say? Yes, certainly.

6120. But what I mean is, there are certain services for which no money is received—is not that the case? Well, certain services are performed on account of which no money actually passes.

6121. Now, among those services are included what? Work or service performed for the different departments.

6122. That is, for departments other than the Railway Department? Yes, other than the Railway Department.

6123. And the next? That is all.

6124. Then are these the only services that are performed by the Railway Department for which no money is received? Quite so.

6125. The only service, you say? The only service.

6126. You are quite sure there are no others? Yes.

6127. And in all these cases, you say, an equivalent for money is received by the department? Quite so.

6128. Now, Mr. Hall, what is the nature of the equivalent? The equivalent is a credit to the department for the services which the department performs. Certainly money might be demanded, but credit is given as a matter of convenience.

6129. Very well, will you kindly explain the way that operates? Each department for which service has been given gives the Railway Commissioners credit for the work that has been done for such department.

6130. Yes; but, for instance, if his Honor the Judge (say) were travelling, and a voucher were given him for a ticket from Sydney to Bourke and return, I suppose that voucher would be presented, would it not, at the railway station? Yes.

6131. And when it was presented a ticket would be issued in exchange for it, I suppose? Yes, in some cases. As a rule it is so, I believe.

6132. I suppose in cases where that is not done it would be used as a pass? Not exactly as a pass—what do you mean by that?

6133. It would be used as a pass—I mean as an equivalent for a ticket? It would be accounted for in the same way as in the case where a ticket was taken.

6134. Yes; but there are two things here. You have said that, in most cases, that voucher would be exchanged for a ticket? Yes.

6135. Now, what I want to know is this: What would be the course adopted in the exceptional case we have been speaking of? In those cases where they have a yearly ticket, which is in place—

6136. I am speaking of a case (say) where a voucher is issued by a department other than the railway, are there any exceptions to the rule of simply presenting the voucher and receiving a ticket in exchange? I do not know of any.

6137. Then in all cases the voucher would be presented, and a ticket given in exchange for it? Yes.

6138. And the value of the ticket so issued would be booked and passed through the books of the Railway Department as cash received? No, not as cash received.

6139. Do you know the system by which tickets are accounted for? Certainly.

6140. Very well. Now is it not a fact that there is what they term a train ticket book? Yes.

6141. And in that book are entered up all the tickets sold at any stations? All the tickets that are issued.

6142. All the tickets that are issued—just so; and that book is supposed to be made up according to varying circumstances—periodically I believe—in some cases many times a day, that is after each train leaves? Yes, I believe so.

6143. And when the entry is made, it is made, is it not, from the ticket rack into the book? Yes.

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6144. And the method of finding out what tickets have been issued is by the rotary numbers of the tickets? Quite so.
6145. And the number on the rack is the number of the bottom ticket in the rack, and after a train has gone out that rack is looked over, and if the bottom number does not correspond with the number on the rack the difference represents the tickets issued? Quite so.
6146. In making up the ticket-book those numbers are quoted the—opening and closing numbers of each class of tickets? Yes.
6147. And opposite to them is placed the number of tickets issued, if any are issued? Yes.
6148. And opposite that again the value of the ticket? Yes.
6149. Very well; besides that train ticket-book there is another book, is there not, in which a record is kept of tickets issued? In some cases, at large stations.
6150. As a matter of fact is there not kept at all stations of any size what is called a classification book? That is the book you have referred to.
6151. Certainly not. I referred first of all to the train ticket-book; then I referred to the classification book, which is a larger book, ruled off with a number of columns? I see what you mean—still it contains the same information.
6152. But they are separate books? Yes.
6153. And they are kept at the large stations particularly? Yes.
6154. And the information from the first book to which we have already referred, is collated and entered into the large book? Yes.
6155. And the number of tickets again entered there? Yes.
6156. And the value of the tickets is placed opposite the tickets issued? Yes.
6157. And then the stations account to the office for the money received as the price of the tickets issued? Yes.
6158. And in sending that in they also send a record of the cash received under various headings, such as notes and gold? Yes.
6159. And attached to it are any vouchers received from any of the departments? Yes.
6160. Those vouchers being accepted by the office as the values of the tickets they represent? Yes.
6161. And at the end of specified periods these vouchers are returned to the departments which issued them? They are treated as departmental checks.
6162. Just so, and the Railway Department receives credit in some way for the amounts shown by these vouchers?
6163. *Mr. Smith.*] Just the same as if it was credit on a bank.
6164. *Witness.*] I have already said so in effect. It is similar to what it would be if you paid over a cheque.
6165. *Mr. Schey.*] Is there not a considerable difference between a cheque and a voucher for a ticket? Not the slightest.
6166. In what way is there no difference? Because it represents payment for services done by the department.
6167. But a cheque would be paid in cash would it not? It does not necessarily follow—it is paid into the bank.
6168. Well, let us see. Supposing you issued a cheque yourself to pay for something, would you not ultimately have to pay over the money which that cheque represented? I scarcely understand the question.
6169. Well suppose your tailor comes to you and presents you with a bill, say for £5, representing the price of a suit of clothes, and you give him a cheque for the amount, your account would be debited with the amount of that cheque I suppose? Of course it would.
6170. And the amount of money you possessed in the bank would be decreased by that amount of £5? Naturally in that case.
6171. Therefore, although you pay your tailor with a piece of paper ultimately you have to part with the money? Well, that depends; if I did a similar service for him I should not part with any money.
6172. Not if you did that, certainly. Now will you point out what service, let us say, for the purpose of illustration, the Department of Justice performs for the Railway Department which is equivalent to the services rendered by that department? I do not know that the Department of Justice perform any work for the Railway Department, but if they do they would have a legal claim against the department.
6173. They would have vouchers for services rendered to the Railway Department? Certainly.
6174. But as a matter of fact does that department perform any services for the Railway Department? I have said that I do not know that they do.
6175. If there were any such services performed you would know of them would you not? I should think so, but I am merely speaking from memory just now.
6176. Quite so. Still you were aware before you came here I suppose of the character of the information which would be required of you? Well, indeed I had no idea that you would ask such questions as these. But if you require to know, it can be easily ascertained.
6177. Let us proceed a little further on this point. In issuing a cheque there is usually value given for it in the nature either of services performed or value given in some way represented by the cheque? Certainly.
6178. Now in the case of one of these vouchers, that is not so, is it? Certainly it is.
6179. Now understand, Mr. Hall, I am not asking you whether the Railway Department performs work representing the value of the vouchers—I quite understand that the Railway Department performs work, which it values at the price of that voucher—but you say that a voucher and a check are the same thing;—now I ask you if you give a cheque to your tailor, who has performed some work for you, you suffer by the amount of that cheque, do you not? Yes, I should say so.
6180. Then what I want to know is this: Does the same operation take place in the issuing of these vouchers for work performed by the Railway Department? Precisely the same, I take it.
6181. Kindly explain how? The Departments give the Commissioners credit for the services performed. You might just as well pay by cheque.
6182. Why? Because the Commissioners have a legal right to ask for a cheque.
6183. The Departments might as well issue a cheque as a voucher? Yes.
6184. I quite understand that; but in this case it is merely a matter of crediting a department with having performed certain work, whereas in the case of the cheque which, as I have put it, you pay to your tailor, there is an absolute loss to you of a certain amount of money, is there not? I do not know that. If I get its value I could not call it a loss.

6185.

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6185. *Quite so*; but is there not a large difference between these two instruments in that way? I fail to see it.
6186. *Mr. Schey.*] I am sorry to say I must differ from you very considerably.
6187. *Witness.*] I daresay you will.
6188. *Mr. Schey.*] At all events the Department takes credit for the amount of these vouchers? I have already said so.
6189. And no money passes whatever? I have said so.
6190. Just so. Now then can you tell me of any service which any Department, other than the Railway, renders to the Railway Department as an equivalent for these credits? I do not understand your question.
6191. Do you know of any services rendered by other Departments to the Railway Department which are paid for by voucher in the same way? Certainly.
6192. Will you tell me which? There is the Government Printing Office.
6193. Any other? I cannot say.
6194. Does the Department of Justice render any service to the Railway Department? I am not aware at this moment.
6195. The Attorney-General's Department? I am not aware. I cannot speak with certainty at this moment.
6196. The Department of Mines? I cannot say without going into the matter.
6197. The Department of Lands? Yes, I should say they did.
6198. Will you describe the services performed by that Department? Certain officers in the Department of Lands have done work for the Railway Commissioners and have been paid.
6199. What was the nature of that work? Making drawings, getting up maps, and such service as that.
6200. Yes, and have they not been paid in cash by the Railway Commissioners? In some cases they have.
6201. Well, now; but take the other away: When his Honor the Judge, for instance, presents a voucher for a ticket ——
6202. *President.*] I do not quite know what you mean by referring to me in that way, Mr. Schey?
6203. *Mr. Schey.*] I might refer to any other person in the same way, your Honor.
6204. *President.*] Then you had better do so, Mr. Schey.
6205. *Mr. Schey.*] I merely made the reference by way of illustration, your Honor, as I understood that all officers in the service had vouchers issued to them for the purpose of travelling.
6206. *President.*] They are not issued to me.
6207. *Mr. Schey.*] All right, your Honor; I was not aware of that. I can take any other illustration.

[*Examination continued.*]

6208. *Mr. Schey.*] Now, Mr. Hall, you say there are no other services for which payment is not received? I do not know of any.
6209. When permanent-way material is carried from one station to another on the railway for the department, is a charge made for that? The charge is not included in the accounts.
6210. But is there not a charge made for it? Of course there is a charge, but as I have said it is never included in the accounts. It is simply to ensure that everything shall be properly accounted for in a systematic manner.
6211. Then in carrying a quantity of material from Sydney to Junee, say, for which the Department would charge at the rate of £50 for freight, there would be a charge made of that amount in the books of the department? As I have already explained that amount of money for such service would not be included in the earnings in the return you allude to.
6212. But would not that charge be shown in the books of the Railway Department? I tell you it is merely a matter of form to ensure all materials being accounted for, and so forth.
6213. And this amount is shown in the books of the department. Am I to understand that? Certainly not—in the books of accounts from which these reports are made up.
6214. Are they shown in any books? I thought I had sufficiently explained. In such cases a charge is made in the usual way to ensure everything being accounted for, but that is merely a matter of form. The charge is not included in the earnings of the railway which are embraced in this report.
6215. That is to say, I suppose, that these charges are put on a way-bill of some kind, are they not? Yes.
6216. Therefore, when these way-bills are received these accounts are checked in the books of accounts at the stations receiving them? Yes.
6217. And these amounts are also shown to the head office? Yes.
6218. They are sent forward? Yes; and are dealt with at the head office.
6219. Then what you mean to say is this: that these amounts are shown in the ordinary traffic receipts of the railway? No; I do not mean that.
6220. Very well, I am speaking of the accounts sent from the stations to the head office, and not of the accounts which are included in the report. In these accounts—the ordinary traffic accounts by which each station accounts for its ——
6221. *Mr. Smith.*] I must object to this, your Honor.
6222. *Mr. Schey.*] It would be a wonder if you did not.
6223. *Mr. Smith.*] I think I have already exhibited patience enough. I submit to the Court that this matter which is now being dragged in has nothing to do with the charge which Mr. Schey has made. Mr. Schey's charge is, not that the railway official returns show a larger amount of income than is received, but that the Railway Department's returns to Parliament do not always contain true statements, and that in their reports the receipts are unduly inflated by showing as revenue sums which the railway does not actually receive.
6224. *President.*] That is what he has asked the witness, and Mr. Hall is stating that that is not the case.
6225. *Mr. Smith.*] The question which he is now asking is whether in point of fact charges are not made by the branch offices to the head department for services rendered, and which of course are made for purpose of record; and secondly to prevent officers of the department from using the railway for private purpose, and also to prevent contractors and others doing the same thing. But I submit, your Honor, that that is not the charge.

6226.

6226. *President.*] Mr. Schey may be asking the question with a view of testing the witness' memory on points connected with the return that was laid before Parliament, and I do not think we can shut out that evidence in cross-examination. The witness is giving very clear evidence, and I think he may be trusted to deal with the questions put to him.
6227. *Mr. Smith.*] But this is not cross-examination, your Honor, and I submit that he is improperly examining the witness.
6228. *President.*] I cannot help it, Mr. Smith. I cannot stop every little thing that is irregular in an examination of this description.
6229. *Mr. Schey* (to Witness).] Now, Mr. Hall, you have said that these amounts are included in the account books of the department? Up to a certain point I said.
6230. Well, when they reach that stage what happens? They are deducted from the accounts, and are not shown as earnings.
6231. Are they deducted weekly or monthly?
6232. *Mr. Smith.*] Really, what has this to do with the question, your Honor?
6233. *President.*] You had better let him proceed.
6234. *Witness.*] They are deducted monthly.
6235. *Mr. Schey.*] You say, then, that at the close of the month at the head office the amounts for these services are deducted from the gross amount shown on these books? Certainly.
6236. And the other I suppose you would call the net earnings? Which other?
6237. The amount after these had been deducted? They are the gross earnings, not the net earnings. The net earnings are when the expenditure has been taken off.
6238. Then you do not include these figures in the gross earnings? Certainly not.
6239. Then these amount are deducted at the end of each month, and the remainder is shown as the gross earnings? Certainly.
6240. And of course the gross earnings, after these amounts are deducted at the end of each month, are eventually made up, and are shown in the reports? Yes.
6241. Now, will you kindly produce the monthly sheets from the office for this year, showing these deductions? If that information is applied for, we can supply it.
6242. *Mr. Schey.*] Then I apply for it now, your Honor.
6243. *President.*] Can you supply it, Mr. Hall?
6244. *Witness.*] Yes.
6245. *President.*] That, I suppose, will be sufficient, Mr. Schey?
6246. *Mr. Schey.*] What I want, your Honor, is the sheets which make up this report. I do not want the particulars written out. I want the sheets as they are in the department at the present time.
6247. *Witness.*] I can provide the information, but not in the way Mr. Schey asks. The information which he requires is simply worked up in the accounts.
6248. *President.*] Would your books show it? Yes.
6249. In what way can you give the information? I can show the returns supplied to me and the net amount brought into the account.
6250. *Mr. Schey.*] That is not sufficient. The witness has already said that once a month these returns are adjusted, and that the charges for these particular services are deducted from the amounts returned by the various stations. Now, what I contend is that if these deductions are made once a month there must be some book or sheet containing them, and from which the monthly earnings, which become afterwards a permanent record, are collected. It is that book or sheet that I want, not any statement made up from them. The witness has committed himself to a statement that these sheets are made up once a month, and I want those sheets.
6251. *Witness.*] I think I have said the information can be supplied.
6252. *Mr. Schey.*] What the witness said was that he could supply the information, but not in the way I desired, because that it was simply worked up into the accounts. But, as I have said, he has committed himself to the statement that the accounts from which these particular services are deducted are made up monthly, and I submit that if the deductions are made monthly there must be some document showing this. Further on in his evidence he went on to say that the remainder was then shown as gross earnings. Now, what I want are these sheets, month by month, from which have been obtained the information included in this report.
6253. *Witness.*] I have said the information can be supplied.
6254. *Mr. Schey.*] But what I want, your Honor, are the books or sheets themselves.
6255. *President.*] In what way do you say the information can be supplied, Mr. Hall?
6256. *Witness.*] By a statement showing the total earnings, and how these charges are deducted from the total earnings, and the net earnings brought into the books.
6257. *Mr. Schey.*] That is in no way sufficient, your Honor, for my purpose. These books or sheets, from which the general returns have been made up, that is to say, in which these monthly deductions have been made, must be in existence.
6258. *Witness.*] I do not see how it can be done, except in the way I have stated. The earnings, such as Mr. Schey refers to, are not entered into the ledgers in which the accounts are kept, they are simply dropped.
6259. *President.*] Are not entries made in your books of these particulars?
6260. *Witness.*] We do not include them in the accounts at all from which the reports are made.
6261. *Mr. Schey.*] I still press the point, your Honor. The witness admits up to a certain point these charges are carried forward in the accounts, and that then there is a point at which the charges are dropped. There must be something to show where the charges are dropped and the amounts, and those amounts must be made up on certain returns. The witness went on to say that the accounts are made up once a month, and the deductions are made once per month. Now, I want those books or documents where these charges are made up, and which show where they are dropped out. I can quite understand that a statement can be prepared, but that must be from information in the possession of the witness or the department; and I do not want any statement from the witness, but the information from which the statement would be made up.
6262. *Witness.*] I think we can satisfy you upon that point.
6263. *President.*] Very well, Mr. Hall, you will get all the information you can upon the subject, and when that is before the Commission we will deal with it.

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6264. *Mr. Schey.*] I still press the point, your Honor, that these particulars should be produced, because they must be in existence.
6265. *President.*] Very well, Mr. Schey, Mr. Hall has heard what you want, and he says he will supply the information as far as he can. If you are not satisfied with the information when it is obtained you can make a further application.
6266. *Mr. Schey.*] Very well, your Honor. (To Witness.) Now, then, I find in this report for 1891, "The amount charged for the carriage of material for the Works Department for ten years, 1878 to 1888, amounted to £658,694, or an average of £865,869 per annum; it will be seen, therefore, how unnecessarily the capital cost of the railways has been increased and the revenue inflated. For the past three years the freight on materials of the same class amounted to £24,839, or an average of £8,276 per annum." You see that in the report? Yes.
6267. Then that paragraph claims that this first amount shows that the £658,000 odd was added to capital cost, and was an inflation of the revenue? I presume it was added to capital cost because it was the amount charged for construction purposes.
6268. Does it not show that as I have put it? It does not show it was added to construction; it was a charge by the then Commissioner.
6269. The report says, "It will be seen, therefore, how unnecessary the cost of the railways has been increased and the revenue inflated," does it not? Naturally, that would be so.
6270. *Mr. Smith.*] I must object to this course of proceeding. Mr. Schey has no right to cross-examine the witness about a written document. The document is there, and speaks for itself. Mr. Hall can neither add to it nor take from it.
6271. *President.*] I understand he is asking the witness to explain certain statements in the document.
6272. *Mr. Schey.*] The paragraph says, "The capital cost of the railways has been increased and the revenue inflated." It does.
6273. And, further, the paragraph says in effect that, for the past three years, these charges have been much reduced? Yes.
6274. And, therefore, although the amounts are reduced, these charges have been used in the same way? The report does not say so.
6275. Does it not? What other construction would you put upon it?
6276. *President.*] You cannot ask the witness what is the meaning of a written document; that is for the Commission to determine.
6277. *Mr. Schey.*] Now, in relation to these services. When railway contracts are in progress, does the Railway Department perform certain services for the railway contractors? In what respect; I do not understand that they do.
6278. I think it is a perfectly plain question? Kindly repeat it.
6279. If a new piece of railway is being built, do the Railway Department perform any service for the contractors who are building that portion of the line? I should say they would.
6280. That is to say, such contractors have certain plant and materials which would be required to be carried over the railway? Most certainly.
6281. And when they are carried over the railway the department would charge the contractors for the service, I presume? I should think so.
6282. Then a certain amount of money would be earned by the department in the carriage of the contractors' plant and material? Certainly.
6283. Just so;—and the contractors would know that when they were making their tenders? I should think so.
6284. Just so;—and, therefore, in presenting their tenders for doing any of this work, they would add on any amounts which they considered necessary to cover such expenditure? If they did not do so, they would probably suffer a loss.
6285. And, therefore, that is one of the elements which enters into the making-up of their contract? I suppose so.
6286. Just so;—therefore, it comes to the same thing whether the contractors receive that amount more for the contract or if they receive so much less and the department carries the stuff free? I should think so.
6287. *Mr. Smith.*] It is only your opinion, Mr. Hall? Quite so; it is a mere supposition.
6288. I suppose, so far as your knowledge goes, any man in the street could give the same information? Well, yes.
6289. *Mr. Schey.*] I object to this, your Honor.
6290. *President.*] It is really a waste of time, Mr. Schey. You might ask anybody in the Court the same question. Mr. Hall is the Accountant of the Railway Department, and can speak as to the accounts of that department. He cannot say as to what contractors might consider or might not consider when making up their tenders.
6291. *Mr. Schey.*] I should have thought, from his position, that he would be in a position to answer such a question.
6292. *President.*] We rule that you cannot continue that line of examination.
6293. *Mr. Schey.*] Now, Mr. Hall, is there any other kind of service which the department performs for which they do not receive money? I have said I am not aware.
6294. In the carriage of volunteers and school children there is a vote by Parliament to cover such service, is there not? There is a vote by Parliament to cover special services.
6295. And others are not covered by vote, as you have already explained? Yes.
6296. The settlers on the line, are they not allowed a certain amount of stores to be carried periodically on the line free of charge? Yes.
6297. That is, from the nearest market town to where they reside they are allowed a certain amount of carriage free? Yes.
6298. Is there any charge made for that in the account? Simply as a matter of record, and in order to show that nothing is carried on the railway but what it is right should be carried.
6299. That is to say, that the freight on 2 cwt. of goods carried for a settler would be booked in the department, and a charge entered as having been paid for? Not as having been paid for; as I have already said, the charge would be made formally, as a matter of record.

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6300. Let us take a case: Supposing that certain quantity of stores was sent in this way from Newcastle to Hexham; they would be received at Hexham, and entered in the books at the station, would they not? Yes; it is precisely similar to the case you went into before.
6301. And those goods, when delivered, would be signed for by the party receiving them, would they not? I should think so.
6302. And when he received them he would pay nothing for the carriage? I have said they would be treated in the same way as in the other case.
6303. But in the book in which he signed for them they would be shown as bearing so much freight charge? Yes.
6304. And those charges are also sent forward from the station? They are accounted for to the traffic auditor.
6305. And at a certain stage these charges are dropped also? Certainly.
6306. I ask now for the same information in regard to that matter; I want the sheets showing these charges—I suppose they are adjusted monthly also? To the best of my knowledge, yes.
6307. All accounts, as a matter of usage, are adjusted monthly? Yes; I am not quite sure in the way you are asking, but I think generally monthly.
6308. Now for the period covered by this report ending 30th June, 1891. I want you to produce the adjustment of those particular amounts, whether they be monthly or for any other period; I want the books or sheets in which these are shewn. Now, I believe employees of the railway are allowed, under certain restrictions, free passes to travel over the line? Yes.
6309. And are those passes valued? No.
6310. Not in any case? No.
6311. And no charge is ever entered against them? No; I am not aware of any.
6312. *Mr. Schey.*] I think that is all the questions I need ask, your Honor.
6313. *Mr. Smith.*] Something has been asked you, Mr. Hall, about a sum voted by Parliament for services rendered; a sum is voted by Parliament for certain purposes, is it not? Yes.
6314. They are classed as unremunerative services? Yes.
6315. Does this return, made up by you [*handing witness document*], show those services for 1891? Yes.
6316. And what was the value of those services? £39,456 14s. 9d.
6317. And what was the amount charged for the vote? £25,000.
6318. Did you take credit for the £39,000 odd, or the £25,000? For the £25,000.
6319. That is a specimen of the way in which these matters are done? Yes, that is the case; it is only the net amount received which is treated as income.
6320. Now, credit is taken for carriage of material for other departments? Yes.
6321. And amongst those is the Public Works Department? Yes.
6322. For services rendered to that department, if you should render any, credit is taken, and a voucher received from the department? Yes.
6323. And I suppose the same practice obtains in other departments equally? Quite so.
6324. Has that always been the practice of the Railway Department? To the best of my knowledge it has.
6325. Do you know the practice of other departments? I should not like to speak about other departments, but I should think it would be the same.
6326. You do know that the Government Printing Office charges you for the work done for your department? Yes.
6327. And the Stamp Office? Yes.
6328. And the Registrar-General's Department? Yes.
6329. You have said so, I think, with regard to the Lands Department? Yes.
6330. And if you should incur expense through other departments, would you expect to receive vouchers from them if they made up their account properly? That would be so.
6331. If you were to carry material such as you carry for the Works Department, and were not to charge for it, would that be a correct course of bookkeeping? Not at all.
6332. Would it be likely to lead to goods being carried for nothing? Yes, and in an unfair manner, because there must be an amount of expense incurred, and I think the department ought to be remunerated for the expense which it incurs.
6333. Now for the departmental work done for other departments such as is carried on for the construction branch of the Works Department, has there been a considerable reduction in the rate of charges since the advent of the present administration? Yes, it is fully three times less than it was.
6334. So that instead of the revenue being inflated, there has been a considerable reduction? Yes, in every way. There has been a great reduction so far as inflated charges go.
6335. That report says that for a considerable time—that is 10 years—the work done for the construction department in the carriage of material amounted to over £658,000? Yes.
6336. And then it is shown that during the past three years the amount has only been £24,839, or an average of £8,276 per annum? Yes.
6337. *Mr. Schey.*] I object to that question. When I was questioning the witness at this point Mr. Smith drew attention to the fact that the witness could not say anything about the document on the ground that he did not write it. Therefore, I contend that the question put by Mr. Smith is equally out of order on similar grounds.
6338. *President.*] You were asking Mr. Hall to explain certain words which were used in that report.
6339. *Mr. Smith.*] I am asking you, as a matter of fact, that for the past three years the freight on materials carried for the construction branch of the Works Department amounted to £8,000 odd per year? It is perfectly correct; I made up those figures myself.
6340. *Mr. Schey.*] I still make the same objection your Honor. The answer has been given to the very question I tried to ask but was prevented.
6341. *Mr. Smith.*] You did not know how to ask it.
6342. *Mr. Schey.*] I admit I did not put the question in the same words.
6343. *Witness.*] I have said distinctly that I made up the figures.
6344. *Mr. Schey.*] I think that it is taking a very unfair advantage.
6345. *Mr. Smith* (to Witness).] You have said that the amount of £8,000 a year, shown in the report there, is perfectly correct? Yes.

6346.

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6346. And that during the past three years the amount of work done in the carriage of material has been very much less than it was for the previous ten years? Yes.
6347. And that is because there has been less construction work going on, and because the department has been charging a less rate? Yes, and charging a less rate.
6348. The former rate—can you tell me how much per ton per mile it was for short distances for this kind of service? About four times as much, I think; how much per ton exactly I cannot say.
6349. Was it not 4d? Yes, I think it was.
6350. And what is it now? It is now 1d.
6351. That is for short distance services only? Yes.
6352. And it has been reduced from 4d. to 1d.? Yes.
6353. Now, Mr. Hall, of course a great deal of coal for departmental purposes is carried by the railway for its own consumption, and material of that character? Yes.
6354. Is freight charged upon that? Not a penny. We carry a great many tons of coal for departmental purposes, and only pay for delivery at the pit's mouth.
6355. Are you aware whether it is different on the Victorian railways? I am not personally aware, but I have been told so.
6356. But the contracts with the coal companies here are for delivery at the pit's mouth? At the stations nearest the colliery, not at the places where it is wanted.
6357. For instance, there is no coal mine very near to Goulburn. Where would you get your coal delivered which is required for that district? I cannot speak from memory, but I should think that the charges for carriage to Goulburn and Eveleigh alone would be £28,000 a year.
6358. But no charge is made for that in the books of the department? No.
6359. We have had something said about the Government Printing Office. You pay a large sum annually to that department for work done, do you not? Yes, £15,000 was the amount paid last year.
6360. Some years ago that practice was different, was it not—they did it for nothing? No charge whatever was made prior to 1887.
6361. Prior to 1887. Does the document you have show returns of the whole of the amounts which have been paid? Yes, it does.
6362. In 1887, the first year, what was the charge? £7,500.
6363. And subsequently the charges have increased very materially? Yes.
6364. And that is debited to working expenses? Yes.
6365. And you give your voucher to the Printing Office Department, and that voucher is debited against you in the Treasury? Quite so.
6366. Practically, these vouchers amount to cheques drawn on the Treasury? Certainly.
6367. As a matter of fact, the Railway Commissioners pay and receive very little money—it is all paid into the Treasury? Yes, there is no separate account—everything is paid into the Public Treasury.
6368. And drawn by cheque? And drawn by cheque.
6369. That is, under the terms of the Railway Act? Quite so.
6370. We have spoken about the Construction Branch of the Public Works Department. The Public Works Department is separate now from the Railway Department, but the Existing Lines Branch is still a portion of the department? Yes, the Existing Lines Branch is managed by the Commissioners.
6371. Is any credit taken for revenue obtained for work done for the Existing Lines Department? I am not aware of a single case; my instruction and practice are to exclude them.
6372. Then, although they are charged in the first instance in the account returned, you write them off? We do.
6373. The only charge is, I suppose, for the engine power? We debit that against working expenses, and do not include any portion of the material carried over the line in what are shown as earnings in the report.
6374. The charge here says—"That in the said reports and returns the receipts are unduly inflated by showing as revenue sums which the Railways do not actually receive." What do you say to that? I say distinctly that they are not inflated. On the contrary, the returns are considerably reduced in the shape of items of the nature spoken of as departmental charges; for example, the charges on material carried for the construction department; and on the other hand, we have increased the charges against working expenses by including therein charges which were never included before.
6375. Since the passing of the Railway Act, the very reverse of what is charged here has been the fact? Decidedly so.
6376. Some comment has been made on a paragraph of this report of 30th June, 1891. It is on page 1, and under the heading of "General Remarks." Do you see the extract I refer to? I see the extract.
6377. The paragraph says:—"The progress of the Railways and Tramways during the past twelve months has been satisfactory in every way; the value of the property has been considerably enhanced out of working expenses, the facilities to the public and comfort accorded in travelling have been increased, and the net returns to the Treasury, after paying working expenses, have also been largely augmented. The general money results may be stated as shortly as follows:—Total traffic—Railways and Tramways, £3,267,271; total expenditure—Railways and Tramways, £2,071,051; net profit, £1,196,221,—being an increase in net profit over last year of £184,081, and making an accumulated increase in net profits paid into the Treasury during the last three years of £782,999." Now, as an accountant, Mr. Hall, would you be at all misled by this statement? I think it is almost impossible for it to mislead any person.
6378. I suppose you know a number of members of Parliament, many of them by name, at least. Do you think it likely for any member of Parliament to be misled by that statement? You see the charge is here, "That the reports and returns furnished by the Railway Commissioners and placed before Parliament from time to time do not always contain a true statement, and that thereby members of the Assembly are frequently misled into believing that the state of affairs is much more satisfactory than it really is." Now, do you know of any member intellectually so framed that would be misled by that statement? I have not met such a gentleman—except Mr. Schey, of course.
6379. Now will you turn to page 3, about the third paragraph down—I refer to the figures in that paragraph which says, "The revenue derived from working the lines during the year was £2,974,421, and the expenses amounted to £1,831,371, or 61·57 per cent. of the gross revenue (a decrease of 5·12 per cent. since we took office), leaving a net revenue of £1,143,050 towards paying interest upon capital, or a return of 4·11 per cent. upon the total debenture capital outstanding, and 3·60 per cent. per annum on the total cost of the railways opened for traffic." Is that a correct statement, from your knowledge of what the accounts show? Most certainly.

6380.

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6380. It has been said here that the Railway Commissioners did not debit themselves with interest upon capital ——
6381. *Mr. Schey.*] I will ask Mr. Smith where that is said?
6382. *Mr. Smith.*] I will not answer your questions. I am examining the witness.
6383. *President.*] It was stated distinctly, as I understood it, that one of the objections to the figures mentioned in the return was that there was no debit for interest on the money borrowed for the construction of the railways.
6384. *Mr. Schey.*] That is not shown in the statement which shows the net profit, and that is the objection.
6385. *President.*] The net profit is shown by giving on one side the expenditure by the Commissioners, and on the other the receipts by the Commissioners, and the difference between the two is said to be the net profit. But in that there is no mention of any sum for interest on the money borrowed for the construction of railways, and that is what you complain of, Mr. Schey?
6386. *Mr. Schey.*] Yes, your Honor; but Mr. Smith is saying that I have asserted that it is not debited. I do not say so; it is not debited there, but in another place by looking for it you can find it.
6387. *President.*] That appears on the face of the document itself.
6388. *Mr. Schey.*] I should like to ask the witness for the document that he is being examined upon. It appears to be a return of some kind.
6389. *President.*] You can see it afterwards.
6390. *Mr. Smith.*] Is that statement on page 3 a correct statement of the facts which I have read? Yes.
6391. As a matter of fact, is the debenture capital specially issued as a Railway loan, or is it a Consolidated Revenue loan? It is a Consolidated loan, and includes loans raised for the departments generally.
6392. Do the Railway Commissioners pay interest on that loan, or do the Treasury pay interest on that loan? The Treasury has to do with the payment of interest on all loans, and with the raising of loans.
6393. Then the liability to pay interest on the loans under the Railway Act is not transferred to the Railway Commissioners? No.
6394. On the same page, that is, page 3, it is stated that debentures of the nominal value of £28,983,967 had been raised. That debenture capital, I suppose, was raised, not by the Railway Commissioners, but by the Treasury, and is charged to Consolidated Revenue? Yes.
6395. You do not administer that fund in any way? Not in any way whatever.
6396. I think you said about the carriage of stores for the railway employees that they are carried free, and that the charge is not included in the revenue;—is that so? They are not included in the revenue earnings, certainly.
6397. *Mr. Schey.*] I would like to ask for that document which has been used, your Honor.
6398. *President.*] What is the document?
6399. *Mr. Smith.*] It is a return showing the amount which the Commissioners credit the Government Printer with for the work he does for them.
6400. *Mr. Young.*] Do I understand you to say, Mr. Hall, that the earnings which the railways make for the reconstruction branch are a charge on the reconstruction branch. In other words, is that amount credited in the balance-sheet as money received? It is
6401. In the matter of works done for other departments in which there is not a fixed amount given, as stated in the case of the vote of £25,000 as against £39,000. I presume, in that case, the Railway Department would have to lose the difference between the £39,000 and the £25,000? Certainly.
6402. But in the case of other departments, in which you state, I think, that there was an account kept when that balance-sheet is made up, do you consider that amount as money received? That is what is credited to us.
6403. As money received? As money received.
6404. That is, as against all these departments? Yes.
6405. *President.*] Does that appear in the returns as money actually received by the Commissioners? It appears as earnings.
6406. But as money actually received, I mean? Not as money actually received, but as earnings. It forms portion of the items where money is received, and is exactly treated as earnings in the same way as money received.
6407. But it is really only a credit as between one department and another? Yes.
6408. *Mr. Young.*] But in the balance-sheet you take that as earnings? Certainly.
6409. Although the other departments actually pay nothing? They give a credit which we look upon as equal to credit given by cheque.
6410. Do you know whether these departments are debited with such amounts? The Auditor-General would take care of that.
6411. *Mr. Smith.*] The amount is voted annually by Parliament.
6412. *Mr. Kethel.*] Are the accounts of the Railway Department audited by the Auditor-General, or by an audit branch of your own? They are audited in some respects by the Auditor-General, and also by our own staff.
6413. In the haulage of material for the extension of a new line, is that a charge to the Works Department, or to the contractor? To the Works Department.
6414. *Mr. Smith.*] That is because, under the Railway Act, the construction department is divided from the Railway Department. It has always been customary.
6415. Even when the departments were one it was the custom? Quite so.
6416. *Mr. Kethel.*] Is it not generally the custom in all contracts that those portions of the permanent-way material which the Government supply are always delivered to the contractor on his section? I cannot say as to what the contracts are; but I know if we carry any material for the construction branch we should debit the construction branch with the cost of the carriage.
6417. *Mr. Smith.*] These amounts with which the departments are debited with by you are voted to these departments annually by Parliament as a portion of their expenses? Certainly.
6418. They are paid out of an annual vote? Yes.
6419. Take the case of carrying the mails, for instance. The Postal Department, I believe, formerly paid a number of contractors to carry the mails, and most of that is now done by the Railway Department, is it not? Yes, most of it is, undoubtedly.
6420. And for that service you are paid an annual sum by the Postal Department? Yes.
6421. And the money voted annually by Parliament to the Postal Department for the carriage of mails comes in as revenue to the Railway Department? Yes.

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6422. Take the carriage of mails by the English Railway Company; would they be paid in the same way? Yes; exactly.
6423. That is to say, even in the case of private companies performing this service, in nine cases out of ten no money would pass? Yes; it would be a credit.
6424. You do not know anything about the practice as regards this class of service on the Belgium and German State railways, I suppose? I do not.
6425. As to whether the services are charged in the same way or not? I do not know that.
6426. *Mr. Schey.*] That last paper you put in, Mr. Hall, it consists entirely, does it not, of a list of free passes issued to various people? Mostly so, I think; I believe it is wholly so.
6427. Therefore, this is a list of free passes and their value? Yes.
6428. *Mr. Young.*] What department bears the expenses of the free passes, Mr. Hall? It is provided for by a special vote of Parliament.
6429. *President.*] That is the £25,000 vote? Yes.
6430. And the annual expenditure is represented by the £39,000? Yes.
6431. And the Commissioners lose the difference? Yes; quite so.
6432. *Mr. Schey.*] These charges, you say, are paid by a special vote of Parliament? Yes; and according to this return the vote of Parliament has been largely exceeded.
6433. That is to say, the vote was not sufficient to cover the amount of this particular service? Quite so.
6434. Now, I see by this return the first item shown is for twelve months' free passes granted to Members of the Legislative Council and the Legislative Assembly, at the rate of £1,625 per month; can you tell how that amount is assessed; do the members travel to that extent? I do not know how much they travel. That represents the value of the tickets issued.
6435. On what basis is it valued? I have said it is made up of the value of the tickets.
6436. What do you call the value of the tickets? I believe the value of each ticket is £100.
6437. Then you mean to say, because Members of the Legislative Council and Legislative Assembly have free passes issued to them, that the department values each of those tickets at £100, whether the holders of those tickets travel on the railways or not? That is hardly a question I can answer. I simply record the facts.
6438. This return shows the value of the tickets issued to Members of Parliament and others for twelve months? Yes.
6439. Now, I find the total value of free passes issued to Members of the Legislative Council and the Assembly is stated to be £19,500; I want to know how you arrive at that fact? I have already said that it is arrived at by charging a certain amount for each ticket that is supplied.
6440. That is an arbitrary value put upon the passes by the Railway Commissioners? I do not say so; it is the general value.
6441. Then how do you get at the actual value? The amount you refer to represents the total value of tickets issued under that particular heading for the year. The price charged against each free pass issued is the price of a yearly ticket.
6442. Then as a matter of fact, that may or may not be the value of the service rendered? I have said it is the value.
6443. That is by the arbitrary standard fixed by the department? It is the value of the tickets issued on the basis I have stated.
6444. But there is nothing to show that the amount of value is taken out by travelling on the railway? That I have nothing to do with; I am simply giving you the fact as to how the value is arrived at.
6445. Now, as to this other return you have dealt with, the statement of total debit for printing and stationery, I suppose this is all paid to the Government Printing Office? Yes, by voucher.
6446. The first item is for the year 1887, and the total amount for that year, for printing and stationery, was £8,420. Some items are charged to the Government Printer, and some to other printers and stationers. But in 1887 you were not here, I believe? No.
6447. And the present Commissioners were not in office at the time, were they? I think not.
6448. They assumed office late in the year 1888, and you yourself were not here for some time after that? No; I think it was about a year after that.
6449. Therefore the practice of charging for this work was not initiated by you or the present Railway Commissioners? Certainly not; but, as you see, the charge at the beginning was small as compared with what it has been since.
6450. Now you were speaking of the consolidated revenue. Is there not a separate railway loan and debenture account,—are not the railway loans kept separate from the loans for other purposes? By the Treasury, I suppose.
6451. Is there not a special railway loan and debenture account? I do not know.
6452. Do not you know in your position as Chief Accountant of the Railway Department how the Treasury deals with the accounts of the Railway Department? I do not know how their accounts are treated.
6453. There are other services rendered beyond those mentioned for which no vote of Parliament is taken at all, are there not? Well, I do not exactly know how to answer your question; I think I have already replied to you on that point.
6454. Take the paper you have put in, showing the value of certain services provided for by vote of Parliament—that is merely for free passes issued to certain persons—are there not services for which no vote of Parliament is taken? I do not know of any.
6455. You think every service you have mentioned as to carrying for other departments is covered by vote? Certainly; I should say so.
6456. You think it is? It must be so.
6457. Do you swear that it is so? I cannot swear that it is so; but I say they give us credit, and they could not do that unless they had a vote.
6458. Now is it a fact that there is no general balance statement made up for the railways each year? No general balance statement.
6459. Not in the same way as private companies balance every half year? No.
6460. *President.*] When did you come to this Colony, Mr. Hall? In February, 1890.
6461. That was some time after the Commissioners took office? Yes; about a year, I think.
6462. *President.*] Does that close your case, Mr. Schey?

6463.

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6463. *Mr. Schey.*] I have no more witnesses to call, your Honor.
6464. *President.*] Then the third and fourth charges are now closed.
6465. *Mr. Smith.*] I propose to call Mr. McLachlan, your Honor.
6466. *President.*] Very well.

Mr. McLachlan further examined :—

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6467. *Mr. Smith.*] You are already sworn, Mr. McLachlan. I think a question has arisen about some concessions that have been made to the staff since the Railway Commissioners took office.
6468. *Mr. Schey.*] I object to this question altogether, your Honor. I do not know that we have anything to do with how many concessions were made to the staff by the Commissioners. I submit it is altogether wide of the matter. I shall have to call several other witnesses if this goes on.
6469. *President.*] There were three matters dealt with by Mr. Schey in reference to the return of 1890. Is it worth while going into such matters as to the fettler's time, and as to whether tricycles were ordered by Mr. Goodchap, and so forth.
6470. *Mr. McLachlan.*] We are simply prepared to prove the facts, your Honor, that is all.
6471. *President.*] I do not wish to stop you, of course, if you desire to go on.
6472. *Mr. Smith.*] Very well, your Honor. I will not trouble the Court with Mr. McLachlan's examination.

6473. *President.*] Then we now proceed to the fifth charge, which is—"That a large number of the higher officers in the railway service have been put out of their positions to make room for personal friends or acquaintances of the said Chief Commissioner, or of one Mr. Findlay, of the London and North-western Railway." Do you wish to ask any questions of Mr. Schey?
6474. *Mr. Smith.*] Yes, your Honor.
6475. *Mr. Schey.*] Do I understand that I am not to initiate the proceedings on this charge, your Honor.
6476. *President.*] Mr. Smith requires to know, or if he does not the Commission do, to whom you refer in this charge. You say that a number of the higher officers in the railway service have been put out of their positions, but you do not mention the names of any one, and it is impossible to know whom you are referring to. The charge is extremely vague you see.
6477. *Mr. Schey.*] But, your Honor, may I ask is Mr. Smith or the Commission entitled to order me into the witness box to commence the case.
6478. *President.*] You see, Mr. Schey, the Commission will find it very difficult to deal with a charge as vague as this. As you know the duty sometimes falls on the President of deciding as to whether certain evidence is admissable or not, but unless the Commission understands definitely what the charge is it is impossible to tell whether evidence is admissable or not. What we want you to say is, what these charges refer to or to whom they refer, and we want you to state that definitely.
6479. *Mr. Schey.*] I will ask your Honor to wait a moment to enable me to go into this matter.
6480. *President.*] You will find it on page 6297 of Hansard, in your speech of the 9th March, near the end of the first column, where it says, "We find a large number of the higher officers in the railway service have been put out of their positions," &c.
6481. *Mr. Schey.*] Yes, your Honor. Now what does your Honor desire?
6482. *President.*] I want to know who were the higher officers who were put out of their positions?
6483. *Mr. Schey.*] That is an opinion I formed at that time, your Honor.
6484. *President.*] No; this is a statement of fact.
6485. *Mr. Schey.*] Undoubtedly, it is a statement, but these things are not stated as absolute facts, that I could swear in this case such a thing took place. I said that that was a conclusion I had arrived at on certain things which were in my mind.
6486. *President.*] You can state upon oath to whom you referred.
6487. *Mr. Schey.*] Undoubtedly. But before I go into this matter I want a list of the officers of the department.
6488. *President.*] That would not enable you to state what you had in your mind at the time you made this speech.
6489. *Mr. Schey.*] Of course not.
6490. *President.*] Well that is what the Commission want to know. So will you be good enough to go into the box, Mr. Schey?
6491. *Mr. Schey.*] Very well, your Honor.

Mr. Schey further examined :—

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6492. *President.*] Will you name the higher officers in the Railway Service whom you consider have been put out of their positions to make room for personal friends or acquaintances of Mr. Eddy or Mr. Findlay? I said that in my opinion at the time I made the speech which is reported in Hansard I thought such was the case in relation to certain persons.
6493. I ask you who those persons are; I ask you to name them? In my opinion Mr. Midelton was put out of his position to make room for Mr. Thow. That was my opinion your at the time Honor, and I also held the opinion that Mr. Angus was brought from England and that Mr. D. H. Neale was brought from America—I am not quite sure whether he came from America or from England—but I held the opinion that those gentlemen were brought here to fill positions in the Railway Service, and that subsequently other officers were put out of their position to make way for Mr. Angus and Mr. Neale.
6494. But who were put out of their positions? In the case of Mr. Angus it was my opinion that Mr. Cowdery, the late Engineer for Existing Lines, was put out of his place, and that Mr. Angus was put into it. In the Case of Mr. D. H. Neale I am not able to say that any particular person was put out to make room for him; but it appeared to me that he had been brought here and placed over the heads of a number of other persons who were already in the service. Therefore, although there might be no specific person who was actually ejected to make room for Mr. Neale, yet there were a number of persons whose names I am not at the present moment able to state who were put out of the service, and Mr. Neale was put in, and in my opinion without there being any necessity. Another person in relation to whom I held a similar opinion is Mr. Hall, the Chief Accountant of the Railway Department. I was of opinion at the

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the time I made my speech to Parliament, that Mr. Hall had been brought from England and placed at the head of the Accounts Branch at a very large increase of salary over the man who for many years had been in charge of it, and who was a trusted servant of the country. There must be some reason why Mr. Hall was brought here, and although no one was actually ejected to make his place, yet there was such an interference with the positions of those already in the branch that Mr. Hall was put in charge at a higher salary, and consequently the gentleman who had previously held the same position, although he remained in the Service nevertheless held a reduced status.

6495. What is the name of the person you refer to? Mr. F. Wickham. But, your Honor will see that I have no papers here to refer to, and therefore I cannot speak correctly.

6496. *Mr. Smith.*] You say Mr. Wickham was ejected. Was he not ejected by being buried?

6497. *Witness.*] I did not say he was ejected.

6498. *President.*] I understood you to say, Mr. Schey, that Mr. Hall was put over his head. Now, are there any other persons you wish to refer to? Yes; there is Mr. P. B. Elwell who, I understand, occupies the position of Consulting Electrical Engineer. In my opinion he too was improperly brought here.

6499. But, Mr. Schey, the charge is not that persons were improperly brought here, but that high officers in the railway service were put out of their positions to make room for personal friends or acquaintances of the Chief Commissioner? Yes, your Honor, I am quite aware of that; but as I have already said whatever I am stating now is merely the opinion I held at the time I made my statement in Parliament. As regards the gentlemen I have named, the opinion I then held was that they were more or less known to Mr. Eddy or to Mr. Findlay of the London and North-Western Railway before they came here, and that in some senses they owed their appointment to one, or other, or both, of these gentlemen. I am stating that as my opinion at the time.

6500. Have you any evidence to produce in support of your opinion? Well, in the way of legal evidence—

6501. I ask if you have any evidence;—I do not limit you to legal evidence? Well, your Honor, I have a small amount of documentary evidence in relation to two of them, but in the other cases I have information received which I am not now in a position to produce, I admit.

6502. Then will you give what evidence you have, Mr. Schey? I have no papers to refer to on this matter, your Honor. I am not prepared at the present moment to go into it. You have asked me to state what basis I had for the statement I made to Parliament, and so far as I can I have given you the basis, but I have nothing further to refer to at the present moment. There may be other persons, your Honor, whom I shall probably have to refer to hereafter, but before I can proceed with my case I wish to get certain information from the department.

6503. You see, Mr. Schey, if you had wanted any information in reference to these matters you ought to have asked for it earlier. If you had made such an application to the Commission, no doubt the information would have been supplied by this time? No, your Honor; I have been asking for a lot of information, and I have experienced considerable difficulty in getting it.

6504. But you have not asked for any information in reference to the fifth charge? No; I have not.

6505. If you had done so it is probable the information would have been supplied by this time? No doubt, your Honor; but I had no idea it would have been required at such an early stage. I will ask, your Honor, whether Mr. Smith is entitled at the present juncture to proceed with the cross-examination of myself.

6506. *President.*] Certainly.

6507. *Witness.*] Then all I can say is, your Honor, I am bound to consider that I am being prevented from dealing with this matter as I think I ought to be allowed to deal with it.

6508. *President.*] I cannot help what you consider, Mr. Schey.

6509. *Mr. Smith.*] Will you repeat to me, Mr. Schey, the names of the higher officers whom you have referred to as having been put out of their positions in the railway service to make room for friends or acquaintances of Mr. Eddy? I have already given the names to his Honor.

6510. Will you kindly repeat them again to me? If you require them, you can get the shorthand writer to read them to you.

6511. I ask you to repeat the names of the persons you referred to? Perhaps your Honor will save this needless repetition on my part by asking the shorthand writer to read the answer I have already given. I do not think that there is any necessity for Mr. Smith to repeat questions which have already been asked.

6512. I want the information again because, although I have taken a note of some of the names you mention, I was unable to gather from you the whole of the officers whom you consider have been put out of their positions. In any case no complete list has been given, nor any complete statement made. I have only the name of one man, and that is Mr. Midelton. I understood you to say that he was removed to make room for Mr. Thow? Did I say so?

6513. You gave the name of Mr. Thow? What did I say in relation to him?

6514. I ask you to repeat what you did say? You did not ask me that question before.

6515. I want you to give me the names of the higher officers, one by one, who have been put out of their positions? And I ask you to get those names from the shorthand writer.

6516. Give me the names of the officers one by one, sir? Will you kindly repeat your question?

6517. I want you to answer my question, and at once? I have already answered it.

6518. Do you decline to answer it? I ask his Honor to rule that, having already given the names in answer to questions from his Honor, there is no necessity for me to repeat them.

6519. *Mr. Smith.*] But I ask you, Mr. Schey, to give me the names; to repeat them again for me? Ask me some definite question upon any particular name you want to know, and I will tell you.

6520. I ask you to give me the names of the officers who were removed from their positions? I ask his Honor to rule that the question has already been answered.

6521. *President.*] When I put the questions to you, Mr. Schey, you did not at all answer them in a clear way. It is not perfectly clear at the present moment, to my mind, who the higher officers are that you say were removed from the service. You have mentioned the names of Mr. Midelton, Mr. Cowdery, Mr. Wickham. Those are the only three names I caught at the time. I think you will have to answer the question which Mr. Smith is putting to you?

6522. *Witness.*] Very well, your Honor. Now then, Mr. Smith, what is your question?

6523. *Mr. Smith.*] Give me the names of the higher officers who you referred to, one by one? In what reference?

6524.

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6524. Give me an answer to that question? If you ask me a definite question ——
6525. I do ask you a definite question. I ask you to repeat to me, one by one, the names of the higher officers who you referred to as having been removed from the service? What higher officers?
6526. The higher officers referred to by you. Will you give me an answer? I will give you an answer to any definite question you put to me.
6527. *Mr. Smith.*] If this witness does not give me a reply, your Honor, I must ask you to commit him for contempt of Court. I must ask for a warrant for his committal if he refuses to answer the question.
6528. *Witness.*] I can give you an answer to any definite question, Mr. Smith, but I would point out that what you are now asking me is not a definite question by any means.
6529. *President.*] If the witness says he has a difficulty in understanding your question, Mr. Smith, you had better read the charge, and then ask him who are the higher officers there referred to?
6530. *Mr. Smith.*] Very well, your Honor, I will adopt that course. I will read the statement—I believe Mr. Schey objects to have it called a charge—into which this Commission is inquiring. It is "That a large number of the higher officers in the railway service have been put out of their positions to make room for personal friends or acquaintances of the said Chief Commissioner, or of one Mr. Findlay, of the London and North-Western Railway." (To Witness): Now state who these higher officers are? I say I held that opinion, and in my ——
6531. I do not ask you your opinion, I ask you to state the names of the higher officers? I was going on to say, if you had permitted me, that, in my opinion, the first officer was Mr. Midelton. In my opinion ——
6532. I tell you I do not want your opinions. Give me facts. Your opinions are not very valuable.
6533. *Witness.*] That is a matter for the Commission to decide, and not you, Mr. Smith.
6534. *Mr. Smith.*] At the present moment I am not asking you for opinions, but facts.
6535. *Witness.*] And I am giving you opinions, and in my opinion ——
6536. Remember you are on your solemn oath before your God, if you have a God. I want to know the facts of this matter? Your Honor, I do not think there is any need for any of this theatrical nonsense. I have made my statement, and if necessary I will make it again, but I am not going to be bullied by Mr. Smith, or anyone else, into making a statement I have not already made.
6537. I am very certain of this, Mr. Schey, that no bullying and no ordinary way of dealing with you will get any facts out of you, because there are none in you.
6538. *Witness.*] Then, your Honor, it is useless for Mr. Smith to ask these questions.
6539. *Mr. Smith.*] I want to know, Mr. Schey, who you refer to. You have given Mr. Midelton's name, have you not? I have stated that in my opinion Mr. Midelton was removed from the service, and a certain other gentleman was put in his place.
6540. We will deal with that directly: You have given the name of Mr. Midelton. Can you tell me of any other higher officers who were removed? I was of opinion at that time that Mr. Cowdery had been removed from the service,
6541. That Mr. Cowdery had been removed? Yes.
6542. He is one of the officers you intend to refer to? In my opinion, yes.
6543. Are there any other persons you intended at that time to refer to? As I have already stated to his Honor, I also intended to refer to Mr. Wickham, and at the same time I stated that his case was qualified in so far as he was not ejected from his office.
6544. You have given me three names now. Had you any other officer in mind when you made your statement? I do not think, so far as I can remember at the present moment, that there were any other names in my mind when I made the statement; but I had the impression that the same thing had happened to other persons, though I am not prepared now to name them.
6545. Very well, we will now take your list backwards—Mr. Wickham, Mr. Cowdery, and Mr. Midelton. I ask you whether, at the time you made your statement, you knew that Mr. Wickham, after the present Commissioners were appointed, had his salary raised, remained in the department, and died when in receipt of a higher salary than when the Commissioners took office. Were you aware of that fact? I am aware that Mr. Wickham is dead.
6546. Answer my question first, then we will take what you knew besides. I want to know whether you were acquainted with the fact I have just mentioned when you made this charge in Parliament? When I made that statement, I suppose you mean; I do not admit that I made it as a charge.
6547. When you spoke in Parliament were you personally aware of the fact that Mr. Wickham was dead? Will you allow me to answer the question in my own way?
6548. I intend to get a yes or no from you, Mr. Schey. Were you aware of the fact? You will have my answer in the way I choose to give it. Allow me to explain this. Mr. Wickham I understand now is dead, and I understand also that Mr. Wickham died very much about the time when this speech was made, I think a short time before, but I am not in a position to say absolutely that I was aware he was dead at the time. I am strongly of the impression that I knew he was dead, that he died somewhere about the time I made the statement in Parliament. I am not in a position to swear whether he was dead at that time.
6549. I am not asking you whether you are in a position to swear anything. I ask you whether you are aware that he was dead at that time? I am answering you to the best of my knowledge, and I believe I was aware he was dead at that time.
6550. Were you aware of the fact that he retained his position in the office at a higher salary up to the time of his death? I was aware that he retained his office.
6551. You say you were aware that he retained his office. I ask you whether you were aware that his salary had been increased? That was ——
6552. Just answer my question please? I will answer you if you will allow me time. I am of opinion ——
6553. I do not want your opinion, I won't have it. I want facts? You will have my opinions, Mr. Smith.
6554. *Mr. Smith.*] I decline to have your opinions. I want to know the fact. I submit, your Honor, that this witness must not give his opinions, he is on his solemn oath, and he is bound to give me the facts?
6555. *Witness.*] It is being upon my oath that makes me very careful in answering the question.
6556. *President.*] I should imagine, Mr. Schey, there was no difference whether you are on your oath or not if you wanted to tell the truth before this Commission. The question put to you is one I think which you can answer with yes or no. You can say whether you did or did not know a particular thing at that date.

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6557. *Witness.*] I believe your Honor that it was within my knowledge that Mr. Wickham had had an increase of £25. I believe I had that in my mind at the time I made my speech, but I am not prepared to say positively that he had an increase or to say the amount of the increase.
6558. *Mr. Smith.*] I am not asking you about the amount of the increase, I ask you whether at that time ——
6559. *President.*] The witness has answered the question sufficiently Mr. Smith.
6560. *Mr. Smith.*] Now Mr. Schey will you tell me whether you now know the date when Mr. Wickham died? No, I do not.
6561. You only happen to know that he is dead? I am under the impression that he died some time just before the speech was made, but I am not quite certain.
6562. While he was still in the railway service? Yes.
6563. And though you were aware of that fact you told Parliament, or intended Parliament to understand that Mr. Wickham had been removed or put out of his position? I do not say I was aware of it. I have already told you to what extent my knowledge went. In the next place I did not tell Parliament so far as I know that Mr. Wickham had been removed.
6564. You say you did not tell Parliament when Mr. Wickham had been removed? That is so far as I know. If you think I did you had better produce *Hansard*.
6565. But Mr. Schey you have to-day sworn that when you spoke in Parliament you intended to refer to Mr. Wickham? I have to-day sworn that at that time I had Mr. Wickham's case in my mind.
6566. Did you at that time intend to refer to Mr. Wickham as one of the persons who had been put out of his position? As to my intention to refer I am unable to say.
6567. You cannot say now what you intended? I made a statement and I considered at the time that I had grounds for making it. There is no doubt in my mind that Mr. Wickham's case with others helped to form the ground for my statement.
6568. Did you make your statement without concerning yourself to inquire whether it was true or false? No, I do not say so.
6569. As a matter of fact you now know that the statement you then made was false? I do not know anything of the kind.
6570. Do you not now know that Mr. Wickham died when he was in the service? Yes.
6571. You do know that now? I have no doubt he did die in the service.
6572. When you spoke in Parliament did you intend your brother Members to understand that Mr. Wickham had been put out of the service? I did not say so; I do not say so.
6573. Do you include him amongst the higher officers you intended to refer to? I have already answered that question as fully as I can answer it.
6574. The next name is that of Mr. Cowdery. Did you intend to refer to Mr. Cowdery when you made your speech? I have already said that when I made the statement I considered I had good grounds for it, and from general information on the matter of which I am now speaking there is no doubt at that time I had Mr. Cowdery's case in my mind, but I did not refer specifically to Mr. Cowdery.
6575. You did not refer to him by name? No.
6576. Did you intend other Members of Parliament to understand that you referred to him? I am not able to say that. I am only able to say what I said.
6577. But at any rate, what you had in your mind was that Mr. Cowdery had been put out of the service? I have no doubt whatever that when I spoke Mr. Cowdery's was one of the cases which had helped me to form my opinions.
6578. Do you now know anything which has led you to alter that opinion, because you have stated here that at that time you intended to refer to Mr. Cowdery? With the qualification already expressed,—Yes.
6579. Do you know any facts now which would alter your opinion about Mr. Cowdery? I do not think I know anything more now than I did at that time.
6580. Then you do not know now that Mr. Cowdery retired under the Railway regulations because he was over 60 years of age. You do not know that he retired and took his pension? I do not know as a matter of my own knowledge.
6581. Do you know it from those various sources of information which you have got. You say you have had some information about it. Have you heard or have you been informed of anything? Informed of what?
6582. Of the circumstances under which Mr. Cowdery retired? I believe I have a general idea on the matter.
6583. What was that idea? As to what point.
6584. As to the circumstances under which Mr. Cowdery retired? I believe he retired from the service and received a pension which I believe he enjoys at the present time.
6585. Did you or did you not then know that Mr. Cowdery was over 60 years of age? I am unable to say at the present moment without any papers to refer to.
6586. You know him by sight? Yes.
6587. Surely you do not want any papers to tell you his age? I cannot say that; I do not profess to be a judge of ages.
6588. You have never concerned yourself to ascertain from the Civil Service Reports the ages of the employees? I believe I have read each of the Civil Service Reports, and that in a general way I have taken notice of what they contained. I am not saying that Mr. Cowdery is not 60 years of age; all I say is that I did not know of my own knowledge that he was that age. It is very likely I may have observed the fact at some time, but I cannot say positively.
6589. At any rate are you prepared now to say that Mr. Cowdery did not retire on a pension because he was more than 60 years of age? I am not prepared to say anything beyond that my impression is that he d d retire. I do not say so as a matter of knowledge but as an impression.
6590. You had an impression that he did retire under the Railway regulations because he was over 60 years of age, and that he retired on a pension, and you know that he is now enjoying that pension? No; I do not know it, but I believe he is.
6591. You have the opinion that he is? I have the opinion that he did so retire, and that he is enjoying his pension at the present moment.

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6592. Then it is a fact that you did say in Parliament that a number of higher officers, meaning Mr. Cowdery, had been put out of the service? I mean to say just what I did say, and I don't mean to say anything more than I did say. If you will say what I did say I will admit it.
6593. Probably you will. I ask you whether you did say that a number of higher officers had been put out of the service, thereby intending to include Mr. Cowdery? I did not say including anybody.
6594. But you did say that a number of higher officers had been put out of their positions? If you hand me a copy of *Hansard* I will tell you what I did say.
6595. You did say that a number of the higher officers had been put out of the service? If you are quibbling about words Mr. Smith you had better give me *Hansard*, and I will tell you exactly the words I used.
6596. I will ask the question and you can give me a reply. I will not receive any instructions from you as to what I shall do. I ask you whether you told Parliament that a large number of higher officers had been put out of the service? Without being able to swear to every word I used on that occasion, I may say that I said something of the kind you indicate.
6597. And you have stated here to-day that you intended to include Mr. Cowdery? I have not said so. I have said I had no doubt whatever that Mr. Cowdery's case was one of the matters in my mind when I formed that opinion.
6598. Did you at that time know the circumstances relating to Mr. Cowdery which you now know? I believe that I have no further knowledge about Mr. Cowdery now than I had then.
6599. Did you then know all the facts about Mr. Cowdery which you now know? So far as I can say I knew as much about Mr. Cowdery as I now know. It is merely a matter of memory.

[*Resuming after lunch.*]

6600. *Mr. Schey.*] Before proceeding further I desire your Honor to draw attention to a point which I omitted to note this morning. I think on Friday last that a question was raised as to whether the Railway Commissioners were to continue to be represented by counsel, and I then raised again a strong objection to such a course on grounds previously stated to the Commission—on the statement of the Colonial Treasurer made in Parliament. I understood on Friday that your Honor did not absolutely decide the matter. At that time the 3rd and 4th charges had not been entered upon. Now I omitted to take the point although I had previously expressed strong objections in this direction, and before proceeding further I ask your Honor to rule that the Railway Commissioners shall represent themselves for the remainder of this inquiry, and not be represented by counsel.
6601. *President.*] When Mr. Smith appeared for Mr. Eddy, on his leaving the Court yesterday, you raised no objection to his proceeding with the charge as representing Mr. Eddy.
6602. *Mr. Schey.*] I have continually raised objections, your Honor.
6603. *President.*] But you did not object then.
6604. *Mr. Schey.*] I understood in the first instance that I was overruled, your Honor. Then I raised the objection again and I understand that because of Mr. Eddy's inability, Mr. Smith was allowed to appear for him. I admit that after that I should have taken the point again, but I failed to do so. I certainly intended to have done so. I raised the objection at the earliest moment it has occurred to me again.
6605. *President.*] Perhaps for the present Mr. Smith has already asked you a number of questions in reference to this fifth charge, and as I understand he has only to deal with the case of Mr. Midelton it would be better for Mr. Smith to finish his examination.
6606. *Mr. Schey.*] I ask your Honor to rule absolutely, because I raised the objection, and I intend to press it until I am overruled by your Honor. If you compel me so to do I must bow to the ruling of the Commission, but I submit that that is not what the Commission at first determined. The matter was to come up for revision, and it was only because I was not prepared to proceed with the matter that I overlooked the objection; but on thinking over the matter since, I found that I had omitted to raise the objection, and I certainly must press the point now until I am overruled by your Honor. If your Honor says I must go into the box and must proceed of course I shall have to do so, but otherwise I protest against the Commissioners being represented by counsel.
6607. *President.*] We think that for the present that it would be better for Mr. Smith to finish the question he wishes to put to you in reference to the fifth charge. After that we will deal with the matter.
6608. *Mr. Schey.*] Then without any necessity on my part, your Honor, to again raise the question, if I should happen to admit it, immediately after Mr. Smith has concluded my examination, will your Honor then go into the question.
6609. *President.*] Then we will deal with the matter.
6610. *Mr. Schey.*] Meanwhile you rule that I must go into the box.
6611. *President.*] Yes, in order to allow Mr. Smith to complete the questions he wishes to put to you.

[*Examination of Mr. Schey, continued.*]

6612. *Mr. Smith.*] When we adjourned, Mr. Schey, I was about to ask you in reference to Mr. Midelton. When you made your statement in Parliament, Mr. Midelton was one of the higher officers you intended to refer to. You have said that? When I made the statement in Parliament, no doubt Mr. Midelton's case was one of those in my mind, and which had helped me to form the opinion I then expressed.
6613. Were you at that time, I mean when you made your speech in Parliament, aware of the fact that Mr. Midelton had been dismissed? You say dismissed.
6614. Yes, that is the question I put to you? I was not aware.
6615. You were not then aware of that fact? No.
6616. Were you then aware of the facts to which Mr. Midelton has sworn here in Court? What facts do you mean.
6617. In reference to his removal? Will you state what facts you refer to.
6618. Did you hear, or have you since read the evidence which Mr. Midelton gave here in the witness-box before this Commission? I think I have read it; I have read it cursorily at all events.
6619. Were you aware when you made this charge in Parliament of the circumstances connected with Mr. Midelton's dismissal, which he swore to when in the witness-box? You will have to recapitulate the circumstances which you wish me to swear to.
6620. I ask you whether you were aware of the circumstances, and I want an answer, yes or no? I will answer the question as I answered it before. If you want to know that I was aware of any particular

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set of circumstances at the time I made my speech, you must quote the particular set of circumstances, and I will then give you my answer. In reference to Mr. Midelton's dismissal I will say this: I was aware that Mr. Midelton had been removed from the service, but I am not prepared to say whether he was dismissed or not.

6621. You are aware now that he was removed? Yes; I am aware that he was removed from the service.

6622. Were you aware that he was removed from the service when you made your speech? That he had been removed, yes.

6623. Have you, during the proceedings of this Commission, learnt anything which you did not previously know about Mr. Midelton's removal? That is so large an order that I cannot charge my memory.

6624. You cannot charge your memory whether you have learnt anything since? I cannot.

6625. Will you undertake to say you did not know when you made the charge in Parliament everything which has since appeared before this Commission in reference to Mr. Midelton? I will not swear because a variety of things have transpired before this Commission. I am not prepared to swear whether I did or did not know them all at that time. I do not think, to give you the answer you apparently want, that I am aware of much more now than I was then; but I am not prepared to swear that nothing fresh has been put before the Commission.

6626. Were you, when you made your speech, aware of the circumstances under which Mr. Thow had been appointed? Well, I cannot say that. I had a knowledge so far as I knew of the circumstances, but whether they were the actual circumstances or not I will not swear.

6627. But had you a knowledge, then, of the circumstances about his appointment, which he and Mr. Eddy have since sworn to? If you relate the circumstances you refer to I will give you a definite answer.

6628. You were in Court here when the evidence of Mr. Thow and Mr. Eddy was given? Yes, I think so, all the time.

6629. Will you undertake to swear that you were not aware of all the circumstances, when you made your charge, which you swore to in evidence? In relation to what?

6630. In relation to Mr. Thow's appointment? Oh, well, there are a variety of circumstances which have been alleged about Mr. Thow's appointment.

6631. What are the variety of circumstances? If you ask me that ——

6632. Explain what that variety is;—you say there were a variety of circumstances? I do not profess to be a travelling Webster's dictionary, and I do not see any reason why I should give the meaning of the word variety.

6633. I want you to explain what you mean when you said there were a variety of circumstances which have been alleged about Mr. Thow's appointment? What I mean to say is this, that a number of things have been said in the course of the evidence ——

6634. You mean small things? I am not prepared to swear whether I was aware of all at that time; I am not prepared to swear whether I was aware of all the matters which have been adduced before this Commission.

6635. You cannot swear, you will not undertake to swear, that you were not aware of all of them? I say that I was not aware of all that has been put forward before this Commission.

6636. But you will not undertake to swear that you have learnt anything about Mr. Thow's appointment during this inquiry? I am not prepared to say that. For instance, your Honor, if I may be permitted to explain here, Mr. Eddy has sworn in the box that he did not see Mr. Thow to his knowledge when he arrived in Adelaide on his way to New South Wales. While I am aware that Mr. Eddy has sworn that I was not aware when I made my speech that Mr. Eddy would swear that; and therefore that is something sworn to which I did not then know; but as to the general fact that Mr. Midelton was removed from the service and that Mr. Thow was brought here from South Australia to take his place, that was in my knowledge at the time I spoke just as much as it is now.

6637. Have you any evidence to call on this subject, I mean the subject of Mr. Midelton's removal and of Mr. Thow's appointment, different to the evidence that has already been given? That I cannot say until the evidence is made.

6638. Have you any witnesses to call in support of that statement other than the witnesses already called? I am going to call a number of witnesses.

6639. I want to know who they are?

6640. *Witness.*] Is Mr. Smith entitled to ask that question, your Honor.

6641. *President.*] I do not know, Mr. Smith, that you can ask that question.

6642. *Mr. Smith.*] Very well sir. Now, Mr. Schey, you are aware, or are you aware, that the statement which you made in this charge that is, that officers have been put out of their positions to make room for personal friends or acquaintances of the Chief Commissioner had been previously made by another person. When you made your speech in Parliament did you know that another person had previously made a similar charge? I am not able to say that with any certainty. I do not remember any person having made such a charge, but, of course, I will not say they have not done so.

6643. I ask you whether you are aware of the fact, not whether any other person had made the charge? I may have been aware that such a charge had been made.

6644. You remember hearing the name of Reseigh Martin? Yes; what about him.

6645. You know the name it is familiar to you? Yes, I have heard the name before.

6646. When you made your charges in Parliament was it in your mind that a person of that name had made or published charges of the same character previously? I knew, as a matter of fact, that Mr. Martin had made certain charges, because I read the article which Mr. Martin wrote, and which was the subject of a prosecution for criminal libel by Mr. Eddy. I read the article, and I read the proceedings and I think I had, through the daily press, a fair knowledge of the whole business.

6647. You were aware when you made your statement in Parliament of the fact that another person named Martin had previously made charges to the same effect? At the time I spoke no doubt I was aware that Mr. Martin had written the article spoken of.

6648. You were aware that he had been tried and convicted for criminal libel? I was.

6649. And that he got two years' imprisonment? Yes.

6650. And at the time you made your statement you made it under the privilege of Parliament? Yes.

6651. And when you came here the other day, before you commenced these charges, you required an undertaking that you would not be similarly prosecuted? Undoubtedly I did. 6652.

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6652. You asked for an indemnity? Before you go any further, Mr. Smith, I wish you to remember that I have already several times protested against the way in which these charges are formulated. I decline to take any responsibility for the way in which they are formulated.
6653. Not for the way they are formulated, I understand that. You only take the responsibility for the way you made them in Parliament? I only take the responsibility of the expressions made use of in Parliament, and as reported in *Hansard*.
6654. Quite so. Now at the time you made this statement in Parliament it was in your mind that another person had been tried and convicted, and sentenced to two years' imprisonment, for making a similar charge out of Parliament? I cannot say it was in my mind at the time; of course I knew such a thing had transpired.
6655. And was that one of the reasons you asked for an indemnity against criminal proceeding? It was not.
6656. Why did you ask for that indemnity? Because I felt convinced that every endeavour would be made to subject me to prosecution if such a thing could possibly be done, and as I consider——
6657. One moment, Mr. Schey. I want to ask you another question. You were aware, of course, that if you told the truth you would not be liable to a criminal prosecution? I cannot say that I was aware of it.
6658. It never occurred to you? I may state ——
6659. It never occurred to you that you might tell the truth, and so avoid a criminal prosecution? I don't take the question as you put it, but I say this in reply. I don't say it is beyond the bounds of possibility that cases might be produced in which men are unjustly prosecuted, and I think that when I dealt with the matter in Parliament on an adjournment of the Assembly I stated that I then feared that a prosecution might be initiated even if it were unjust and improper. The fact that the truth is told does not, in my opinion, always save a man from being convicted.
6660. You say you read the newspaper reports of the trial and conviction of Martin? I did.
6661. Did you read the newspaper reports of Mr. Eddy's evidence? I think so; that would be part of the case.
6662. Did you ever read that Mr. Eddy denied on oath the truth of the statements which you afterwards repeated in Parliament? No.
6663. You did not read that? Let me say this, I remember that Mr. Eddy denied on oath the statement made in the article for which Martin was prosecuted.
6664. I want to ask you whether you are prepared to say you did not read in the newspapers containing the report of Martin's trial the evidence of Mr. Eddy, in which he swore that none of his own or Mr. Findlay's friends had been appointed to the railway service? I am not prepared to say that. I have already sworn that to the best of my knowledge and belief I read all the reports that were published in the ordinary press, at all events of the trial and conviction of Resoigh Martin, and all the evidence given by Mr. Eddy; but I am not prepared to swear as to the particular points that evidence touched upon. I believe I read it all.
6665. And had you that in your mind when you made these charges in Parliament? I don't think I had at all. So far as I can remember that matter was not in my mind at the time, but as I have said already, I was aware of the fact; I do not dispute that for one moment.
6666. *Mr. Smith.*] That is all I have to ask.
6667. *Mr. Young.*] Mr. Schey, I find in the report of *Hansard* of your speech these words:—"We find that a large number of higher-office officers have been put out of positions to make room for personal friends or acquaintances of the Chief Commissioner, or Mr. Findlay, of the London and North-Western Railway." Then you go on to say, "The first action of the Chief Commissioner in the Colony proves that the first two officers whom he brought here he engaged before he came to the Colony at all; therefore, it was not on account of the proved inefficiency of the service, but of his own ideas, that the first two were brought here." Now, when you made that statement, were you speaking of something within your own knowledge? That was the conviction that had come to my mind from what I had seen and heard regarding this matter.
6668. You refer to a specific case here. You say that the first two officers brought here were engaged by Mr. Eddy before he came to the colony at all? No doubt. That is stated in the same way that other statements were made. It is intended to convey an impression which was in my mind at the time.
6669. Did you know it of your own knowledge? Of my own knowledge, I did not know it.
6670. And you thought you were justified in making that statement although you did not know it of your own knowledge? I thought I was.
6671. It was an inference? Undoubtedly.
6672. *Mr. Smith.*] I may say, your Honor and members of the Commission, that on the subject of counsel appearing, it has been continually represented before the Commission that there was some undertaking given on the part of the Government that the parties should appear themselves and without counsel. I had not taken the trouble until last night to look at the evidence put in on this subject, but I now find that one of the first documents tendered to you by Mr. Schey shows exactly the contrary. I direct attention to a paper printed to the order of the Legislative Assembly on 31st March, 1892. This paper commences with Mr. Eddy's letter, and it contains the Cabinet decisions, and also Mr. Schey's letter. The Cabinet decisions will be found on page 4. The first is, "Cabinet approves Royal Commission to inquire.—EDMUND BARTON, 23/3/92." The second is, "Cabinet desires appointment of Railway Commission of three persons to inquire, on the lines indicated in minute of Minister for Railways. Mr. Justice Owen, Chief Judge in Equity, Mr. John Young, and Mr. Alexander Kethel should be asked to act. The Attorney-General to inquire and to report as to willingness of these gentlemen to accept.—EDMUND BARTON, 26/3/92." There is a third minute to the effect, "Attorney-General reported that the three gentlemen named as Commissioners are willing to act, and was asked to draft Commission accordingly. The inquiry to be held with open doors. Liberty to Mr. Eddy and Mr. Schey to cross-examine witnesses. Cabinet will not reimburse either of them for law costs before the Commission.—EDMUND BARTON, 29/3/92." I think that shows distinctly, your Honor, that they contemplated employment of counsel, but, to make the matter more clear, I will refer you to a letter addressed by Mr. Schey to the Attorney-General, on the 29th March, 1892, which will be found on page 5. In that letter Mr. Schey says, "I fully appreciate the acquiescence of the Government and yourself in certain stipulations made by me in regard to the proposed inquiry, although I must still insist that the liberty granted to Mr. Eddy and his colleagues to appear by counsel is so grave an injustice, and puts me *ab initio*, at so great a disadvantage,

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or, as an alternative." This, I would point out, isimmediately after the Cabinet minute—"to so great an expense that I could not be expected to incur—that I would be, on this ground alone, amply justified in refusing to have anything further to do with the matter. Indeed, in this direction I am placed in a much worse position than any ordinary person laying an ordinary information against any other." Mr. Schey, I believe, read the whole of this letter.

6673. *Mr. Schey.*] I did not read that, your Honor.

6674. *Mr. Smith.*] I will read another passage, your Honor, which is familiar to me as having been previously read in this Court. I think it must have been read by Mr. Schey. "In such a case the Crown immediately takes action, and arrest or other process takes place, and when the matter goes into court a solicitor or barrister, instructed by the Crown, appears to prosecute, and the person who laid the information is merely a Crown witness, without expense of any kind, and who, indeed, is paid for his attendance at court. Should the case be sent for trial, and a bill be filed, the Crown Solicitor and Crown Prosecutor do all the legal work, and get up the case, with all the resources of the Government; and the person who laid the information is again paid for his time, and is at no expense or risk, except he commit provable perjury. In this inquiry proposed to be held, all this is entirely reversed, and I am called upon, by my own unaided efforts, to carry out what is virtually a prosecution, entirely at my own cost, and with no assistance of any kind to make my case, which is properly one for the Crown itself, or, from my point of view, for Parliament." I remember that being *read*, and I think——

6675. *Mr. Schey.*] I do not think it was read, your Honor.

6676. *Mr. Smith.*] This was the first document put in, and not only does it refer to the Cabinet minute under which this Commission was appointed, but it contains also Mr. Schey's letter of the 29th March, in reference to that minute.

6677. *Mr. Schey.*] In answer to Mr. Smith, I beg to point out to your Honor and the Commission—first of all that I have protested, from the very first moment it was proposed to appoint a Royal Commission, against Mr. Eddy being allowed, or against the Railway Commissioners being allowed, to appear by counsel. The letter referred to is dated 29th March, and will be found on page 5 of the document. On page 4 is the Cabinet Minute referred to by Mr. Smith, and your Honor will notice that it is signed "Edmund Barton, 29/3/92." The letter which appears here was handed in to the Cabinet room by myself, before the Cabinet meeting commenced, on the day in question, and the Cabinet minute was written after the Cabinet meeting, and therefore I had no knowledge whatever, at the time I wrote this letter, that the Cabinet had made such a minute. As a matter of fact, this letter was sent before I was aware that the Cabinet had made such a minute at all. Your Honor will see, therefore, that the reference in my letter could have nothing whatever to do with the Cabinet minute, because the Cabinet minute was written subsequent, and not prior to my letter. In the next place, your Honor will remember that I drew particular attention to this matter, and that at the commencement of this Commission I quoted a passage from *Hansard* in which the Minister for Railways, from his place in Parliament, said that he was in a position to say he did not think that Mr. Eddy would seek to be represented either by counsel or attorney; and I submit again, your Honor, that the Minister in charge—this is the last declaration on the matter—must have had some grounds for his declaration, and no doubt he had some communication with Mr. Eddy concerning this matter. But in any case the Attorney-General pointed out to Parliament that Mr. Eddy should make his application to the Commission, and it would lie with the Commission to decide whether counsel might appear or not. Subsequent to that, this declaration was made by the Minister for Railways, and at all events, your Honor, the Government could not decide the matter, because it lies in the hands of the Commission and not in the hands of the Government to say whether counsel shall be employed or not. In the next place, I submit there are a variety of reasons which I do not intend to repeat, but which I have urged before, why I consider this to be a grave injustice to myself that counsel should be employed; and I ask your Honor to rule that no counsel shall be employed in the matter.

6678. *President.*] Although we think it would be a very great convenience to the Commissioners if Mr. Smith were allowed to appear and to conduct the inquiry for them, still we think that perhaps it would be fairer if the Commissioners themselves were to conduct the inquiry without the active assistance of Mr. Smith. At the same time if in these departmental inquiries Mr. Smith sees that there are certain matters which ought to be brought under the notice of the Commission, we will give him an opportunity of doing so, for the purpose of showing to the Commission that there are matters which have not come out, and which ought to be considered by them; but, beyond that, we think it is better that Mr. Smith should not appear as counsel for the Commissioners.

6679. *Mr. Schey.*] As to the other point which Mr. Smith raises, that lies with the Government to decide.

6680. *President.*] We have given our decision on the point referred to us.

6681. *Mr. Schey.*] I was speaking of the point referred to by Mr. Smith as to the Government remunerating counsel.

6682. *President.*] We have nothing whatever to do with that.

6683. *Mr. Schey.*] I understand Mr. Smith is employed by the Department.

6684. *President.*] We know nothing about that, nor do we say anything about it. Now, Mr. Schey, will you proceed with your evidence on this charge.

6685. *Mr. Schey.*] Before I go any further, your Honor, I said this morning, in commencing this matter, that I had no papers to refer to, and that in any statement I made I was merely speaking from memory. I now find that I did not include a number of gentlemen I intended to speak of in relation to this matter, and I desire, therefore, now to add some names to those already mentioned.

6686. *President.*] You had an opportunity when you were in the box, not only before, but after lunch, to name all the higher officers referred to by you.

6687. *Mr. Schey.*] Yes, your Honor, but you will remember that I said that I wanted a certain list.

6688. *President.*] But you have had no list since you made your statement, Mr. Schey?

6689. *Mr. Schey.*] Quite so, your Honor, but when I went to lunch I thought over the matter, and then I remembered that I had made certain serious omissions, at least to my way of thinking.

6690. *President.*] Any statement you have to make, Mr. Schey, you had better make in the box, just as you have done previously.

6691. *Mr. Schey.*] Very well, your Honor.

[*Mr. Schey went into the witness-box.*]

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6692. *Mr. Schey.*] I think the names of the officers I mentioned to your Honor. I have no list even now, though I have stated that I want a list from the department; and I have some officers on a list which I have at home. I think I mentioned this morning that the officers brought here were Mr. Angus, Mr. D. H. Neale, Mr. Elwell, and Mr. Thow. I do not exactly remember whether I mentioned any others.
6693. *President.*] You mentioned the name of Mr. Hall.
6694. *Mr. Schey.*] Mr. Hall, undoubtedly. Did I mention any others?
6695. *Mr. Kethel.*] Only those five.
6696. *Mr. Schey.*] Among other officers who were brought here, as I conceive, to fill positions made vacant, and who I had in my mind at the time I spoke, I must include Mr. Foxlee, Mr. Hodgson, Mr. Corus, Mr. Nichols, Mr. Kneeshaw, and Mr. Wilkin. I have remembered these names since I gave my previous evidence. I do not say that these gentlemen were brought here, and that for each of them some one was directly ejected from the service, but I say that I am of the opinion that these persons were brought here, and that as a consequence, either directly or indirectly, officers then in the service were put out, and room was made for them. That is the opinion I held at the time I made my speech, and these are some of the gentlemen I was thinking of when I made that statement. Even now I do not think these are all, but I cannot remember at the present moment any other names to add to the list.
6697. *President.*] Can you name the officers who, in your opinion, were put out of their positions to make room for these gentlemen?
6698. *Mr. Schey.*] At the present time I cannot. Neither do I think, your Honor, that in each case I can identify any particular officer who was ejected; but there are a large number of officers of various grades who were put out of the department, and these other officers were brought here from England, not all directly I know—I am not going to say that; but they have been employed by the Railway Commissioners; some of them, at all events, being brought here directly, I understand, and in that way I think they have fallen into the places which others had vacated.
6699. *President.*] Do you say that these persons were personal friends or acquaintances of Mr. Eddy or of Mr. Findlay?
6700. *Mr. Schey.*] I hold the opinion, your Honor, that a number of them, at all events, were so.
6701. *President.*] Very well, Mr. Schey, will you now proceed to prove your case?
6702. *Mr. Schey.*] I do not think I am in a position to proceed any further to-day.
6703. *President.*] Why not?
6704. *Mr. Schey.*] In the first place, I have no witnesses ready, and in the next place, I have no documents.
6705. *President.*] But you surely can take the first case you mentioned—the case of Mr. Midelton and Mr. Thow. Have you any evidence in reference to them? I think not, your Honor.
6706. *Mr. Smith.*] Mr. Midelton, I understand, is here.
6707. *Mr. Schey.*] I may say, your Honor, that I desire to call as witnesses a number of the gentlemen I have named. I desire, at all events, to call Mr. Eddy, Mr. Hall, Mr. Hodgson, Mr. Corus, Mr. Nicolls, Mr. Foxlee, Mr. Angus, and Mr. D. H. Neale.
6708. *Mr. Kethel.*] Has not Mr. Angus left the service?
6709. *Mr. Schey.*] I think I am correct in saying that he has; but at the same time I hear he was in Sydney only a short time ago, and I think he is here now.
6710. *President.*] Is there any evidence you can give this afternoon on any of these points?
6711. *Mr. Schey.*] I do not think so, your Honor; I have not had any opportunity to go into the matter.
6712. *President.*] But you know the Commission is sitting here to go on with this inquiry, and you ought to be prepared to proceed without any delay.
6713. *Mr. Schey.*] But, your Honor, it has taken all the spare time at my command to read through the evidence which has been taken up to the present, and to arrange matters so far as they have gone. I have had no chance whatever to prepare myself for the fifth charge, therefore I am not in a position to go on now.
6714. *Mr. Smith.*] I would point out to this Commission ——
6715. *Mr. Schey.*] I do not think, Mr. President, that Mr. Smith, having completed his cross-examination of me, is, after your Honor's decision, entitled to address you.
6716. *President.*] But Mr. Smith may wish to point something out to the Commission.
6717. *Mr. Smith.*] What I desire to point out to the Commission is this, Mr. President, that on the part of the Railway Commissioners there is no wish to burke inquiry. If this were an administrative inquiry the Commissioners would only be too happy to assist the Commission in getting the fullest information; and I may say that all these matters have previously been the subject of an investigation before the Criminal Court. I would refer your Honor's attention to the particular charge which the Commission are about to investigate. It is not an administrative investigation, but it is a judicial investigation; it is, that certain higher officers have been put out of their positions in the railway service, and that Mr. Eddy or Mr. Findlay have appointed personal friends or acquaintances to fill those vacancies. The charge is not in regard to the appointments which may have been made, but in regard to the removals, and I submit, therefore, that the evidence on this particular charge might easily be reduced to a very small compass seeing, as I said before, that it relates to removals and not to appointments. If the Commission goes into the question of appointments they will necessarily have to go into an investigation of what the requirements of the Railway service are. Something has been said about a consulting electrical engineer. Before the Commission can determine whether such an appointment was necessary or not——
6718. *President.*] We do not intend to go into that question, Mr. Smith. The whole gravamen of the charge is that certain officers were removed, and other persons, who were friends or acquaintances of Mr. Eddy, were put in their places.
6719. *Mr. Smith.*] Mr. Midelton is here, I believe, Mr. President, and Mr. Chambers is either here or outside the Court.
6720. *Mr. Schey.*] Allow me to say, your Honor, in relation to the point raised by Mr. Smith, that I cannot for one moment pretend to identify each officer who was imported and each officer who was put out of his position, and to prove that this man was put out as the direct result of that man being brought here. That is a thing I have never for one moment supposed I was able to prove. In some cases, at all events, it might be that there was a movement downwards or upwards, and that then another person fell into

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into one of the places. It might be that there were several moves of officers to make way for a new man; but it does not follow that they must necessarily be identified the one put out with the one put in. I cannot pretend to do that, your Honor.

6721. *President.*] You see what your charge is, Mr Schey. It is that a large number of higher officers in the railway service have been put out of their positions to make room for personal friends or acquaintances of Mr. Eddy.

6722. *Mr. Schey.*] Quite so, your Honor. I thoroughly understand that statement, but it does not appear to me by any means that one man must necessarily come out of his position and another go into it without any intermediaries or anything of that kind.

6723. *President.*] Not necessarily into the same position, but you will have to show that they were removed, and removed for the purpose stated in the charge—to make room in some form or another for friends or acquaintances of Mr. Eddy or Mr. Findlay.

6724. *Mr. Schey.*] I want to proceed to show that there was reason for my statement, but if you want me to prove actually by legal evidence that a man was removed for the purpose of putting another man in, I cannot do that. I stated there my opinion, and I think I was justified in holding that opinion; but at the same time I cannot pretend to identify these officers one with the other, the one that went out with the one that went in. It may be that some hundreds of officers of different grades were put out of their positions within the period covered by these arrivals, and it is quite impossible for me to show who was put out and who was put in.

6725. *Mr. Young.*] But you must give the grounds of your opinion, Mr. Schey.

6726. *Mr. Schey.*] If your Honor will allow me to get a list of names from the department, a list showing all the men who have been put out, and another list giving those who were put in, then—

6727. *President.*] Then, Mr. Schey, you will be able to adjust them afterwards?

6728. *Mr. Schey.*] Certainly, your Honor, I will adjust them so far as I can. I do not expect I shall be able to fit one into the other like the teeth of two saws.

6729. *President.*] Very likely not.

6730. *Mr. Smith.*] I may say, Mr. President, that all this information which Mr. Schey refers to has been put in before the Commission in the annual reports. In those reports, as required by the Government Railways Act, there is a return showing the removals from, and appointments to the service.

6731. *President.*] Where is that, Mr. Smith, in each return?

6732. *Mr. Smith.*] Yes, sir; in each return.

6733. *Mr. Schey.*] Those reports will not show what I want, your Honor, neither do I want more than about a tenth part of what is shown there. I want my information in a different form, and what I desire is not contained in the reports.

6734. *President.*] What is the information you want which is not contained in these returns?

6735. *Mr. Schey.*] I want a return showing the number of officers engaged in Great Britain and brought out here. Then, in addition, I want a return of the officers who have been employed in the Railway Department during the period of the Commissioners' term of office whose last position was in Great Britain or whose last position in Great Britain was within twelve months of their coming to this Colony. That is what I want, and without I can obtain such a list it is impossible for me to show what I want to show. In the next place I must call these gentlemen and examine them on certain matters, otherwise I cannot possibly give any evidence as to the charge now before the Commission. What I want will only be a small return and will not contain one-tenth of the information conveyed in the reports.

6736. *Mr. Kethel.*] Could you not select the names yourself from the reports?

6737. *Mr. Schey.*] Some of them I could select no doubt, but others I could not select at all. At all events if I am permitted I will undertake to select some of them.

6738. *President.*] Mr. Smith, would it be possible for Mr. Oliver to give this information now?

6739. *Mr. Smith.*] Yes, sir; I think he can state it at once to the Commission.

6740. *Mr. Oliver.*] I should be very glad, Mr. President, to state the information. It is all contained in the annual reports.

6741. *President.*] Very well; will you step into the box, Mr. Oliver.

Mr. C. Oliver sworn and examined:—

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6742. *Mr. Smith.*] Now, Mr. Oliver, will you tell the Commission ——

6743. *Mr. Schey.*] I must object, your Honor, to Mr. Smith examining this witness.

6744. *Witness.*] I have a personal objection to have anything whatever to do with Mr. Schey beyond being present here; but of course if it is the wish of the Commission I will conduct this case myself.

6745. *Mr. Schey.*] Allow me to point out, your Honor, that when I am in the witness-box I have no one to ask me any questions to bring out my particular business. If I go into the box I have to watch everything myself. I have no one to question me on my own behalf.

6746. *President.*] I have not noticed, Mr. Schey, that you ever had any difficulty in expressing the views you wished to lay before the Commission.

6747. *Mr. Schey.*] Neither do I suppose the Commissioners will have any difficulty in expressing their views. I dare say Mr. Oliver can express all he wants to express without any interference on the part of Mr. Smith.

6748. *President.*] Perhaps you will state to the Commission what you have to say, Mr. Oliver?

6749. *Witness.*] The officers who came from England to the Colony, so far as I can recollect them, were Mr. Nicolls, Mr. Angus, Mr. D. H. Neale, Mr. Foxlee, Mr. Hodgson, and Mr. Corus. Mr. Nicolls, I may say, came out in a junior capacity with the Chief Commissioner.

6750. In what capacity? I may explain, your Honor, that it was represented to the Chief Commissioner by some persons in England who were well acquainted with the Colony that he would have a difficulty in obtaining a shorthand writer here. That, of course, was a mistake; but the Chief Commissioner, not knowing the circumstances of the Colony, brought out Mr. Nicolls as his shorthand writer, and for six months paid him out of his own pocket; but afterwards, we being in need of shorthand writers, and Mr. Nicolls having had a certain amount of experience, he was taken on in a junior capacity.

6751. *Mr. Smith.*] What is his present salary? I am not sure, but I think it is about £200 a year.

6752. *President.*] As shorthand writer? Yes, your Honor, in the department; but he is combining that work with other duties.

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6753. *Mr. Smith.*] Mr. Nicolls is now in the Accountant's Branch, is he not? Yes. I think the names I have mentioned comprise those referred to by Mr. Schey.
6754. *President.*] The names you have given us you say are the officers who came out from England; will you read them again? Mr. Nicolls, Mr. Angus, Mr. D. H. Neale, Mr. Foxlee, Mr. Hodgson, and Mr. Corns.
6755. And Mr. Hall? Yes; I omitted to mention Mr. Hall.
6756. Are these all the officers in the Railway Department who have come out from England since the present Commissioners took office? At our instigation.
6757. Would you state the offices or appointments they got in the Railway Department? I have already described Mr. Nicoll's appointment. Mr. Angus came out here as assistant to Mr. Cowdery; Mr. Cowdery was then Engineer-in-Chief for Existing Lines. Mr. Neale came here as a mechanical engineer; we greatly needed assistance in that way. Mr. Neale came out attached to no position at the time, but he is now a mechanical engineer on the staff. Mr. Foxlee came here as a civil engineer in connection with our permanent-way. He was put on the staff of engineers, and under the rearrangement of the service he has since become Engineer-in-Chief. Practically, he is now in the position that Mr. Angus occupied. Mr. Hall, as he himself told you this morning, came out here as an accountant; he is now our Chief Accountant. Mr. Hodgson and Mr. Corns are both traffic officers. We were very much in need of additional assistance in the Traffic Branch, and Sir George Findlay was communicated with in England as being an authority on railway matters, and asked to send us out two traffic officers. We told him the sort of men we wanted, and he made the selection and sent out the two gentlemen named. I think I am perfectly correct in saying that neither of these gentlemen was in any way known to a single one of the Commissioners.
6758. Were they in addition to the traffic officers already in the Service? They displaced no one; they were brought here to strengthen the Traffic Branch. We were notoriously weak in that department, and it was to strengthen it that we obtained the services of these gentlemen.
6759. *Mr. Schey.*] I suppose I may examine Mr. Oliver, your Honor?
6760. *President.*] Yes, you may ask him some questions.
6761. *Mr. Schey* (to Witness).] Does that paper you have in your hand contain a list of the gentlemen you have referred to? [*Paper handed to Mr. Schey.*] Now, will you tell me, Mr. Oliver, the date when Mr. Angus was engaged by the Department? Some short time after we took office, I think; I do not remember the exact date.
6762. You do not know the exact date? No; but of course I can obtain it for you.
6763. Was it very shortly after you entered office? Not shortly afterwards; during the first twelve months.
6764. Was it during the first six months? I am not in a position to tell you.
6765. You will not say it was not?
6766. *Witness.*] Your Honor, it is useless Mr. Schey pressing me in this way; I cannot give him an answer, but I will get the information for him.
6767. *President.*] Mr. Oliver says he will get the information for you, Mr. Schey.
6768. *Mr. Schey.*] Very well, your Honor. (To Witness): Do you know Mr. Angus' previous career? I know nothing of his previous career.
6769. You do not know where he came from? I have no personal knowledge.
6770. Can you tell me whether either of the other Commissioners has a personal knowledge? Mr. Angus came with recommendations showing what he had been. You asked me as to my personal knowledge, and I say I have none.
6771. But in your position as a Commissioner, you have some knowledge in that way? Yes; Mr. Angus was employed by one of the railway companies in England, and he is a man of considerable experience, particularly in maintenance work.
6772. And he was engaged in England, was he not? Certainly.
6773. I mean by the present Commissioners? Since we were in office.
6774. I mean, he did not come out here and was then engaged, but he was brought here by the Commissioners? Yes.
6775. Can you tell me what line he was connected with in England? I do not remember.
6776. Are there papers in the office showing it? I should think so, but I am not positive; I should think his references would show that.
6777. Will you have those papers sent up? Any papers we have we shall be happy to place at your disposal.
6778. I mean the papers referring to each gentleman you have named? Tell me which you want, please.
6779. The papers referring to Mr. Angus, Mr. Neale, and Mr. Elwell? Those papers have already been published.
6780. I mean the papers relating to their appointment, the recommendations or testimonials they produced at the time—will you furnish those? Yes.
6781. *Mr. Smith.*] Although there may be no objection to supply these papers, Mr. President, it is a question whether they are admissible before this Commission. I cannot conceive why on this charge the Commission should be encumbered with such documents.
6782. *President.*] I do not know that they will be put in evidence, Mr. Smith.
6783. *Mr. Smith.*] But this does not arise out of the charge in any way.
6784. *President.*] Except in this way, that the persons who were brought here were alleged to be friends or acquaintances of Mr. Eddy and Mr. Findlay, and I suppose Mr. Schey thinks he will be able to prove that allegation by these documents.
6785. *Mr. Schey* (to Witness).] Do you require me to give you the other names in relation to whom I desire to have papers, I have mentioned some of them? Perhaps you had better mention them all.
6786. Mr. Angus, Mr. Neale, Mr. Elwell, ——? I have given no evidence in reference to Mr. Elwell; I have not said he came from England.
6787. You say you will send up the papers relating to Mr. Angus? Yes.
6788. Now in Mr. Neale's case, was he engaged at the same time as Mr. Angus or about the same time? I think about the same time.

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6789. And have you any knowledge as a Commissioner of what his previous career was? Yes, through the Chief Commissioner.
6790. Will you send up his papers? Any papers we have, but we do not keep large volumes of papers.
6791. Now, in relation to Mr. Elwell, was he engaged in England? No, he was engaged in the Colony.
6792. Have you any knowledge of his previous career? Not beyond what he stated himself, and what the references he supplied to the department contained. I may say we were in need of an electrical engineer some short time ago, and Mr. Elwell was appointed. He practically succeeded a Mr. Watson, who was with us and also with the Telegraph Department. Mr. Watson held a joint office, but his services were wholly required by the Telegraph Department, and Mr. Elwell is practically in his position as regards the railways.
6793. He belongs to the Railway Department? Yes, wholly.
6794. He has nothing whatever to do with the Telegraph Department? No.
6795. *President.*] You say Mr. Watson is attached now to the Telegraph Department? Entirely, your Honor.
6796. Then, you have two men for the two offices instead of one man filling both? Yes, your Honor; our business has extended, and it was considered advisable to have a separate man.
6797. *Mr. Schey.*] I suppose there are certain papers in the department relating to Mr. Elwell's appointment, such as references, &c.? I believe there are.
6798. Will you send those up also? I shall be very glad to.
6799. Now, concerning Mr. Thow—I do not think it is necessary to ask you any questions about his previous career, he has already told us something about it himself? If you will ask me questions and not make speeches I shall be obliged.
6800. Do you know Mr. Thow's previous career? Yes.
6801. Where was he before he came here? South Australia.
6802. *President.*] There is no need to go into that matter again.
6803. *Mr. Schey.*] I was endeavouring to get over the matter, your Honor will have observed, but Mr. Oliver objected.
6804. *President.*] If you do not want any information about Mr. Thow's appointment there is no need to ask the questions.
6805. *Mr. Schey* (to Witness)]. Will you send the papers relating to his appointment? Yes, such as we have.
6806. Now, in relation to Mr. Hall. I suppose as a Commissioner you have some knowledge of him? Since he has been with us.
6807. But of his previous career? No, none whatever personally.
6808. Do you know where he came from? I know he had large railway experience, but I cannot give you the name of the company he was with in England.
6809. Mr. Hall was engaged in England, was he? Yes, but he was not personally known to any of the Commissioners.
6810. Will you send his papers? I shall be very glad to.
6811. Now, as to Mr. Foxlee—do you know where he came from? From England.
6812. But from what line? I am not sure of the line.
6813. But there are some papers about him, and you will send those up? Yes.
6814. Now, Mr. Hodgson—do you know anything of him? No.
6815. But there are some papers referring to him and his appointment in the department? Yes.
6816. By the way, Mr. Foxlee was engaged in England, was he not? I have said so.
6817. And Mr. Hodgson also? I think I have said that too.
6818. You will send the papers relating to his appointment? Certainly.
6819. Now in relation to Mr. Corns—do you know his previous career? No.
6820. Nothing at all about him? No.
6821. But he was engaged in England, and you will send his papers? Yes.
6822. Now, as to Mr. Nicholls? I have given you his history so far as I know it.
6823. Was he engaged in England or in the Colony? I think I have already stated it.
6824. Will you repeat it? I don't think it is necessary.
6825. *President.*] You will send up the papers if there are any? Yes.
6826. *Mr. Schey.*] Now as to Mr. Kneeshaw? I do not think I said he came from England.
6827. I am not asking you whether you said that; you know this gentleman? I think I am right in saying that he was an applicant for a position which was advertised by the department. He was in the service of the New Zealand railways, and he got his position, I believe, though I am not quite sure, in a competitive way; however, his papers will show.
6828. You have some papers, of course, concerning his appointment? Yes.
6829. And I shall have those? Yes.
6830. Now, as to Mr. Wilkin? He was obtained by advertisement. We had advertised for an interlocking engineer throughout the colonies, and he was considered the most eligible applicant, and he was appointed to the position.
6831. You will also send the papers relating to him? Yes.
6832. *Mr. Schey.*] I think that is all I need ask Mr. Oliver, your Honor. I should be much obliged if your Honor would allow me at this stage to retire for the day. I feel very unwell. I have a very bad headache, and it has been getting worse all day, and I should be obliged if your Honor will consent to allow me to retire.
6833. *President.*] Very well, Mr. Schey, we will adjourn now.
6834. *Mr. Schey.*] The papers I have asked for, I presume, will be furnished me in time for Thursday?
6835. *Mr. Oliver.*] I will send them up to the Secretary as soon as possible.
6836. *President.*] Without delay, please, because we want to proceed as quickly as possible.
6837. *Mr. Oliver.*] I will try and collect them this afternoon.
6838. *Mr. Schey.*] And these gentlemen will be summoned as witnesses, your Honor?
6839. *President.*] Yes, for Thursday, and if there are any other witnesses, they will also be summoned.
6840. *Mr. Schey.*] I suppose your Honor will say the same in relation to any other papers I may want?
6841. *President.*] That is, assuming the Commission allow you to see them. If you send in a list of the papers you will want to see, we will make the usual order.

6842.

6842. *Mr. Schey.*] Well, your Honor, I want from the department the two lists I have already referred to. I ask you to give an order for those lists to be prepared.
6843. *President.*] Will you write down a list of exactly what you want?
6844. *Mr. Schey.*] Very well, your Honor, I will do so at once.
6845. *Mr. Smith.*] While Mr. Schey is preparing this list I want to ask your Honor whether the Commission have decided that they will go into the evidence of all these witnesses as to their appointments?
6846. *President.*] I do not say anything of the kind, Mr. Smith. I am simply saying that they will be summoned to appear here on Thursday. I am not going to say what evidence they will or will not give.
6847. *Mr. Smith.*] Because I desire to point out that the time of the Commission has nearly expired. I think it was only a two-months Commission, and five weeks of that time have already expired.
6848. *President.*] I think the date of the Commission is 26th April.
6849. *Mr. Smith.*] It is a two-months' Commission, and if the inquiry is conducted as heretofore it will be necessary to get an extension.
6850. *President.*] There is plenty of time for that, Mr. Smith.
6851. *Mr. Schey.*] The papers I desire to see are in this list, your Honor, which, you will see, is a very small one. [*The list was handed to the President and afterwards to Mr. Smith.*]
6852. *Mr. Smith.*] It appears to me, your Honor, that this list refers to purely administrative matters, which Parliament has not referred to this Commission. They come under the 63rd and 65th sections of the Railway Act, but they are not dealt with in this charge.
6853. *President.*] I thought they were wanted for the purpose of proving the fifth charge?
6854. *Mr. Smith.*] Mr. Schey first of all asks for a list of persons appointed with salaries of over £150 a year.
6855. *President.*] No, he does not. The list is modified by each one of the different sections. In the first place it is limited to those whose previous employment in Great Britain was within twelve months of the time of their appointment here.
6856. *Mr. Oliver.*] I may point out, Mr. President, that this will be a most difficult return to prepare. We do not know where all the people in the service were previously employed, and to prepare such a list as Mr. Schey now asks for would require that we should go to each of our officers and ask them where they came from and the work they were previously employed at. I do not think that has anything to do with this inquiry, and I respectfully submit that Mr. Schey should not be allowed to call for these returns. He is not now in Parliament moving for all sorts of returns, and he should be restricted to the four corners of this charge. I submit that the information now asked for has nothing whatever to do with the matter before the Commission. I speak now not only in the interests of the Railway Commissioners but in the interest of the Royal Commission, and unless Mr. Schey's demands are put a stop to this inquiry will be interminable.
6857. *President.*] That is a matter which concerns the Commission, and not the Railway Commissioners.
6858. *Mr. Schey.*] I submit, your Honor, that the information can be easily obtained. It is the usual practice in the Railway Department to make applicants for positions provide testimonials showing where they have been employed. This is most carefully insisted upon, and there ought to be no trouble in procuring the information I have asked for. And besides, your Honor, I submit it is most pertinent to this matter.
6859. *Mr. Oliver.*] I cannot possibly promise to supply this information before Thursday. Its preparation will involve a considerable amount of inquiry, and it is impossible to have it ready before the next sitting of the Commission.
6860. *Mr. Schey.*] Then all I can say is that, if the information I have asked for is not supplied, it will necessitate this Commission going to a very much greater amount of trouble, because I shall be obliged to call a number of other witnesses to elicit information which ought to be given by the Department, and which is in their possession.
6861. *Mr. Smith.*] I think I am right in saying that there are 13,000 employees in the railway service, and the probability is the greater number of them are getting over £150 a year, and before this return can be supplied it would be necessary to interview each of those 13,000 persons.
6862. *Mr. Schey.*] The list I asked for is limited to the 1st January, 1889, and the appointments in that time cannot be anything like 13,000; indeed, I should not think even 1,300; and, besides, the greater number of these men are workmen at daily wages. I am not asking for those appointments, but of men who are receiving more than £150 a year, and that excludes all the ordinary class of workmen, and only deals with another very small class. With the limitations I have laid down, I contend, the department ought to have no trouble in preparing this list. I do not suppose when it is completed that it will contain more than thirty or forty names. I do not think it ought to consist of more than half that number.
6863. *Mr. Eddy (having just entered the Court).*] As I have not had an opportunity of hearing this matter discussed I should be obliged if I may be allowed to see the list of information asked for. [*List handed to Mr. Eddy.*] I think this information ought not to be given. I submit to the Commission the charge is that I corruptly, and irrespective of the merits of the people affected, put out of the railway service here a large number of higher officers to make way for personal friends or acquaintances of myself or Sir George Findlay. Mr. Schey has made that charge. I contend that he ought to be made to prove it, and not be allowed to go on a fishing excursion, to see if he can find out something. I should be glad if your Honor will request Mr. Schey to go into the box, so that I may put a few questions to him in regard to the fifth charge before this list is dealt with.
6864. *President.*] Mr. Schey has already been in the box, and examined by Mr. Smith.
6865. *Mr. Eddy.*] But this is quite a different list, your Honor; there are all kinds of people mentioned here. As I understand it, it has been proved that of the people first named by Mr. Schey one retired because he was over age; another was removed for total incompetency; and a third died in the service, in a better position than he was in when the Railway Commissioners took office. Mr. Schey has failed to prove his case, and now he comes forward with another list of people, and wants to go fishing, in order to get a lot of information. I would like him to be put into the box, so that he may answer a few questions before the Commission give their decision regarding this matter.
6866. *Mr. Schey.*] You have already promised me, your Honor ——
6867. *President.*] Mr. Eddy only wants to ask you a few questions in reference to the ist you desire to have prepared for Thursday, and perhaps it is better to deal with that matter, and have done with it.
6868. *Mr. Schey.*] If it is only in relation to that list, I do not mind going back into that box; but as I told your Honor before, I am very unwell, and I should like to go home.

[*Mr. Schey here entered the box.*]

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6869. *Mr. Eddy.*] You said that a large number of higher officers ——

6870. *Witness.*] I understand, your Honor, I am only to be asked questions in relation to the returns I desire to have prepared. If this is to be a general examination, I must ask your Honor to allow me to retire.

6871. *President.*] I cannot tell what the examination is to be, until I hear the question which Mr. Eddy is about to put.

6872. *Witness.*] He is commencing his examination by asking me about the higher officers.

6873. *Mr. Eddy.*] You stated that a large number of higher officers in the railway service have been put out of their positions to make room for——

6874. *Witness.*] I said I expressed that opinion.

6875. *Mr. Eddy.*] But we do not want your opinion, sir. I warn you to be careful in your answers. You are aware, perhaps, that I have already gone through the degradation of a criminal prosecution of someone who made the same false charges. Remember that you are now on your oath, and without any indemnity whatever. I warn you therefore to be careful.

6876. *Witness.*] I ask your Honor if what Mr. Eddy says is correct?

6877. *President.*] It is not for me to say that, Mr. Schey.

6878. *Witness.*] Very well, your Honor, then it appears to me in this way: I am about to be asked questions on which a criminal prosecution can be founded against myself; and that being so, I must ask your Honor to relieve me of this examination, because I only went into the box at your Honor's request to answer a few questions about the returns I have asked for. Mr. Eddy warns me that he is about to institute a prosecution.

6879. *Mr. Eddy.*] I do nothing of the sort.

6880. *President.*] Mr. Eddy, these matters have already been gone into by Mr. Smith. Mr. Schey has been examined at great length in reference to this criminal prosecution of a person named Martin, who published a newspaper article, and who was sentenced to two years imprisonment for criminal libel. That has already been gone into, and I cannot allow it to be gone into again.

6881. *Mr. Eddy.*] I only want to warn Mr. Schey ——

6882. *President.*] Will you kindly proceed with the one point about these lists?

6883. *Mr. Eddy.*] Very well, sir. Now, Mr. Schey, you stated that these officers had been put out of the service.

6884. *Witness.*] I have stated nothing of the kind. I have asked for a return and his Honor has asked me to answer a few questions upon it. You are now proceeding to examine me on a charge on which Mr. Smith has already examined me.

6885. *Mr. Eddy.*] You have made a criminal charge against me, and I claim my right to put some question to you on that point, and I intend to do so.

6886. *Witness.*] It was Mr. Eddy's request, your Honor, that Mr. Smith was allowed to represent him.

6887. *President.*] Mr. Schey has already been examined at considerable length by Mr. Smith on this charge, Mr. Eddy. I understood that you wished to have Mr. Schey put into the box again for the purpose of asking him some questions in reference to a return, which Mr. Schey says he wants from the department.

6888. *Mr. Eddy.*] I wish to examine Mr. Schey about this list of persons which Mr. Smith has not already examined him upon. (To Witness): You stated that Mr. Thow ——

6889. *Witness.*] I again protest, your Honor, against Mr. Eddy's line of examination. You asked me to go into the box merely to answer some questions about this return.

6890. *President.*] Mr. Eddy, Mr. Schey asked the Commission not to proceed further with the case to-day, because he is suffering from severe headache, and we agreed to accede to his request. We then asked him to give a list of certain returns, which he desired to have furnished for Thursday. That list was made out by Mr. Schey, and handed to Mr. Oliver. Then you came in, and expressed a wish to ask Mr. Schey some questions in reference to that return.

6891. *Mr. Eddy.*] No, sir. It was in reference to this new list of people he has given.

6892. *President.*] It is not a list of people, Mr. Eddy. It is a return which Mr. Schey desires shall be furnished to him. He wants to have that list for Thursday, and it is only for the purpose of determining this matter that the Commission is now sitting.

6893. *Mr. Eddy.*] I ask your Honor to reserve this question until I have been permitted to examine Mr. Schey.

6894. *President.*] You will have the fullest opportunity of examining Mr. Schey before this charge is finished. Mr. Schey has not commenced to prove his charge yet.

6895. *Mr. Eddy.*] As this return is asked for merely for the purposes of a fishing inquiry, until I have had an opportunity of examining Mr. Schey on oath, I ask the Commission to be good enough to reserve this point.

6896. *President.*] Then that means, Mr. Eddy, that we shall meet here on Thursday. Mr. Schey will be examined in reference to this list, and he will say that he cannot proceed further without it, and then another day will be lost.

6897. *Mr. Eddy.*] And therefore Mr. Schey will confess that he had no proof in his hands when he made the charge.

6898. *Mr. Schey.*] Will these returns be furnished, your Honor?

6899. *President.*] They will not be furnished before Thursday.

6900. *Mr. Schey.*] Do I understand your Honor to say that they will not be furnished before Thursday?

6901. *President.*] Mr. Eddy wishes to ask you some questions before he supplies it. But the witnesses you have named will be summoned to attend, and we shall expect that you will go on with the examination of those witnesses, and further that you will continue with your evidence as far as you can on Thursday, so as to close this inquiry on the 5th charge.

6902. *Mr. Schey.*] I will proceed as fast as I possibly can, your Honor. Before the Court closes I should like to intimate that Mr. Eddy has told me that I am now here without any indemnity whatever. If I remember correctly, Mr. Eddy, earlier in the proceedings, handed to the Commission an indemnity which I then understood was to cover the whole proceedings of the Commission. If it was only intended to cover part of the proceedings, and Mr. Eddy now informs me that I am not to go on except under a liability of criminal prosecution, I give notice that in all probability I shall refuse to proceed any further.

6903. *Mr. Eddy.*] I admit, sir, that for the purpose of giving Mr. Schey a little courage I gave him a personal

personal indemnity in regard to the first two charges, charges which I then distinctly stated I considered were quite outside the other charges, which, if true, would really be proof of a criminal failure of my colleagues and myself. My colleagues, of course, decided that neither one of us could represent the other at an inquiry of this sort, and therefore we appointed Mr. Smith to conduct our case before you. It was clearly understood at the commencement, I think, that my personal indemnity would not affect my colleagues in any way. Mr. Schey raised the question at the time and he was then made aware of the nature of the indemnity; and I do not see, sir, what Mr. Schey has to fear, or what any other man has to fear, so long as he speaks the truth. But Mr. Schey seems to be unable to trust himself to give his evidence in the way that other persons are prepared to give their evidence here. He wants an indemnity. I did not ask for an indemnity, and neither did any of our witnesses. I submit, Mr. President, that Mr. Schey should be prepared either to confine himself to the truth, or to lay himself open to whatever steps may be necessary to punish him for evil-doing. Mr. Schey. 31 May, 1892.

6904. *Mr. Schey.*] I have merely raised the point now, your Honor. I do not admit on my own part that a man by telling the truth can either prevent himself being prosecuted, or in some cases, can prevent his being convicted. I am not of that opinion. It may be right or wrong, but at the same time it is my opinion. I would point out to the Commission that both in Parliament and during this inquiry I have stated distinctly that I had been warned that an endeavour was to be made to found a prosecution of some sort or another against me. Mr. Eddy has now told me that I have no indemnity, and therefore, inferentially, that a prosecution will be procured if there is any possibility of doing so. I do not wish the Commission to go away with the idea that I shall proceed on Thursday if I am advised that Mr. Eddy is correct in what he states; I shall refuse to go on. The Government of this country have made certain promises to me. Mr. Eddy practically now claims by inference that those promises and his indemnity do not bind himself or his colleagues. When Mr. Eddy spoke of a personal indemnity, I at the time raised the point as to whether there would be an attempt to void it by either of the other Commissioners. Now Mr. Eddy has thought fit to refer to this matter again, and his remarks appear to me to contain so much menace to myself that unless I am advised that I may safely proceed on Thursday I shall be compelled to intimate to the Commission that, in consequence of Mr. Eddy's threats, I shall not be able to proceed at all. I do not say what I shall do at the present time. I am not able to say that. The point has arisen suddenly and I was relying upon the fact that I was not laying myself open to any prosecution in proceeding with this matter; therefore if I now find that I am open for prosecution I shall be compelled to decline to proceed further with the matter.

6905. *President.*] Are we to understand, Mr. Schey, that if you refuse to go on with this inquiry—that is, to substantiate the charges you made in Parliament—it is for fear of being prosecuted for perjury or libel?

6906. *Mr. Schey.*] Certainly not for perjury, for the simple reason that I have nothing whatever to conceal. I have no fear of telling the truth; but at the same time I cannot conceal from myself, what I regard as a fact, that men have been unjustly prosecuted and unjustly imprisoned on charges of libel, and other charges of which they were not probably guilty, and, as I have other people to think of besides myself, I do not intend to submit myself to any risk of that kind. I told the Government and the Parliament that what I did, I did as a representative of the people of this country in my place in Parliament, and that I was entitled to do what I did, and there is no power to void the privilege which belonged to me there as a Member of Parliament. I have declared to the Government that the privilege of Parliament shall not be voided in my person. I made that stipulation decidedly and distinctly, and I say that I shall not void my privilege, and I shall not render myself liable to prosecution for libel to suit Mr. Eddy or any other person by going on with this inquiry unless I feel quite secure.

THURSDAY, 2 JUNE, 1892.

[*The Commission met at 11 a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

JOHN YOUNG, Esq., J.P. | ALEXANDER KETHEL, Esq., J.P.

6907. *Mr. Smith.*] If your Honor pleases during one of the earlier charges, I think it was the third or fourth charge, we were asked to produce returns showing the departmental traffic, and which would have entries upon them showing how amounts were written off which are not charged to revenue. We have brought here about forty-one parcels of documents to be handed in to the Commission. If there are any others they will be put in in due course. I understand it will be necessary to go to every railway station in the Colony in order to collect these returns, and therefore, some weeks will be occupied in obtaining the required information.

6908. *President.*] We do not think it would be necessary to produce more than a few of these documents, because, as I understand, what is wanted is to ascertain what is the course of procedure by the Railway Commissioners, not to verify that in every instance, but simply to ascertain how the thing is done; and, therefore, a few samples would be quite sufficient.

6909. *Mr. Schey.*] The documents I asked for, your Honor, are not documents coming from the railway stations, but they are those documents from which Mr. Hall said certain amounts were written off and adjusted once a month in the head office. Now, your Honor, as I have asked for the documents comprised in one year's return only they should not consist of more than twelve sheets of paper or twelve pages of some book or books. That is what I want and not all the documents from different stations. According to the witness these charges are not supposed to be written off until the returns reach the head office, and it is, therefore, the head office returns I asked for.

6910. *Mr. Eddy.*] As a matter of fact, Mr. President, the money value of services rendered to the department is never included in the traffic. When the Chief Accountant obtains from the Traffic Auditor the statement of the value of traffic carried for the preceding month for the purposes of his branch in compiling the records of his department, that statement does not contain the money value for those services which are known as departmental services in connection with existing lines. Perhaps it would simplify

simplify matters if we were to examine the Traffic Auditor, who is responsible for the compilation of all the station accounts and for rendering to the Chief Accountant monthly the value of the traffic carried which is revenue. If he were placed in the box he would show you in five minutes the actual procedure gone through, and he would also testify that these services are never put into the money result of the working of the railways.

6911. *President.*] Mr. Hall stated distinctly that these items were not shown in the money returns; and, as I understood, perhaps I may have been mistaken, when these returns come in showing the departmental equivalents, as they are called, of the services rendered they were written off in some way or other; there was some operation in the books by which these departmental services were written off so as not to appear in the money receipts of the Commissioners.

6912. *Mr. Eddy.*] Mr. Hall was speaking only so far as he was concerned. He stated that he only puts into the Annual and quarterly reports of the Commissioners the actual moneys received.

6913. *President.*] He stated that distinctly.

6914. *Mr. Eddy.*] The *modus operandi* in regard to accounts at these stations is outside his jurisdiction. The accounts of the station are under the Traffic Auditor; and, as a matter of fact, the value of services rendered to the existing lines has never appeared in the money returns of traffic carried by the department. It is invoiced on quite a distinct set of invoices headed "On Her Majesty's service." The money invoices are of a different nature altogether. The Traffic Auditor receives the two classes; he makes his total of money earned on one sheet which is sent, as Mr. Schey says, for the year in twelve sheets, to Mr. Hall, the Chief Accountant, and that information is the basis for showing the earnings of the railways. The other returns are used for other purposes, namely: To enable the Commissioners to see what work is being done on the railways without payment, and also to enable them to control what is being done, and to see that no work is performed which is not authorized by them.

6915. *President.*] The real gravamen of the charge was this, as I understand, Mr. Eddy: That the returns laid before Parliament, and to which the public had access, possibly showed that the services which were rendered to the departments were included in the money returns, so that the Railway Commissioners would appear to receive a larger income than in point of fact they do. That, I understand, was the gravamen of the charge. Then Mr. Hall gave clear evidence on that point. He said that the returns of work done for the department did not appear as money received by the Commissioners, but they were eliminated.

6916. *Mr. Eddy.*] I think there is a slight misapprehension, Mr. President. It is the work done for departments outside the Railway Commissioners themselves.

6917. *President.*] That is what I mean, of course.

6918. *Mr. Eddy.*] That is charged for. Although we do not get actual cash we get vouchers for the work. For instance, we carry the mails. We get a credit for that, and it is brought into the railway records as an earning. We also carry a number of people for the different Government departments. We do not get cash for that service, but we get vouchers or orders for certain work to be done, and those orders are subsequently sent back, and we get credit for the value of the work so performed. But within ourselves, of course, there is a large amount of work done for which no charge is made. All our coals, for instance, are carried from the different collieries to the places where they are consumed. We do not take to ourselves credit for that work. If we wanted to unduly inflate our returns we could quite properly call for tenders for the delivery of so many hundred thousand tons of coal at Eveleigh, or at the different places in the Colony where it is required, and by that means we should, I think, improperly inflate our earnings; but we do not do that; we call for tenders for putting the coal into our waggons at the pit's mouth, and then we carry that coal to the different places where it has to be consumed, and we carry it at our own expense. We do not include that in the revenue. In like manner, when we carry rails about the line for railway maintenance purposes or for putting in a new siding we do not debit ourselves with any carriage. We carry large quantities of ballast annually, and what we do is to debit the Engineering Department with the cost of the engine and the cost of the men employed, that is all. We do not put any revenue in, although we carry heavy weights over the lines. The outside departments have to pay for the work we do for them, but in ourselves we try to do all we can to keep our expenses down, and therefore not to unduly inflate our returns. If Mr. Schey does not consider that explanation clear enough we will have pleasure in putting the Traffic Auditor into the witness-box, and he can confirm practically what I have said, or give any further information which may be required; but he has a book here in which the debits in connection with what we call Her Majesty's Service traffic have been entered since January, 1890; but perhaps Mr. Schey would be satisfied after the explanation I have given.

6919. *Mr. Schey.*] In relation to this matter, your Honor, it appears perfectly clear from Mr. Eddy's explanation that there are several classes of charges, some of which, the services for other departments, Mr. Eddy now says are included in the revenue, and shown as revenue. Very well, for those services no money is received, and it would be as well if the Commission ascertained to what value vouchers are used and shown in revenue. Personally, I think they are used to a very large amount, and if that be so, and Mr. Eddy says it is, and that is the best evidence upon the point, it shows that a large amount of revenue shown in the returns is not received; it is simply a matter of book-keeping; it is services rendered for which no money passes. Then, in addition, there is another class of services performed, the carriage of goods, for which Mr. Eddy says no charge of any kind is made, and there appears to be a third class of service, for which charges are made in the first instance. Mr. Eddy produces there an O.H.M.S. invoice, and on that invoice, I think, will be found the weight of the material carried, and also the sum of money which is charged for the service performed. Mr. Hall, the Chief Accountant to the department, stated that these charges were made in the first instance, and that they were carried forward to a certain point in the accounts of the department, but at that certain point they were dropped out or written off. To be dropped out and written off they necessarily must be collated—they must be shown as totals. It is not pertinent to show whether they are written off in Mr. Hall's department, as I understood him to say, or whether they are written off in the Traffic Auditor's department; but somewhere it is plain these charges are written off, and if they are written off there must be books or papers in which the total of those services is shown, or the total of other services shown from which the unremunerative services are deducted, leaving what is termed the gross revenue. Now, if these amounts are shown anywhere, it must be in a certain book or books or on certain sheets of paper. It is claimed that these adjustments are made once a month. If that be so the returns I speak of must appear in the books at intervals, perhaps with other

accounts

accounts between them. If they are shown on sheets of paper they must be on separate sheets headed with the month for which they are returned. What I wanted, and what I asked for, were the twelve returns for the twelve months included in the report of the Commissioners ended 30th June, 1891. Whether those returns are in books or on sheets I want them produced here for inspection. If, as is claimed, these O.H.M. services are shown altogether in one book in which does not appear an account of the traffic for which money is received, then it becomes necessary to produce two books—one having the entries of the unremunerative services, and the other containing the remunerative services; and it becomes necessary further than that to produce a document, whatever it may be, which shows the adjustment between the two. These are the things I want.

6920. *Mr. Eddy.*] So far as the money question is concerned, I thought that had been made quite clear. In connection with the Railway Department, the Treasury practically takes the place here of the bankers' clearing house in London, and, therefore, it would be highly inconvenient for the Post Office and other departments to which we render services to be continually running over to the Railway Commissioners with a bag of gold.

6921. *Mr. Schey.*] Allow me for one moment, please. I am not speaking of services rendered to the Post Office, but of the third class of services spoken of by Mr. Eddy, and in connection with which he produced an O.H.M.S. invoice. I am only speaking of those for which it is claimed that they are adjusted once a month, services to the Works Department for the carriage of materials and things of that kind.

6922. *Mr. Eddy.*] The Works Department is outside the Railway Commissioners, and is in the same position as the Post Office. If Mr. Schey does not refer to any department outside the Railway Commissioners I think I can hand in returns for the twelve months referred to.

6923. *President.*] That would be the best thing to do, and let Mr. Schey see them.

6924. *Mr. Eddy.*] It would be, with this explanation, Mr. President: That the money represented as O.H.M. services has never been included in the revenues of the Railway Department. [*Document put in.*]

6925. *Mr. Schey.*] I still stick to my point, your Honor. I only ask for those services which are charged in the first instance, and which it was claimed are afterwards deducted; I do not want returns of those services which are paid by voucher and included in revenue.

6926. *President.*] Will you look at the paper handed in, Mr. Schey?

6927. *Mr. Schey.*] Perhaps later on, your Honor.

6928. *Mr. Smith.*] It will be taken, then, your Honor, that the parcels of papers before referred to will not be required.

6929. *President.*] I understand not.

6930. *Mr. Smith.*] When we adjourned at the last sitting Mr. Schey handed in a list of documents which he required in reference to the fifth charge. I have not got the original list; it has been mislaid; but I have a typewritten copy. Mr. Schey asked for "A list of all officers and clerks and draftsmen, or employees of any kind, who have been appointed or employed by the Railway Department since 1st January, 1889, and who are receiving more than £150 per annum, and whose previous employment was in Great Britain, at any time within twelve months of their appointment or employment in New South Wales." That is what Mr. Schey first asks for. I beg to remark here that Mr. Schey is perfectly aware, from a question asked by one of his friends in Parliament, that there are no records showing what persons have been employed. We have no such list.

6931. *Mr. Schey.*] Of course, I do not admit that, your Honor.

6932. *Mr. Smith.*] I say there are no records, nor do we conceive, as representing the Commissioners for Railways, that it is any part of our duty, or of the duty of this Commission, to inquire among the employees how or where they were previously employed; but there are quarterly and annual reports prepared by the Railway Commissioners which contain all the information required to be kept, and those returns are already before the Commission.

6933. *Mr. Schey.*] I am quite aware of that, but that is not what I want.

6934. *Mr. Smith.*] The annual reports for 1889, 1890, and 1891 are already before the Commission, and I have here also the quarterly reports for the same periods.

6935. *Mr. Schey.*] I say again that those are no use whatever.

6936. *Mr. Smith.*] Will you allow me to proceed. I have here, Mr. President, the quarterly reports of the Railway Commissioners, dated 28th October, 1891, 3rd January, 1892, and 30th April, 1892. These have all been published and presented to Parliament, and they contain information down to a date subsequent to the date when Mr. Schey made his charges in Parliament, 9th March. But if the Commission require to go into the appointments we have also a list, made up to as nearly as possible the present day, for the months of April and May, which I will also hand in. [*Documents handed in.*] I may say that these lists are the only lists and the only information we have in the office in the form of lists bearing upon this subject of appointments, and we are not in a position to give any further information on the subject; but if it were required possibly every employee in the Railway Service could be called, that is, if the Commission consider it part of the charge, and examined as to his appointment; but I may say, with all submission, and as being responsible to advise the Commissioners, I have advised the Commissioners that, as it does not come within the scope of the charge, they might possibly render themselves liable in some way or other to the employees if they were to make reports as to how those employees had been previously employed, unless such reports are required by Act of Parliament. It is with no wish to prevent the fullest information being given, but merely for their protection, that I have so advised them. If your Honor looks at the charge, and compares it with this list of Mr. Schey's, you will see that the information asked for, and which admittedly we are not required by law to keep, has no relation whatever to the charge. Now, having said so much about the first point, I will deal with the second and third.

6937. *Mr. Schey.*] Perhaps it would be better, your Honor, if we dealt with these points one at a time. What Mr. Smith has asked you to believe is this, that the Railway Commissioners employ a large number of persons not previously employed by the department, and of whom, presumably, at the time they are appointed, no inquiry whatever is made. It must be borne in mind that the information asked for in that list is limited to those employees receiving over £150 per annum. Therefore, they are not the lowest grade of persons in the employ of the department, nor the probationers, neither does it include the workmen. But they are persons of a somewhat superior station, and they are persons who, presumably,

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the department knows nothing at all about. Now, what Mr. Smith has presented to the Commission is this, that the Railway Department has employed these people knowing nothing at all about their fitness, nothing at all about their record, nothing at all about their experience, and, as a matter of fact, puts them on quite promiscuously and haphazard without making any inquiry as to their fitness for the positions into which they are put.

6938. *President.*] That remark is wholly unjustified by anything which Mr. Smith said. What Mr. Smith did say was that the Railway Commissioners do not keep a record from which the previous employment of persons in the service can be ascertained.

6939. *Mr. Schey.*] It is within my own knowledge, your Honor, that such records have been habitually kept. Whether they are kept now in the same way I am not in a position to say, but I personally in times past, have seen plenty of these records. As a matter of fact, there was a form of application ——

6940. *Mr. Smith.*] I submit, your Honor, that Mr. Schey can argue as much as he likes, but if he desires to state matters of fact he must do so from the witness-box.

6941. *President.*] They will not be accepted by the Commission as on oath, Mr. Smith, but we cannot prevent Mr. Schey making statements.

6942. *Mr. Schey.*] As a matter of fact, your Honor, it is within my knowledge that many of these records have existed, and it is only reasonable to suppose that they now exist. I do not want particulars of the previous servitude of these persons; I only want to know such particulars of their past as will show how many of them were previously employed in Great Britain within twelve months of their appointment or employment here. It is quite certain that when these men were appointed some inquiry was made and some testimonials were produced. It is outside the bounds of reason to suppose that persons would come here without any testimonials and would be put on the Railway service. Now, will Mr. Smith undertake to put a witness into the box ——

6943. *Mr. Smith.*] I will not undertake to do anything of the kind.

6944. *Mr. Schey.*] Will Mr. Smith undertake to put a witness into the box to swear that no testimonials are required from persons applying for positions, and secondly that the testimonials so produced are not impounded and kept by the department until the man's period of service terminates, or, at all events, in a large number of cases. If he will not do that there is no means of satisfying the Commission that these records are not in existence. I say the information I require can easily be prepared, and I press upon the Commission to order that it be obtained for me. I ask your Honor to direct Mr. Smith to put a witness into the box to swear to these two points.

6945. *President.*] The lists you are putting in, Mr. Smith, show the persons who have been removed from the service, or who have left the service during that period, and the persons who have been employed freshly in the service. The particulars are disclosed in the returns you have already made?

6946. *Mr. Smith.*] The whole of that information is given up to date, your Honor.

6947. *President.*] And when you say there is no return kept by the Commissioners you are speaking with authority?

6948. *Mr. Smith.*] Yes, your Honor, I speak with authority when I say there is no list or return kept.

6949. *President.*] Mr. Schey, we are informed that there is no list or return kept by the Commissioners which will show whether the person has been previously employed in Great Britain, or in this Colony, or anywhere else.

6950. *Mr. Eddy.*] Perhaps I may be allowed to say a few words in reply, Mr. President, in order to make matters clear. There being no law which prevents people coming from Great Britain being employed in the Railway service of this Colony, there being no regulations in the Railway Act to that effect, there are no instructions to our Staff Committee, which investigates the claims of all applicants for appointments, to inquire whether they came from Great Britain. The only instruction the Committee have is to inquire into the good character and the suitability of applicants for the positions they are applying for. There may, of course, amongst the papers that are put in by applicants be information showing that they came from Great Britain; but we do not require that information to be given, and unless it is incidentally in the papers in that way, it is not in our possession.

6951. *President.*] Then, in order to ascertain the fact, I suppose you would have to look through the recommendations of every one who has been appointed?

6952. *Mr. Eddy.*] Of every person who has been appointed since we took office?

6953. *Mr. Schey.*] Only of those who salaries are over £150 a year.

6954. *Mr. Eddy.*] But I would point out that the pay in our service is exceedingly good, and the 9s. per day man has £150 a year.

6955. *President.*] We think that this list should not be required. It is perfectly clear in the first instance that the Railway Commissioners have not got such a list, or any records from which the return can be made, and that it would involve their investigating the recommendations of everybody who has been employed by the Commissioners to ascertain whether those persons had or had not been employed in England previously. That, we think, is far too wide a fishing inquiry to compel the Railway Commissioners to comply with. In the second place, it appears to me to have the very remotest possible connection with the charge we are inquiring into. As I pointed out before, the gravamen of the charge is that Mr. Eddy introduced personal friends or acquaintances of his own or of Mr. Findlay from England, and turned high officers in the Railway service out of their employment for the purpose of putting his friends into their places. That is the real gravamen of the charge made, and as the return now asked for has only the very remotest bearing on the charge, and as it cannot be supplied by the Commissioners without an enormous amount of labour and trouble, wholly incommensurate with the return itself, we think it should not be asked for.

6956. *Mr. Smith.*] Now, your Honor, as to the other parts of Mr. Schey's list. "The certificates provided for by the Railway Act, section 63, and the papers relating thereto in the cases of those officers who have been appointed under that section; also, a list of the officers called upon to show cause, as provided by section 65 of the Railway Act. The 63rd section of the Railway Act reads thus:—"All appointments shall be made to the lowest grade in each of the various branches of the Railway service and on probation only for a period of six months. After the period of such probation, and upon production of a certificate of fitness from the officer at the head of the branch in which such probationer is employed, and upon proof to the satisfaction of the Commissioners that all the provisions of this Act have been complied with, such appointment may be confirmed by the Commissioners. The Commissioners shall, notwithstanding, have the power to appoint to any position or grade, if they think fit, without examination as aforesaid, persons of

of known ability not engaged in the Railway service. No such appointment shall be made unless the Commissioners shall have previously certified under their seal to the Governor that there is no person in the Railway service fit and qualified to be promoted to such appointment, and shall have obtained his sanction to such appointment."

6957. *Mr. Schey.*] Now, will you quote what I asked for.

6958–9. *Mr. Smith.*] The question now is as to the producing of certificates provided for by that section of the Railway Act, that is section 32, and the papers relating thereto in the case of those officers who have been appointed under that section.

6960. *Mr. Schey.*] Appointed in England?

6961. *Mr. Smith.*] No, appointed under that section.

6962. *Mr. Schey.*] [*Looking at list.*] I see you are quite correct.

6962½. *Mr. Smith.*] That I contend is not a charge which this Commission is appointed to investigate. No charge has been made by Mr. Schey, as yet, or by anyone else, that appointments have been made to the Railway service in contravention of section 63 of the Railway Act. It may be that that charge may hereafter be made, and may have to be investigated, but it does not fall to the Commission, at least under this charge, to make such an investigation, and therefore it is not really essential to the charge. The charge is not that appointments were made to the Railway service without complying with section 63, and I therefore submit that the information asked for either does not come within the scope of the Commission, or of this particular charge.

6963. *President.*] As I understand it, what it is desired to ascertain is, the persons who have been placed in the Railway service without examination, and without having been previously engaged in the service, and the certificates required by the clause that there is no person in the Railway service fit and qualified to be promoted to such appointment.

6964. *Mr. Smith.*] Quite so. I do not wish to argue with the Commission, it is only for the purpose of facilitating the proceedings that I raised the point.

6965. *President.*] This information I take it is not required with a view of showing that the certificates were improperly issued, but to ascertain the number of persons who have been so engaged and who were not previously in the Railway service.

6966. *Mr. Schey.*] That is it, your Honor. The number of persons appointed under the provisions of that clause. I do not allege that the appointments were made in contravention of the section. Perhaps I may ask your Honor to consider the third request with the second. The third request is for a list of the officers called upon to show cause as provided by section 65 of the Railway Act. I will ask your Honor to look at section 65, and you will see that it provides that before section 63, the one you are now dealing with, shall be put in force, any officer who is to be passed over either under that section, or by a subsequent means stated in the Act, shall be allowed to show cause why he should not be passed over. Now, therefore, every officer has a right under that section to show cause why he should not be passed over for somebody else, and in addition to that the Act is mandatory on the Commissioners that he shall be allowed to show cause, they must give him every opportunity. In the first place, your Honor, I want to know the persons who have been engaged under clause 63, and have been brought into the service under certificates which I presume have been passed to the Governor. I want their names, and when they were appointed, and to put against that I want the names of those who, under section 65, have been allowed to enjoy the right given therein. The two things go together, and I ask your Honor to take them together.

9667. *Mr. Smith.*] I still submit my objection, Mr. President, to the furnishing of the information demanded by Mr. Schey, and I do so on the ground that it is outside this charge, and that it is not wanted for the purposes of this charge.

6968–9. *President.*] We do not want to hear you further on the 65th section, Mr. Smith.

6970. *Mr. Schey.*] May I submit, your Honor, that the provisions of section 65 are such that if it be shown that officers who have been put out of the service through any process have not had their right under section 65, it would be—at least so it appears to me—important evidence towards the very matter into which the Commission is asked to inquire.

6971. *President.*] I think the 65th section has nothing whatever to do with this inquiry. That section provides that when a vacancy occurs in any branch of the Railway service not open for competitive examination it shall be filled, if possible, by the promotion of some officer next in grade in the department, and, unless the head of the branch advises the Commissioners that he is not fit for the position, no officer shall be passed over without being allowed to show cause to the Commissioners, whose decision upon the matter is to be final. That is a matter we have nothing whatever to do with. That provides only for the mode of filling up vacancies, so that the person who is next to the one who has been removed shall get the office so vacated, unless it is certified that he is not fit to fulfil the duties. That we have nothing whatever to do with, and it is wholly different from the matters referred to in section 63, which refers to the appointment of persons outside the Railway service to positions in the Railway service. We think a return under section 63 ought to be made, but not a return under section 65.

6972. *Mr. Schey.*] Then I understand your Honor declines to allow either of these returns to be made?

6973. *President.*] No, Mr. Schey; I think the Commissioners should provide a return under section 63.

6974. *Mr. Schey.*] But not under section 65?

6975. *President.*] No.

6976. *Mr. Schey.*] Do I understand your Honor to direct that a return under section 63 be produced and put in?

6977. *President.*] Will there be any difficulty, Mr. Eddy, in supplying a list of those who have been appointed under section 63?

6978. *Mr. Eddy.*] Not if you and your colleagues wish it, Mr. President.

6979. *President.*] We do wish it.

6980. *Mr. Eddy.*] We will have pleasure in putting it in to-day.

6981. *President.*] The Commissioners promise, Mr. Schey, that a return shall be made.

6982. *Mr. Schey.*] May I now ask, your Honor, whether the papers promised by Mr. Oliver, and relating to the appointment of a number of gentlemen to the Railway service, have been put in yet? I asked for those papers on Tuesday, and Mr. Oliver promised, without any reservation, that they should be put in. I remind your Honor that I then stated that unless I received the papers yesterday, it would be

impossible

impossible for me to do anything in relation to them. I have not yet seen them, nor have I had any opportunity of seeing them. I came here yesterday afternoon for that express purpose, and I made an arrangement by which, if they came later in the afternoon, I should see them; and, therefore, so far as I am concerned, I have taken every step I possibly could to see those papers. They are not yet produced, and, therefore, I am not in a position to say anything regarding them.

6983. *Mr. Smith.*] The position of that matter is this, Mr. President: That Mr. Oliver, called as a witness stated that any documents which Mr. Schey wanted would be produced, and he then undertook to write out a list of what he did want; but Mr. Schey, instead of writing out a list of what he did want, wrote out this list, of which I have a typewritten copy in my hand, and which we have been discussing. Instead of asking for the information which Mr. Oliver stated he was willing to supply, he asked for the information set forth in this list. I sent for Mr. Eddy, and he came up, and an objection was then taken that this list did not come within the charge.

6984. *President.*] I thought the papers which Mr. Oliver promised were different papers.

6985. *Mr. Smith.*] I understood your Honor to say that these returns would not be furnished owing to this very point which we are now dealing with. At least that is what I understood your Honor to remark. I don't say they necessarily lead to that conclusion; but on page 45 of the minutes of evidence of that day your Honor will find that Mr. Schey asked: "Will these returns be furnished, your Honor?" and your Honor remarked: "They will not be furnished before Thursday."

6986. *President.*] I was then referring to the papers referred to in Mr. Schey's written list, and not to the papers promised by Mr. Oliver. Mr Oliver was asked to furnish papers regarding the appointment of a number of persons then named, and he promised to do so. Those are the papers Mr. Schey wants.

6987. *Mr. Schey.*] Yes, your Honor. The second lot of papers were distinct and separate.

6988. *Mr. Eddy.*] When I entered the Court, on Tuesday, I found that a long list of names had been given that Mr. Oliver had not been questioned upon, and I expressed a desire to ask Mr. Schey certain questions in regard to those names before any papers were produced, for the reason that the list included many people of whom I had no knowledge whatever until they were appointed to the service.

6989. *President.*] If that is so, Mr. Eddy, it is easy to have that statement on oath, and there is an end of the matter, so far as you are concerned. What Mr. Oliver promised was that he would produce the papers in reference to those persons.

6990. *Mr. Eddy.*] We shall have pleasure, Mr. President, in putting in the papers referring to the persons named by Mr. Oliver.

6991. *President.*] Mr. Schey says he has not had an opportunity of seeing them yet.

6992. *Mr. Eddy.*] We cannot produce papers by magic, Mr. President.

6993. *President.*] If you say you cannot produce them in the time, there is an end of the matter.

6994. *Mr. Eddy.*] We produce the papers now.

6995. *Mr. Schey.*] Then I shall have an opportunity of seeing them, your Honor?

6996. *President.*] Yes. You will understand, Mr. Schey, that the fact of these documents being produced does not make them evidence.

6997. *Mr. Schey.*] Not necessarily, your Honor; but they are produced for inspection.

6998. *President.*] Yes. It may be there are matters in these papers that ought not to be made public; and, if so, they will not be made public.

6999. *Mr. Schey.*] I understand that, your Honor, but I want to be quite clear that these papers are produced for my inspection at all events, and that it rests with the discretion of the Commissioners what portion of them will be made public.

7000. *Mr. Eddy.*] These are the papers we desire to put in, Mr. President. [*Documents put in.*]

7001. *Mr. Schey.*] Might I ask your Honor, now, whether the papers produced include all the papers which Mr. Oliver promised?

7002. *President.*] Yes, I understand they are all there.

7003. *Mr. Schey.*] Your Honor, I have an application to make to the Commission now. The business of this Commission has reached such a stage, and assumed such an aspect, that I deem it necessary to have legal advice to look after my interests, in the same way as the Railway Commissioners have. Yesterday I endeavoured to engage a solicitor. I went after three gentlemen, and unfortunately they were all out of town, but they are all to return to-day, I believe—or, at least the last one, if not returning by the mid-day train from Melbourne, will be here to-morrow. I tried to see two of those solicitors again this morning, but I failed to see either of them, and I now apply for an adjournment to permit me to get legal advice before going further.

7004. *President.*] What do you want legal advice for?

7005. *Mr. Schey.*] To generally look after my interests, your Honor.

7006. *President.*] But legal advice cannot be given to look after your interests. What do you want it upon?

7007. *Mr. Schey.*] I want legal advice upon several points. For instance ——

7008. *President.*] You see, you are asking for an adjournment, Mr. Schey, and you must explain to the Commissioners what you want that adjournment for.

7009. *Mr. Schey.*] Your Honor will remember that at the last sitting of the Commission, on Tuesday afternoon, I intimated that I desired legal advice upon the way in which matters are now standing. I said I should seek to obtain that advice, and upon that advice I should probably have to shape my course of action. As I have not had an opportunity of getting that legal advice, I am not properly in a position now to say absolutely what I intend to proceed with, and therefore, I ask for an adjournment until such time as I can get this legal advice to enable me to determine further. I do not feel competent myself to proceed without legal advice. Up to the present I have done without it, but matters have now assumed such a complexion that I do not feel justified in going further until I have had legal advice; and, as I have told your Honor, I called upon three several solicitors—I can give their names if it is any satisfaction to the Commission—but I have not yet been able to see any one of them. I do not feel justified in proceeding any further until I have obtained legal advice.

7010. *President.*] We want to know what you want the advice of your solicitor for. Do you want advice as to your position here in reference to your indemnity, or is it advice in reference to the conduct of the inquiry in examining witnesses?

7011. *Mr. Schey.*] Both, your Honor.

7012. *President.*] So far as the examination of witnesses is concerned, we think you are quite capable of proceeding with the examination of those witnesses who have been called for to-day. So far as you require advice as to your position here, your position is in no way different now to what it was when the Commission commenced, and to what it has been all through the Commission up to the present time. As to the undertaking which was given by Mr. Eddy, we have looked into that document, and we find that it is an undertaking referring, not merely to the first two charges, but to all the proceedings before this Commission. I think Mr. Eddy is mistaken in supposing that his undertaking was limited to the first two charges.

7013. *Mr. Eddy.*] I was under the impression, sir, that it only applied to the first two charges, because I said that my colleagues were interested in the other charges.

7014. *President.*] If I recollect rightly, it arose in this way. After the undertaking was given, Mr. Schey asked whether it would bind your colleagues, and you said that you could give no undertaking upon them, but that as regarded the first two charges, as they dealt exclusively with yourself, you gave an undertaking, a complete undertaking with respect to them, and that undertaking, so far as you are concerned, relates to the whole of the proceedings before the Commission.

7015. *Mr. Eddy.*] I am quite willing to accept that position, sir.

7016. *President.*] That is your position now, Mr. Schey, and that has been your position throughout; and I again point out to you that in the Act 44 Vic., No. 1, under which this Royal Commission is taking evidence, it is provided that the witnesses before a Royal Commission shall have the same protection as witnesses appearing before the Supreme Court in any action or suit. Further than that it is impossible to go. So far as regards proceeding against you for libel, I stated as my opinion, and I have carefully reconsidered the matter, and I still give it as my opinion, that you are under no risk whatsoever of any action for libel for any evidence you may give before this Commission upon oath, or for any question you may put to any witness you may call as prosecutor, or advocate, or counsel. I cannot, therefore, see how you are in any risk or danger whatsoever in reference to any proceedings before this Commission. We wish emphatically, and I speak now on behalf of all my colleagues, to state that we think it is very improper to hold out any threat, either of proceedings for libel, or for perjury, against Mr. Schey, or against any witness, or any person, who comes before this Commission. Any threat of that kind can only have the effect of terrorising the person against whom it is made, and we think that is very improper with regard to the person himself, and derogatory to the position of the Commissioners.

7017. *Mr. Eddy.*] I wish to say, sir, that it was only Mr. Schey who considered my remark a threat. At least, so I thought. I only intended to caution Mr. Schey before he gave me his answers. It was not intended by me as a threat of any proceedings.

7018. *President.*] I am quite sure Mr. Eddy that you did not mean anything disrespectful to the Commission. We entirely acquit you of that, but at the same time I do not think it was a proper remark to make. Under all the circumstances, Mr. Schey, we think you ought to proceed with your case.

7019. *Mr. Schey.*] I still press for an adjournment.

7020. *President.*] We decline to allow an adjournment of the case under these circumstances.

7021. *Mr. Schey.*] Very well, your Honor. I desire to say to your Honor, therefore, that circumstances have arisen in relation to this matter which render it necessary for me to make a brief explanation. In the first place, the promise made in the face of Parliament by the Government of this country as to the papers which I should have, a promise that I should have all and every paper that I liked to ask for, has been very largely departed from. Even papers that were promised on Tuesday last are only now produced, and in such a way as to absolutely preclude me from going through them, at all events until the close of this day's proceedings, and therefore I shall not be in a position to deal with them were I otherwise able to do so. I say that that promise has been largely departed from, that a deliberate and successful attempt has been made to keep from me certain papers which I deemed it necessary to have for the conduct of this case which I have been asked to go on with. Mr. Eddy has proved this himself, for on one occasion when I referred to a document which was in evidence, and which Mr. Eddy did not at that time know was in evidence, asked what traitor had betrayed ——

7022. *President.*] What has that got to with this matter, Mr. Schey? Really, we cannot have the whole day wasted with these long harangues.

7023. *Mr. Schey.*] I do not wish to say very much, your Honor.

7024. *President.*] Then let what you have to say be pertinent to the matter.

7025. *Mr. Schey.*] I will endeavour so to do your Honor. That goes to show at all events that Mr. Eddy knew of some papers which he did not think I would see, should see, or could see, or he could not have used the word traitor in relation to the matter. As a matter of fact, the papers were produced by the department; but, as I said, Mr. Eddy's observation simply goes to show that these papers were not intended for my sight, and it was a matter of surprise that I had seen them. In the next place, I have already referred to the declaration made by Mr. See, the Minister for Railways in Parliament. Mr. See stated to the House that it was very unlikely Mr. Eddy would employ either counsel or solicitor. I am not now in a position to say what authority Mr. See had for making that statement, and I can very well leave Mr. Eddy and Mr. See to settle that matter themselves. Another undertaking was made by the Attorney-General, who at that time was Acting Premier of the Colony, that Mr. Eddy should have no legal advice except at his own expense. But we find that the solicitor for the Railway Department, who I understand is receiving a State salary of £1,500 a year, has appeared all through these proceedings on behalf of the Railway Commissioners. At all events, whether it be right or no, it appears to me that we are in this anomalous position, that a person receiving a State salary, and being a State servant, appears here for the purpose of prosecuting another person, myself, who has already been promised by the Government, and in the face of Parliament, an indemnity for any proceedings. In the third place, your Honor has already spoken of the indecency of the threat made by Mr. Eddy.

7026. *President.*] I never used the word indecent, Mr. Schey.

7027. *Mr. Schey.*] I apply that term to it, your Honor.

7028. *President.*] You should state so.

7029. *Mr. Schey.*] I apply that term to it your Honor; and I consider that it is a grave offence for Mr. Eddy to threaten any witness before a Royal Commission, and by that means seek to intimidate him. As to the value of the threat I have nothing whatever to say at the present moment; but I intend to show Mr. Eddy, and anyone else who may be interested, that whatever he may think of the question I have a

full

full knowledge of my position as a Member of Parliament, and as a representative of the people, and that I have a full apprehension of the rights which belong to that position, although it appears to me that they have been seriously forgotten in the course of the proceedings of this Commission. In the fourth place, although Mr. Eddy has had the advantage of counsel all through this inquiry, I have not, and now I have applied to your Honor for an adjournment, practically for half a day only, for the purpose of allowing me to get legal advice to enable me to proceed further, your Honor, and your colleagues have refused me even that small amount of grace, if I may term it so—right, I should prefer to term it. Under all these circumstances, it appears to me that the position I have been asked to assume, and which the Commission itself has laid upon me—a position of being some sort of prosecutor—is one I am in no way entitled to accept, and I only accepted it at the direction of the Commission. I had previously protested against being put into such a position, and I only accepted it at the request of the Commission for the purpose of facilitating business, because, to my mind, the Commissioners themselves saw that unless I did so there would be considerable difficulty in conducting the inquiry; and it was for that reason, and that reason alone, to relieve any difficulty which might have existed, that I ever took up such a position. Now, I have stated in Parliament, I have stated here, and I repeat it, that what I stated in Parliament, I stated as a member of Parliament, from my place in Parliament, in the course of the proceedings of Parliament; and I say the matter is one for Parliamentary inquiry. I did what I esteemed was my duty in the interest of the public, and I conceive that I was right in so doing. Under the circumstances I have already described to your Honor, I must now absolutely decline to proceed any further with the inquiry in its present form.

7030. *President.*] There must be no noise of that kind in Court. Mr. Schey, you say you are going to retire from this inquiry. The inquiry is laid upon the Commissioners. It is their duty to make the inquiry, and they intend to prosecute that inquiry. You are a necessary witness in prosecuting the inquiry, and if you do not think fit to come forward and produce what evidence was in your mind, or what evidence at the present time induces you to believe that these charges are true, so much the worse for you; but so far as the inquiry is concerned, you will be put into the box, you will have to give an explanation of what you mean by the charges, you will have to state to the Commission the evidence which was in your mind at the time you made the charges, and other matters that the Commissioners may think fit to interrogate you upon. You must not imagine that by retiring you are going to burke this inquiry.

7031. *Mr. Schey.*] I quite understand, your Honor, that under the Act under which this Commission is sitting I am a witness before the Commission, and that the Commission may ask me any questions they think proper, and that I should be compelled to answer them. I quite understand that. What I am declining to do is to proceed in the position of prosecutor; a position which was assigned to me; I decline to take up that position any more. I am aware of my liabilities as a witness before the Commission, and I have no desire to avoid them; but matters have now reached that stage when I deem it necessary to have legal advice before proceeding further. I hope your Honor will be so far gracious as to allow me to secure a legal adviser before proceeding further. I have no desire, I know too much of the law of the country, to avoid an inquiry. Nothing of the kind entered my head; I have no wish to burke the inquiry. But I deem it necessary for my interests to have legal advice before proceeding further. As that concession has been allowed to Mr. Eddy all the way through, I ask you to be good enough to permit me to obtain a legal adviser before going on.

7032. *President.*] We have not prevented you, Mr. Schey, from taking legal advice. On the contrary, we have suggested more than once that both for your own sake and for the sake of the Commission it would be a great advantage if you were represented by counsel or solicitor. But you ask now, at 20 minutes past 12 o'clock, for an adjournment for the rest of the day, in order that you may consult your legal advisers. You have given notice to the Secretary that you wish to have certain witnesses summoned. Those witnesses, I understand, have been summoned, and are now here ready to give evidence. Up to the present, for the last fourteen days, you have conducted the inquiry yourself, and if I may be permitted to say so, you have conducted it with considerable ability, and I think you are quite capable of asking these witnesses, who are here present, such questions as you may have intended to ask them when you said they were necessary for your case. We wish to go on so far with your case as to examine these witnesses, instead of losing some three or four hours of the Commissioners' time in waiting until you have consulted your solicitor.

7033. *Mr. Schey.*] I have already intimated to your Honor that I desire the advice of a solicitor before I decide whether I can take up that position again or not. Your Honor by refusing me that permission has compelled me to decide, of my own mind, and therefore leaves me no option whatever but to decline to ask the witnesses any questions whatever. If your Honor will grant an adjournment until to-morrow, so that I may obtain advice, I shall be in a better position to say whether I am prepared to ask further questions. At the present moment, however, the decision of the Commission leaves me no option whatever but to decline to ask any witness any question whatever.

7034. *President.*] If you are so anxious to consult your legal adviser you can do so between this time and 2 o'clock.

7035. *Mr. Schey.*] I do not think I can, your Honor.

7036. *President.*] If you cannot, then we must continue.

7037. *Mr. Schey.*] The solicitor I require to see, your Honor, is not in Sydney at the present moment, but I believe he is on his way here. If the Melbourne train has arrived he may be here, but it is very unlikely that I shall be able to see him between this and 2 o'clock. I am not responsible for the solicitors being out of Sydney, your Honor.

7038. *President.*] But there are a large number of solicitors in Sydney.

Mr. Charles Austen Hodgson sworn and examined:—

Mr. C. A. Hodgson. 2 June, 1892.

7039. *President.*] Are you employed in the Railway Department now, Mr. Hodgson? I am.

7040. How long have you been in the Department? About two years and five months.

7041. What office do you hold? I am Traffic Officer.

7042. What is Traffic Officer—are you head of the Traffic Department? At present I am with the Chief Traffic Manager.

7043. How long did you say you had been in the service? Two years and five months.

7044,

Mr. C. A. Hodgson. 2 June, 1892.

7044. Where were you last employed previous to coming here? In England.
7045. On what railway? The London and North-Western.
7046. What were you there? When I left I was out-door assistant to the Assistant Goods Manager.
7047. How did you get your appointment out here? Mr. Findlay spoke to me about it. He sent for me, and asked me if I was willing to accept a position here.
7048. Are you a personal friend of Sir George Findlay? I have known him for some time.
7049. Have you personally known him or simply known him by name? I have known him personally.
7050. Are you any relation of his? Oh, no.
7051. Was the appointment you got here similar to the one you held in England? Well, the work is very similar.
7052. The office you now hold was it held by anyone before you came here, or was it an office created when you came? The office I hold now I did not hold when I first came out.
7053. What office did you hold when you first came out? I was with the Commissioners. I was on their personal staff.
7054. What were you? I was in the Traffic Branch. I worked under the direction of the Secretary, chiefly in instituting inquiries.
7055. Was that a new appointment, do you know? I believe so. The position I hold now, I believe, is also a new one.
7056. That is a new one, also? Yes, your Honor.
7057. How long did you hold your first appointment? Until some day in July, 1890. I cannot remember the exact time.
7058. And you have held your present position since then? Yes, your Honor.
7059. *President.*] We do not want to ask any further questions of this witness. Do you wish to ask him anything, Mr. Schey?
7060. *Mr. Schey.*] Under the circumstances described, I decline to ask any witness any question at all.
7061. *Mr. Eddy* (to Witness).] You were employed on the North-Western Railway, I believe, to make special investigations into important matters for the Assistant Goods Manager, and sometimes for the Chairman and General Manager? Yes, sir.
7062. It was the same kind of duty you came here to perform for the Commissioners? Yes.
7063. And when they thought it desirable to strengthen the Chief Traffic Manager's hands you were transferred to his office? Yes.
7064. Now, the charge this Royal Commission is investigating is, that a large number of higher officers in the railway service have been put out of their positions to make room for personal friends or acquaintances of myself or Mr. Findlay. You knew me, of course, on the North-Western as one of the leading officers? I did.
7065. Beyond that had you any personal acquaintance or friendship with me? None whatever.
7066. Practically, you knew no more about me as a friend or anything of that sort than thousands of others in the North-western service? No.
7067. Do you know, as a matter of your own knowledge, that Mr. Findlay, prior to asking if you were willing to come to New South Wales for this position that had been cabled about, had offered it to other gentlemen in the service? I do.
7068. And, therefore, it was consequent on their not accepting the position that he asked you, thinking you were fit for the post, if you would be willing to come out? Yes.
7069. I take it that from your own knowledge you know there had been no officer under the Commissioners or under the Chief Traffic Manager performing the duties you now perform, or who was displaced to make room for you? I have never heard of such a one.

Mr. Joseph G. S. Corns sworn and examined:—

Mr. J. G. S. Corns. 2 June, 1892.

7070. *President.*] What are you, Mr. Corns? I am Goods Manager for Sydney and district, and also Rolling-stock Superintendent for the railways generally.
7071. How long have you held your appointment? My present appointment I have held for something like a year and five months.
7072. And before that what were you? Before that I was acting as inquiry officer for the Commissioners for two months in a somewhat similar manner to that described by Mr. Hodgson.
7073. Before you were appointed by the New South Wales Commissioners where had you been employed? On the London and North-western Railway in England for the whole of my life.
7074. Do you know Sir George Findlay? As my chief officer only.
7075. He is not a personal friend of yours? No; he is not.
7076. You merely know him in his official capacity? Precisely.
7077. Can you tell us how you came to obtain your appointment in this Colony? Certainly. Mr. Findlay communicated to me that Mr. Eddy was in want of a couple of traffic officers, and Mr. Findlay wished to know if I was prepared to go to New South Wales. The offer was made by Mr. Findlay.
7078. Did you know anything of Mr. Eddy? I had known him for a number of years simply as an officer high in our service. I knew him as a fellow officer, and in no other capacity.
7079. Not as a personal friend? No.
7080. And in accepting this office had you any communication with Mr. Eddy in any way? Yes; I must say I had this communication, otherwise I should not be frank. I was travelling from England to Scotland in June, 1888. On my way down I was informed that Mr. Eddy had just received this appointment. I called upon him at his office, having other business to do with him, and I asked him if the rumour I had heard was correct. He informed me that it was, and I told him that, as I understood the climate was very fine, I should have no objection to going to New South Wales. It was a mere informal suggestion, because I was prepared for a change, but in that sense only. I had not the slightest communication with Mr. Eddy between that time and the time I received the offer through Mr. Findlay, something like one year and three or four months afterwards.
7081. Do you know whether, in the appointment you first held, anybody had been removed from the service;—did anybody hold the same appointment or a similar appointment? I believe no person had held an appointment of the kind previously.

Mr. J. G. S. Corns. 2 June, 1892.

7082. And the present appointment, which you now hold? It is a new office, to assist an officer who was overburdened with work at that time.
7083. So far as you know, no person was removed from the railway service in order to provide a place for you in either your first or second appointment? I am perfectly satisfied that no one has ever held such appointments.
7084. *Mr. Eddy.*] How many years railway experience had you, Mr. Corns, on the North-Western? About thirty.
7085. You held important positions, did you not; you once had charge of all the North-Western interests in Ireland at Dublin? I was their agent in Dublin for 2½ years.
7086. And after that you had charge of the business at Bolton? Yes, at Bolton and Preston.
7087. And for years you held an important position in connection with the rolling-stock of that great undertaking? I was ten years rolling-stock superintendent.
7088. And so far as this charge is concerned, that a large number of higher officers in the railway service had been put out of their positions to make room for personal friends or acquaintances of myself or Mr. Findlay, I take it that personal friendship or acquaintanceship means something nearer to myself or to Mr. Findlay than the mere acquaintanceship that would arise from official intercourse. Do you consider the charge a just one in connection with myself? I consider it is entirely without foundation.
7089. Do you consider it just in connection with Sir George Findlay? It is not just in regard to either one or the other.
7090. Since you came here you have taken an important position in connection with the management of the goods traffic of Sydney and the surrounding district? Yes.
7091. That position was formerly undertaken by the goods superintendent; he was responsible for the working of the goods throughout the whole of the system? Just so.
7092. And from your own knowledge, are you aware that the Commissioners were dissatisfied with the way in which the business was conducted, and that they considered that the officer was overburdened with work? Yes.
7093. And has there not been a very material improvement in the working of the goods traffic of Sydney since the change took place? Well, that is a question I can scarcely answer.
7094. But are you not aware that a great change for the better has taken place by this alteration in the administration? I am constantly hearing of the great improvement which has taken place.
7095. I think, in answer to a question from the President, you said you were quite certain that in taking your position you had not displaced any other officer in the service? Yes.

Mr. Alan Nicoll sworn and examined:—

Mr. A. Nicoll. 2 June, 1892.

7096. *President.*] What office do you hold in the railway service? I am clerk and shorthand-writer in the Accountant's department.
7097. How long have you held that appointment? A little over twelve months.
7098. Had you any other appointment in the Railway Department before that? I was on the personal staff of the Commissioners.
7099. How long were you on the personal staff? About a year.
7100. Where were you employed before that? On the London and North-western Railway in England.
7101. How did you get your appointment on the personal staff—through whom? I came here on my own account.
7102. Did you make any application, or had you any communication with Sir George Findlay? No, sir.
7103. Or with Mr. Eddy? I interviewed Mr. Eddy prior to his leaving England. I told him I was anxious to go abroad, and at that time I was either going to South America or coming to this country, and I asked Mr. Eddy if he would be good enough to bear me in mind if he knew of anything suitable for me.
7104. What appointment did you get when you came out here? I did some clerical work under the secretary, and I travelled up country with the Commissioners to attend to clerical work at that time.
7105. Was any one removed or displaced from the railway service to make room for you? Not that I am aware of.
7106. Do you know if any one has been removed from the service from the position which you now hold? No, sir.
7107. Do I understand then that the position you now hold was a post created? It was to facilitate work.
7108. Had any one held the same position before? No, your Honor.
7109. And your position on the personal staff of the Commissioners was a new position, I suppose? Yes, your Honor.
7110. *Mr. Eddy.*] The charge which this Commission is inquiring into is that a large number of higher officers have been put out of their positions in the railway service to make room for personal friends or acquaintances of the Chief Commissioner or Sir George Findlay. I ask you how many times you had seen me in your life before you came to Sydney? I had only seen you occasionally travelling over the North-western lines.
7111. How many times had you spoken to me? Once.
7112. That was when you were introduced to me as one of the superior apprentices in the North-western service? Yes, sir.
7113. Had you any personal acquaintance with Mr. Findlay? None whatever.
7114. Had you ever spoken to him? I spoke to him once in Birmingham, but only on a matter of business.
7115. That is all the acquaintance you had with Mr. Findlay or myself? Yes.
7116. You paid your own passage to New South Wales? I did.
7117. And you took up a position as shorthand-writer and clerk in the secretary's office at £150 per annum? Yes.
7118. That was about three years ago, and you are now getting what? £200 per annum.
7119. What office are you in? Permanent-way Accountant.
7120. That branch has been a new creation altogether since the Commissioners took office? It has, sir.

Mr.

Mr. W. T. Foxlee sworn and examined :—

Mr. W. T. Foxlee. 2 June, 1892.

7121. *President.*] What position do you hold in the Railway Department, Mr. Foxlee? I am Engineer-in-Chief for Existing Lines of Railways in this Colony.
7122. How long have you held that position? Since September last.
7123. What position did you hold before that? That of Deputy Engineer in the same Department.
7124. How long have you held that appointment of Deputy Engineer? I arrived in the Colony at the end of February, 1890.
7125. What employment were you in before that? Previous to my coming to this Colony I was connected with the Great Eastern Railway Company as Resident Engineer in connection with the Essex lines, which were being constructed at the time by that Company.
7126. How did you get your appointment out here, Mr. Foxlee? I was offered it by the present Railway Commissioners.
7127. Do you know Sir George Findlay? I know Sir George Findlay.
7128. Do you know him as a personal friend? No; I only knew him as the general manager of the company with which I was connected previous to my being with the Great Eastern Company.
7129. Do I understand that it was only in business matters that you knew him? Quite so.
7130. Do you know under what circumstances the Commissioners offered the appointment to you—in what way it came to be offered to you? Through the Chief Commissioner, I think. Before he left England I heard of his appointment to the position of Chief Commissioner of Railways of New South Wales, and I told him if he required anyone like myself that if he could make it worth my while I would be willing to come out. After that I was recommended for the position of Railway Commissioner in Queensland, and I sent copies of the testimonials which the railway companies at home gave me for that appointment to Mr. Eddy, and informed him that I was still of the same mind, and that if he required the assistance I was in a position to give I would like to come. I have the original testimonials for the appointment in Queensland in my pocket, if your Honor would like to see them. My name was one of six sent to Brisbane by the Agent-General in London.
7131. *President.*] I do not think it necessary that you should show the testimonials;—do you know whether anyone was holding your appointment when you first came out here, that is to say whether anyone had held the same appointment before you? I believe there was a Deputy engineer.
7132. Who was he? Mr. Max. Thompson.
7133. Do you know what became of him? He had retired before I came to the Colony.
7134. Do you know how he left the service? Not of my own personal knowledge.
7135. *Mr. Eddy.*] Will you tell us how long you have been associated with the Institute of Civil Engineers, Mr. Foxlee? About 18 years.
7136. At what date did you become a full Member of that Institution? I am speaking from memory, but I think it was in 1884.
7137. You became a full member of the Institution of Civil Engineers in 1874? Yes; I am speaking from memory, your Honor.
7138. And on the North-Western Line you held the position of Resident Engineer for the Construction of New Lines? Yes.
7139. When the new line which you were last engaged upon came to an end, you were offered a better position on the Existing Lines than you had in connection with the New Lines? Yes; I was offered charge of the Northern division which comprises the lines north of the Mersey.
7140. You preferred to continue with new works, and you went over to the Great Eastern Company? Yes; they offered me charge of the Essex lines.
7141. This charge is that a large number of the higher officers in the railway service have been put out of their position to make room for personal friends and acquaintances of myself or Sir George Findlay. Did Sir George Findlay speak to you with regard to your appointment here? Not at all.
7142. You received a direct communication from the Railway Commissioners? Certainly.
7143. And you have had no friendship or acquaintance with me beyond what would necessarily take place in connection with officers of the same Company? No, not in the least.
7144. As a matter of fact, you had only met me two or three times in connection with my going over for inspection purposes some lines under your control? That is correct.
7145. And seeing me as you have described just before I left England? Yes. I do not think I had spoken to you more than six times in my life previous to my coming out here. I think I am right in saying that.

Mr. Deodatus Hilin Neale sworn and examined :—

Mr. D. H. Neale. 2 June, 1892.

7146. *President.*] What are you, Mr. Neale? I am a mechanical engineer by profession.
7147. What appointment do you hold in the railway service? I am a mechanical engineer on the personal staff of the Commissioners.
7148. How long have you held that appointment? Ever since I have been in the country, that is about three years and a half.
7149. How did you come out—was it at the request of the Railway Commissioners here? Yes, I wrote to Mr. Eddy when I heard of his appointment, and I said I was thinking of leaving America, and as New South Wales was a fine climate, and I had heard of his appointment, I should be willing to come out if he wanted anyone with my qualifications. Mr. Eddy cabled to me and asked me to come out at once. That was some time after I wrote my letter.
7150. Where had you been previously employed? Immediately prior to coming here in the United States. I was mechanical editor of the *Railroad Gazette* for about five years.
7151. And before that did you come from England at any time, or are you a native of America? I am a native of Great Britain, your Honor. Before I was connected with the *Railroad Gazette* I was on the Cape Government Railways, and before that I was on the Great Eastern Railway.
7152. Had you any acquaintance with Sir George Findlay? No; I have never seen him in my life.
7153. And had you any acquaintance with Mr. Eddy? Mr. Eddy was brought to my office, in New York, either late in April or early in May, 1888. I had never previously heard his name; I did not know there was such a person. He was brought to my office by the agent for the London and North Western-

Mr. D. H. Neale. 2 June, 1892.

Western Railway, in New York, whom I knew. Mr. Eddy wanted some information about the American railways, and we had, I think, in all about three conversations on that subject, and I gave him some statistics and comparisons between the work that American railways do and that English railways do, and also as to the rates charged. That was the whole extent of my acquaintance with Mr. Eddy.

7154. Was it on that occasion you told him you would be willing to come out here? No; it was after that time.

7155. Had you heard that he was coming here at that time? I have read the correspondence, your Honor, and it seems to me that those interviews took place before Mr. Eddy's name was mooted in any way whatever in connection with his appointment here.

7156. It was after you heard he had been appointed Commissioner that you wrote and told him you would be willing to come out here if he required your services? Yes.

7157. Do you know whether the appointment you now hold was filled by anybody previous to your coming here, or is it a new appointment? It is a new appointment altogether.

7158. You did not displace anyone in the service? No, your Honor.

7159. *Mr. Eddy.*] Before you went to America, Mr. Neale, I believe you had a considerable training on the English railways as a mechanical engineer? Certainly, I had. I served a popilage with the North London; I then became chief draftsman on the Monmouthshire Railway; then I was inspector for Sir Charles Douglas Fox, as regards the manufacture of locomotive cranes, &c., for the South Indian Railway. Then I went to the North British Railway as assistant to the locomotive superintendent. Afterwards I was with the Westinghouse Brake Company for about six months, at the end of which time I joined the Great Eastern Railway in the capacity of chief draftsman for four years. Then I went to the Cape Government Railways, where I was assistant, and part of the time acting locomotive superintendent. From the Cape I returned to England, and then after a little time went over to America.

7160. The *Railroad Gazette* of New York is the leading railway paper is it not? I think I may claim that, so far as the operation and working of railways are concerned, it is the leading railway paper in the world.

7161. And the mechanical editorship of that paper is looked upon as rather an important position, is it not? Well, when I sat at my desk and wrote an article, I had to reflect that it would be criticised by half the railway officers in the world.

7162. Therefore you had to be conversant with railway practice all over the world? I had.

7162. And that especially fitted you for the position you now hold in our service, a position which requires you to deal with all special mechanical questions, and with every branch of locomotive work? I believe my varied training does especially fit me for the work I have to do.

7164. Beyond the interviews I had with you in New York in the beginning of 1888 you had no personal knowledge or acquaintanceship or friendship with me of any kind? I did not know there was such a person in existence. I had never heard your name mentioned.

7165. Those interviews were the only ones you had with me until you arrived here? That is so.

Mr. Thomas Hall sworn and examined:—

Mr. T. Hall. 2 June, 1892.

7166. *President.*] I believe you were employed in connection with the railways in England before coming out here, Mr. Hall? Yes.

7167. On what railways? On the London and North-western; immediately before coming out here I was in private practice.

7168. Do you know Sir George Findlay? Not intimately.

7169. Did you know Mr. Eddy, the Chief Commissioner for Railways, before coming here? I did not personally before I came to Sydney.

7170. How did you come to receive your appointment in the railway service here? Sir George Findlay asked me if I had the opportunity to come out here as accountant would I go, and I said I would.

7171. When you arrived here did you displace anybody from the service in the appointment you got? I did not displace anybody.

7172. You were placed over the head of the Accounts Department? I was placed at the head of that department.

7173. Had you been long connected with railway service before coming out here? Yes, I have had thirty years' experience in England, and also in South America.

7174. In what capacity did you serve—in the Accountant's Department? Yes, but I had experience in almost every department, more or less.

7175. And as accountant? Seven years.

7176. *Mr. Eddy.*] I believe in the North-western Railway service you had at one time charge of one of the largest goods stations in Liverpool, had you not? Yes.

7177. And you were then the accountant for the company in connection with the Liverpool Goods' Traffic? Yes.

7178. Which is an enormous traffic? Yes.

7179. And after that you went to South America as manager for some railway there? Yes.

7180. And then you returned to England? Yes. I was engaged in private practice as public accountant.

7181. And it was from that position that you were asked by the general manager of the North-western Company if you would come out here? Quite so.

7182. Had you ever seen me before arriving in Sydney? No.

7183. Therefore, it would be untrue if anyone said you were a personal friend or acquaintance of mine? Yes, it would certainly.

7184. And any communication you had with the general manager of the North-western line was, I suppose, nothing more than would take place between officers in the same position as yourself in the service? Quite so.

7185. A question was asked you by the President in regard to displacing anyone in the service;—under the Railway Act of 1888 I believe that a new organisation was found necessary in connection with the railway service and the Auditor-General, was there not? Yes.

7186. And the accountant in charge of the head office when you arrived was Mr. Wickham? Yes.

Mr. T. Hall. June, 1892.

7187. Was it not a fact that the Railway Commissioners made arrangement, through the Executive Council, that certain certificates which the Railway Act required them to give, and other most responsible acts of theirs, should be performed by Mr. Wickham, so as to relieve them of that responsibility? Quite so.
7188. Therefore, although you apparently took Mr. Wickham's position, yet Mr. Wickham's actual position in the service was, if anything, a more dignified one than before? Yes.
7189. And he had an additional salary because of that greater responsibility? Yes.
7190. At the present time, by the rearrangement of the office, you in yourself combined the offices of accountant and assistant accountant that existed prior to the Commissioners taking office? Yes.
7191. So you, as one person, now take the whole responsibility of the two offices that existed before the Railway Commissioners entered office in 1888? Yes.
7192. *President.*] Mr. Wickham, I think, you said is dead?
7193. *Mr. Eddy.*] Yes, he is dead, your Honor.

7194. *President.*] Would you go into the box, Mr. Eddy. I want to ask you a few questions? [*Mr. Eddy here entered the box.*]

Mr. E. M. G. Eddy further examined:—

Mr. E. M. G. Eddy. 2 June, 1892.

7195. *President.*] The witnesses that have been called by the Commission this morning are those summoned by Mr. Schey. You have heard their evidence. Now, in the case of any of those persons, were they personal friends or acquaintances of yours? There was no personal friendship or acquaintanceship beyond what occurs necessarily between officers engaged in the same service. Some of them, of course, were not in the same service, and others I did not know at all.
7196. Was any officer in the New South Wales Railway service put out of his position to make room for any of those persons? Not in the way indicated, sir. No one was put out of his position to make room for any of these officers. The position Mr. Foxlee first held was that of Assistant or Deputy Engineer for Existing Lines. There had been a deputy engineer previously, but for reasons which I would not like to mention publicly—I can put the papers before the Commission, if necessary—we had to dispense with that officer's services, and Mr. Foxlee consequently took his place.
7197. Then when Mr. Foxlee was appointed the position was vacant? Yes.
7198. The prior occupant was not removed to make way for Mr. Foxlee? Most decidedly not.
7199. I have mentioned these persons who have been examined here summoned by Mr. Schey. Now, is it true in respect of any other officer in the railway service that he was put out of his position to make room for any person who was a friend or acquaintance of your own? I have never done such a thing in my life.
7200. Nor of Sir George Findlay? No.
7201. There is only one witness here that we have not been able to call, that is Mr. Angus, and we understand he is in Brisbane. What appointment does he hold? He is not in the service. He came here to be on the personal staff of the Commissioners in regard to engineering questions, and subsequently, when the Engineer for Existing Lines, who had attained the age of 60 was retired, Mr. Angus was appointed to that position. He was a most able engineer, and we are very sorry he is not now in our service.
7202. At whose recommendation was he appointed? He was obtained through the general manager of the North-western Railway.
7203. Did you know him previously in England? Yes, I had known him for years as one of the ablest of the assistant engineers in charge of the permanent-way of the North-western Railway. I first knew of him in connection with the heavy lines in the Birmingham and South Staffordshire districts. Subsequently he was appointed in charge of a heavier section of line, that is, the southern part of the North-western Railway, and including all the London district. It was when I was superintendent of that part of the line, years ago, that I became aware of his great abilities as a practical permanent-way engineer.
7204. And in no other way was he either a personal friend or acquaintance of yours? Certainly not.
7205. Or of Sir George Findlay? No, only as a respected officer in the service.
7206. That will do, Mr. Eddy.
7207. *President.*] Mr. Eddy, do you wish to call any witnesses upon this fifth charge?
7208. *Mr. Eddy.*] No, sir; not unless you consider it necessary that I should do so. There were several other names mentioned by Mr. Schey the other day, beyond those gentlemen who were summoned to attend here.
7209. *President.*] Who are they?
7210. *Mr. Eddy.*] Mr. Elwell.
7211. *President.*] But I understood he had not come out from England to the department?
7212. *Mr. Eddy.*] No.
7213. *President.*] Who are the other gentlemen to whom you have referred?
7214. *Mr. Eddy.*] They are Mr. Thow, Mr. Kneeshaw, Mr. Elwell, and Mr. Wilkin. All of these gentlemen were engaged by the Commissioners in the Colony; but if you think it necessary they can be put in the witness-box to prove what acquaintanceship they had with me.
7215. *President.*] Are there any others?
7216. *Mr. Eddy.*] Those are all.
7217. *President.*] And are these gentlemen in attendance?
7218. *Mr. Eddy.*] Mr. Thow is here, and Mr. Kneeshaw is here. Mr. Wilkin is away from Sydney, apparently.
7219. *President.*] What is Mr. Wilkin?
7220. *Mr. Eddy.*] He is interlocking engineer on the line, and we secured him by putting an advertisement in the newspapers of all the colonies. We received a number of applications for the position, and selected Mr. Wilkin as the most suitable.
7221. *President.*] Very well; then will you, Mr. Eddy, give evidence with respect to Mr. Wilkin and Mr. Elwell?
7222. *Mr. Eddy.*] Very well, sir.
7223. *President.*] What position does Mr. Elwell hold in the department? Mr. Elwell is consulting electrician

Mr. E. M. G. Eddy. 2 June, 1892.

Electrician to the Railway Commissioners. Formerly there was an officer, paid jointly by the Railway Department and the Telegraph Department, to look after the electrical work on the railway. That officer was selected by the Electrician for the Electric Telegraph Department, Mr. Cracknell, to fill the position in the Telegraph Department solely. We released him; but our telegraph arrangements have become of far greater importance than was formerly the case, because we had introduced a system of working the lines by means of electric tablets, and electric train staffs, instead of by the old-fashioned way of train staff and ticket; and we deemed it advisable to get someone of considerable electrical skill for the position. We advertised in the papers and received a great number of applications, but none of the applicants came up to what we considered our standard. Mr. Elwell appeared to possess very considerable electrical knowledge, but he had not had the control of the working of electrical appliances on any railway before. We, therefore, engaged him for a period of six months as Consulting Engineer—he practically gave us all his time—and after that time expired, we extended his engagement for another six months, which latter engagement has not expired. That is the way in which we obtained the services of Mr. Elwell.

7224. *President.*] No one was displaced in order to give him the position? No, sir.

7225. And until he made application for the position, he was unknown to the Railway Commissioners? I think I did know him by sight, but that is practically all.

7226. He did not come from England at the time of your appointment of him? No; he was a resident in Sydney.

7227. Then, as to Mr. Wilkin, what is he? Mr. Wilkin is Interlocking Engineer for the railway. He succeeded a Mr. Parry, whom we promoted from the position of Interlocking Engineer to a more important position in the Traffic Branch. We advertised for an interlocking engineer. Mr. Wilkin was at that time filling a somewhat similar position in South Australia, and we appointed him to the post.

7228. Did you know him previously? Not previous to his appointment to the position he at present holds.

7229. Do you know if either of those gentlemen were friends of Sir George Findlay? I have no knowledge; but I know that he had nothing to do with their appointment.

7230. I think you said both Mr. Thow and Mr. Kneeshaw are in court? They are both in court.

7231. *President.*] Very well, we will examine those gentlemen.

Mr. Thow called and further examined:—

Mr. Thow. 2 June, 1892.

7232. *President.*] Before you got your present appointment, Mr. Thow, I think you told us you had been in South Australia? Yes.

7233. How long had you been there? Twelve and a half years.

7234. You were twelve and a half years in South Australia? Yes.

7235. Did you know Sir George Findlay before securing your present position? No.

7236. Did you know Mr. Eddy before you were appointed? Only by being over here to inquire into the state of the rolling stock. That was before I became an officer in the department.

7237. At the time you came over here first to inspect the rolling stock, did you know Mr. Eddy before this? I had met him for a very short time on arrival of the steamer at Adelaide.

7238. Just for a few minutes? Perhaps for half-an-hour—for a very short time, at all events.

7239. How long was it after you had come here to inspect the rolling stock that you got this appointment? I think my work in connection with the inspection of the rolling stock was finished on the 12th March, perhaps a little later—about the middle of March (say)—and I came to the Colony on the 3rd of May.

7240. I think you made a long report on the subject? I did.

7240½. *Mr. Eddy.*] I would like to ask you, Mr. Thow—the charge is that a large number of the higher officers in the Railway service have been put out of their positions to make room for personal friends or acquaintances of the Chief Commissioner, or of Mr. Findlay, of the London and North-Western Railway—as a matter of fact, you were not a personal friend or acquaintance of mine in the manner intended by this statement? Not at all.

7241. Or of the Manager of the London and North-Western Railway Company? No; I do not know him.

7242. When you met me with several other gentlemen, on the arrival of the steamer which brought me out from England, did you speak to me at all about coming to New South Wales in any position whatever? Not in the least.

7243. And you made no application to the Railway Commissioners to be placed in a position here? None whatever.

7244. And you had no communication with the Railway Commissioners in respect to your appointment, either by speaking or writing about the position? No.

7245. You were offered the position, and did not by any means endeavour to obtain it? Yes.

Mr. John Kneeshaw sworn and examined:—

Mr. J. Kneeshaw. 2 June, 1892.

7246. *President.*] What office do you hold in the Railway Department? I am Chief Clerk to the Outdoor Superintendent.

7247. How long have you had that appointment? For about fourteen months.

7248. You were appointed by these Commissioners? Yes.

7249. Did you hold any other appointment in the Railway Department before that? Yes; I was clerk in the Secretary's office previously.

7250. What position had you there—what kind of position;—were you Chief Clerk, or had you any particular post there? I was clerk in charge of the traffic business.

7251. And what office did you hold before that? That was the first appointment I had here.

7252. And elsewhere? I have had eighteen years of railway experience.

7253. Where? I was in the railway for sixteen years in New Zealand.

7254. Did you know Mr. Eddy before you obtained an appointment in the Railway Department here? I saw him when he was in New Zealand on two or three occasions in my official capacity in the Railway Department there.

7255. You did not know him in any other way? No, sir.

7256. Do you know Sir George Findlay? No, sir; I have not the slightest knowledge of him.

Mr. J. Knocshaw. 2 June, 1892.

7257. When you got your appointment here was any person discharged from the Railway service to make room for you? No; the position I took had been filled by an officer who had resigned two months previously.
7258. Who was that? Mr. A. G. Price.
7259. At the time of your appointment there was no occupant of the office that you then held? No.
7260. Was there an occupant of the position which you now hold previous to your securing it? No; that was a new office.
7261. Quite a new office? Yes; it was created.
7262. *Mr. Eddy.*] In regard to the new office, the Commissioners divided the work of the general superintendence of the whole of the line between two officers? Yes.
7263. And Mr. Parry, who was the Interlocking Engineer, was appointed Out-door Superintendent of the Southern and South Coast Line? Yes.
7264. And you were appointed his chief clerk, to assist him in carry out those duties? Yes.
7265. I think you have said there was no former acquaintance between you and myself;—I think you said that in answer to the President? Yes; and I repeat it most emphatically.
7266. All you had seen of me before you took up your position in the Commissioners' office was during the few days I was in Dunedin, about two years ago, and the Railway Commissioners instructed you to see me occasionally, to ascertain if there was any work in connection with the railways in which you could be of service to me? Yes.
7267. *President.*] That concludes the list of persons that were mentioned by Mr. Schey, does it not?
7268. *Mr. Eddy.*] Yes; the whole of them, sir.
7269. *President.*] You say you do not wish to call any further evidence, Mr. Eddy?
7270. *Mr. Eddy.*] No, sir.
7271. *President.*] There was a return asked for this morning which I think you said you would be able to supply under the 63rd section of the Act.
7272. *Mr. Eddy.*] Yes.
7273. *President.*] It would be, perhaps, as well to have that return put in.
7274. *Mr. Eddy.*] The whole of the officers that have been appointed under that class—that is to say, the whole of the papers in connection with their appointments are in, except with reference to two, which are in the possession of the Treasury; and the officers of that Department have declined to part with them except at the request of this Court. If your Honor will send a message to the Treasury they will send the papers in at once.
7275. *President.*] What are their names?
7276. *Mr. Eddy.*] They are certificates under the Act in regard to the appointment of Mr. Angus and Mr. D. H. Neale. We have put in all we could get, and these others can be obtained in the way I have said.
7277. *President.*] As to the other persons—you say the papers are all in now?
7278. *Mr. Eddy.*] They are all in now.
7279. *President.*] Mr. Schey, all the papers you asked for this morning in reference to the appointments under the 63rd section of the Act are in Court, with the exception of two. These two are with the Treasury, and the Commission is writing to ask them to produce those papers for to-morrow.
7280. *Mr. Schey.*] Very well, sir.
7281. *President.*] We do not think it right at present to close the inquiry upon this fifth charge, and we will, therefore, leave it open, so that you may have an opportunity between this and to-morrow morning to consult your solicitor, and take what steps you think fit. In the meantime, the evidence on the charge is closed, and we will not proceed to the sixth charge, which is:—"That the Commissioners have frequently supplied false answers to questions asked in the Assembly in matters connected with the railway." That, of course, is so vague a charge that unless, Mr. Schey, you explain what it refers to it will be impossible to make any inquiry into the matter. Therefore, I must ask you to go into the witness-box, if you please.
7282. *Mr. Schey.*] Very well, sir.

Mr. Schey further examined:—

Mr. Schey. 2 June, 1892.

7283. *President.*] You state in this charge that the Commissioners have frequently supplied false answers to questions asked in the Assembly on matters connected with the railways. Will you state what answers and what questions you refer to in that statement or charge? In the first place, your Honor, that charge, as stated in the Commission, I have not identified with anything in *Hansard* that I have stated. I may have said something of the same character, I believe I did say something of the kind; I do not dispute that something of the same character was said, or that it may be practically in those words. As to the particular cases, I have not collated any facts up to the present time, and I have none to produce.
7284. You have been a member of Parliament since when? Since the 2nd or 5th of February, 1887.
7285. You have been a member of Parliament since 1887, that is to say, you have been a member of Parliament during the whole time the Commissioners have been in office? No, not altogether, your Honor, because in the election of 1889 I lost my seat, and was out of Parliament for five months.
7286. But with the exception of that period you have been a member of Parliament during the whole time the Commissioners have been in office? Yes.
7287. Your statement here is that false answers to questions were supplied to Parliament, therefore you must know, as a member of Parliament, to what questions you referred, where the answers were false? In a general way, yes; but at the same time as I say, I have not gone over the list of questions so as to see what the questions are, and where the answers are false.
7288. But when you made this statement in Parliament, as a member of Parliament, and to Parliament you must have had certain questions and answers in your mind at the time? No; I do not think I had. That was an opinion I had come to by the different things that had passed through my mind during my parliamentary experience.
7289. But these are not matters of opinion as to whether false answers are returned to questions in Parliament; that is a statement of fact and not of opinion? Undoubtedly, and it appeared to me to be a fact when I made the statement.

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7290. What facts do you refer to? A variety of facts, but as I have said I have not up to the present time collected the material. I have no doubt that if I go over the list of questions and answers, I can do so. As a matter of fact, I intended to do it had time been allowed; but it has been all I could do up to the present time to keep pace with the proceedings of the Commission from day to day.

7291. Then you cannot tell the Commissioners definitely what it was you referred to when you made that charge in Parliament? Will you let me have *Hansard*, of the 10th of March. [*Volume handed to the Witness.*] Yes, I see I used these words. I gave some specific cases.

7292-3. That is what I am asking you to do now? This is what I said: "I have had to charge the Commissioners, and I charge them again with giving incorrect answers to questions. I will give some specific cases. On one occasion I asked in the House whether a certain officer who was brought out from England had a passage paid for himself, his wife, his children, and his servant. The answer which the Commissioners put into the hands of the Minister was that the passage was paid for himself, his wife, and his children, but not for the servant. I say that the answer was false, as money was paid for the servant; it ought to be easy to prove whether that was so or not." There is a specific case, your Honor.

7294. Who is the person you refer to? Mr. Thomas Hall, Chief Accountant of the Railway Department.

7295. And the point at issue between you and the Railway Commissioners is as to whether the passage of Mr. Hall's servant was paid for or not? Yes, your Honor. I am speaking from memory, of course, but the paper could be found. The question was put in Parliament, and for some time it was not answered; I do not know for what reason; the question, I think, was postponed, and a return was made showing the names of other officers for whom passages had been paid from England, including, I think, Mr. Angus, Mr. Neale—I am speaking entirely from memory, but I think it included those gentlemen.

7295½. Well? It was stated that a number of passages were paid in each case. In some cases for the officer and his wife, and in some others for the wife and one or more children. I am not quite sure about that. In Mr. Hall's case I think I might say, I am sure in saying in fact that the passages were to be paid of himself, his wife, and three sons. I am not in a position to say where the information came from. I do not think I should be asked the question. But I was informed that Mr. Hall had brought out a domestic servant with him, from England, and that the passage of that domestic servant was paid. I was assured of it in the most positive way. I was assured of it in a way that made it impossible for me to doubt it, and it was on that information that I made the statement which is here recorded in *Hansard*. I will ask your Honor, as a test of the matter, to demand that the original voucher which was signed by Mr. Hall for payment to him on account of this passage money, be put in before your Honor.

7296. *President.*] We will take the proper step to see whether the answers were false or not, you may depend upon that, Mr. Schey. Is there any other instance in which, as you say, false answers were given to questions put in the House in relation to railway matters? I am reported here as saying,—"I questioned the Honorable Member for East Sydney, Mr. McMillan, as to the contracts to which I have referred at the time of their inception, and I say that the answers which were given in reply to my questions were false, and they were intentionally false." That was my opinion at the time, and I considered that I had excellent grounds for making that statement.

7297. When was the question asked. Give the Commission some clue to find it—when was the question asked and what was it? Several questions were asked by me in Parliament relating to this practice so far as I can remember.

7298. You say that you questioned Mr. McMillan as to these contracts—to what contracts do you refer? Contracts entered into by the Railway Commissioners relating to the reballasting and duplicating of the line. I think the first questions were asked about June or July of 1890, and I remember asking Mr. McMillan as to the conditions under which these contracts were to be carried out. I think I asked at the same time for the schedule prices. At all events, certain information I did ask for which Mr. McMillan refused to give, and in some way—I cannot state at present exactly how—I challenged Mr. McMillan that these contracts were not in the public interests, and that, as a matter of fact, the public would suffer if these contracts were carried out. Some challenge of that kind was made, and Mr. McMillan gave some assurance that in these contracts the public interests would be thoroughly well guarded. Well, at the time I made this challenge, a number of these contracts had been carried out, or were partially carried out, and from what I had heard from different sources I was of opinion that the public interest was not safe-guarded, and that therefore the answers given by Mr. McMillan were untrue. I assume that the answers given by the Minister in Parliament on railway matters are furnished by the Commissioners or the department to the Minister to be read in Parliament—that is the process, I understand, and of course that was in my mind at the time. In my speech I go on further to say, "I say that the answers given to the Honorable Member for Camden, Mr. McCourt, in reference to Messrs. Monie and Angus' contract were wholly misleading, and in part were false and wilfully false. Questions were asked as to the cost of the alteration of the railway platforms necessitated by the importation of the Baldwin engines, and the Commissioners gave an answer in which they said that certain stations were out of gauge, and that slight alterations had been made, but the whole cost would not exceed £50." That was some answer given to a question of that character giving the cost as somewhere about £50. I went on to say, "That was a wilful and intentional falsehood. It was well known at the time when the answer was given that the alterations had already cost hundreds of pounds, and the Chief Commissioner himself proved it, because in a speech he made not long ago he admitted that the alterations had cost considerably over £1,000. He also stated that the alterations were made before the engines arrived in the Colony; but the answer given to a question that was asked in the House was that the alteration had been made since there arrival here." I made these statements, firmly believing them to be true, and my contention was supported by a speech made by the Chief Commissioner himself. I have not got it here at the present moment, but I daresay I could turn it up. It is one of those despised newspaper reports; but being a report published in the *Daily Telegraph*, it is presumably a fairly accurate report of what the Chief Commissioner said. As I have said, if necessary, I think I can get the report. I think also the answers I refer to here concerning this question can be turned up, and as I say so far as it stands I believed it to be perfectly true.

7299. These questions and answers are stated by you to have been made in Parliament? Yes, your Honor, with the exception of the speech made by Mr. Eddy to which I have just referred.

7300. That has nothing to do with this charge, Mr. Schey, which is, that false answers were given to questions asked in the Assembly? I am speaking of questions answered in the Assembly too, and I connect the

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the speech made by Mr. Eddy with those questions and answers, by showing that in one case on the same subject he made a different statement outside, or one which clashed with the reply put into the Minister's mouth in the Assembly.

7301. We have only to do just now with the proceedings in Parliament. When a question is asked in the Assembly, is not a record kept of the question and the answer given to it? Undoubtedly, your Honor.

7302. Then you can turn to the record and see whether that answer was correct or not? I do not know about them being in the Assembly; but they certainly can be turned up.

7303. *Mr. Kethel.*] Are not the originals filed by the Clerk of Parliaments? I think they are, but I cannot tell you with certainty. They are sent to the Government Printing Office each night, and afterwards printed as Votes and Proceedings of the House, and are distributed amongst the members. What is done with the originals I do not know.

7304. *Mr. Eddy.*] I think we have put in at your request the whole of the questions to and answers by the Railway Commissioners since we took office.

7305. *President.*] Do I understand that the papers which have been put in contain all the questions that have been asked and the answers given by the Railway Commissioners since they took office.

7306. *Mr. Eddy.*] I am under the impression, sir, that at an early stage of these proceedings there was a request made that all questions and answers by the Railway Commissioners since they took office should be put in evidence; and that I think was done.

7307. *President.*] They were not limited to questions put by Mr. Schey.

7308. *Mr. Eddy.*] No, your Honor, the whole of the questions referring to the railways since the Commissioners took office.

7309. *President.*] You have mentioned two months, Mr. Schey, namely, June and July of 1890? Yes, your Honor, of course I am speaking from memory only.

7310. Are there any other months in any other year in which, as you say, false answers were returned to questions asked in Parliament? I really cannot say, your Honor, without looking the matter up.

7311. The whole of the votes and proceedings of Parliament from the time the Commissioners were appointed up to the present time are all here. Will you go through these and point out those questions which as you say have received false answers from the Commissioners? Will your Honor permit me to point out that that is a work of considerable magnitude, and I must ask your Honor to allow me time in which to perform it. There are a hundred or two separate documents in this bundle alone, and some of them contain as many as twenty or thirty questions or more. To go over that lot for a period of four years is a work I am not equal to at the time, however willing I might be to attempt it.

7312. But you need not necessarily go through the whole of those documents. What we have to do with has reference only to the Railway Commissioners? Yes, your Honor, but these questions are distributed very largely through the list of questions in each day's votes and proceedings of the House, and that would necessarily take up a considerable time. I do not think it would be possible to look them over in a whole day.

7313. If you had to read them all through it would take you a whole day, but you have only to look over certain questions? Yes; but I have not the dates in my memory, so that I must look through the entire list. There is a better method for finding them than taking the bundle as produced here.

7314. What is that? By making use of the Parliamentary Index, from which the numbers of the questions can be determined.

7315. *President.*] I am just informed that every question that has been asked of the Railway Commissioners in that pile of papers there is marked by blue pencil, so you will have no difficulty in going through them, and selecting what particular questions you want for reference.

7316. *Witness.*] Your Honor will allow me a moment.

7317. *President.*] Certainly, Mr. Schey.

7318. *Mr. Schey (after looking through some of the papers).*] This is the first question referred to. It was not asked by me, but I think I put a question asking for a portion of this information. At all events, I see by the records of the Assembly that Mr. Willis, on Tuesday, the 10th June, asked a question in the Assembly about these officers, and asked for a return of the passage money paid to them. Mr. M'Millan, in reply, said that the information would be laid upon the Table of the House. That return, I believe, is the one I refer to and which contains the names of those different officers whom I have mentioned.

7319. And that return, as laid upon the Table of the House, was printed? Yes; undoubtedly the return should correspond with the question that produced it.

7320. *President.*] Then if you look in the proceedings of the next day you will find it.

7321. *Mr. MacLachlan.*] It was laid on the Table of the House, your Honor, and is with the papers before the Commission.

7322. *President.*] Have you found any further question, Mr. Schey.

7322½. *Witness.*] I have not, your Honor, at present. I should like to refer to them further presently. I do not wish to stipulate any until I have some further recollection. [*Witness left the box and proceeded to examine the Votes and Proceedings for the period stated.*]

7323. *President.*] Mr. Schey, can you go through these papers between this time and to-morrow, because we have other work to do, and nothing can be gained by our sitting here. We will deal with this question about Mr. Hall's servant at once.

7324. *Mr. Schey.*] Very well, your Honor.

7325. *President.*] I understand about this question, and the answer given to it in relation to Mr. Hall's passage money, that your objection is that Mr. Hall received payment for the passage of his domestic servant, whereas it is stated in the answer to the question that he did not.

7326. *Mr. Schey.*] I did not say he did, your Honor. It was my opinion that he did.

7327. *Mr. Eddy.*] If you put Mr. Schey in the witness-box, your Honor, and allow me to ask him a few questions, I think I can clear the matter up.

7328. *President.*] How can you prove it through him. He says he knows nothing about it, that it is only an opinion he formed. How can you examine him about that?

7329. *Mr. Eddy.*] Still I would like him to go into the box, your Honor.

7330. *President.*] Very well. Mr. Schey, Mr. Eddy desires to ask you one or two questions.

7331. *Mr. Schey.*] But I decline to answer any questions from Mr. Eddy.

7332. *President.*] You cannot do that; you must go into the witness-box if you are told to do so.

7333.

Mr. Schey. June, 1892.

7333. *Mr. Schey.*] Do I understand, your Honor, that these proceedings are regulated by the Royal Commission's Evidence Act, 44 Victoria No. 1?
7334. *President.*] Yes.
7335. *Mr. Schey.*] Then, your Honor, if you rule against me, I must again ask that you will adjourn till to-morrow to enable me to seek legal advise. From my reading of the Act it informs me that if I am summoned as a witness before the Commission I am compelled to attend, and that any question which the Royal Commissioners ask me I am compelled to answer, and that if I fail to do so the Act provides a certain penalty which the Royal Commissioners may proceed to recover before two Justices of the Peace. But as far as I can see, your Honor, the Act does not appear to confer the same right upon any other person whatever. That the Royal Commissioners have the power, I understand perfectly well, but I fail to see that that same power rests in anyone else. I have no objection whatever to go into the box and answer any question which the Royal Commissioners may put to me; but as I have been compelled, from certain circumstances, to decline to conduct the case, I must decline to answer questions from persons other than the Royal Commissioners before whom the inquiry is being held.
7336. *Mr. Eddy.*] I would point out, sir, that this Commission expressly directs "That you do permit the said William Francis Schey and the said Edward Miller Gard Eddy respectively, freely to examine and cross-examine all or any witnesses and persons called and appearing before you."
7337. *Mr. Schey.*] Your Honor, at the time this Commission was spoken of in Parliament this matter was to some extent dealt with and it was contended by one of the Members, who is also a member of the legal profession, that the Government had no power to do certain things, and one of those things was in relation to the questioning of witnesses by myself. It was pointed out that the Act gave no such power.
7338. *Mr. Eddy.*] To save time, sir, although I should like to ask Mr. Schey a question or two, I will not press the point. Mr. Hall will, therefore, go into the witness-box at once and give evidence on this charge.

Mr. Hall further examined:—

Mr. Hall. 2 June, 1892.

7339. *President.*] When you came out here, Mr. Hall, I believe some passage-money was paid for bringing out yourself and family? Yes.
7340. Did you receive any payment from the Government for any servant? I did not.
7341. Did any servant accompany you? No.
7342. *Mr. Schey.*] I will ask your Honor to ask for the original voucher signed by Mr. Hall for the payment of money on account of the passages of himself and family.
7343. *Mr. Eddy.*] Papers are already before you which showed that Mr. Hall was paid nothing for his passage-money; his passage was taken for him and paid for by the Agent-General at home.
7344. *Mr. Schey.*] That is not what I have said.
7345. *President.*] Certainly it is not what you have said. Mr. Eddy says that what you have said is impossible. The arrangements for bringing out Mr. Hall and his family were made by the Agent-General, therefore the voucher, if there was one, would not be here at all. It would be with the Agent-General, I suppose.
7346. *Mr. Eddy.*] I take it that it would be with the Agent-General, sir.
7347. *Mr. Schey.*] Does Mr. Eddy mean to say that no money was passed to Mr. Hall here in this Colony, and that no voucher is now, or has been in the Railway Department showing that Mr. Hall received payment for passage-money?
7348. *President.*] I understand so.
7349. *Mr. Eddy.*] I have a copy of a letter here, sir, which is from Sir George Findlay, dated 13th December, 1889, in reference to this very matter. (To Witness): This letter says, "With reference to the various communications received from Mr. Eddy, the Chief Commissioner of Railways in New South Wales, and to the telegrams you have received and forwarded on the subject, I have arranged with Mr. Thomas Hall, until lately this company's accountant for Liverpool and the district, to proceed to the Colony to take up the position of chief accountant of the Government Railways. I presume his pay will commence from the time of his leaving England, and that free passages will be provided for himself and family. In the absence of a more formal agreement I shall be glad if you will ratify the arrangement I have provisionally entered into, so that Mr. Hall may take out with him the necessary official assurance relating to the new appointment." Here is another letter dated 9th January, 1890, signed by Sir Saul Samuel, and addressed to the Minister for Railways, as follows:—"Referring to the telegrams that have passed between us respecting the appointment of Mr. Thomas Hall as accountant for railways, and to my telegraphic message of the 17th December last, I have now the honor to state that Mr. Hall sails on the 10th instant by the Peninsular and Oriental Company's S.S. 'Oceana,' for Sydney. I have paid the passage money of Mr. Hall, his wife and three sons, but have given Mr. Hall to understand that as I feared my authority in this regard did not go beyond providing passages for himself and wife, should the Government deem it necessary he must be prepared to refund the amount paid in respect of his three sons. I have not entered into any formal agreement with Mr. Hall on your behalf; but I have stated to that gentleman that I have little doubt but that an agreement will be entered into between the Railway Commissioners and himself for service in your department upon the terms indicated in Mr. Eddy's private communication to Mr. Findlay, the general manager of the London and North-western Railway Company. I have directed Mr. Hall to report himself to you immediately upon his arrival in the Colony."
7350. Does that correctly represent what happened in England in regard to your passage-money? Exactly so.
7351. Did you sign any voucher? No, I never signed for any money at all.
7352. *Mr. Schey.*] I ask your Honor to ask whomever your Honor chooses to specifically swear that there was no voucher signed for money paid to Mr. Hall on account of passages from England. I want to know whether or not such document ever had existence.
7353. *Witness.*] Not that I am aware of, that is to say, that I signed. No doubt a voucher will have to be made out for money paid on behalf of the Treasury.
7354. *President.*] Where would it be if there were one? With the Auditor-General, I should say.
7355. Would it be in his department or in the Treasury? I should think in his department.
7356. *Mr. Eddy.*] We will make every inquiry sir, and let you know whether such a voucher exists in this Colony.

7357.

Mr. Hall. 2 June, 1892.

7357. *President.*] Mr. Schey, have you any other case that we could go on with in the meantime.
7358. *Mr. Schey.*] I think not, your Honor.
7359. *President.*] It is quite clear that we cannot do anything more this afternoon except to allow Mr. Schey to go through those papers and formulate his charges. The Commission will adjourn until to-morrow at eleven o'clock, and we ask you, Mr. Schey, to be good enough in the meantime to go through those papers so as to be able to point out the questions to which you say false answers have been given.
7360. *Mr. Schey.*] Yes, your Honor.
7361. *President.*] We expect that you will be here whatever your resolution may be with respect to proceeding with these charges or not.
7362. *Mr. Schey.*] Very well, your Honor.
7363. *President.*] I wish to add that we may consider for the purpose of giving you the utmost protection under the Act 44 Victoria No. 1, that you are summoned here as a witness before the Commission. You will thus have the full protection given to witnesses as provided in this Act.
7364. *Mr. Schey.*] Very well, your Honor.
7365. *President.*] You are not a volunteer.
7366. *Mr. Schey.*] Very well, your Honor.

FRIDAY, 3 JUNE, 1892.

[*The Commission met at 11 a.m. in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

JOHN YOUNG, ESQ., J.P. | ALEXANDER KETHEL, ESQ., J.P.

7367. *Mr. Crick.*] Mr. President, before you proceed with the business of the day, I desire to state to you, sir, and the other members of the Commission, that I have been instructed by Mr. Schey to appear here to-day in his behalf. And I desire to intimate to the Commission that Mr. Schey has, for reasons satisfactory to himself, decided to no longer take any part in the prosecution or conducting of the case now before the Commission. Some of those reasons Mr. Schey yesterday stated, others equally strong, if not stronger he has not stated; but acting on my advice, Mr. Schey will now only appear here as a witness, and will decline to answer any questions addressed to him by anybody except yourself or the other members of the Commission, and he will not submit to be cross-examined by anybody except the members of the Commission. I am fully aware of the powers which the Government have purported to convey to this Commission in the document issued under this Act, but the Government have no such powers; they can only act within the limits of the Act under which you sit; and within the limits of that Act we shall claim simply to appear here as a witness, and to answer only such questions as may be put by the members of the Commission. Perhaps I may be permitted to say that during the whole course of this long and tedious case it has struck me as an individual who, to some extent, has been advising Mr. Schey privately, that he could not possibly keep pace with the mass of accumulated evidence that has been here at the rate at which the Commission has been sitting. From my own experience of some years professional practice in conducting cases, I have found it very difficult in large cases which have been continued from day to day, even with the assistance of numerous clerks to keep pace with a case. Then how much more difficult must it be to an untrained man like Mr. Schey without having such assistance, and without possessing the means to obtain such assistance, to keep abreast of an inquiry conducted in the manner in which this has been; I may say how impossible it would have been for him to keep pace with the rate at which this Commission has been going. I have now to say that, with the consent of the Commission, I shall simply sit here to watch the questions put to Mr. Schey, and I would not ask that, were it not for a statement made here by Mr. Eddy, and which is reported on page 44 of the evidence, as follows:—"But we do not want your opinion, sir. I warn you to be careful in your answers. You are aware perhaps that I have already gone through the degradation of a a criminal prosecution of someone who made the same false charges. Remember that you are now on your oath, and without any indemnity whatever. I warn you, therefore, to be careful." That being so, I shall ask the consent of the Commission to sit here and to advise Mr. Schey either to answer or decline to answer such questions as I can consider ought or ought not to be put to him. If that statement reported to be made here by Mr. Eddy to this Commission is true, there has been a gross breach of faith somewhere, because it is a matter of record as to which this Commission may well take judicial notice that a full indemnity was given to Mr. Schey ——
7368. *President.*] We have already dealt with that, Mr. Crick, on a former occasion.
7369. *Mr. Crick.*] Very well, Mr. President, I was simply mentioning the reason why I asked permission to sit here and advise Mr. Schey.
7370. *Mr. Smith.*] Mr. Eddy does not object in any way.
7371. *Mr. Crick.*] I do not ask you, Mr. Smith; I am addressing the members of the Commission. I do not know in what capacity ——
7372. *President.*] Mr. Crick, it may save a great deal of time if I say at once that we shall be very glad indeed if Mr. Schey is represented by his legal adviser before this Commission, and I shall be very glad to hear you in relation to the matters that we are inquiring into.
7373. *Mr. Crick.*] I have only one thing to say, sir, and that is this: I would like to know if you, Mr. President, and the other members of the Commission are prepared to go on now and take Mr. Schey's evidence to-day. If not we shall retire, and Mr. Schey will attend as a witness only when required so to do by the Commission. If the Commission is not prepared to proceed with the examination of Mr. Schey as a witness, as I have said, we shall retire until they are prepared to do so. I shall therefore be much obliged if the Commission will say whether they are so prepared at this stage, as Mr. Schey cannot be expected to attend here from day to day if the Commission are not prepared to take his evidence. But, if the Commission desire to take his evidence now, my client is prepared to go into the witness-box and answer such questions as you, Mr. President, or the other members of the Commission may ask.
7374. *President.*] Mr. Crick, we were dealing yesterday with the fifth charge, which is: "That a large number

number of the higher officers of the railway service were put out of their positions to make room for personal friends or acquaintances of the said Chief Commissioner, or of one Mr. Findlay, of the London and North-western Railway." That was the charge which we were on principally yesterday, and, as Mr. Schey stated that he did not wish to appear further as prosecutor of the inquiry or as assisting the members of the Commission in the inquiry, we examined the witnesses that Mr. Schey had summoned before this Commission and certain other persons whom he had not summoned, but whose names he had mentioned as persons whom he had in his mind at the time he made that particular charge. The Commission having dealt with all those persons, and having examined Mr. Schey and Mr. Eddy on the subject, so far as we were concerned, we did not wish to take any further evidence; but we left the charge open in order that Mr. Schey might have an opportunity, if he wished to do so after consulting his legal adviser, to proceed further, or give further evidence, or bring forward anything further that could be produced in reference to this charge. We now ask you, as appearing for Mr. Schey, whether you wish any further evidence to be taken on that charge?

7375. *Mr. Crick.*] With all respect, Mr. President, as I have already intimated, my client washes his hands entirely clean of the whole matter, except in so far as appearing when called upon as a witness before the Commission. [*Slight hissing.*] I may intimate, Mr. President, that I have read with surprise and indignation in the reports of these proceedings from day to day of the hissing which has proceeded from certain ill-conducted individuals in Court.

7376. *President.*] Mr. Crick, we have endeavoured to suppress anything of the kind that may have, unfortunately, taken place here.

7377. *Mr. Crick.*] There is a very effectual way of doing that, your Honor—that is, by putting the persons out of Court.

7378. *President.*] You must be aware, Mr. Crick, that a Royal Commission like this, especially when it has been directed to hold the inquiry in open Court, has not the same powers that a Judge of the Supreme Court would have in a case tried before him. I can only repeat my request that those gentlemen present here to-day will restrain their feelings, either in applauding or expressing disapproval of anything that occurs before this Commission.

7379. *Mr. Crick.*] I was stating, sir, when that unseemly interruption of ill-conducted persons in the Court occurred, that we wash our hands of the whole matter; but if my client is called as a witness he will be prepared to enter the witness-box and answer any questions that may be put to him by members of the Commission.

7380. *President.*] Then I must understand that you do not want to produce any further evidence on this particular charge?

7381. *Mr. Crick.*] I simply say we have nothing to do with it at all.

7382. *President.*] Very well; then I must put my own interpretation upon it. Under these circumstances we close the inquiry in so far as it relates to the fifth charge.

7383. *Mr. Eddy.*] Just before the Commission adjourned yesterday, sir, I promised to have a search made for any voucher in a Government Department for the payment of passage-money to Mr. Thomas Hall and his family. I have succeeded in obtaining that voucher. It reads as follows:—"London, 5, Westminster Chambers, 20th December, 1889, Railway Account. Received from the Government of New South Wales, *per* the Agent-General, the sum of £300, for passage-money, &c., to Mr. Thomas Hall, Mrs. Hall, and three sons, from London to Sydney, per s.s. 'Oceana.' J. W. Pateman, for the Managing Director of the P. & O. S.N. Co." [*Document handed in.*]

7384. *President.*] Now as to the sixth charge. We proceeded with the inquiry as to that charge yesterday, and we asked Mr. Schey if he would be good enough to look through the Parliamentary Votes and Proceedings that were laid before him, and in which questions and answers that were asked in Parliament were printed, and to point out to the Commission what questions he referred to, to which the Railway Commissioners were stated to have given false answers. Yesterday Mr. Schey pointed out one question. That was in reference to the payment of the passage-money for Mr. Hall and his family. It was alleged by you, Mr. Schey, that in your opinion Mr. Hall had brought out a domestic servant, and that that servant's passage money had been paid by the Government, whereas the Commissioners had stated, in reply to a question which was asked in Parliament, that no servant had been paid for. That charge has been already dealt with. We now ask you if there were any other questions to which you took exception; have you looked through all those papers?

7385. *Mr. Schey.*] I have looked through part of them, your Honor.

7386. *President.*] Have you found any others to which you say false answers were given in Parliament?

7387. *Mr. Schey.*] I have selected certain papers which I shall require to go through again before making any definite statement. And I have now to say that I am not prepared at present to refer to any question to which I now allege a false answer was given.

7388. *President.*] How far have you gone through the list, Mr. Schey?

7389. *Mr. Schey.*] The bundle of papers I took home last night, your Honor, included these, and these [*referring to three different bundles of papers*], are certain documents I have selected for further attention. These are papers which I have not yet looked at. These are papers I have been through and passed over; and there is another lot of papers which I had as well to look over, and which I have yet to go through.

7390. *President.*] Then so far as those are concerned, which you have gone through, you make no charge in reference to them.

7391. *Mr. Schey.*] So far as I have had an opportunity of examining them in the time at my command, your Honor, I have nothing to say in relation to them.

7392. *President.*] How far do these questions extend; over what period of time?

7393. *Mr. Schey.*] I cannot exactly say, as they do not run according to date. The first here is the 11th June, 1890, and the last 3rd September, 1889. I took them as they were in that pile. They are not arranged by date.

7394. *President.*] I thought perhaps they were arranged by date?

7395. *Mr. Schey.*] No, your Honor; but I should think they would cover a period of six or eight months probably altogether.

7396. *President.*] Then do you wish to have time to go through those papers, Mr. Schey?

7397. *Mr. Schey.*] Your Honor, I have no wish in the matter at all. Whatever questions your Honor asks

asks me I shall be prepared to reply to, but so far as my wishes are concerned, I wish to have nothing to do with the matter under the circumstances.

7398. *President.*] Yes, Mr. Schey, but you see we have to make the inquiry. You have been good enough to give us your assistance so far in this inquiry, and you see it is impossible to go through all these questions in order to find out whether the answers given to them were true or not. It might take six months.

7399. *Mr. Schey.*] I regret the impossibility, your Honor. Still I cannot charge myself with any responsibility for your Honor being in that position.

7400. *President.*] You made the charges, Mr. Schey?

7401. *Mr. Schey.*] I made certain statements in Parliament—yes, your Honor.

7402. *President.*] We want to ascertain what, in the particular statement referred to, are the answers to which you have taken exception.

7403. *Mr. Schey.*] As I have said before, I have been five years in Parliament, and during that time have taken very keen interest in the business of Parliament. At almost every sitting of the House a large number of questions are answered on a variety of subjects, and since the present Railway Commissioners took office large numbers of questions have been put in the House in respect to railway matters. From my own past experience in connection with railway work, I have had a keen interest in all matters concerning the railway, and consequently asked a number of questions myself. When the answers to questions on these subjects came before me many of them appeared to me to be incorrect, but although that impression was left upon my mind at the time, I may say a very strong impression indeed in some cases, I am not prepared some years afterwards to go into these matters in detail, and state the date on which a particular question was asked, the answer to which I objected to at that time.

7404. *President.*] I can quite understand that, Mr. Schey, and that is why we ask you to go through the papers for the purpose of satisfying yourself what particular question you had in your mind at the time you made the charge. If you do that, that is to say, if you point out such questions as you took exception to for the reasons stated, then this Commission will be able to inquire whether the answers given to such questions were correct or not. But it is impossible for us to ascertain that unless we know what the questions are.

7405. *Mr. Schey.*] As I have already intimated, your Honor, the papers include a very large number indeed, and the work of looking over them is a task of very considerable magnitude. In the next place, after looking over these papers and selecting a certain number from among them before I am prepared to come here and swear that a certain thing is or is not true, or that a certain answer is false, I have to carry my memory back to some of the debates in Parliament at that time, and to other information that was in my possession, before I can determine the accuracy of such matters at all. In the next place, it is hardly a reasonable thing to expect me to be attending the Court all day, and then to work during hours of the night as well on the business of this Commission.

7406. *President.*] We have never asked you to do that, Mr. Schey.

7407. *Mr. Schey.*] In the next place, your Honor, perhaps I may ask whether it is a part of my position as a witness to go through these documents at all.

7408. *President.*] Oh, certainly. We can put you into the witness-box and make you go through every one of those papers under examination as a witness. It is only a question of saving time.

7409. *Mr. Schey.*] Well, I told your Honor I would do what I could, and I may now tell you that I was engaged going through these papers until 11 o'clock last night, and I consider that a very fair thing.

7410. *President.*] Yes, that was quite late enough, certainly. The question now is, do you want more time to go through these papers. If so, we will leave this 6th charge open?

7411. *Mr. Schey.*] I do not want anything at all, your Honor. The point appears to me to be not what I want, but what your Honor and your Honor's colleagues want.

7412. *President.*] We want you to settle that point with regard to the questions, the answers to which you have taken exception to, and it must be done by you at your leisure, or you will have to go into the witness-box, and we shall examine you on every one of the papers in the long list before you.

7413. *Mr. Schey.*] In that case, your Honor, it might be necessary to begin at the beginning of the present Railway Commissioners' career, and repeat every question and answer that has been recorded in Parliament during that time, and I certainly have too much consideration for your Honor to ask you to go to so much trouble as that.

7414. *President.*] Then, Mr. Schey, we ask you to so far oblige us as to go through those papers for the purpose stated without putting us to any further trouble in the matter.

7415. *Mr. Schey.*] I will do that if you will grant me a sufficient adjournment for the purpose.

7416. *President.*] It is not a question of adjournment at all. We will keep this charge open until you have had an opportunity of going through the papers.

7417. *Mr. Schey.*] It seems to me to be very much the same thing, your Honor.

7418. *President.*] We will go on in the meantime with the other charges.

7419. *Mr. Schey.*] Very well, your Honor.

7420. *President.*] As to the 7th charge, we desire to ask you some questions, and we will ask you to go into the witness-box.

7421. *Mr. Schey.*] Very well, sir.

Mr. Schey called and examined:—

Mr. Schey. 3 June, 1892.

7422. *President.*] The 7th charge is, that "false and misleading paragraphs relating to the railways have been written in the Commissioners' office and inserted in newspapers." Now, what are the paragraphs you refer to there? I am exactly in the same difficulty in relation to this matter as I was in relation to the questions. These paragraphs have been inserted in the public Press at various times, extending over a period of some years, and it would be necessary to go over a very large amount indeed of Press matter to identify it. If I am compelled so to do, of course I must do so; otherwise I am not at the present time in the position, so far as I know, to identify any paragraphs, or to swear that any particular paragraph is false.

7423. During the sittings of this Commission you have produced an enormous number of paragraphs or cuttings out of newspapers in reference to railway matters. Did not you cut out those paragraphs referred to in this charge in the same way as you cut out all those others which you have already produced? I certainly produced a quantity of newspaper matter, but it all had reference to a totally different subject. 7424.

Mr. Schey. 3 June, 1892.

7424. Yes; but I notice that you have had a habit of cutting out extracts from the newspapers, and I ask you the question with the view of ascertaining if your practice in that regard had been adopted in reference to these misleading paragraphs you speak of? I was about to say that there are a great number of these small paragraphs I have referred to, and I do not know that many of them have been cut out, but I think I have, speaking from memory, and not in any way desiring to exaggerate, I think I have some 2,000 newspaper extracts in various books, and by the exercise of a little time and patience I might be able to procure some of these paragraphs referred to.

7425. Now, have you any evidence that any of these paragraphs in the Press were written in the Commissioners' office, and were false and misleading? I have no evidence to offer of my own knowledge.

7426. *Mr. Crick.*] I may say, Mr. President, that I have advised Mr. Schey, while he is in the box, only to speak of what he knows of his own knowledge, and not to say anything from hearsay, or from inferences drawn, but to speak of facts only within his own knowledge.

7427. *President.*] The Commissioners can compel the witness to answer the questions put to him.

7428. *Mr. Crick.*] I admit that the witness is compelled to give answers in regard to matters which are evidence in the case.

7429. *President.*] Whether they are evidence or not is a question for the Commission to determine. Now, Mr. Schey, what paragraphs do you say were inserted in the newspapers, and which were written in the Commissioners' office. You made that charge from your place in Parliament. Had you anything to support such charge at the time you made it? If you mean to ask me, if when I made that statement I considered that I had evidence as to its truth, I say yes.

7430. And what was the evidence? The evidence was simply that I had been so informed.

7431. And by whom were you so informed? I am not in a position to give the name of my informer.

7432. How are you not in a position to give the name? Because the information was given to me as a matter of confidence, and to divulge it would be doing a very great injury indeed to any person who made such a statement to me, and therefore, because it was given to me in confidence, I must decline to disclose the name of the person who gave it.

7433. But with the exception of the statement made to you by your informant, have you evidence to offer of any kind that any false or misleading paragraphs were written in the Commissioners' office, and inserted in the newspapers? As to them being written in the Commissioners' office, that was simply from information.

7434. Was that from one person—I do not ask you to give names—or from more than one person? So far as I can charge my memory, there were three, I think. How far the information of, at all events, one of these persons was reliable, I am not prepared to say; but in the other two cases, I should say the information was certainly reliable.

7435. Very well, do you wish to call these persons to give that information in support of the statement you made in Parliament? I have already declined to call anybody, or to take any part in the conducting of the inquiry.

7436. Do you wish the Commission to call them? No; I do not.

7437. Do you decline to give their names? I decline to give their names, yes.

7438. Very well, that will do, Mr. Schey.

[*Mr. Schey then left the witness-box.*]

7439. *President.*] Mr. Eddy, the Commission will now get you to answer one or two questions and afterwards will possibly ask certain questions of Mr. Oliver and Mr. McLachlan.

E. M. G. Eddy, Esq., further examined:—

Mr. E. M. G. Eddy. 3 June, 1892.

7440. *President.*] You are sworn, Mr. Eddy. Is it true that any paragraphs which have been inserted in the newspapers were written in the Railway Commissioners' office, so far as you know? In some cases, yes, they have been written.

7441. Can you refer to any particular paragraph? There are paragraphs written giving the details of excursion arrangements and business matters of that kind, and there have been on some occasions paragraphs written to ensure no mistake being made in regard to information given to the Press. The newspaper reporters come down to the office for information, and we have found on some occasions that the information given has been reported in a somewhat different way to what it should have been, so as to cause a certain amount of misapprehension regarding the facts, and since then, in all important matters, we have reduced the facts to actual writing, so as to ensure no mistake being made.

7442. Were those occasions on which the newspaper reporters had asked for information? Yes, had asked for information.

7443. And to ensure that the information was correctly inserted in the newspapers, are we to understand that you put that information in writing? Yes, your Honor. I remember one occasion—it was with regard to the removal of one of the officers of the Department, and we were anxious that nothing but the absolute facts should be stated, and we put the words down in writing. That was, I think, about three years ago.

7444. Was the communication you refer to as being written in the office handed to the reporter, or sent to the newspaper direct from the office? I cannot charge my memory as to whether the paragraph was handed to the reporter, or sent to the paper. At any rate, it had the same effect. It was a paragraph written in the Commissioners' office with a view of ensuring accuracy as to the facts.

7445. Is there any other instance in which paragraphs have been written in the Commissioners' office for insertion in the newspapers? I cannot charge my memory at the present time with any; but if they were written, they were written for the purpose of ensuring that absolute facts should go forth to the public, and not for the purpose of putting false or misleading paragraphs in the newspapers.

7446. In supplying this information to the Press, what is the practice of the Commissioners—do you refer all matters to your officers to give the information, or do you write it down from your own knowledge? It is only in exceptional cases where they have been written down. But the newspaper reporters come round regularly to see if they can get information of public interest. When we took office, for instance, we were found fault with very seriously because we declined to give information to the Press. We were told that these railways were State railways—that they were different from private undertakings, and that the public were interested in knowing what was going on. But we, so far as we could, kept

Mr. E. M. G. Eddy. 3 June, 1892.

kept aloof from giving information. Last evening, I may mention, two of the leading reporters were in the Commissioners' office, and we gave them something we were doing in connection with showing the progress of locomotive power in New South Wales at the forthcoming Chicago Exhibition, as we had had a special application from one of the leading manufacturers in America to assist in showing the development and progress of locomotive power up to the present time. We looked upon this as information that the people of the Colony would like to have, and we gave it to the reporters accordingly. We do give information of that kind to them.

7447. Can you give us any idea how often these paragraphs have been written in the Commissioners' office? So far as those relating to excursion arrangements and such matters are concerned the Secretary will be better able to tell you than I can. But with regard to information of the character I have mentioned just now, it is exceedingly rare that anything of the kind takes place.

7448. *Mr. Young.*] Have you seen any paragraphs in the newspapers which have not been correct in regard to railway matters—any misleading paragraphs? There have been frequently, to my knowledge, paragraphs which have not been accurate, that is to say, they have not been inserted in the shape in which it was intended they should be.

7449. *President.*] And it was to prevent such inaccuracy and to prevent it occurring again that you put something in writing, as you have already stated? Yes. But as I have said, the occasions on which paragraphs are written in the office in that special manner are rare. We do not write the paragraphs which appear in the newspapers. The reporters come round in the ordinary course of their duty collecting information of interest to the public.

7450. *Mr. Young.*] If you see an incorrect paragraph in the paper relating to the railways, do you take the trouble to contradict it? Practically no. If it is anything that has been conveyed to the reporter by the Secretary, the Secretary will take an opportunity of mentioning the matter probably when next the reporter comes round, but they do not, as a rule, correct their own paragraphs, unless it is something material.

7451. *President.*] I do not know whether Mr. Oliver desires to give any evidence in the matter.

7452. *Mr. Oliver.*] I have heard, your Honor, all Mr. Eddy has said, and of course I am aware that what he has stated is exactly what takes place.

7453. *President.*] Then we will consider you have stated that upon oath, Mr. Oliver?

7454. *Mr. Oliver.*] Yes, your Honor.

Mr. Hugh McLachlan called and examined:—

Mr. H. McLachlan. 3 June, 1892.

7455. *President.*] You are Secretary for the Railway Commissioners, Mr. McLachlan? I am.

7456. How long have you held that position? About 2½ years; since September, 1889.

7457. That is about one year after the Railway Commissioners took office? About eleven months; they came in October, 1888.

7458. Since you have been Secretary to the Railway Commissioners, has it been your duty to write any paragraphs in the Commissioners' office for the newspapers? Perhaps I may explain, your Honor. As the Chief Commissioner had stated, the newspaper reporters regularly visit the office in search of information for their several papers. There are certain reporters told off to visit the Government offices during the day. Our offices lie between those of the Public Works Department and the Colonial Secretary's Department. Perhaps that fact may bring the reporters more into contact with us than otherwise would be the case. But ours are among the offices that they regularly visit. Every day they come to see me—it is very seldom they see the Commissioners—they always come to my room to ask me if I have any information of interest to the public. Anything that takes place, perhaps an accident, perhaps it may relate to new rolling-stock, the letting of contracts or the opening up of a fresh section of lines—such items I give to the reporters for publication in their papers. I give them the facts, and they put them in their papers in their own way.

7459. That is the way the reporters take the news from you? Yes.

7460. Have any paragraphs been written by you for insertion in the newspapers? Yes, we generally write paragraphs in relation to excursion arrangements and new time-tables, because it is rather difficult for a reporter to follow where are you giving information regarding the times of running of holiday trains and items of that kind. Perhaps a paragraph might be written in this way: Something might possibly strike me after they had called round, and I might write a note to them—not in the shape of a paragraph, but simply a note stating a certain fact or facts, and they would dress the matter up in their own way. It has been handed to them, and rests entirely with themselves as to whether it is published in that or some other form.

7461. Do you know of any cases in which paragraphs written by you have been inserted in the newspapers? Oh, yes; I know that such paragraphs have been published.

7462. What was the nature of the paragraphs you refer to? It would have reference to the working of the railways.

7463. How do you get the information you put into these paragraphs? I get it from my own knowledge as an officer of the department, or from some of the other officers.

7464. Can you state whether in giving this information you did all that was in your power to ascertain the truth of the statemets which you made? I am quite satisfied that every statement made has been made only after a most careful consideration, and with the utmost desire that it should be perfectly truthful.

7465. And only a truthful statement? Yes.

7466. *Mr. Young.*] Have you seen any paragraphs in the papers which you have not been responsible for? Most of the paragraphs, of course, are written by the reporters when they come to the office or from information collected outside with regard to railway matters.

7467. Have you seen in the newspapers any paragraphs which you have had nothing to do with whatever, and that you were in no way responsible for concerning railway matters? Oh, yes.

7468. You have seen them? Yes.

7469. *Mr. Kethel.*] Have you ever written, dictated, or inspired a paragraph relating to railway matters which contained any matter that was not absolutely true, Mr. McLachlan? As I have said no information is given from the office without the utmost care being taken to ascertain that it is absolutely correct and reliable. I know that this is an important point with the Railway Commissioners, and am scrupulously careful myself in the matter.

7470.

Mr. H. McLachlan. 8 June, 1892.

7470. *President.*] Mr. Crick, are there any witnesses that you wish the Commission to call?
7471. *Mr. Crick.*] None, your Honor, none at all.
7472. *Mr. Kethel.*] I suppose, Mr. McLachlan, these communications that you have referred to were handed to the representatives of the metropolitan Press alone—do you ever send to the suburban or provincial papers?
7473. *Mr. McLachlan.*] Only as to excursions, sir—that is to say, as to purely local matters. Only the reporters from the metropolitan press call upon us. They are generally the leading reporters of the staff, and use their own judgment as to what they publish.
7474. *President.*] Mr. Crick, you will understand that you have the opportunity of examining any of the witnesses that may be called here?
7475. *Mr. Crick.*] We have no desire to do that. We have no desire to interfere at all in the conduct of the Commission.
7476. *President.*] Mr. Crick, there is one other question I desire to put to Mr. Schey.
7477. *Mr. Schey.*] (Rising) I cannot hear your Honor.
7478. *President.*] I was speaking to your solicitor. You said when you were in the witness-box——
7479. *Mr. Schey.*] Do I understand your Honor to ask a question?
7480. *President.*] I do not want you to go into the witness-box.
7481. *Mr. Schey.*] I prefer to go into the box, your Honor.
7482. *President.*] Very well, now you are on your oath remember.
7483. *Mr. Schey.*] Yes, your Honor.
7484. *President.*] When you stated you had a lot of newspaper extracts in your possession, did you mean us to understand that you wished to look through those extracts to see if you could find any of the paragraphs which you say were written in the Commissioners' office and inserted in the newspapers.
7485. *Mr. Schey.*] I have already told your Honor, that I have no wish to produce anything to the Commission. So far as I am concerned, I have no wish whatever in that direction.
7486. *President.*] Mr. Crick, have you any objection, after the evidence which has been given now, to the inquiry closing of this seventh charge.
7487. *Mr. Crick.*] It is not for me to interfere in any way.
7488. *President.*] Do you object to the Commission closing it.
7489. *Mr. Crick.*] I do not wish to say anything on that point at all, your Honor.
7490. *President.*] Have you any objection, Mr. Schey.
7491. *Mr. Schey.*] I have nothing to say at all, your Honor.
7492. *President.*] Then we close the inquiry as to the seventh charge. Mr. Eddy, would you tell the Commission what regulation it is under which officers in your Department retire at the age of 60 years—I do not know whether it is under the Act, or under your regulations?
7493. *Mr. Eddy.*] It is under our regulations, sir. Under the Railway Act we have power to make certain by-laws.
7494. *President.*] Do they fix the age at which employees of the service shall retire in the different branches of the Railway service.
7495. *Mr. Eddy.*] Yes, sir; we made certain by-laws under the Act, which were published in the *Gazette*, on 12th December, 1889. One of these by-laws is this. The particular regulation referred to will be found on page 17, and is as follows:—"All employees in every branch of the Railway service, whether the same be officers or servants shall retire from the Railway service at the age of 60 years. Provided, however, that the Railway Commissioners may, at their discretion, and with consent of the parties, require any of such officers or servants to continue in the said service after the age of 60 years, if it shall appear to the Commissioners that the retention of such officers or servants would be advantageous to the service."
7496. *President.*] Now we come to the eighth and ninth charges, which appear to be practically the same, and, therefore, perhaps it will be unnecessary for us to take evidence separately on those two charges. The first of these charges says—"That moneys voted for purposes of the said railways have been misspent by the said Commissioners, and the country robbed." The other is—"That the affairs of the Railway Department have been maladministered, and a robbery has been perpetrated." These two charges are, if possible, more vague than the former charges, and we must therefore ask Mr. Schey to go into the box and state what they mean.

Mr. Schey further examined:—

Mr. Schey. 3 June, 1892.

7497. *President.*] Do you know what the eighth and ninth charges are, Mr. Schey? As to the precise words, no; as to the general effect, yes.
7498. I will read them to you. The eighth charge says, "That moneys voted for the purpose of the railways have been misspent by the Commissioners, and the country robbed"; and the ninth charge says, "That the affairs of the Railway Department have been maladministered, and that a robbery has been perpetrated." Will you now state to the Commission what it is you refer to in these two charges? First of all, your Honor, I do not identify these as my charges, and I raise the same objection here as before. I do not say that some statement to that effect is not made in *Hansard*, but I do not identify the words, neither do I accept the words as my charge. I did not draft the charge.
7499. Then, do you now allege that moneys voted for the purposes of the railway were misspent by the Commissioners, and the country robbed? I do not say on oath that they have; in my opinion they have.
7500. In what respect? Well, I think in a great many respects.
7501. Can you mention what they are—in what way the moneys voted for the purposes of the railways were misspent? Perhaps, if you hand me the *Hansard*, I may be able to see what I was then speaking about. [*Volume of Hansard handed to witness.*] Yes; I see here that I say, "The affairs of the Railway Department have been maladministered to a tremendous extent, and a robbery has been perpetrated. I would remind the Minister that when he and I sat on the Opposition benches, I brought forward a motion referring to railway contracts. The honorable member, who is now Premier, moved an amendment on my motion, that a Select Committee be appointed to inquire into the charges which are practically brought forward to-night. The Premier of the day declared that he would accept either the motion or the amendment as a motion of censure, but that he would bring in a certain Bill to cut certain powers from the Commissioners." Then I go on to say, "If it was right for the honorable member for the Murrumbidgee, as leader of the Opposition, to move for an inquiry, surely it is right, now that he is Prime Minister,

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Minister, to give the inquiry which he moved for himself? What was right for me to do when I sat on the Opposition benches is right for me to do when I sit on the Government benches; and if an inquiry was right then, it must be right now, when more evidence is available in favour of an inquiry. If an inquiry is initiated there would be no further need to indicate what further steps the Government will take; they will find such a state of things that they will take all the necessary steps without loss of time." That is what I was saying at the time to which you refer, and I think it gives a pretty clear indication of what was passing in my mind at the time.

7502. But it does not give any instance in which moneys voted for railway purposes have been misspent? Maladministration is a word which includes, to my mind, a very great deal, and which can only be dealt with by a series of definite charges. Had I been permitted, I think I should have been prepared to schedule the charges and go on with the case. But I have not been so permitted, and it is no part of my business to say what I was wanted to do when the drawers of this Commission made up the list of charges which you have before you, sir.

7503. But you have made these charges, and unless you specify the grounds on which they were made, and in what way these moneys voted were misspent as you allege, it will be absolutely hopeless to attempt to go on? The opinions I held at the time I made those statements in Parliament were based on the experience I had obtained extending over a considerable time, and the reading of documents, and the general information I obtained from, I may say, thousands of different sources.

7504. You say if you had time you could formulate your charges? I said that I might have been able to do so had I been given an opportunity.

7505. Then we call upon you now to formulate those charges? I am not in a position to do so. If I had to do so I should require a considerable time to consider the matter; and in the next place, I do not consider myself called upon to do so at the present time.

7506. *Mr. Young.*] You must have had these charges in your mind; that is to say, you must have had something in your mind that led you to make these charges when you made your speech in Parliament? I had certain information, no doubt.

7507. Well, the Commission want to know what you had in your mind at that time. You say, for instance, that a robbery had been perpetrated? That was my opinion.

7508. You must have had some reason for that opinion? Yes.

7509. Well, we want you to give us that reason; how came you to make such a statement? You see, I referred there to a previous speech on the same matter. That previous speech, if it were admissible, would probably contain a considerable amount of information that was in my mind at the time.

7510. You beat about the bush so; why do you not give a straight answer to the question? I am not attempting to beat about the bush, but to answer directly a question that includes so much is not possible to do.

7511. We want you to give an answer to one question at a time; you say that the affairs of the Railway Department have been maladministered; now, tell us in what way the affairs of the Railway were maladministered? I was referring to a speech that I had already delivered on the question, and to which reference is made to large quantities of locomotive engines that had been purchased without tenders being called for them.

7512. We have already gone into that? But that was one of the things in my mind when I formed the opinion that the country had been robbed, and that the public funds had been unduly spent.

7513. We have dealt with that in another charge, Mr. Schey? You asked for the information upon which I formed the opinion that led me to make this statement, and I am telling you that this matter to which I have referred formed part of what was passing in my mind at the time. It is impossible to separate one thing from another in a matter of this kind.

7514. We want to refer to another question altogether? At the time I made this remark I was referring to a previous speech, which you will find to contain the whole of that, and it mainly refers to this locomotive question. There can be no doubt that at the time these words were used that is what I was thinking of.

7515. *Mr. Young.*] What is the date of the speech you are referring to? Somewhere about six months before that, I think. I cannot tell you exactly from memory.

7516. *President.*] But a speech is not evidence; what we want to know is, what was the nature of the maladministration of which you definitely speak in this charge, and whether you wish to bring any evidence in support of it? If you ask me what I wish to bring, your Honor, then I say I do not wish to bring anything.

7517. *Mr. Kethel.*] On page 6296 of *Hansard*, Mr. Schey, you have made a definite statement, I think; you say: "Gangers have been paid for who have never been employed"? Yes. That is one definite charge.

7518. Can you tell us what was in your mind at the time, or what particular instance you refer to? There is no doubt that was in my mind when I made the statement; I believed it to be true; but if you ask me to give you the name of the ganger who was set down for payment who was not employed I cannot do it. I am not prepared to do that.

7519. That would be something definite to go on, at least? I consider that a very definite statement as it stands.

7520. *Mr. Young.*] You knew the name of the ganger at the time? I did not know him.

7521. *President.*] How did you get your information, then? The information was conveyed to me. I was told that such a thing had occurred.

7522. Who was your informant? I am not in a position to say, your Honor.

7523. You mean to say you decline to give the name of your informant? I wish to explain, your Honor, that my informant would be liable to prosecution if I were to give his name; but I may say this, that the statement there referred to is one which is contained in a sworn declaration, and which is in my possession; but as the man who made that declaration would be liable to prosecution if it were made known, I decline to give his name. I may say that in the particular instance relating to these contracts a considerable amount of the information given to me was embodied in this declaration I speak of, which was sworn before a Justice of the Peace of this Colony; but as by making public the author of that document I should be rendering him liable to prosecution, I must decline so disclose his name.

7524. Or to produce the declaration which he made? Or to produce the declaration which he made.

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7525-6. *Mr. Eddy.*] Mr. President, this charge is that moneys voted for the purposes of the railways have been mis-spent by the Commissioners, and the country robbed. It is therefore clear to my mind that if this evidence of Mr. Schey's is pertinent to the inquiry, the Commissioners have put dummy men on the pay-bills, and pocketed the money. I may say, therefore, that I am quite prepared on my own part and on behalf of my brother Commissioners to say that no prosecution of any kind, so far as the Commissioners are concerned, shall follow the evidence of any man who will go into the witness-box and prove that.

7527. *President.*] You give that indemnity, Mr. Eddy, not only on behalf of yourself, but the whole of the Commissioners?

7528. *Mr. Eddy.*] Yes, sir; the whole of them.

7529. *Mr. Crick.*] I must submit that we ask no indemnity from the Commissioners, or anybody else. We will depose to facts that are true and take the consequences. We make no terms whatever.

7530. *President.*] Then, Mr. Schey, we must call upon you to give the name of the person on whose authority—on whose sworn statement you made this charge.

7531. *Witness.*] Will your Honor permit me to see the man himself. I believe he can be seen. He was in Sydney two or three days ago, and I believe him to be in Sydney now, and as he gave me that document, and swore to it, so that I might have something to go upon, I should like to see him in the first place. I may say that the man was a stranger to me at the time he brought the statement to me, and I declined to believe him unless he could prove he was acting *bona fide* in the matter. He then made the declaration I have referred to, and which I compelled him to swear before a Justice of the Peace before I would proceed. He told me at the time that it was given in confidence, as he would be a ruined man if his name was revealed; therefore I do not feel at liberty to give his name unless I obtain his permission to do so. I have no objection myself if after seeing him I can get his permission.

7532. *President.*] You have heard the statement made by Mr. Eddy that he has nothing to fear from the Railway Commissioners. If he has sworn to the statements, as you say, I must assume for the present that the man has sworn to what he believes to be true. Therefore he can be in no danger of an indictment for perjury. Under these circumstances he has nothing to fear by appearing before this Commission, and we insist upon the name of that person being given.

7533. *Mr. Crick.*] I submit, sir, that Mr. Eddy's indemnity does not touch the question. Perhaps, your Honor, if you allow Mr. Schey to see the man, he may not object to his name being given.

7534. *President.*] I do not care whether he objects or not; we must have the man's name, Mr. Crick.

7535. *Witness.*] I think, your Honor, I am within my rights in refusing to disclose the name.

7536. *President.*] You are not within your rights, sir. You must answer the question.

7537. *Witness.*] I ask your Honor to permit me to consult with this man?

7538. *President.*] We insist, sir, upon your giving the name.

7539. *Witness.*] Then I must decline to give the name, your Honor.

7540. *President.*] Are you aware of the penalties you incur by refusing to answer a question that is put to you by the Commission. You are summoned here as a witness by the Commission; you are put in that box by the Commission. We put a question to you, and you refuse to answer that question. I want to know if you are aware of the penalties that you render yourself liable to by so refusing to answer.

7541. *Witness.*] Perhaps your Honor will inform me.

7542. *President.*] Clause 2 of the Act reads: "Every person who shall have been served with any such summons, whether personally or by the same having been left at his usual place of abode, and who, without reasonable excuse, shall fail to attend before such Commission as aforesaid, or shall refuse to be sworn or to answer any question put to him by any such Commissioner touching the subject of inquiry, and every person having the custody or control of any books, documents, or writings required to be produced by any such summons as aforesaid, who shall neglect to produce the same at the time and place specified in such summons shall be liable to a penalty not exceeding £20, to be recovered in a summary way before any two Justices of the Peace." Now, Mr. Schey, will you give the name of your informant?

7543. *Witness.*] No, your Honor.

7544. *President.*] Very well. That is one question you have refused to answer.

7545. *Witness.*] Permit me to say, your Honor, that I think I am equally entitled to refuse to answer questions just as other persons have refused to answer questions before this Commission. For instance, Mr. Eddy has refused to answer questions that have been put to him; Mr. Curnow has refused to answer questions; Mr. Brient practically did the same, and Mr. Goodchap refused to answer questions. And I may add that Mr. Eddy, when called upon to produce certain documents, declined to do so. Under these circumstances I think I am fully justified in declining to answer the question on such a matter as this. Especially, your Honor, as I only decline until such time as I can communicate with the man who made the statement. If you will permit me to do this, and allow the point to stand over until that time I will give you a further answer after I have seen the man. I think I may certainly ask so much.

7546. *President.*] You see, Mr. Schey, you have made perhaps as serious a charge as anyone could make against the Railway Commissioners. You have charged them with having mis-spent public money and robbed the country.

7547. *Witness.*] Excuse me, I have not charged the Commissioners with anything of the kind.

7548. *President.*] Those words are in your speech delivered in your place in Parliament.

7549. *Witness.*] I respectfully submit to you, sir, that nowhere in my speech is there any statement that the Commissioners have robbed the country. I am subject to your Honor's correction, for I am speaking from memory, but I submit with confidence that there is no such statement to be found in my speech.

7550. *President.*] These are your words, "The affairs of the Railway Department have been mal-administered to a tremendous extent, and a robbery has been perpetrated."

7551. *Witness.*] That is it, your Honor.

7552. *President.*] Then by whom do you say the robbery was perpetrated? I am not in a position to say. I am not in a position to locate the firm. But certainly there is no statement there that the Commissioners have robbed the country. I conceive it would be quite possible for other people to rob the country without the Commissioners participating in the matter. In another part of my speech, your Honor will see that all I charge the Commissioners with is that when this matter came to be sifted is would be found that they had displayed—I think the word is—gross ignorance or neglect.

7553. *President.*] That comes into another charge altogether.

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7554. *Witness.*] These charges, as they are drafted in the Commission, appear to go together; they both have relation to the same matters.

7555. *President.*] That is not the point I want to draw your attention to. There is a charge here that the affairs of the Railway Department have been maladministered, and that a robbery has been perpetrated. It was then pointed out to you, when you were asked to give some instances of the alleged robbery, that in a previous part of your speech you had alleged that ganger had been paid for who had never been employed, and you were asked on what authority you made that statement.

7556. *Witness.*] Permit me to say I did not point out that. It was Mr. Kethel pointed it out.

7557. *President.*] It was pointed out to you as one of the matters mentioned in your speech;—you then said you had information on which you made that statement in respect to the ganger, and that your information was a sworn statement given to you by some person whom you now decline to name;—this is a very serious charge, whoever has made it. If gangers have been paid who have never been employed, it simply means this, that certain money has been paid out of the public funds representing the wages of men, who, as a matter of fact, were never employed at all. That is what you intend to imply. That is a very serious charge and a matter which this Commission has to inquire into, and as the information upon which you based that charge was given to you by some person to whom you have referred. We have asked you who that person is in order that he may come here and give some information if he is willing to do so.

7558. *Witness.*] Will your Honor permit me to point out that this reference to gangers is intimately connected with the question of those contracts which are extensively referred to in the speech in question. And the only thing said about the Commissioners in the matter, is this on page 6293, extending down to the middle of the page. At this point the speech reads:—"In these contracts, the Commissioners have displayed one or two things—they have either displayed gross ignorance and incapacity, or they have displayed something worse." That is what I said, your Honor.

7559. *President.*] These are the matters that are formulated in the two next charges,—the tenth and eleventh.

7560. *Witness.*] I must decline to take any responsibility for the way in which the charges are formulated. I did not formulate them myself nor was I consulted in the matter.

7561. *President.*] I am not asking you to do anything of the kind, Mr. Schey. I am saying that these matters to which you refer are dealt with in other charges which we have to inquire into presently. What I am now referring to is the statement in your speech that gangers have been paid for who have never really been employed. You say you have sworn information upon that point by some person, and we ask you to give us that information.

7562. *Witness.*] Will your Honor permit me to point out ——

7563. *President.*] No, Mr. Schey, I do not want to have any further discussions with you. I want a yes or no.

7564. *Witness.*] I again desire to point out, your Honor, that these charges all arise out of the one matter of these contracts which I mentioned in the speech, and from the same information; and therefore it is utterly impossible for me to separate them. It is no part of my business that some person has separated these matters which are so intimately connected. I cannot do it. I cannot give evidence on one part of it as distinguished from the other. The matter of these contracts is dealt with on page 6293, partly down the second column, and extends nearly to the end of page 6296. This is undoubtedly the same matter, and in it occurs this charge about the gangers. The whole of that portion of the speech arose out of the same information, but it happens to have been divided here into separate charges. That, your Honor, I cannot help. That is as the Commission has it. But there is the speech itself. I cannot separate one part of it from another.

7565. *President.*] I am not asking you to do that at all, if you will listen to me. The statement made by you is this,—that gangers have been paid who have never been employed. That is a statement made in your speech. You say that you made that statement upon certain information supplied to you by some person upon oath, and we ask you to give the name of your informant.

7566. *Witness.*] And I ask you to allow me to try if I can see the man and endeavour to bring him here to give evidence. I also require to consult the document itself to refresh my memory. I have nothing whatever to gain by concealing this man's name; he is nothing to me at all; and this information was imparted to me in confidence, and, therefore, under these circumstances I ask, your Honor, to permit me to communicate with the man, and if I cannot find him I shall be able to come back to Court and answer any further questions you may wish to put to me. I think I could find him in the course of two or three hours.

7567. *President.*] Very well, we shall not sit to-morrow, but on Monday you must either bring him before the Commission or be prepared to disclose his name.

7568. *Witness.*] I suppose if I fail to induce him to come it will be sufficient for me to give you his name and the Commission will summons him.

7569. *President.*] We will take care of that;—now, then, apart from this matter of the ganger and apart from the matter referred to in your earlier charge as to the purchase of £500,000 worth of locomotives, and apart from what you stated in reference to the contracts of Proudfoot & Co., Monie, Angus, & Co., M'Sweeney, Gulliver, and Tate, are there any other matters in which you say there was maladministration of the Railway Department and robbery of the country? These are all parts of the very matter, your Honor. They are all mixed up together, as I have said.

7570. But you have here made a definite charge with respect to these gangers, and I want to know whether, apart from that, there are any other instances of maladministration of the department that you can specifically refer to? I am not prepared to state.

7571. Will you say you are not aware of any others? I am not aware of any others of my own knowledge.

7572. Are there any others which you wish to bring under the notice of the Commission for the purpose of having an inquiry made into them? I wish nothing, your Honor. I have no wish in the matter.

7573. But you know, Mr. Schey, that an inquiry has to be made by the Commission, and you are surely patriotic enough to wish the Commission to fully investigate the question as to whether there has been maladministration in such an important department of the public service;—we ask you if you know of any other instance of such maladministration in addition to what you have referred to already? There is no instance in my mind at the present moment.

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7574. That is what I want to know. We have already dealt with the question of the ordering of locomotives, and the question of the contracts is a question which we shall have to consider in the tenth and eleventh charges. Therefore, so far as the eighth and ninth charges are concerned, we may close them. But, perhaps, instead of adopting the form of formally closing these two charges we will take them as part of the tenth and eleventh charges—that is to say, the charges so far will be limited to the particulars which are in the tenth and eleventh; but we will leave the others open for the purpose of ascertaining if any further evidence can be obtained in relation to the matters therein referred to. We now pass on to the tenth and eleventh charges. The tenth charge is, "That in making contracts with Messrs. Proudfoot & Co., Monie, Angus, & Co., M'Sweeney, Gilliver and Tate, and a number of other contractors, the said Commissioners have displayed either gross ignorance and incapacity, or something worse. That in many cases the contracts were bogus contracts from their inception. That when it was proposed to make these contracts 1,100 men were dismissed from the Railway service, and that from the time of such dismissal the said Commissioners have connived at the sweating of the men working on the said railway for the contractor, and that the said Commissioners knew what was going on." And the eleventh charge is, "That by means of the said bogus contracts made in connection with the said railways the country has been swindled out of thousands of pounds. That the contractors have made contracts which were intentionally bogus on their first inception, and thus certain persons have obtained large sums of money as the expense of the country." Now, Mr. Schey, will you explain to the Commission what you mean by the expression "something worse" in the tenth charge? I think the words are clear enough, your Honor.
7575. If so you ought to have no difficulty in explaining them? I have no other meaning to give to the words than the meaning the words carry.
7576. Then, when you use the words "something worse," you attached no meaning to them? I attached to them the meaning which the words bear.
7577. There are many things worse than ignorance and incapacity;—I want to know what you mean by those words? If I go into those words, your Honor, it will be simply a matter of imagination. I can imagine many things that might be implied by the term "something worse." I can give you no further interpretation therefore.
7578-9. Then, as I have said, we are to understand that you attach no meaning to those words? I attach to them the meaning which they bear.
7580. And I ask you what your meaning is? Well, your Honor, if I were making a comparison between two things, and said one was worse than the other, I should mean that one was not as good as the other.
7581. That is not what you say here. I ask you what did you mean when you used those words? I mean exactly what I said, and nothing more.
7582. Then we are to understand that it means nothing? I am not responsible for what your Honor understands.
7583. But you are responsible for what you say? Undoubtedly, your Honor.
7584. Who are the other contractors referred to in the charge. You mention some by name, and then say there are certain others. I want to know who they are? I do not know of any others at the present time. I do not call any others to mind.
7585. *Mr. Young.*] Why did you say other contractors, if there were none? I am really unable to say why, on the 9th March, I said, "other contractors." I can only imagine that at that time I suppose there were others to whom the same thing applied.
7586. You suppose so? I cannot say.
7587. You have no knowledge of any other contractors except those named? At the present moment I do not know of any others except those named.
7588. *President.*] You say that the Commissioners displayed "gross ignorance" in making these contracts. In what way do you say they displayed "gross ignorance"? Because it appeared to me that the contracts were made in a wrongful fashion, and that ignorance would be the most charitable way in which the matter could be referred to.
7589. In what way were the contracts made in a wrongful fashion? That is a matter for your Honor and your Honor's colleagues to find out.
7590. We want you to point it out? I am not prepared to say how they were made. I held certain views on the subject at the time.
7591. Did you know how they were made? Of my own knowledge, I did not.
7592. Had you seen the contracts at the time you made that statement? I had not.
7593. Then on what authority did you make the statement? On the authority of information received from various people.
7594. Who are the persons who gave you that information? Well, a large part of this information is derived from the document which, your Honor, I have already said I shall try to find the author of.
7595. Were there any other informants besides the person you have referred to? In the way of general information, yes; but in the way of putting them here as evidence, no. As a matter of fact, these things were commonly talked of by a large number of people, and I do not know that I could identify any single person who made any definite statement at the present time.
7596. *Mr. Young.*] Was it common gossip? Well, that is a term you might like to apply to it. A man going about among other men meets lots of people, and hears a great many things. Many of these may be small matters perhaps, which, taken of themselves, might appear of very little consequence; but by hearing them repeatedly spoken of by different classes of people, one forms an opinion in his own mind, which he considers he has a good basis for. That, to my mind, is the way in which, upon large questions, a man arrives at an opinion. In the next place, these contracts have been questioned and challenged in Parliament by more than one member, and all these things put together lead me to form the opinion I have spoken of.
7597. *President.*] Did you not make any further inquiry or try to ascertain from the documents themselves, that is the contracts, whether those things were true or not when you made the charge from your seat in Parliament? I had not seen the contracts.
7598. *Mr. Kethel.*] But, Mr. Schey, you say in your speech here, "Anyone who takes the trouble to go into the matter will be convinced I am speaking the solid truth." Therefore, you must have had something more than idle rumour in your mind at the time to cause you to make such a statement as that? I have already said that I thought so. What you call idle rumour was information of a sworn character,

and

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and I should think that coming as a confirmation of what was heard in a number of different places and from various people was amply sufficient to bring me to the conclusion that the opinion was arrived at upon a proper basis.

7599. *President.*] It depends altogether upon the person who makes the statement, the person himself may not have had the information. He might simply be communicating to you the gossip picked up from somebody else, and that of course even before a Royal Commission is not evidence.

7600. *Mr. Young.*] Before you made this speech of 9th March, in Parliament, you were quite aware that you had as a Member of Parliament, sufficient authority and opportunity to find out all about these contracts? No; I was not aware of any such thing. If you ask me that question I say I am aware that as a Member of the Assembly and a representative of the people I ought to be in a position to get all that information. But, as a matter of fact, on several occasions when I have asked for such information it has been refused; and, as a matter of fact, the Railway Commissioners would afford me no information whatever; and as they declined to see me at all some considerable time ago it would be impossible for any man in my position to approach them again; therefore, I have not the opportunity of obtaining information which a Member of Parliament ought to have from the servants of the people.

7601. *President.*] Could you not as a Member of Parliament have asked to have these contracts laid on the Table of the House? Yes, your Honor, and got snubbed for my pains probably, as others have been who have asked for similar information.

7602. *Mr. Young.*] Would it not have been advisable to obtain correct information before making such a serious charge. Would it not have been well to get at the facts from the contracts themselves? I am bound to consider that I did all I could to do so. As a matter of fact, I waited upon the Minister for Railways and conveyed to him such information as I could relating to the matter, and I asked him to agree to a Select Committee for the purpose of investigating these matters without the necessity of dealing with them in open Parliament. I am not in a position at the present moment to swear to it, but I can say with certainty that I showed the document of which I have already spoken to the present Premier of the country, Mr. G. R. Dibbs, and I urged him also to make the inquiry. I do not think he read the whole document, but he did read a part of it. I have also discussed the matter in one way or the other certainly with two other Ministers of the Crown, but in a private way, and I do not consider myself called upon to give their names. I have also discussed the matter with certain Members of the Assembly, and you will find it stated in my speech that when I went to Ministers and tried to cause an inquiry to be made without taking the final steps of bringing the matter up in open Parliament, I was told to go to Parliament and make my speech there, and make my charges definitely. I had previously considered that I had made my charges in a very definite form, but I was told that I must go to Parliament and make these charges in the most substantial way; and there is no doubt that this declaration which was made to me on oath urged me to make this declaration in Parliament, perhaps in a slightly stronger way than I should otherwise have done. But I consider myself clear of any charge of having made this statement without having previously tried to deal with the matter without so doing.

7603. *Mr. Young.*] These contracts or tenders, were they publicly tendered for? Do you refer to the contracts of Messrs. Proudfoot and Monie, Angus, & Co?

7604. Yes? I am not in a position to say on oath that they were tendered for. I am informed that they were not, and I do not believe they were tendered for. When I speak of tendering, I speak of tendering in the ordinary sense of public tenders being called.

7605-6. You could have ascertained that fact before making your speech? I considered that my information on the point was sufficient to indicate to me that they had not been tendered for. But I may say in relation to this—I am speaking now from memory, of course—that I myself questioned the Minister in relation to them.

7607. Would you state what the contracts are that you allude to in your speech? I was speaking of the contracts which had been let in some way or given by the Railway Commissioners to Messrs. Proudfoot & Co., Monie, Angus, & Co., Justin M'Sweeney, and Gilliver and Tate; they were contracts for re-ballasting, re-laying and duplications. I cannot pledge myself that they did not include something else, but that was the main portion of the work to be carried out.

7608. And you state that they were not publicly tendered for? I have said that I am not in a position to swear that they were not; but I do not believe they were.

7609. Were any of these contracts you speak of for the construction of new lines? I do not think so. I think the contracts were entirely free from the construction of new lines, any more than there might be sidings to the existing lines, but not for new lines in the ordinary sense of the term—that is, new lines constructed for the Works Department before being handed over to the Commission.

7610. Is that what you mean by using the term "bogus" contracts? Well, the word "bogus" must stand its own meaning. I have not a "Webster's Unabridged" at the present moment to enable me to give the exact definition.

7611. *President.*] The question is what do you mean by it, Mr. Schey? What I intended to say was that, in my opinion, these contracts had been let without tenders, and not only that, but that they were contracts only in point of name; and that, as the word contracts is usually understood, they were not contracts at all. That is what I intended.

7612. In what way were they not contracts? In several ways, I think. For instance, I was informed that a large quantity of this work, nominally done by contract, would be done by day work at a certain schedule rate, and there were certain provisions by which this schedule rate would be brought into force; and that these contracts were bogus, inasmuch as instead of the work being done at certain prices it was done by day-work; and therefore it was merely a matter of the contractors' men doing the work for which the Commissioners paid the contractors, who paid the men, and, while paying the men a certain sum, in my opinion, they paid a certain other sum, which went into the contractors' pocket.

7613. *Mr. Young.*] How did you obtain that information? That is impossible for me to say. Moving as I did, and do now, amongst thousands of different people, many of whom are connected with the railways in various ways, information comes to me in a variety of different ways, and I cannot now specify a particular instance. Sometimes it would be by men coming to me and telling me things; sometimes by anonymous letters; at other times by letters which are signed; and I am obliged to say here that, considering the risk involved, the non-signing of letters, under the circumstances, is a very wise and justifiable precaution.

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7614. Then, without ascertaining the correctness of these reports, you believed all these anonymous letters and the gossip of the men? Not necessarily—certainly not. If I were to believe all that you refer to as gossip and letters sent to me I should have had a very different tale to tell. But I believed such portions of it as appeared to me to be borne out by information in my possession, just in the general way in which a reasonable man would arrive at an opinion.
7615. At any rate, if you could identify the contracts you allude to we could easily obtain those contracts to speak for themselves? That is a matter entirely for the Commission. I have nothing to do with it.
7616. *Mr. Kethel.*] Mr. Schey, during the time you were delivering this speech in Parliament on the 9th March, you quoted from the statement which you said had been made on oath by a certain person, and you commenced to read it, but you were stopped by the rules of the House? Yes.
7617. Is that the document to which you have referred to-day? Yes.
7618. And you have no other sworn document in relation to this matter that would throw any light upon what you allege? I have no other document, but I have a very considerable amount of correspondence of all kinds.
7619. *President.*] We do not want any anonymous letters, Mr. Schey—hand us those signed by honest people. That will do, thank you.

[*Mr. Schey here left the witness-box.*]

7620. *President.*] Now, Mr. Eddy, we should like to have the contracts that have been made with these different people from the time that the Commissioners took office. I suppose there would be no difficulty in obtaining them?
7621. *Mr. Eddy.*] No, sir; we will bring them here this afternoon.
7622. *President.*] Then, as to the mode in which these contracts were entered into, will you be able to give us that?
7623. *Mr. Eddy.*] Yes, sir; we will give that information when we place the papers before you. Generally, I may say public tenders were called for in every case. In fact, all the main contracts were publicly tendered for, but of course a number of minor works were carried out under schedule prices in the general contract.
7624. *President.*] What we want is to have all the contracts with these different contractors that are mentioned in the charge. Mr. Schey says he does not know of any others. Therefore, we must limit the inquiry to those that are named.
7625. *Mr. Eddy.*] Would it be possible, sir, to get Mr. Schey's witness here this afternoon? In that case we might be able to get through the business to-day.
7626. *President.*] We cannot ask Mr. Schey that—it is now nearly 1 o'clock—but I hope on Monday we shall be able to close the inquiry.
7627. *Mr. Young.*] Who were the engineers of the lines referred to in these contracts?
7628. *Mr. Eddy.*] I cannot quite say at the moment, but Mr. Cowdery, Mr. Angus, and Mr. Foxlee were engineers of the department. The calling for tenders is always done through our own office. The procedure for the acceptance of tenders can be explained by the Secretary. The Commissioners themselves determine finally who the contractors shall be.
7629. *Mr. Young.*] I think we shall require to see the Secretary and all concerned with the letting of the contracts, the engineers and the contractors.
7630. *Mr. Eddy.*] Very well, sir; we can make arrangements to that end. Mr. Angus is at present in Brisbane.
7631. *Mr. Kethel.*] In cases where the work is done by schedule I presume the schedule of prices under which the work will be done will be produced here?
7632. *Mr. Eddy.*] Yes. I may as well put in one of the largest contracts carried out by Moonie, Angus, & Co. for duplication works, laid on the Table of the House on the 19th December, 1890, which contains a schedule of prices. It is a specimen of a duplication contract.
7633. *President.*] You will, at any rate, give us all the information you can on this subject this afternoon.
7634. *Mr. Eddy.*] By 2 o'clock, sir. I would ask that the Commission send an intimation to the contractors themselves, and if the Secretary will make out the needful documents, we will undertake the delivery.
7635. *President.*] You cannot do that this afternoon, Mr. Eddy, I think.
7636. *Mr. Eddy.*] We will arrange for the delivery of the documents, Mr. President. We might at least obtain one or two of the gentlemen.
7637. *President.*] If we could get some of them here this afternoon, of course so much the better.
7638. *Mr. Eddy.*] I am only desirous of expediting your business, sir.

[*Resuming in the afternoon.*]

7639. *Mr. Schey.*] Your Honor, as I am only attending as a witness, I would like to know whether you require me this afternoon.
7640. *President.*] We desire to ask you one or two questions, and then we shall release you for the afternoon.
7641. *Mr. Schey.*] But my solicitor is not here at present, your Honor; I understood he would not be required.
7642. *President.*] I am not responsible for what you understood, Mr. Schey. I want to ask you one or two questions, and I desire you to step into the box.
7643. *Mr. Schey.*] I ask your Honor to postpone the questions until Mr. Crick is in attendance.
7644. *President.*] We cannot do that. Will you enter the box please?

[*Mr. Schey here entered the box.*]

7645. *Mr. Young.*] I presume, Mr. Schey, that when you made your speech in the Assembly on the 9th March, you were anxious there should be some inquiry into the matters connected with the railway? I was.
7646. I presume you are now in the same state of mind. That some inquiry should be made?
7647. Yes? Yes; I still think the inquiry should be made.

Mr. Schey. 3 June, 1892.

7648. If I put a question to you, not in reference to the charges here made exactly, but in another form—for instance, if I ask you to name the contracts in which you think there have been irregularities, I mean as regard the schedule rates of day-work, will you do so;—you say that you are anxious an inquiry should be made, and we are equally anxious to make an inquiry, and we wish you to assist us by naming the contracts or other works connected with the railways in which you consider there have been irregularities? That is only so far as I think.

7649. So far as you thought? I can only name the contracts which are already mentioned in my speech. I do not remember any others at the present time. I then referred, as I stated this morning, to contracts for re-ballasting duplications and re-laying—some of one and some of the other. There is no one distinct thing included in any one distinct contract.

7650. But do you not see, Mr. Schey, that we might be searching into a number of works and contracts which would have no reference whatever to the matters mentioned by you;—we only desire to inquire into those contracts which you had in your mind when you spoke about these irregularities? I do not think that those I referred to comprise a very great number. I am unable to say what number, and I do not think now—I am simply venturing an opinion—that unless the Railway Commissioners will go into the whole of those I have named that they will get at the truth of the matter.

7651. You think, then, that the contracts of Messrs. Proudfoot & Co., Monie, Angus, & Co., M'Sweeney, Gulliver and Tait comprise all the contracts and all works either at day or schedule rates which you had in your mind when you made your statement? So far as I can charge my memory, yes. I do not know of any others at the present moment. I may add to that remark that should I hereafter find, on thinking the matter over, that there are other names, I shall be perfectly willing to mention them to the Commission; but at present I do not think there are any others.

7652. *President.*] You will do that on Monday, if you please? Do what, your Honor?

7653. Think the matter over and ascertain if there are any other contracts? Undoubtedly, your Honor. Do I understand that I am now free?

7654. Yes, Mr. Schey; you need not remain any longer.

[*Mr. Schey then left the Court.*]

7655. *Mr. Eddy.*] Of course, Mr. President, this has been rather a hurried matter to get together all the papers referring to so many different contracts; but Mr. McLachlan will be happy to assist the Secretary for the Commission to put everything in perfect order for the Royal Commissioners. We merely put the papers in the rough as we have been able to collect them during the luncheon hour. I may mention with regard to Messrs. Angus & Co.—Monie, Angus, & Co. they are referred to in Mr. Schey's speech—that they had a very large contract from the Commissioners for duplications, one section being for the widening of the line between Ryde and Hornsby. Seventeen tenders were received by the Railway Commissioners, and the prices quoted were from £49,093 to £68,934. We accepted the lowest tender, which was that of Messrs. Angus & Co. I may say that a large number of duplication works were put in hand rather hurriedly, because there were so many unemployed men about. The works were urgently required, and, as I said, they were put in hand quickly, and the Commissioners undertook the supervision of those men. But later on it was found that it would be far better for the work to pass into the hands of ordinary contractors, whose business it was to carry out works of that nature. We, therefore, called for tenders, and we received twelve tenders for carrying the duplications from Hurstville to the George's River and Sutherland, and then to Waterfall; Granville to Campbelltown, and Campbelltown to Picton; Strathfield to Ryde; and Teralba to Adamstown; and Messrs. Angus & Co. being the lowest tenderers for that work their tender was accepted.

7656. *Mr. Young.*] Was that at a lump sum or by schedule rates?

7657. *Mr. Eddy.*] I think, sir, it was by schedule rates. I think it was 2s. 1½d. per yard for shifting earth, and I think that also included rock, but I will not be certain.

7658. *President.*] That will appear by the contracts themselves, I suppose?

7659. *Mr. Eddy.*] The papers here will show exactly what the prices are.

7660. *President.*] Before that contract was entered into how was the work done—by day labour or piece work, or how? You said that the Railway Commissioners supervised the work up to a certain stage before the contract was let.

7661. *Mr. Eddy.*] I think it was a kind of piece work, your Honor. I think we paid one man for the labour of about ten or a dozen men who formed themselves into little gangs. We paid one man for the work executed by his gang. The work was measured up, and we paid for it weekly or fortnightly.

7662. *President.*] And was that work done under the officers of the Railway Commissioners?

7663. *Mr. Eddy.*] Under the officers of the department.

7664. *President.*] And how long did that last?

7665. *Mr. Eddy.*] The work in our hands?

7666. *President.*] Yes.

7667. *Mr. Eddy.*] It went on for some months. The work undertaken by the contractors is scarcely finished yet. We have not quite got out of hand the duplication to Picton.

7668. *Mr. Young.*] Did you commence the work in that form, or was it commenced before you arrived?

7669. *Mr. Eddy.*] We commenced it in that form ourselves. The employment of these men was so urgent that we put them on this particular work.

7670. *President.*] When was that?

7671. *Mr. Eddy.*] It would be about May or June, 1889.

7672. *President.*] Was that at the time when the Government were giving relief work.

7673. *Mr. Eddy.*] No, sir. There were a lot of unemployed about, and as the duplication works had not been carried out quite soon enough to meet the big traffic, it was deemed a very suitable opportunity for getting the work done at a reasonable price, and also for affording a considerable amount of employment.

7674. *Mr. Young.*] Were you asked to put the men on in that form by the Government?

7675. *Mr. Eddy.*] There was a consultation as to whether profitable work could be found at that moment.

7676. *Mr. Young.*] In what form?

7677. *Mr. Eddy.*] Yes, in that form, pick and shovel work. But the contractors thought it was rather trenching on their privileges, and it was of course very undesirable for the Railway Commissioners to have a big floating staff of that kind.
7678. *Mr. Young.*] You did not study the contractors?
7679. *Mr. Eddy.*] We studied our own interests, and we got a very low price.
7680. *President.*] So far as you could judge from the work that had been done, which was the most economical way of carrying out the work?
7681. *Mr. Eddy.*] By the contractors, sir. We had it worked out very carefully from the figures we kept ourselves showing the cost, and our engineer certified to us that the price for earthwork was slightly under our mean price, namely, 2s. 1¾d. per cubic yard.
7682. *President.*] That was under the contract?
7683. *Mr. Eddy.*] Yes, it came out better, and we, of course, lost all necessity for the supervision of the men, and it reduced our office work and matters of that description.
7684. *President.*] Then, you did find, as the result of doing this work by contract, that it was economical as compared with the way in which you commenced the work?
7685. *Mr. Eddy.*] Yes, your Honor.
7686. *President.*] Was the work done by the contractors equally good?
7687. *Mr. Eddy.*] Undoubtedly. We found that all the work given to these contractors, or this firm of contractors, was done exceedingly well, and without any unnecessary trouble.
7688. *President.*] Then, if it was more economical, and the work was excellently done by the contractors, it was a benefit to the Colony to have it done in that way?
7689. *Mr. Eddy.*] Undoubtedly so. The papers refer also to a number of minor works that we have given to the same firm under their schedule of prices without calling for special tenders from other firms. I may mention as an instance of what I mean the unfortunate landslip at Bell. We had to deviate the line instantly, and Angus & Co. were able to put a large staff of men from the duplication works on to the special work we required, and we gave them schedule prices for that work because those prices were considered very fair and reasonable.
7690. *President.*] And the work had to be done at once?
7691. *Mr. Eddy.*] Yes, sir; the work was required to be done instantly. Angus & Co. also did other work which we considered it wise to give to them, and it shall be tabulated so that the Commission will have no difficulty in identifying it.
7692. *Mr. Young.*] The construction of new lines has not come under your jurisdiction, I believe, Mr. Eddy?
7693. *Mr. Eddy.*] Not a really new line, sir. If we were to make a short extension such as, say, from Bourke, at the present terminus of the railway, to the river, that we should do under our powers; but the making of a line from Nyngan to Cobar, or a line even half a dozen miles long, that does not come within our powers; that belongs to the Minister for Works.
7694. *Mr. Young.*] Does the alteration of curves on the mountains and the tunnelling to avoid the Zig Zag come under your jurisdiction?
7695. *Mr. Eddy.*] Those are works belonging to the Railway Commissioners, and in the papers which will be placed before you those works will be shown. I may mention, in connection with the Zig Zag, you will see some papers in which we called for tenders. About eighteen tenders were received, the lowest being that of Mr. Justin McSweeney, £39,379. The prices varied from that amount to £61,000.
7696. *Mr. Young.*] The name of Mr. McSweeney is one of those mentioned by Mr. Schey, is it not?
7697. *Mr. Eddy.*] Yes, sir. When we came to go into the figures—I may say that when tenders are received, before we accept any one they are all carefully considered by our engineers—it was found that there was some mistake in his tender, and he was not prepared to abide by the figures, although he intimated the next day that he would carry the contract out. But in the meantime we had communicated with Mr. David Proudfoot—the late Mr. David Proudfoot, who had also carried out works for us, and we told him that his tender would be accepted, because Mr. M'Sweeney was not prepared to go on. Mr. Proudfoot's tender, therefore, was accepted.
7698. *Mr. Young.*] Was he the next on the list?
7699. *Mr. Eddy.*] Yes; his price was £43,096. That was for cutting out the Lapstone Hill, on the Zig Zag.
7700. *President.*] You say that Mr. M'Sweeney made a mistake in his tender?
7701. *Mr. Eddy.*] Yes, sir.
7702. *President.*] Did that mistake increase or decrease the amount originally quoted?
7703. *Mr. Eddy.*] Well, it would have increased it, sir; but it is more than two years since I looked at the papers, and I cannot give you exact particulars. I think Mr. M'Sweeney made a great blunder in the price for brickwork, and when it was pointed out to him—and your Honor will see that in another case we pointed out a mistake of a similar sort to another contractor—Mr. M'Sweeney said that he could not carry out the contract in the face of a mistake which would materially alter the price. But next day, after we had told the late Mr. David Proudfoot that he had secured the contract, Mr. M'Sweeney intimated that he was prepared to go on. However, it was then too late.
7704. *Mr. Young.*] I presume he did not carry out the contract?
7705. *Mr. Eddy.*] No, sir. Mr. David Proudfoot secured it, because of that incident. Then Messrs. Gulliver and Tait have been referred to. They had a contract from the Railway Commissioners for the construction of the loop line between the North Coast line and the Main Suburban Line at Homebush. We wanted to run the trains direct between the Northern Line and the Southern and Western Lines without going into Strathfield. There were fifteen tenders in that case, the prices varying from £24,950 to £40,934. I might mention that that contract also included the widening of the line between Strathfield and Flemington on the main suburban line. As Messrs. Gulliver and Tate quoted the lowest price, we accepted their tender. They also obtained the contract for widening the Suburban Line between Long Cove Creek, near Petersham and Ashfield. There were fifteen tenderers in that instance, the prices varying from £52,746 to £71,945. Messrs. Gulliver and Tait again being the lowest, we accepted their tender. In regard to the other contract, that was made for a period of five years for extraordinary relaying and reballasting of lines, it may be within the recollection of the Commission that when the Railway Commissioners took office we had a special Vote of Parliament to enable us to radically improve the

the state of the permanent-way, which had run down; and we intended to put in hand an enormous amount of reballasting and relaying. As a matter of fact from then until now we have put about 700,000 tons of ballast upon the lines, and we have done over 200 miles of relaying. If we had done that work ourselves it would have necessitated our employing many thousands of men. I believe the contractors at one time had 3,000 or 4,000 men in their employ, but we were not in the position to take the control of such a large number of extra men, who would have had to be dispensed with as soon as this extra work was out of hand. After considering the whole question, we therefore determined to do what the leading companies elsewhere do, that is, to obtain tenders for the carrying out of this work by contractors. We called for tenders, and I think we received in all twenty-one. Mr. Justin McSweeney and the late Mr. David Proudfoot were the two lowest tenderers. In some cases the prices in one tender were higher than they were in the other, and in some cases lower. We deemed it unwise to place the whole of our work in the hands of one firm, and we therefore sent for the two gentlemen I have named, and we said to them, "In your tenders you have such and such a price for such and such work, and we have a tender to do that work at a lower price." We discussed the question with these two gentlemen, and got them to agree in each instance to accept the lowest price for the work that existed in either tender; and we then divided the work between the two contractors as nearly as we could equally, and the work went on. I will put in all the tenders and the papers relating thereto, but in one case I must ask not to be requested to put in all our correspondence in regard to a contract with the late Mr. David Proudfoot. Since Mr. Proudfoot's death, his executors and the Commissioners have got into some dispute. In the interests of the department, we had to terminate the contract some two months ago, and after three months' notice had been given. There may be some litigation in regard to this matter, and therefore it will be seen, I think, that it would be undesirable to place all our correspondence, in reference to the matter, in evidence here.

7706. *President.*] That, you say, took place some two months ago?

7707. *Mr. Eddy.*] That was, as to the termination of the contract, your Honor. We got into rather troubled waters six months ago. Then we gave three months notice to terminate the contract, and that notice expired about two months ago.

7708. *Mr. Young.*] When you call for tenders for works such as you have mentioned, or indeed for any work, is it the custom to have schedule rates for all the work that has to be done?

7709. *Mr. Eddy.*] In some cases there is a lump sum, and in others a schedule is attached. In carrying out a contract there is a lot of work which cannot be foreseen, and therefore a schedule is generally attached, so that work which cannot be provided for in the general contract, can be carried out by day-labour and in other ways.

7710. *Mr. Young.*] Do you let any contracts which are not explained in every detail by the schedule rates accompanying the quantities?

7711. *Mr. Eddy.*] I think it would be better to place our engineer in the box, if you desire an explanation as to the details of the schedules and the carrying out of contract work. I was going to say that we are making some improvements in our grades at different places. We have a number of bad grades and some of them perhaps hold the key as it were to a long stretch of railway. For instance, between Dubbo and Bourke, about Manoa, which is a short distance west of Dubbo, there is a bad grade, and there has been considerable waste in working that section of the line, and therefore we cut the grade down, so as to enable us to take a larger load from Bourke to Dubbo. We called for tenders for that work, and received three,—Proudfoot & Co., £15,750, which was the lowest, and the highest was that of Mr. Justin McSweeney, £19,416. We accepted the tender of Proudfoot & Co.

7712. *Mr. Young.*] Was the whole of the duplication between Redfern and Flemington let by contract?

7713. *Mr. Eddy.*] The whole of it, sir. Mr. Justin McSweeney did the piece from Redfern station to about Macdonaldtown, just beyond the Illawarra Junction. Then M'Master took it from that point to about Petersham, and Gilliver and Tait carried it from Long Cove Creek to Ashfield. Then Ohearn took it from Ashfield forward to Strathfield, and Gilliver and Tait from Strathfield to Flemington. The work was placed in the hands of several contractors in order that it might be proceeded with more quickly than would otherwise be the case. Mr. Justin McSweeney had several contracts. One was for putting up a shed at Darling Harbour. That contract was let before the Railway Commissioners took office, and when we came into power we decided to modify the original arrangements and turn the shed into a goods-shed, and Mr. McSweeney, having the buildings in hand, carried out these alterations at the prices scheduled in the original tender. Later on he obtained a contract for putting up a large shed at Redfern for the accommodation of the hay and produce traffic. In that instance we advertised for tenders, and received three—Tulloch & Co., McSweeney, and Hudson Brothers. Mr. McSweeney having put in a lower price than either of the other two firms, obtained the work. I referred incidentally just now to the fact that Mr. McSweeney, with the late David Proudfoot, obtained the reballasting and re-laying contract, and the papers are here in reference to that matter.

7714. *Mr. Young.*] Did you ever let a bogus contract, Mr. Eddy?

7715. *Mr. Eddy.*] No sir. I take it that the word "bogus" implies something which is not straightforward and honourable, and I know nothing whatever about a contract of that nature. Mr. Justin McSweeney also obtained the contract for widening the railway from Redfern to the Illawarra Junction.

7716. *Mr. Young.*] There is a paragraph here which says:—"That the contractors have made contracts which were intentionally 'bogus' on their first inception, and thus certain persons have obtained large sums of money at the expense of the country." Do you know anything of that matter?

7717. *Mr. Eddy.*] Most certainly not. In fact, I do not think you will find anyone who has had any dealings with the Railway Commissioners who will say that they have been able to get anything improperly out of them. You will find that the Railway Commissioners are always watchful to see that they do not pay a penny more than they ought to pay. For the work in connection with the widening of the line between Redfern and the Illawarra Junction fourteen tenders were received. Mr. McSweeney's tender was £53,337 15s., and there were tenders as high as £74,421. Mr. McSweeney's being the lowest tender, was accepted. I might mention that all these tenders are opened by the Commissioners and the public can come in, and the lowest tender is declared at the time by the Commissioners; and I might mention further that this comprises one of the items of information which the secretary is in the habit of communicating to the Press.

7718. *Mr. Young.*] You publicly advertise these contracts in every case, I suppose?

7719. *Mr. Eddy.*] In almost every case; and I think among the papers to be put in you will find one of the advertisements calling for tenders. The Commission will further notice among the documents some papers referring to the widening of the line between Ryde and Hornsby. Questions were asked in Parliament about the matter, and we at once laid a paper on the table of the House, showing exactly what happened; and it is a very good illustration of the way in which these matters are dealt with by the Railway Commissioners. Perhaps I might begin at the beginning. To ensure there being nothing underhand possible with our tenders one or two of the Commissioners are always present when the tenders are opened. A list is then made, the tenders are initialled by the Commissioners, and the head of the Engineering Department is then asked to examine the whole of the tenders and to advise the Commissioners which, in his opinion, ought to be accepted. The Commissioners then sit down, as a rule, with the officers, and decide which tender shall be accepted. That decision is always in the hands of the Commissioners, and, as a rule, the three Commissioners are together when the decision is arrived at. The engineer in examining the tenders sometimes finds that a mistake has been made. A mistake was made by the contractor in connection with one of the tenders for the widening of the line between Ryde and Hornsby. The contractor put down brickwork at 20s. per yard. That was an evident mistake, and Mr. Angus, of Angus & Co., was sent for by the Commissioners and the mistake was pointed out to him, and he was asked whether he intended to abide by the price he had quoted. He showed us his papers and explained clearly how the mistake had been made by one of the clerks. Mr. Angus told us that he was prepared to abide by the price mentioned, and that he would carry out all the brickwork at 20s. per yard, although it would involve him in a considerable loss. All he asked from the Commissioners was that they would not take any advantage of the mistake and give him more brickwork than otherwise would be given. We, therefore, as every honourable man in our position should do, put a minute in the papers to the engineer that no advantage whatever was to be taken of this mistake on the part of Angus & Co.; they were simply to be called upon to do the work contemplated when tenders were called for. That, I think, illustrates the necessity there is for looking through all contracts. Take the case of the Zig-Zig. A contractor might make a mistake and then afterwards say:—"Well it was quite apparent I made this mistake; I cannot do the work at this price and you must make me an allowance." Therefore, we always point out beforehand if any mistake has occurred, and find out whether the contractor is prepared to proceed with the work at the price he has quoted, or whether he prefers to withdraw.

7719½. *President.*] Are the contracts you now produce all the contracts you have made with the contractors—named Messrs. Proudfoot & Co., Monie, Angus, & Co., McSweeney, and Gulliver and Tait?

7720. *Mr. Eddy.*] No, sir. As I have already told you, there are a number of minor matters which are not included.

7721. *President.*] I mean are the papers you now produce all the papers you have in reference to contracts with those firms?

7722. *Mr. Eddy.*] I believe they are all, but we will have them checked over, your Honor, before Monday.

7723. *President.*] In addition to the persons named in the Commission were there any other persons with whom you made contracts for ballasting, or work of that kind?

7724. *Mr. Eddy,*] There are, of course, a number of other people with whom we have made contracts for different works.

7725. *President.*] Other than those already named?

7726. *Mr. Eddy.*] Yes, your Honor, but those people named have had by far the largest portion of the work which has been let. I may say that we have let a number of local contracts. For instance, we are spending a considerable sum of money at Junee in draining. We called for tenders for work of that description, and in many instances a local man gets the contract. If we put up new refreshment rooms ——

7727. *President.*] But they are small matters, I suppose?

7728. *Mr. Eddy.*] Yes, your Honor.

7729. *President.*] They are not referred to by Mr. Schey. Were the smaller contracts you speak of (other than those mentioned here) in reference to the permanent way or merely refreshment rooms and things of that sort?

7730. *Mr. Eddy.*] No, sir. There is a fairly large contract let in connection with the suburban line to a Mr. M'Master whose name I previously mentioned. We have not put the papers in relating to that contract because it was not one of those mentioned by Mr. Schey.

7731. *Mr. Kethel.*] Is that the contract for the Milson's Point extension?

7732. *Mr. Eddy.*] No, sir. It is the contract for the widening of the line at the point at which McSweeney's contract terminates to the Long Cove Creek.

7733. *President.*] In all these cases, Mr. Eddy, were the contractors the only persons who had to deal with the men who were engaged in the work?

7734. *Mr. Eddy.*] All except our inspecting officers.

7735. *President.*] They have to do with the inspecting of the work. I am dealing with the workmen, and I want to know whether the contractors are the only persons who have to deal with the workmen?

7736. *Mr. Eddy.*] Yes, your Honor.

7737. *Mr. Kethel.*] It was stated, and it has been repeated, that the Commissioners discharged 1,100 men about the time they made these contracts, and evidently for the purpose of cheapening labour. Who were the men discharged at that time?

7738. *Mr. Eddy.*] The men who were dispensed with about the time the relaying and reballasting contracts were let were those who had been taken on by the Commissioners to repair the damage done to the roads by the heavy rainfall at the end of 1889 and the beginning of 1890. It will, perhaps, be within your remembrance that we had, I think, in fourteen months about 108 inches of rain. Our lines were not well ballasted and not well drained, and they became terribly damaged in consequence of that heavy rainfall, and we had to put on a very large staff to keep the lines safe, and to repair some of that damage. When we determined to enter into these contracts for the reballasting and relaying we dispensed with a considerable number of men who had been especially taken on to repair this damage. They were not our permanent staff, but they were taken on to meet a special set of circumstances.

7739. *Mr. Kethel.*] Then none of the regular staff were discharged at that time?

7740. *Mr. Eddy.*] None of the permanent way staff, but we have what we call a permanent extra staff, and

and a few of those men were dispensed with; but it was understood that the contractors would take over all the men who were so dispensed with and keep them for a period of one month. We felt that we could not tie the contractors for more than a month, but they were to take the men for that period, and if they were found to be good men they were to be kept on the contractors' staff. I will put in some answers we supplied to Parliament in connection with this question at the time, and they will show the Commission what exactly was the state of things regarding these extra men and the floods.

7741. *President.*] The reason I asked the question, Mr. Eddy, as to the Railway Commissioners having anything to do with the employment of the men is this. It is stated in the charge that the Commissioners have "connived at the sweating of the men working on the said railways for the contractors." I presume it is intended to imply by that that these men were employed doing this extra work for the minimum of pay, and that the Commissioners connived at it. Is there any truth in that statement. Had you anything to do with the payment of these men by the contractors?

7742. *Mr. Eddy.*] Nothing whatever, your Honor. As a matter of fact, the Railway Commissioners did not know what pay was given by the contractors.

7743. *President.*] As a matter of fact, the men are exclusively under the control of the contractors?

7744. *Mr. Eddy.*] Entirely so.

7745. *President.*] Would you have any right to interfere if you did know the rate of wages paid to the men by the contractors?

7746. *Mr. Eddy.*] None whatever, sir. I may say we never saw the pay-sheets of any of the contractors until a somewhat similar statement was made in connection with the Ryde and Hornsby contract, which I referred to just now, when we deemed it right to at once place the facts before Parliament. At that time we asked Mr. Angus, of Angus & Co., to bring his pay-sheets so that we might look at them, and this is what we found. He had 375 men paid at the rate of 7s. a day; 159 men, at the rate of 7s. 6d. a day; 64 men, at the rate of 8s. per day; 19 men, at the rate of 8s. 6d. per day; and 72, at rates varying from 9s. to 17s. per day. So there is not much indication of paying men improperly from that. That is the only time the Railway Commissioners have taken any cognizance of the pay-sheets of contractors, although I do remember seeing in the newspapers, and I asked at the time whether it was correct, that the late Mr. David Proudfoot, when he first got his contract for relaying and reballasting, gave his men a considerable advance of pay. Mr. Proudfoot was paying at a very high rate, his theory being that he would rather give 1s. a day more and have only the very finest men he could pick, than have men at a lesser rate of pay who were less efficient than the specially picked men.

7747. *President.*] Are we to understand that with the exceptions you have mentioned the Commissioners were not aware of the wages that were paid to the men?

7748. *Mr. Eddy.*] Yes, your Honor, we were not in any way aware.

7749. *President.*] Under any contracts?

7750. *Mr. Eddy.*] We were not in any way aware.

7751. *President.*] And in the cases you have quoted, it was only ascertained after the contracts had been taken?

7752. *Mr. Eddy.*] The work was well in hand, and it was because a statement was made in Parliament that we made a special inquiry, and we actually had the pay-sheets put before us, so that we might examine them for ourselves.

7753. *President.*] Then do you consider that the work which was done by these contractors was done more economically than if the work had been done by the Commissioners themselves?

7754. *Mr. Eddy.*] I do, sir.

7755. *President.*] So that by carrying out the work in that way the country was served rather than robbed of money?

7756. *Mr. Eddy.*] I think so.

7757. *President.*] That is your opinion?

7758. *Mr. Eddy.*] Yes, sir.

7759. *President.*] Unless you have anything further to explain, Mr. Eddy, I think that is all we require. Perhaps you will ask Mr. Foxlee to get into the box?

7760. *Mr. Eddy.*] Very well, your Honor.

Mr. Foxlee further examined:—

Mr. Foxlee. 3 June, 1892.

7761. *Mr. Young.*] You are a civil engineer, I believe, Mr. Foxlee? I am, sir.

7762. What works have you had charge of since you have been in New South Wales for the Government or for the Railway Commissioners? When I first came into the Colony, as I explained yesterday, I acted in the position of Deputy Engineer. I then had to do with most of the work proceeding upon the lines, and I have also had complete charge since September, when I was appointed as Engineer-in-Chief of Existing Lines.

7763. *President.*] September in what year? September last.

7764. *Mr. Young.*] Then you had a general superintendence over the whole? Yes.

7765. And not superintendence over any particular section? No.

7766. Who would measure up the work of the various contractors? The resident and divisional engineers. We call the engineers in charge of new works resident engineers, and the divisional engineers are those in charge of sections of the permanent way.

7767. I suppose you designed alterations, such, for instance, as the easing of curves on the mountains; that would be your duty? Yes.

7768. And the designing of tunnels to do away with the Zig Zag? Yes; all those works come under my control.

7769. Then, having made the drawings, the plans, and specifications for these works, you would hand them over for tenders, I presume? Yes; after the quantities had been approximated and the specification drawn out.

7770. Would you take the quantities yourself? Oh, dear, no.

7771. But, having done that, you would then leave it in the hands of the Commissioners until the tender was let? No doubt.

7772. And after that you would supervise these works in a general way? Yes; in a general way, directing my assistants from time to time as questions arose.

7773.

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7773. With the divisional engineers under you? With the divisional and resident engineers.
7774. And these resident engineers would do all the measurements and see that the work was properly carried out at the schedule rates? That is the custom. They see that the work is properly carried out, set it out, and measure it up.
7775. Is it the custom, or has it been the custom, in the various contracts you have seen let under the Commissioners, to give the quantities when tenders are called for? Approximate quantities are supplied, as a rule.
7776. And that the tenders are made from the lump sum of the quantities carried out? Yes.
7777. In measuring up the work of that contract afterwards, is it adjusted according to the schedule rates? Yes; the actual quantities of work are carried out and paid for at schedule rates.
7778. More or less? Yes, more or less.
7779. If there are any additional works which arise during the course of the contract, and which were not contemplated in the first instance, or if there is less work, I suppose you add it or deduct it from the quantities, as the case may be? That is so. Any additional quantity is added, and if there is a deficiency it is, of course, deducted. In fact, only the actual quantity of work carried out is measured up and paid for according to the prices in the schedule.
7780. Therefore it would be unfair to say, if anyone has said, that any works carried out after the contract was entered upon by the same contractor, and at the same schedule rates, would be additional? That would be quite unfair. I might mention, as you no doubt are aware, in carrying out a contract there are certain extra works for which no price will apply in the schedule, and those are adjusted afterwards. It would be unfair to say that those works are separate from the contract; they are contingent to it.
7781. Have all the contracts you have had under your superintendence been carried out in a similar fashion? I think so. I was just thinking that small cottages are sometimes let in the shape of a lump sum. If the drawings and specifications are not departed from we pay that lump sum, but all large contracts are let at schedule prices.
7782. *President.*] You mean anything connected with the permanent-way? Large works connected with the permanent way and things of that kind, your Honor.
7783. *Mr. Young.*] Have you anything to do with the acceptance of contracts? Nothing beyond what the Chief Commissioner has already told you. When contracts are advertised, the tenders come in, and the Commissioners turn them over to me for report and examination; and I make it a rule to see the Commissioners, and to make my recommendations, and tell them why I make those recommendations.
7784. When a number of tenders are handed to you for report, do you work out the totals from the schedule rates and see that the prices are correct? Yes; we always check the various items. That is done before the tenders are brought before me.
7785. And therefore if you found a tender containing brickwork at 20s. per cubic yard, knowing that the price was not sufficient, how would you calculate that under the general average of schedule rates? We calculate them at whatever price is set out in the schedule to see whether they have been accurately worked out, and if I find any glaring blunder of that kind I draw the Commissioners' attention to it.
7786. Is it a fact that these tenders are taken at the lump sum? Yes; the lowest total is taken.
7787. How would you act in a case of this kind: Suppose you discovered two or three items lower than you considered they ought to be (say) perhaps two-thirds or a half lower, and which if carried out accurately would make the total less than it was represented to be, would you still take the lowest total? Yes, it would be the lowest total.
7788. How would you proceed in a case of that kind? I should draw the Commissioners' attention to it, and point out that the prices were below what I considered was fair.
7789. And then contractors would be communicated with? Yes, that is the custom. Where there are glaring blunders of that kind the Commissioners send for the contractors, point out the blunders, and ask them whether they are willing to carry out the work at the price they have filled in.
7790. Even if they are errors? Yes; that is done invariably.
7791. With your experience of works generally, do you think the best and most economical system has been adopted here in the execution of works? I do, sir.
7792. Do you know anything of any "bogus" contracts? I do not, indeed, sir.
7793. *President.*] Do you supervise these works as they are being carried on? I take a general supervision of them.
7794. To see that they are carried out in accordance with the specifications? I take a general supervision; I go over the lines, and I direct my assistants from time to time generally as to the detail of the work.
7795. If you do not do it personally your Department does? Undoubtedly.
7796. And the work is ultimately passed by you or by your officers? Yes.
7797. And before the work is passed, have you to report to the Commissioners that it is being carried out in accordance with the contract? Not in that way exactly. I pass a final certificate, and until the work is satisfactorily completed the contractors do not get their balance.
7798. And the giving by you of the final certificate is evidence to the Commissioners that you are satisfied with the work? That is so.
7799. *Mr. Young.*] The resident engineers measure up the work, of course, and for any superintendence while you are away you have to depend upon them? Quite so.
7800. *President.*] It is not left to the contractors? Oh dear no.
7801. It is carefully measured up and reported to the Commissioners? That is so.
7802. *Mr. Kethel.*] I suppose during the progress of the contracts there is sometimes a necessity for additional work to be done? Yes.
7803. When a tender is made or given by a contractor for that work, is that tender referred to you before it is finally accepted, or is it accepted by the divisional or resident engineers? No contracts are accepted by the divisional or resident engineers. After they are inspected by me, I refer them to the Commissioners, and make a certain recommendation.
7804. Do all the tenders come to you for inspection and approval before they are forwarded to the Commissioners? Yes.
7805. You know there are many unforeseen pieces of work to be done which arise during the progress of a contract, and if that work does not come within the schedule of prices it is necessary, I suppose, to ask the contractor to give a price? The general way is to get a price for it, and then to submit it to the Railway Commissioners for their approval.

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7806. Is that done in every case? Speaking generally, that is the procedure. There are little odds and ends which are left for settlement until the work is completed. Then I go through the whole thing and recommend what allowance should be made.
7807. So that no contracts can possibly be annulled or altered, nor can any subordinate contracts be entered into by any officers without your sanction? No; nor by me without reference to the Commissioners.
7808. *Mr. Young.*] Do you know Messrs. Monie, Angus, & Co. as contractors? Yes.
7809. They have done a considerable amount of work for the Government or the Commissioners, have they not? Yes; they have done a large amount of work for the Commissioners.
7810. Have they done that work satisfactorily? Yes; they have done it very well indeed, speaking generally.
7811. Do you know the various contracts they have entered into? Yes.
7812. Do you remember them from the beginning of the present contracts? The contract for the southern duplication and others were let before I came into the Colony, but I know all about those which have been let since I have been here.
7813. Were they let in the usual way by public tender? Yes, I believe so.
7814. And therefore I suppose, you saw nothing of a "bogus" character about them? No, indeed.
7815. One of the charges we have to try is that the contractors have made contracts which were intentionally "bogus." I want to know if you have any knowledge of such contracts? I do not know of any "bogus" contracts.
7816. Do you know Mr. M'Sweeney as a contractor? Yes.
7817. Has he done his work as he ought to do? Yes, very well, indeed, I think.
7818. Do you remember whether that tender was let publicly? I do not know of any contract let to Mr. M'Sweeney except by public tender.
7819. And he got it because he was the lowest I presume? Yes.
7820. Was that the case with the whole of them? Yes.
7821. Did you observe anything of a "bogus" character about M'Sweeney's contracts? No, sir, I did not.
7822. Now, Gulliver and Tait, do you know them as contractors? Yes.
7823. Are they a respectable firm? Thoroughly so.
7824. Are you aware of what contracts they have had? The first contract they had since I arrived in the Colony was for the widening of the line between Strathfield and Flemington. A second contract was for the widening of the line from Long Cove Creek to Croydon.
7825. How did they obtain those contracts? By public tender.
7826. Not because they were the highest I presume? No, sir, because they were the lowest.
7827. Did you observe anything "bogus" about their contracts? Not at all, sir.
7828. Whatever "bogus" may mean? I am wondering what it does mean.
7829. *Mr. Kethel.*] Can you define the word "bogus," Mr. Foxlee? I have not had occasion to think what it means.
7830. *Mr. Young.*] While you have been employed under the Commissioners, do you think that in the calling for tenders, or in the arrangements generally for that class of work, the Commissioners have displayed gross ignorance? I am sorry to be called upon to answer such a question, if you will allow me to say so.
7831. You need not hesitate to answer the question? I think the work has been carried out in the best possible way. The Commissioners have shown the greatest competency.
7832. *President.*] There is no other way, Mr. Foxlee, which you could suggest in which the work could be carried out so economically or so well? I may say there is no other way of carrying out this work. I have had to do with the expenditure of millions of money, and I know of no other way of doing this particular kind of work.
7833. *Mr. Kethel.*] This system, I suppose, has been adopted on your advice and recommendation? Yes, to a large extent, since I have been here.
7834. *President.*] This was done not only while you were in your present office but at the time you were deputy? Yes, sir.
7835. So far as you know the same practice prevailed? Precisely, and it was inaugurated before I came into the Colony.
7836. *Mr. Young.*] Then you think that "incapacity or something worse" is not applicable to the present Commissioners—I mean in reference to the engineering part of the railways? I think it is an insult to use such an expression, if you will pardon me saying so.
7837. *President.*] You mean to the intelligence of the persons to whom it was addressed? I do, sir, as well as to the Commissioners.
7838. *Mr. Kethel.*] But, Mr. Foxlee, it was addressed to Members of Parliament? If you will allow me to say so, sir, it was a great insult to have said such a thing.
7839. *Mr. Young.*] It might have been spoken ironically. At any rate, from your extensive experience of railway works, and as a civil engineer, can you suggest any better plan of doing the work than has already been adopted by the Commissioners? No, I cannot.
7840. You think there has been no robbing of the country by the method adopted—by the "incapacity or something worse" of the Commissioners? Yes.
7841. *President.*] You have had experience I think you told us not only in this Colony but in England? I had a very varied experience in England.
7842. Do you know the way in which work of this kind is carried out in England by railway companies? For the greater portion of my time in England, I was connected with the leading railway Company, the London and North-Western, and that Company let its contracts and carried them out in precisely the same way as we are doing here now.
7843. The London and North-Western Railway, I suppose, is one of the largest railways in the world, is it not? It has a capital of £106,000,000.
7844. *Mr. Young.*] It is considered, is it not, that the management of the North-Western is the best in England? It has always been looked upon as the cradle of railway engineering and management.
7845. *President.*] That means the best of railway management, I suppose? Yes; the training-ground is perhaps the better expression.

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7846. And when you say it is the best training-ground in England, would you include the rest of the world? I think so, sir. The Pennsylvania railroad, in the States, has remodelled itself on much the same plan as the London and North-Western, and it is looked upon, in fact, as the London and North-Western of America.

7847. *Mr. Kethel.*] Mr Foxlee, it was stated by Mr. Schey, in Parliament, that tenders were called for certain work that had to be done on the Northern line, and that twenty tenders were sent in. Every one of those tenders Mr. Schey stated were rejected, but two firms were communicated with and asked to amend their tenders, which were then accepted without any notification to the other tenderers, and thus undue preference was given to certain persons. Are you in a position to say anything about that? I do not know any thing at all about that.

7848. *Mr. Eddy.*] Mr. Foxlee was not in charge of the railways at that time, sir. I think I explained this matter a few moments ago. If my memory serves me aright, we received twenty-one tenders for this particular work. The two lowest tenders were those of Mr. M'Sweeney and the late Mr. David Proudfoot. Instead of giving the whole of the work——

7849. *President.*] You have explained all that, Mr. Eddy.

7850. *Mr. Eddy.*] Yes, your Honor, that is the case I referred to.

7851. *Mr. Kethel.*] That is the case referred to in this statement?

7852. *Mr. Eddy.*] Yes, sir.

7853. *Mr. Kethel.*] There is another definite statement made by Mr. Schey. He said in his speech: "So well did those contractors get on that some of the conditions of their contracts were broken, and a fresh agreement was entered into." Have you any knowledge of that? I have no knowledge of that at all.

7854. I do not know to what particular contractor or contractors he refers, but there is the statement, and as it has been made definitely in Parliament, it would be well if it is not borne out by facts that some explanation should be given? I am afraid I cannot give you any explanation.

7855. *Mr. Eddy.*] I know of nothing of the kind. We certainly would not enter into any new arrangement with the contractors.

7856. *Mr. Kethel.*] Immediately following that quotation there is another remark, which I do not expect Mr. Foxlee will be able to answer. Mr. Schey says, "The contractors took over from the department some £1,200 worth of tools when the 1,100 men were dismissed, and if they have been paid for it, is only since the row occurred." I do not know of what row he is speaking.

7857. *Mr. Eddy.*] I think that must refer to the difficulty with Proudfoot & Co.; but I cannot speak at this moment with any certainty as to their taking any tools from us.

7858. *President.*] No; it is as to the department taking tools from them.

7859. *Mr. Kethel.*] As I read the quotation it is that "contractors took over from the department some £1,200 worth of tools."

7860. *President.*] In another passage it is stated that the department took over £1,200 worth of tools. On comparing the volumes, which both profess to be reports of *Hansard*, there appears to be a difference in the quotation.

7861. *Mr. Eddy.*] Perhaps those are only proof copies.

7862. *President.*] Here is the official copy, and according to that it would appear that Mr. Schey stated that "the contractors took over the tools from the department."

7863. *Mr. Eddy.*] I will undertake to ascertain, your Honor, before Monday whether they took the tools over or not, and whether they paid for them or not. At this moment the Commissioners have before them an application from Proudfoot & Co. to take over all their tools; but we have replied that until hthe wole question outstanding between the Commissioners and themselves is settled we cannot deal with it.

7864. *Mr. Kethel.*] You observe, Mr. Eddy, that these are definite statements made against the Commissioners, and of course we desire as far as possible to be informed as to their truth or falsehood.

7865. *Mr. Eddy.*] I promise the Commission that on Monday they shall have the exact facts of the case.

7866. *Mr. Kethel.*] Would you kindly give the names of the resident engineers in charge of the various parts of the line in the metropolitan area while these duplication works were being carried out as well as the reballasting and relaying contracts?

7867. *Mr. Eddy.*] I think we had better have a carefully prepared list handed in.

7868. *President.*] Can you have those officers here on Monday?

7869. *Mr. Eddy.*] We will try and have them all here, your Honor.

7870. *President.*] I should like Mr. McLachlan to go into the box for a moment.

Mr. McLachlan here entered the box, and was examined:—

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7871. *President.*] You are Secretary for the Railway Commissioners? Yes.

7872. And have to do with the advertising of tenders? Yes, your Honor.

7873. In the case of those contracts referred to by Mr. Eddy, and in connection with which certain papers have just been put in, were tenders publicly called for? I think in every instance referred to by the Chief Commissioner tenders were called for through the newspapers.

7874. What papers do the advertisements appear in? They are published in all the Sydney papers, and in the *Gazette*, and if it is a country matter we publish in the leading local papers.

7875. It is in all the daily papers? Yes, in every Sydney daily paper, your Honor.

7876. *Mr. Young.*] What time do you generally give in which the tenders are to be made? It varies; but I think you may take the average time at about a fortnight. If it is a big work we sometimes allow a month.

7877. Having called for tenders, what is the next procedure in regard to them? Usually, if it is a contract for construction work, we have conditions and specifications prepared, and they, with the plans, are on view in the Engineer's office, and intending contractors and tenderers visit the Engineer's office or my office, and get information in regard to the contract. Then, on the day specified, the tenders, which have been deposited in a locked box, are at a certain hour taken out in the presence of the Commissioners, and as each tender is taken from its envelope it is initialled by the Commissioners, and scheduled.

7878. The Commissioners, I suppose, really form themselves into a kind of tender board? Two Commissioners, as a rule, are present at the opening of tenders.

7879.

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7879. And a list of the tenders is then made? A schedule of them is made.
7880. Is the lowest tender, or all the tenders, given to the Engineer to report upon? He has the whole of the tenders to go through.
7881. And to report upon? Yes.
7882. Then they come back to be reconsidered? Yes; they come back to be reconsidered in the light of any recommendation he may make.
7883. Is it customary to let any work in any other way? Do you mean then by public tender?
7884. Then by tender, as you have described? Occasionally, when there has only been a small work to undertake, we have written to several firms for prices, and sometimes, when additional works have arisen in connection with contracts already let, the contractors have executed those works at their schedule prices. You will find papers already put in referring to cases of this kind. For instance, the Chief Commissioner has mentioned the deviation at Bell. Angus & Co., I think it was, had a number of men employed on that section, and they were enabled to make this deviation quickly, and they received schedule prices.
7885. *President.*] That was in consequence of a landslip? Yes.
7886. And the work had to be done very quickly? Yes, your Honor. There are a few cases of that kind in which we have not obtained tenders.
7887. *Mr. Young.*] In the case you have mentioned the schedule of prices worked to was the schedule attached to the contract? That has been the rule.
7888. And was that contract the lowest received? I think that was so. It has been the rule to carry additional work out at the schedule of prices under the contract, and almost invariably we accept the lowest tender; and, therefore, it would follow that it was the lowest tenderer who was carrying out the work.
7889. *President.*] That will appear by the papers? Yes, your Honor.
7890. *Mr. Young.*] These exceptions that you speak of, do they occur very frequently? As a rule, they would not be extensive.
7891. What sort of works would they be generally? I have mentioned the deviation at Bell, then there was a quantity of work to be done at Bourke which arose out of the floods, and we took Angus & Co.'s men to do it. Then there was some gradients and curves which we wished to reduce on the Western line.
7892. They were generally emergency works? Yes; the Commissioners wanted those works done quickly, and Messrs. Monie and Angus had the opportunity of carrying them out at their schedule of prices. I believe one or two curves and gradients were cut down by M'Sweeney, but they practically came on M'Sweeney's length, so that it might be taken that those works came within his contract for relaying and reballasting.
7893. That is all that has been done without tender? Yes, sir; practically, everything else has been done by public tender. There may be a few other exceptions but they are very few, and you may take it that as a general rule all work is tendered for.
7894. Where any departure from the general rule has been made it has been on the ground of urgency? Yes, there has been some cause for doing it. I think you will find a full explanation in the papers which we are laying before the Commission.
7895. *Mr. Eddy.*] As an illustration, Mr. President, I might explain that the Commissioners had before them, this morning, some work they were anxious to get done very quickly. It was the strengthening of some bridges, and we decided to send to some half-dozen firms who we know are able to do work of that nature, and ask them to give a price quickly. We shall decide when the prices come in who will have the work, and then it will be undertaken expeditiously. In this case the work has not been advertised, but the Commissioners will decide from the figures placed before them which firm shall have the contract.
7896. *President.*] If you call for tenders time will have to elapse for persons to read the advertisements, and to consider the matter, and in that way there would be delay.
7897. *Mr. Eddy.*] Yes, sir. It would waste considerable time, but by sending to a few firms in whom we can place reliance, and who understand the class of work, time is saved. It is almost the same as the locomotive question which has already been before you.
7898. *Mr. Kethel.*] Limited competition?
7899. *Mr. Eddy.*] I have another case in my mind. We wanted an over-bridge put up at Flemington. There was a narrow escape of some one being killed, and representations were made to the Commissioners. We were pressed to put up an over-bridge, and in order to have the work done quickly, we asked several firms to quote a price. By adopting that course the work was finished in about a fortnight or three weeks from the time we decided to have it done.
7900. *Mr. Kethel* (to Witness.] As to the method of paying contractors—have you any knowledge of that, Mr. McLachlan? We get certificates from the engineers monthly after they have measured up the work. Of course, the work has to be certified to as being correct, and it is directly certified to us.
7901. And then the contractors are paid by the Commissioners? They are paid out of the Treasury.
7902. *President.*] What document is given by the Railway Commissioners which enables payment to be made to the Treasury? A signed and certified voucher goes from us, that the amount is correct, and then it is simply a matter of money being passed over the counter at the Treasury.
7903. In giving that voucher do the Railway Commissioners know anything of the wages paid to the men. Does that matter come before them in any way? No, your Honor, simply the quantities.
7904. I mean the amount of wages paid to the men, does that in any way come before the Railway Commissioners? That is not a matter which would come before the Commissioners.
7905. Not in any way? Not in any way, your Honor.
7906. *Mr. Kethel.*] You simply get a certificate from the resident engineer in charge of the work that a certain quantity of work has been done at the schedule rates of pay? Yes.
7907. And that is approved by the Commissioners, certified to, and forwarded to the Treasury for payment? Yes.
7908. And the contractor draws his money through the Treasury? Yes.
7909. *Mr. Young.*] Have you seen anything, Mr. McLachlan, which would favour the ideathat the Commissioners "have connived at the sweating of the men working on the railways"? Of course, we have nothing to do directly with the workmen. It may be that that statement refers to the competition which

arises

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arises through the calling for tenders. It may be considered that we cut down prices in that way, but it is a far-fetched suggestion.

7910. *President.*] You mean by taking the lowest tender? Yes.

7911. That will do, Mr. McLachlan, thank you. Are there any other officers here, Mr. Eddy?

7912. *Mr. Eddy.*] On Monday we shall have some of our engineers here. I believe one of the contractors is present, Mr. Tait.

7913. *President.*] Then, I think we had better take his evidence.

Mr. Thomas Tate sworn and examined:—

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7914. *President.*] You are a member of the firm of Gulliver and Tait? Yes.

7915. And you are contractors? Yes.

7916. You have done contract work for the Government? Yes; for the Railway Commissioners.

7917. What has been the extent of your contract work? We have had two of the quadruplication contracts. One is practically finished—the Homebush one—and the other is still being carried on, but it will be finished in a very short time now.

7918. In each of these cases were there tenders for the work? Public tenders were called.

7919. And how did you stand? We were lowest in both cases.

7920. And your tender was accepted? Yes.

7921. Have the Railway Commissioners anything to do with the carrying out of contracts beyond seeing that you do the work in accordance with the specifications? They do nothing beyond making a periodical inspection.

7922. To see that the contract is being properly carried out? Yes.

7923. And in no other way do they interfere with your contract? Not in the slightest, your Honor.

7924. Have they anything to say as to the persons you employ? No, your Honor; they do not interfere with us in any way.

7925. Or as to the rate of wages paid? In no way whatever. So far as I am personally concerned, I may say that I have only met Mr. Eddy once, and that was only for a few seconds, while he was on the Ashfield contract. I have not had the pleasure of meeting Mr. Oliver, and I have only met Mr. Fehon about three times.

7926. I am not talking about the Commissioners personally, but of the officers of the department. I suppose they only supervise your work? That is all the resident engineers and inspectors have to do.

7927. *Mr. Young.*] Have you had any other contracts besides those mentioned by the Chief Commissioner? Only the two. We have had contracts under the Water and Sewerage Board, and the Penrith Council.

7928. You say you have only had two contracts under the Railway Commissioners? That is all.

7929. And you obtained those, I understand, because you were the lowest tenderer? Yes, in both cases.

7930. I presume you have bills of quantities supplied with each contract? Yes.

7931. And did you furnish a schedule of rates with your contracts? Yes.

7932. And I presume your work was measured from time to time by the district engineers? Yes; they make monthly measurements.

7933. Were those measurements priced out at your schedule rates? Yes; afterwards.

7934. Did you get anything beyond those schedule rates for anything you did? Not that I am aware of. At the present time there are certain extras, or at least what we consider extras, in dispute, and they will have to be threshed out when the contract is finished.

7935. *President.*] Up to the present time the Commissioners have not acceded to those extras? In no way.

7936. *Mr. Young.*] The contract was made with the Commissioners in the way already stated? Yes.

7937. And in no other way? No. The only other way a contract has been entered into, would refer to a sewer at Ashfield, which would be looked upon as an extra. We were asked to give a price and we did so, but unfortunately for us Mr. Foxlee named a price at which he considered the work should be done, and it was lower than our price. We had the right to do the work at Mr. Foxlee's price, or to reject it, but it being part and parcel of the contract we thought it better to do the work than to allow another contractor to come in.

7938. Your schedule did not apply to that? Not in that case.

7939. Do you know of any other method of tendering, or have you carried out contracts in a different manner to those you have done for the Railway Commissioners? No. That seems to be the usual practice now, schedule rates all through.

7940. You have had considerable experience elsewhere, I suppose? So far as I am personally concerned I have not had great experience in railway contracting, but my partner has.

7941. Do you know whether contracts are carried out in other places in the same way? Yes, I think schedule rates are generally adopted now.

7942. And you say the District Engineers superintend the work? Yes.

7943. And they measure up once a month? Yes; or their subordinate officers do the work.

7944. *Mr. Kethel.*] Do the Commissioners carry any part of your materials free over the railways, or do they charge you freight on everything? The only materials they carry free are sleepers and rails.

7945. Those they are bound to carry free under the terms of the contract? Yes, we unload, of course.

7946. Are you allowed to make use of the telegraph lines free for the purpose of your business? No, sir; not in the slightest way.

7947. If you require to send a telegram you have to use the public telegraph service? Yes, we have to pay for it in the ordinary way.

7948. All other plant and material, except sleepers and rails, which are carried free under the terms of the contract, you have to pay for, I suppose? Yes.

7949. All other plant and material, whatever it is, you have to pay for yourselves? Yes. Up to the present time we have paid something like £2,000 in freights on our two contracts.

7950. Do the Commissioners supply you with ballast? No; we supply our own ballast, and pay the usual rates for it.

7951. No matter where it comes from, you have to pay for the haulage of ballast? Yes.

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7952. Then any statement that you and other contractors have been allowed the use of the lines for the haulage of ballast, or that you have received any privileges outside your tender or your contract would not be true? I can assure you it does not apply to us in any way. As I said, we have already paid over £2,000 for freight in connection with our two contracts.
7953. *Mr. Eddy.*] The Railway Commissioners provide all the permanent-way material and the top ballast for the contract, do they not? All blue metal.
7954. And you told the Royal Commission clearly that you have had no personal acquaintance with me, and that there can be no possible suggestion that I am pecuniarily interested in any of these contracts? I have told them so.
7955. *Mr. Eddy.*] Perhaps, Mr. President, I might make some reference to the schedule of prices put in for day labour. I believe there is some misconception in that respect. You will find in the schedule of prices a higher rate of wage for the men than is usually given by the department. A contractor in tendering for work must necessarily stipulate a higher rate of wage for his men in his schedule of prices than he really pays. The cost of the men to him is something more than the wages he pays. He has to provide for the cost of the supervision of his men, for all his office expenses in connection with the payment of the men, for interest upon his tools and plant; and he therefore has to measure his profit by the difference between what he pays to his men and what he pays for the material, and between the person who gives the contract. It is, therefore, not fair for anyone to say here to the Commission that the Railway Commissioners are paying 9s. a day for the men, and that the men are only receiving 7s. 6d. or 8s. 6d. per day, and that the difference is going into the pocket of the contractors. Nothing of the sort. As I say the contractor has other charges to provide for beyond the actual wages paid to the men.
7956. *President.*] I do not quite understand how the Railway Commissioners have anything to do with the wages of the contractors' men. That was the question I have been asking all through, and I am told that the Commissioners have nothing whatever to do with the wages paid by the contractors.
7957. *Mr. Eddy.*] That is so, your Honor. But I have heard all sorts of statements as to collusion between the Commissioners and the contractors by which a higher rate of wage is put down in the schedule of prices that the men receive.
7958. *Mr. Young.*] Is it not usual in all tenders, in addition to prices of quantities, to put down that the contractor will supply day-labour?
7959. *Mr. Eddy.*] That is so.
7960. *Mr. Young.*] And that is the class of labour you are alluding to?
7961. *Mr. Eddy.*] One of the instructions issued by the Commissioners to their officers is this, that if there is anything in connection with the carrying out of a particular work which is running into day-labour to any considerable extent that the matter must be brought under their notice as promptly as possible with a view to minimise that class of labour as much as possible. In making these contracts, of course, it is not possible to foresee anything, and that is why this schedule of prices for day-labour goes in.
7962. *President.*] Have you any further evidence to go on with to-day, Mr. Eddy?
7963. *Mr. Eddy.*] Unfortunately we have not been able to get any other contractors here, they are all out of town.
7964. *President.*] But on Monday you will have them here with any other witnesses you may desire to call, because we desire to conclude the examination of witnesses as quickly as possible.
7965. *Mr. Eddy.*] We will have them all in attendance on Monday, your Honor. There was one question in connection with the alleged false answers to Parliament which I desire to refer to. The question and the answer have already been mentioned and also a speech which I delivered at the Railway Institute. The speech was quoted to prove that the answer given in Parliament was false. If your Honor likes I can clear that matter up in two minutes.
7966. *President.*] That comes under the sixth charge.
7967. *Mr. Eddy.*] Mr. Schey referred to an answer in which it was stated that the alterations in the platforms for Baldwin engines would cost £50, and he pointed out that, in a speech I myself delivered at a latter day, I remarked that the cost would amount to a very much larger sum. I will put it in as evidence, the question as it was asked in Parliament and the answer. Amongst other things, Mr. O'Sullivan asked the Colonial Treasurer,—"Are the suburban railway stations being altered to accommodate the imported American engines; if not, what is the meaning of the extensive alterations now being made at certain suburban railway stations?" The answer to that question was—"The platforms at several suburban stations were slightly modified at a cost not exceeding £50 in consequence of their not being to gauge. The extensive alterations which are going on are the works in connection with the duplication of the line." It was the suburban stations which were referred to in the question put to the Railway Commissioners, and our Engineer estimated at the moment that the cost would not be more than £50. A little later on it was decided to make a somewhat larger change for reasons I need not trouble the Commission with, and I believe the total expenditure in the end came to about £100 or £150. That was the expenditure in connection with that matter.
7968. *President.*] You say that at the time the cost was estimated at £50?
7969. *Mr. Eddy.*] Yes. That was all the expenditure which it was thought would be necessary for the work then being done.
7970. *President.*] On the suburban lines?
7971. *Mr. Eddy.*] Yes, on the suburban lines. In the remarks which I made at the Railway Institute, when the medals and certificates were being given to the successful candidates in the Railway and Tramway Ambulance Corps, I took the opportunity to make some reference to the work that was being done by the American engines. I stated then, and the figures quoted were those that had been supplied to me within a day or two previously by the Engineer as to the actual expenditure, that—"The total cost to date of altering platforms and buildings to the standard gauge have been £2,478 5s. 4d., while the cost of slewing roads past stations had been £112 15s. 11d." That applied to the whole of the railways in the Colony, 2,182 miles. So that the difference in the figures simply arises from the difference in the actual conditions.
7972. *President.*] One refers only to the suburban lines and the other to the whole of the lines in the Colony?
7973. *Mr. Eddy.*] Yes.
7974. *Mr. Kethel.*] I observe in Mr. Schey's speech, immediately after his reference to these alterations, some allusion to a State car. Has that matter ever been cleared up? 7975.

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7975. *Mr. Eddy.*] I can put in the answer itself, if you like, sir, and the original paper showing that the answer given to Parliament was absolutely true.
7976. *President.*] The papers you have already brought into Court, Mr. Eddy, I understand, are to be arranged in accordance with the different contracts?
7977. *Mr. Eddy.*] Yes, your Honor. Mr. McLachlan will assist the Secretary for the Commission to put them in order.

MONDAY, 6 JUNE, 1892.

[*The Commission met at* 11 *a.m., in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

7978. *President.*] Can you give the Commission the name of your informant, Mr. Schey?
7979. *Mr. Crick.*] May I be allowed to say, Mr. President, that, as promised by Mr. Schey at the last sitting of the Commission, certain steps have been taken to endeavour to see the man who made this declaration. If your Honor will permit me, I will read to the Commission the reason why Mr. Schey deemed it necessary to take the steps he did. On receiving the declaration, Mr. Schey gave the following undertaking:—

"I, WILLIAM FRANCIS SCHEY, Member of the Legislative Assembly of New South Wales, do hereby pledge my honor and word that I will not part with the manuscript statement made and signed by , relating to the railway contracts of Proudfoot Co., to any person whatever except by permission of the said ; and in making use of the same for the purpose of obtaining an inquiry into the matters alleged therein I will not divulge the name of the said except by permission as aforesaid.—(Signed) W. F. SCHEY."

I propose to put Mr. Schey into the box, and let him tell the Commission what steps he has taken to see this person. In the meantime I will ask the Commission, Mr. Schey having signed that undertaking, whether they would ask him to divulge the name of his informant, or whether they would take another course which is open to them. Beneath that undertaking is this:—

"I HEREBY authorise Mr. Schey to show the document above referred to to Messrs. Hoyle, Sheldon, McCourt, Houghton Morgan, Sharpe, McGowan, and Reid, and to any Minister of the Crown excepting Mr. Suttor; also to exhibit the same to Messrs. Garvan and Brunker.—(Signed) ——."

I may say, your Honor, that this document has been shown to all these gentlemen except Mr. Houghton Mr. Garvan, and Mr. Brunker. Some other Ministers have seen it, and amongst the Members of the Legislative Assembly who saw the document were Messrs. Hoyle, Sheldon, McCourt, Morgan, Clarke, McGowan, and G. H. Reid. So that if the Commission desire to ascertain the name of Mr. Schey's informant they might call any one of those gentlemen before them and ask him to give the name if they think that would be the better course; or if they consider that Mr. Schey can be relieved of the solemn obligation which I have just read to the Commission then Mr. Schey has no objection to divulge the name.
7980. *President.*] Will you read the words of that undertaking again, Mr. Crick.
7981. *Mr. Crick.*] The undertaking is: "I, William Francis Schey, Member of the Legislative Assembly of New South Wales, do hereby pledge my honor and word that I will not part with the manuscript statement made and signed by , relating to the railway contracts of Proudfoot & Co., to any person whatever, except by permission of the said ; and in making use of the same for the purpose of obtaining an inquiry into the matters alleged therein I will not divulge the name of the said except by permission as aforesaid.—(Signed) W. F. SCHEY." That permission, your Honor, we have not got, but we are prepared to say on oath what steps we have taken to obtain that permission, or to see whether it would be given or refused to the Commission. We had permission to show the document to the gentlemen I have named, and in accordance with that permission we did show it to those gentlemen.
7982. *President.*] Besides the names you have mentioned, the promise includes "any Minister of the Crown, excepting Mr. Suttor."
7983. *Mr. Crick.*] That is so, your Honor.
7984. *President.*] Was the document shown to any Minister of the Crown?
7985. *Mr. Crick.*] The present Colonial Secretary, Mr. G. R. Dibbs, saw it, but he did not read it through. The present Minister for Railways, Mr. John See, also saw it, and he read it. In view of the undertaking given by Mr. Schey, your Honor will see that he cannot divulge the name of his informant, or the contents of the declaration, without breaking that solemn bond; but there is another way by which the information can be obtained, and it is for the Commission to say whether they will adopt that course. In the meantime I suppose there will be no harm in Mr. Schey's stating what steps he has taken to see the person who made this declaration.
7986. *President.*] I think that evidence had better be given.

Mr. Schey further examined:—

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7987. *Mr. Crick.*] You have already been sworn, Mr. Schey? I have.
7988. You are recalled on your former oath. Now, as regards the statutory declaration which you referred to on Friday last, you stated to the Commission that you would endeavour to see the person who made it, and obtain his promise to publicly give his name. Would you state to the Commission what steps you have taken in that direction without divulging the name of the person or his residence—state what steps you have taken since the last sitting to see the person who made the declaration? I have spent considerable time, since I made that promise to the Commission, in endeavouring to see the person spoken of. Immediately after leaving the Commission on Friday afternoon I made one call, only of a very brief nature, and then I proceeded to the residence of the person named, his address being known to me. On asking for the person named at his address, a lady, who I understand is his wife, informed me that her husband was not at home, that he was down town somewhere, and as he was irregular in his habits it was impossible to say when he would return, but that very likely he might be found in Pitt-street, somewhere

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somewhere near King and Pitt Streets, as he frequented that part of the town. Immediately after leaving the residence, I took a tram and proceeded to town, and spent some further time in trying to find the person named about the locality spoken of, but I did not succeed in doing so. On Saturday afternoon I again proceeded to the address already referred to, and made another endeavour to see the person I was in search of. The same lady again informed me that her husband was not at home, that he had gone out immediately after his dinner, I think she said, but he had gone out at all events, and she was unable to say when he would return. I then wrote a message on a piece of paper and left it with this lady, asking the person I desired to see to meet me at 11 o'clock on Sunday morning. At that hour I proceeded to keep the appointment, but the person named did not turn up. In the afternoon of the same day, in company with a witness—I may say, your Honor, that I deemed it advisable to take some person with me as a witness of anything that might transpire, and I took my brother with me that he might be a witness of anything that took place—in company with my brother, I proceeded to the address of the person spoken of, and when we got within a short distance of that person's residence I saw that person ahead of me in company with another person, and proceeding in the same direction.

7989. State the name of the person in whose company he was? I will state that in one moment. The person I was looking for was not known to my brother in any way; the person who was with the person I was looking for was not known to me in any way at that time, but I subsequently discovered who he was. I saw these two persons proceeding in front of me and my brother, and I saw an action which led us to suppose that the person who was with the person I was looking for passed something from his pocket to his hand, and from his hand to the hand of the person I was looking for. The two then hurriedly separated, the one turning up a small side-street, and the other proceeding in a different direction. Instructing my brother to keep his eye upon the person whom I did not know, I proceeded to follow the person I did know, and we spent some considerable time thereafter in following these two persons round the neighbourhood, because they doubled through a number of small streets, and came out again in different places in the same locality, and eventually I lost sight of the person I did not know. To the house of the person I was looking for there is a back lane, and I went into that back lane to see if either of these persons were there. I proceeded past the back gate of the house of the person I was looking for, and went to the top of the lane. The lane is only very short, and having reached the end of it I turned round to come back, and as I did so the other person who was with the person I was looking for emerged from the back gate of the residence of the person I was looking for, and doubled round into the main street again. He then crossed the road and went around three sides of a square, coming out again higher up; and my brother followed him through some more streets and back again to the yard of the house of the person I was looking for. This second person subsequently left the back yard, took some more turnings, crossed the main street, went around three sides of another square, and finally entered the front door of the residence of the person I was looking for. In the meantime, I had met in the street another person, whom I knew, and he had said good-bye to me and gone to his own house; and when this other person went into the first-named person's residence I sent for the third person just referred to, and I kept watch upon the house to see that no one left it until my brother and the other witness returned. When they did return the third person and myself kept watch at the back gate of the residence of the first-named person, while my brother kept watch upon the front of the house in question. Very shortly afterwards we received a signal from my brother that the second-named person had left the front door of the house, and we immediately proceeded to follow him. I had already passed him twice and obtained a good view of him, so that I might be able to identify him thereafter. I proceeded up one side of the street, following this person, who appeared to be making directly for town, and my brother and the other witness proceeded on the other side of the street. On arriving at the tramline and finding a tram just on the point of starting I jumped into it and went in the same direction that the second-named person was going. At the next stopping-place I alighted from the tram and took up a position at a corner where there is a gas-lamp, under which the person spoken of must pass, so that I could obtain another view of him. The person named did pass, and I obtained a full view of him, so that I should be able to identify him afterwards. In the meantime my brother and the third person named had followed the second person down the street, had overtaken him and turned round, and they also obtained a good view of him in a good light. I subsequently joined my brother and the third person named, and I asked the latter, as he did not follow the person we were tracing further, whether he knew who he was, and he replied, "I know him very well. I have known him for the last fifteen years." I said, "Who is it?" and he replied, "It is Mr. Carson Woods.". That is a truthful statement, and having identified that person he could be put into the box and recognised. Having obtained his name and address,—he lives somewhere in the same locality of the Glebe I believe,—having obtained his name and address, I may say that my brother and I two or three times during this amount of travelling called at the house and asked whether this person was in.

7990. That is the house of the person who made the declaration? Yes, at the house of the person who made the declaration, and on each occasion the lady, who I have said I presumed is the wife of the person I was in search of, denied that he was there. But I had already seen him twice in the vicinity, and the last time I saw him he was proceeding directly to the house, and, therefore, I had every reason to believe he was in the house when I called. I then made up my mind that the person named did not intend to see me under any circumstances, and, consequently, that I would not be able to see him, and, therefore, I went home without taking any further steps to find him. I may say that I got home just before 7 o'clock last evening after that search, and I have every reason to believe that the person who has been identified as Mr. Carson Woods intended to return to the same house last night, as when he went into it he had a heavy walking-stick, and when he left the house he did not carry the stick, and the natural presumption is that he would return for it some time later. That is a summary of all the steps I took to get an interview with the person named.

7991. Did his wife tell you that he was about to go anywhere? Yes; she informed me that he would probably be going to Newcastle—that he expected to go away to Newcastle. She thought he had some work there.

7992. *Mr. Crick.*] Those, your Honor, are the steps we have taken, and, as your Honor will see, they have been pretty exhaustive steps, to have an interview with this man.

7993. *President.*] Very exhaustive, apparently. Mr. Schey, can you tell us whether Mr. Carson Woods has any contracts with the Railway Commissioners?

7994. *Witness.*] I do not know, your Honor.

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7995. Do you know whether he had any reason of any kind for preventing this person from seeing you? I do not know of any reason in my own knowledge.
7996. But if there is any reason in your mind of any kind is it a reason in connection with the Railway Commissioners, that is what I want to know? I should not like to say, your Honor. I should not like to allocate where the reasons may lie. In my opinion, I am only giving an opinion, there are strong reasons why certain people should wish this particular person out of the way.
7997. And one of those persons is Mr. Carson Woods? I cannot say, your Honor. I am unable to say what connection Mr. Carson Woods has with the matter. I have detailed to your Honor what he did, but the Commission must form its own opinion as to what he wanted.
7998. I should like it from you, Mr. Schey? Whether he was an intermediary or a principal I am unable to say.
7999. Are you aware of any reason why Mr. Carson Woods should wish to keep this person out of the way? Of my own knowledge I am not aware of any reason.
8000. *President.*] Then, under these circumstances, Mr. Schey, we think, as you have given a written pledge that you would not divulge the name, and as you have pointed out to us that there are other means by which we can ascertain who this person is, we think you need not give it at the present moment.
8001. *Witness.*] You do not press me at present for the name your Honor?
8002. *President.*] No.
8003. *Witness.*] Very well, your Honor.
8004. *President.*] I do not mean to say that hereafter we may not require to ask you further questions.
8005. *Witness.*] Very well, your Honor.
8006. *President.*] At present we do not insist upon your divulging the name of this person.
8007. *Witness.*] Very well.
8008. *Mr. Crick.*] I presume, your Honor, Mr. Schey will not be further required to-day?
8009. *Mr. Schey.*] Am I done with here your Honor?
8010. *President.*] So far as the Commissioners are concerned in this inquiry we do not require you further at the moment, but if you should be required we will let you know.
8011. *Mr. Schey.*] Then I am at liberty to retire your Honor.
8012. *Mr. Smith.*] Before Mr. Schey goes I should like to point out to the Commission that as a witness in the box Mr. Schey has stated to the Court that he has in his possession a solemn declaration made before a Magistrate. That declaration is either true or false. If it is false the person who made it ought to be prosecuted; and this Commission I am sure will be no party to hiding or cloaking a crime; if the declaration is true, then the persons charged with crimes therein ought to be prosecuted. We do not know what the declaration contains, but we will assist so far as possible in prosecuting those persons. In any case that declaration must be produced. I would point out that the public would never be satisfied, seeing that a Member of Parliament holding a high position in the country has stated that he had a solemn declaration in his possession which he would produce as evidence in any inquiry which was made, if that declaration is not produced. Mr. Schey more than once declared in Parliament that he would lay this document upon the Table if the Minister would hold an inquiry; and I would submit that this Royal Commission will not be acting according to the course I am sure they will take if they do not.
8013. *Mr. Crick.*] Your Honor, I thought I was addressing the Commission when Mr. Smith rose, and I think I might have been permitted to conclude what I had to say.
8014. *President.*] I understood that you had finished Mr. Crick.
8015. *Mr. Crick.*] No, Mr. President. I simply paused while you addressed a remark to Mr. Schey. I was going on to say that when the name of this person has been obtained and he is summoned to give evidence before the Commission if his testimony before the Commission varies from the contents of the sworn declaration, then I shall ask permission to confront him with the sworn declaration, but until that time arrives I may save time and trouble by stating that at all costs we will not produce this document. If the Commission can get this man's name in no other way we will ourselves as a last extremity disclose it; but until he has given his evidence we will not produce the declaration. As I said before if when that existence is given it varies in any material point from the sworn declaration which we now have in our possession we will ask permission to confront him with that declaration. We can say no more than that. Perhaps before I sit down I might be allowed to suggest that in connection with this matter the following witnesses might be examined, for their evidence is very material.
8016. *Mr. Smith.*] I object your Honor to this matter being gone into until we have first dealt with Mr. Schey.
8017. *Mr. Crick.*] If I am not permitted to conclude what I have to say to the Commission, and which is for the assistance of the Commission, I shall decline to say anything at all. I was going to suggest that the following might be called as witnesses:—Mr. William Monie, of Monie Angus and Co., Mr. George Proudfoot, of Proudfoot and Fletcher, Justin McSweeney, Alex. Amos, and George Blunt. They ought to be examined in connection with the man who made this declaration.
8018. *President.*] All the witnesses you have mentioned with the exception of Mr. Blunt, are I understand in attendance.
8019. *Mr. Smith.*] Mr. President. In reference to the production of this document, it will be in the minds of the Commission that from the very earliest meeting I asked that Mr. Schey might be ordered to produce all the documents in his possession, which he stated in Parliament he would produce before this inquiry. The Commission has ordered the production of this document, and I submit now that they would not be doing themselves justice nor doing the public justice if they don't insist upon that declaration being produced. It is not as though this were a private written document, it is a sworn declaration before a Magistrate, and as I previously remarked the contents of that declaration are either true or false. If they are false then the person who made the declaration is punishable, and I am sure the Commission will be no party to hiding, cloaking, or concealing a crime. I submit that the Commission ought not to allow another hour to pass without insisting upon the production of this document, because it might be that some other declaration might be substituted for it. This declaration has an important bearing upon one of the matters into which this Commission is appointed to inquire, and it now being in the possession of one of the parties before the Court, and of a witness, I am sure the Commission will see their way to order the production of that declaration without further delay. I apply that the Commission order Mr. Schey to produce it at once.

8020.

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8020. *Mr. Crick.*] I don't know whether Mr. Smith intends to suggest that we may alter or interfere with this document; but I can assure the Commission that I will take good care that the document does not see the light of day until it is necessary to produce it to rebut the evidence of the man who made it. Until that time arrives I say the document shall not see the light of day, and as to the Commission ordering its production, with all respect I think we have shown that we are as willing to assist the Commission as we possibly can be consistent with what we have pledged ourselves to do. Under the circumstances already stated we shall not produce the document.

8021. *President.*] The only question before the Commission at present is this:—On a former occasion, on Friday last, Mr. Schey undertook either to give the name of the person who had supplied him with this information, or else to produce that person himself. When the Commission met this morning Mr. Schey explained that he had made every attempt to find this person and to bring him before the Commission, but without success. The only other question was whether he should divulge the name; and as Mr. Schey gave a written undertaking when he received the information from this person that he would not divulge the name except to certain persons, and as he has divulged the name to several persons who are not bound by that pledge, we thought it was not necessary to press Mr. Schey further to mention the name. That is the only question which we have to deal with at present. As to the production of the declaration itself, that is a matter which the Commission will have to consider afterwards.

8022. *Mr. Crick.*] I can assure the Commission that in the meantime the document is quite safe. It will not be tampered with or interfered with in any shape or form. I will take good care of that. Did I understand your Honor to suggest that Mr. See should be summoned?

8023. *President.*] I was just consulting with my colleagues, and we do not think it necessary to summons Mr. See; we can perhaps communicate with him.

8024. *Mr. Crick.*] It might be possible, your Honor, as Mr. See has many thousands of documents brought before him, that he may have forgotten the name in this case. We will show him a copy this morning so that his memory may be refreshed in case he should have forgotten. In fact, we will exhibit the original to him.

8025. *President.*] If that is so, perhaps it would be better for Mr. See to come here before the Commission and then you could show him the document?

8026. *Mr. Crick.*] It will be no trouble for me to go to the Treasury, your Honor, and just show him the paper, in order to refresh his memory, in case he may have forgotten.

8027. *President.*] Very well, Mr. Crick. Will you kindly do so at once, to save time?

8028. *Mr Crick.*] Before I leave I should like your Honor to direct that a copy of the shorthand notes be supplied to me this afternoon. I want them in connection with the matter of this declaration?

8029. *President.*] As the Commission sits until 4 o'clock, I am afraid that can hardly be done; but you shall have them in the morning.

8030. *Mr. Crick.*] As early as possible, if your Honor pleases.

8031. *Mr. Schey.*] Do I understand, your Honor, that I am not further required, at any rate, for the present?

8032. *President.*] Yes, Mr. Schey. If we want you we will communicate with you. What witnesses are in Court, Mr. Eddy?

8033. *Mr Eddy.*] I think there are twelve of them here, your Honor. These tables I am handing in show exactly the works the various contractors have carried out for the Commissioners, and also who the resident engineers were who supervised those works. I might suggest that there are two ways in which you might facilitate your business. We can put the engineers into the box to deal entirely with the works carried out by each contractor, or we can put the engineers into the box to testify as to the works they have supervised in connection with all contracts. Perhaps you might find it more convenient to deal with the contractors, and then to have the evidence of the engineers who supervised the work done by those contractors.

8034. *President.*] Perhaps that would be the better way, Mr. Eddy.

8035. *Mr. Eddy.*] Very well, your Honor. We will first call Mr. Proudfoot.

8036. *Mr. Perkins.*] Your Honor, I appear for Mr. Proudfoot, and I desire, with your permission, to make a few remarks to the Commission. Mr. Proudfoot, I may say, is one of the Administrators of the estate of the late David Proudfoot, and in that capacity he has been carrying on a number of works under the Railway Commissioners. In a speech which Mr. Schey made in Parliament, your Honor is perhaps aware that serious charges were levelled at Mr. Proudfoot, and it is Mr. Proudfoot's wish that the Commission will not put him into the box until the name of the person who supplied Mr. Schey with the information upon which he based his charge has been disclosed. We have reason to believe that these charges have been initiated by some person in order to damage Mr. Proudfoot, and Mr. Proudfoot would prefer, if the Commission will permit him, not to give evidence until the name of that person has been divulged. He is quite willing to attend from day to day, or at any time, to give evidence; but he does not think it is fair to him that he should go into the witness-box before the name has been disclosed of the person who stabbed him in the dark. I might state also, your Honor, with regard to Mr. Schey, that, under the *nom de plume* of "Straight Griffin," a series of articles appeared in one of the Sydney papers, in which Mr. David Proudfoot during his lifetime was seriously libelled, and an action was instituted in the Supreme Court against Mr. Schey as the author of those articles, which was averted by Mr. Schey apologising and paying the costs. In one year after that action Mr. Schey again libelled Mr. George Proudfoot, and the information constituting the libel, I believe, was obtained from exactly the same sources as in the first case; and in that second action Mr. Schey has pleaded privilege as a member of Parliament, and of course the action has gone no further. Your Honor will see that it is a serious thing for Mr. Proudfoot as a business man that people should be constantly making these attacks upon his character, and as soon as the name of this person has been disclosed, Mr. Proudfoot is quite willing to go into the box, and not only so, but he will do his best to bring that person before the Commission. I understand there are a number of other contractors to be examined, and it will in no way delay the Commission if Mr. Proudfoot's wish is acceded to.

8037. *President.*] We will first take the evidence of Mr. McSweeney.

Mr. Justin M'Sweeney sworn and examined:—

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8038. *President.*] What are you? I am a contractor.
8039. *Mr. Young.*] What contracts have you had under the Government? I have a contract for the relaying and reballasting of the railway lines between Sydney and Albury, and the branch lines extending over to Blayney, and to Kiama on the Illawarra line. I have a contract for the construction of the main outfall sewer for the western suburbs at Arncliffe, and I have a contract for the construction of a ——
8040. I only want those contracts you have held under the Railway Commissioners? I thought you asked me for my contracts generally.
8041. No. Only those under the Commissioners. You say one contract was for reballasting and relaying? Yes. I also had a contract for the widening of the suburban line between Redfern and the Illawarra Junction. That contract has been completed.
8042. Are those the only two contracts you have had? No, sir.
8043. *Mr. Eddy.*] Perhaps you had better tell the Commission the whole of the contracts you have had from the Railway Commissioners.
8044. *Mr. Young.*] I see from this list that you have had contracts for the relaying and reballasting of the southern division and part of the central division? Yes.
8045. Also for the extension of farm produce market, Darling Harbour? That was a contract before the Commissioners entered office. I had that under Mr. Goodchap, and when the present Commissioners came into power they extended the buildings, and I had the contract for the extension.
8046. Then another contract of yours was for widening of the suburban railway between Redfern and Illawarra Junction? Yes; that is another contract. If you want my contracts in the order I have had them they are these:—The construction of an iron hay-shed at Redfern—I was the lowest tenderer for that and I got the job; the third contract was for the widening of the suburban line between Redfern and Illawarra Junction—I was the lowest tenderer in that case; the next contract I had was for reballasting the lines; the late Mr. David Proudfoot and myself were the two lowest tenderers out of twenty, and we got the work. Then I had a contract for the construction of a subway and additional platform at Parramatta, and there again I was the lowest tenderer.
8047. You also had a tender, I see, for the deviation of the Western Railway between Blaxland and Karabar? Yes; that was given to me at schedule prices.
8048. What schedule? The schedule under the relaying and reballasting contract.
8049. How would that apply? It covered every item of it.
8050. In regard to the relaying and reballsting contract, how did you obtain that? I was the lowest tenderer, but the Commissioners decided that all the tenders were too high, and they would not accept any. They subsequenty sent for Mr. David Proudfoot, who, with myself, was the lowest tenderer, and the Commissioners told us that they had decided to offer us a lower price than we had quoted. They fixed a certain minimum price, and offered us the work at that figure. Mr. Proudfoot was inclined to accept the work, but I was not inclined, because I thought the price too low, and it was only when Mr. Proudfoot stated that he would accept the contract that I did the same, thinking that if he could do the work at the price I could also. But I felt so little inclined to go on with the contract, even after I had agreed to take it, that I subsequently wrote a letter to the Secretary asking him to see if the Railway Commissioners would not delay the contract coming into force until 1st January, which would be a period of about four months. The Secretary told me that he did not think the Commissioners would extend the time so long, but as they were short of sleepers it would suit their convenience to delay the contract for a month, and he said if I wrote a letter asking for an extension for that time it would probably be granted. I wrote a letter to that effect, and it is now in the possession of the Commissioners, upon which they granted an extension of a month.
8051. Was any alteration made in the schedule you had at that time? No alteration, except that the prices were reduced.
8052. Did any additional works arise which were not contemplated in the first instance? Some additional works were given under that schedule, but they did not arise out of the original contract.
8053. Of what nature were they? The supply of ballast, and the lifting of the road.
8054. Was not the supply of ballast in the first schedule? No; the spreading of it was included in the schedule at first. The Commissioners thought to do it by day labour, but subsequently we got the contract to supply the ballast at a certain price.
8055. Was that bluestone? Some of it was bluestone, and some sandstone—it was chiefly bluestone.
8056. And that, you say, was an after-arrangement? Yes.
8057. The supply of bluestone was a very material item, was it not? The Commissioners were supplying it themselves in the first instance, but I think it was costing them more than they cared to give, and I think they gave the contract to save money.
8058. *Mr. Eddy.*] I might explain, in connection with this question of the ballast, that the major part of the material is obtained by the Commissioners from their own quarries. We have some large quarries at Bombo and at Bowral, and we spend a good deal of money to turn out the stone cheaply. The supplies we get from the railway contractors were for out-places where we did not deem it desirable at that time to open quarries ourselves.
8059. *President.*] Where is Bombo?
8060. *Mr. Eddy.*] It is at Kiama, sir.
8061. *Mr. Young* (to Witness).] Do you supply Kiama ballast? No; the Commissioners supply that themselves. I have a private quarry there, but I do not supply the Commissioners.
8062. What necessity was there for altering the schedule rate in that respect? There was no necessity for altering it; they did not alter it.
8063. I understood you to say that afterwards you took the contract for supplying ballast which previously the Commissioners had supplied? That was in the different places where the Commissioners had no quarry.
8064. What is the extent of that? It is indefinite; it is to supply whatever ballast may be wanted. It may be 1,000 or 5,000 yards. It is just as they want it for lifting the lines.
8065. Was that the only case in which the schedule rate was altered? That and the lifting. Those were the only two things I remember.
8066. They were not included in the first schedule? No, sir.

8067.

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8067. To what amount has the deviation contract extended to at present? I think about £2,700.
8068. The relaying and reballasting contract I am alluding to. What amount has that arrived at? I have never totalled it out. We calculate it monthly, as the work is done.
8069. Now, this tender for the widening of the suburban railway from Redfern to the Illawarra Junction—how did you obtain that? I was the lowest tenderer; but after the tenders had closed the second lowest tenderer wrote to the Railway Commissioners and offered to do the work in less time than was named in the specifications; and the Railway Commissioners sent for me and told me they had received this letter from another contractor, and that unless I could see my way clear to shorten my time they would not allow a matter of £300, which was the difference between us, to stand in the way of accepting his tender in preference to mine. I told the Commissioners that I considered myself as well qualified to carry out the contract expeditiously as any other man who had tendered, and in order to reduce the time of the contract I promised to send to England for girders, and to have them shipped by mail steamer, if the Commissioners would agree to accept my tender.
8070. Then you were the lowest tenderer? Yes; both in point of time and money.
8071. Have you completed that contract? Yes.
8072. Did any other works arise out of that contract as it was being carried out? There was the widening of the island platforms at Eveleigh, and the supply of some ballast which the Commissioners at first undertook to provide. They had a quantity of their own ballast stocked at Eveleigh, which we used for the purposes of the contract, but before we finished the contract the Commissioners had used a large quantity of this ballast on other work, and when we came to finish the contract there was not sufficient, and then I had to supply ballast from wherever I could get it.
8073. Had you a schedule rate for that? The schedule rate for the supply of ballast was the one under the reballasting contract. In that contract there was a schedule price for supplying ballast, and that schedule applied in the case I have referred to.
8074. Had you no schedule in that contract? No; the Commissioners undertook to supply the ballast themselves, but they ran short.
8075. What was about the amount of the additional works in connection with that contract? So far as I can remember, I think I have drawn about £4,000 over the contract amount.
8076. What was the amount of the contract itself? It was £53,000 and some hundreds.
8077. And that you say has been completed? Yes; but it is not settled yet. There is still some money owing to me; there has not been a final settlement.
8078. Has the contract for the deviation of the Western Railway between Blaxland and Karabar been completed? Yes.
8079. Did you get that by public tender? No. That work was carried out under the schedule attached to the relaying and reballasting tenders.
8080. Were there any earthworks in that? Yes; earthworks, rail-laying, &c.
8081. Is that included in the relaying and reballasting schedule? Yes, sir.
8082. You had all these items in that schedule? Yes.
8083. All the items in connection with this deviation? Yes; they were all in the relaying and reballasting schedules.
8084. And the relaying and reballasting contract was obtained by public tender and at the lowest price? By my being the lowest tenderer, and the prices being still further reduced.
8085. What amount of day labour work have been carried out in connection with this relaying and reballasting contract. Can you say approximately what amount it has reached up to the present? I have never totalled it out; there is a rate for it in the printed schedule, and we pay on monthly certificates.
8086. How long have these relaying and reballasting contracts been in existence? I started on the 29th September, 1890, about eighteen months ago.
8087. Can you find out for us the approximate amount of day works extra upon the schedule rates which you have had during that period? Yes; I can find that out for the Commission.
8088. I should like you to do that if you can? Yes; I can do it.
8089. Have you had any contracts with the Government other than those secured with public tender? Not at all, except small matters as I have already referred to—such as the supply of bluestone and the deviation.
8090. And which were carried out at the schedule rates in connection with other contracts? Quite so.
8091. *Mr. Kethel.*] At the time the relaying and ballasting works were commenced it was reported that the Commissioners had a very large number of day men employed. Did you take over any of those men? Yes; a great many of them.
8092. Was there any difference in the rate of wages paid by you, and the rate paid by the Commissioners? I think I paid the men more. When I took over the works the Commissioners were paying some of the men from 6s. to 6s. 6d. The least amount I paid was 7s., and I have never gone below that amount.
8093. Did you employ a large number of these men? Yes; I employed a very large number of them, and a great many others besides. There was supposed to be about 600 men dismissed at that time, and I think I had then about 1,700 men employed on railway work. I daresay that almost the whole of those men got on again.
8094. And did they remain with you; or did you discharge them? I told my gangers to treat them as they would treat men on other works. If the men worked well they were to be kept on, and if not they were to be discharged. I do not think many of them were discharged.
8095. I suppose the wages you paid under these contracts were the average rate of wages usually paid for similar classes of work? Quite so.
8096. What is the course usually observed in engaging and maintaining of day-labour men. Who orders you to put them on? The engineer.
8097. The resident or the divisional engineer? The engineer in charge of the works.
8098. And he indicates the work to which these men shall be put? Yes.
8099. And you put them on that work? Yes.
8100. And who keeps the time of these men as apart from the labour-gangs at schedule rates? I keep a timekeeper to take the time, and the Government also have a timekeeper, and the time is checked one by the other.

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8101. You are sure the records are always kept separate from the schedule work? Quite so.
8102–8112. You are aware, I suppose, it has been stated that it is customary amongst certain railway contractors to give in an exaggerated return for the day-labour men, who, many of them for the greater part of their time, are employed at schedule work? So far as I am concerned, such a statement is an unqualified falsehood, whoever makes it.
8113. Have you any objection to give us the names of any of your timekeepers who have been engaged in that work, in order that the Commissioners may satisfy themselves as to the usual course of procedure? I have no objection whatever.
8114. In the schedule rates for day labour, what is the difference between the rates you pay your men and the amount the Commissioners pay you? About 1s. a day; sometimes it may be 1s. 6d., or as much as 2s., according to the man. I think you might take the average as 1s.
8115. Of course it is understood throughout the contracting world that a contractor cannot afford to pay his men the same amount of wages that he gets for them? No, there must be a margin for the cost of time keepers, office expenses, &c.
8116. And plant? Yes, and plant.
8117. And that custom is universal, I suppose? It is universal in all the Departments.
8118. Is it recognised outside departmental work, in contracts generally? Yes; I think I may say it is recognised in all contracts.
8119. The general custom is where a contractor employs labour, either mechanical or navvies, to allow a margin between the rate he pays his men and the amount he receives for their labour? Yes.
8120. That is the recognised custom? It is.
8121. And the difference between these two rates enables the contractor to pay the cost of maintaining his establishment and his staff? Yes.
8122. *President.*] Is that rate agreed to among contractors generally, or is there a fixed rate? So far as this case is concerned, the rate is fixed in the schedule. We put a price in before the tenders close.
8123. I am referring to this margin you speak of, and which you say would average about 1s. Is that a fixed margin? I said the difference would average about that amount. In this particular case the amount of our day labour was fixed when the tenders went in. We named a price in the each schedule rate.
8124. What I mean is, is it the custom generally amongst contracors to fix that margin at about 1s.? From 1s. to 2s., because some men are better than others, and they get a higher rate of wage. We generally give a price in the schedule, and then we pay the men what we think they are worth. Working in that way, in some cases the difference would be about 1s., and in others as much as 2s.; but in some cases a contractor will pay special men more than he receives from the Government. That of course applies only to a limited number.
8125. *Mr. Kethel.*] Assuming that you had to employ a number of men, say blacksmiths and bricklayers, without schedule rates, would you still adhere to the practice of charging from 1s. to 2s. a day upon each man's rate of pay? Unquestionably. In some of the Departments it is distinctly specified that a contractor gets, I think it is 15 per cent. upon the amount he pays to his men. That amount is allowed on the contractor's price.
8126. Have you ever had any complaint, or has your attention been directed to a statement made in Parliament, that railway contractors have been unduly lowering the men's wages, and pocketing a greater percentage of their wages than they were justified in doing? I have noticed such statements, but in the generality of cases those statements are made by men who have no absolute knowledge of the matters of which they are talking. If you will allow me, I would like to say that some statements to that effect were made before these contracts were accepted, and that was one of the reasons which induced me to take this contract. Public meetings were called, at which Mr. Schey and some of his friends accused me then, in August, 1890, of sweating, before I had employed any men at all. One of the other railway men, Mr. Hoyle, stated that a contractor was not fit to go inside a railway fence. Although I built bridges while trains and trams were passing underneath them, and although I had put girders across at Harris Park and Petersham, while the traffic was in operation, and had treated the men liberally, these statements were publicly made, and it was out of defiance to the men who made these statements that I accepted the contract, because I thought the Commissioners had cut the price so low that it was a dangerous contract to deal with; in fact, I may say I wrote a reply to some of the statements which were made, and it was published in the evening *Star*. If your Honor would like to see my reply I will hand it in.
8127. *President.*] Does it contain any matter you have not already stated to the Commission? It may deal with other matters, your Honor.
8128. Because we cannot take paragraphs from newspapers as any evidence. If there are any facts you want to mention which are included in that article, if you state them now we will consider them? On the point of sweating, your Honor, I may say that the only instance in which I was charged was in the case of Hilltop, where I had some men working in a quarry. I insisted that whenever it was necessary to do Sunday work the men should do it, or find employment elsewhere, and I was charged with sweating because I kept those men at Sunday work; but wherever I have had men working on Sundays they have been allowed time and a half; if they worked eight hours they were paid for twelve. It is absolutely necessary to do Sunday work, for instance, as in cleaning out tunnels, which is a dangerous occupation to conduct on ordinary week-days. Instead of sweating men, I think that no other railway contractor has treated them as I have done. I instituted a system of paying the men weekly. I have a staff of pay-clerks travelling between here and Albury who pay the men in cash every week. The general practice has been to pay the men once a month, but I established a system which gave the men an opportunity of dealing with whatever storekeepers they thought fit, and of making better terms for their supplies than they had been in a position to do before; and that system is in force still.
8129. *Mr. Kethel.*] Have you had anything to do with the truck system. Have you insisted upon your men dealing at a store in which you had an interest, or at a store at which you had guaranteed their payment. Have you ever countenanced such a system as that? I never allowed anyone connected with me to be mixed up with any stores. I always pay the men in cash. The only instance in which I have sent stores to a man occurred during a strike which took place amongst the men in my quarries a month ago. Some of the men would not work under a new gauger I had appointed, and they organised

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a strike. The storekeeper took sides with the men, and refused to supply the ganger, so I had to send him stores myself. In no other way have I had to do with the supplying of stores.

8130. *Mr. Eddy.*] This is one of our specifications, sir, for the big works—the duplication of existing lines. You will see in it a clause which prohibits the truck system. [*Document handed in.*]

8131. *Mr. Smith.*] It is clause 18.

8132. *President.*] Mr. M'Sweeney, do you recognise any right on the part of the Commissioners, you having taken a contract, to interfere with the rate of wages which you are paying the men? They have no right whatever, your Honor; I would not allow the Commissioners to interfere with any rate I fixed.

8133. However you might deal with your men, you would not allow the Commissioners to interfere in any way whatever? Not in the slightest degree.

8134. *Mr. Kethel.*] In reference to the carriage of materials over the railways, what arrangement is there between the Commissioners and yourself. Certain material connected with the permanent-way has to be delivered on your section, has it not? Yes.

8135. Such as sleepers and rails? Yes; the Commissioners carry that material free.

8136. And in the matter of ballast? They have to carry that also. The Commissioners do not allow us to interfere at all with the running of trains. We simply fill the ballast, and their own men then take charge of the train. For instance, if we had twenty men idle through want of ballast we dare not interfere with the line to send the ballast along.

8137. The materials which are to be delivered to you by the Commissioners are all specified in the conditions of the contract, I presume? Yes.

8138. And in relation to the other materials which you have to supply yourselves, I suppose there are large quantities, say of bricks and timber and cement, which you have to carry yourself? I have no heavy material to supply, only tools.

8139. That is in the relaying and reballasting? Yes; that is what I am referring to.

8140. Any materials outside those mentioned in the specifications, and which you may require, you have to pay for the carriage of yourself? Not if it is required for the purposes of the contract; everything goes free?

8141. Is that concession always granted to contractors on the railways? It is given in these contracts.

8142. Is that the only concession you have? The men are entitled to passes, but that also is included in the specifications.

8143. Does that matter of the free-passes apply to all the men you have engaged, labourers, mechanics and others, or does it only apply to yourself and your officers? It applies to all the men working on the relaying contracts.

8144. But in the case of a new extension that would not apply, I suppose? No.

8145. *Mr. Young.*] Where the relaying and reballasting takes place all the materials are carried for you by the Commissioners? Yes.

8146. Do those conditions also apply to the widening of the suburban railways between Redfern and the Illawarra Junction? No; I pay for my own carriage there.

8147. In the first case you said you had no material, but in the second case I suppose you have? When I said there were no materials I was speaking of the relaying contract. On the contract for the widening of the suburban railway I pay for the carriage of the materials myself.

8148. In connection with the contract for the widening of the suburban railways you have to pay for the carriage of all the material you use? Yes.

8149. The charge we are inquiring into says: "That by means of the said 'bogus' contracts made in connection with the said railways the country has been swindled out of thousands of pounds. That the contractors have made contracts which were intentionally 'bogus' on their first inception, and thus persons have obtained large sums of money at the expense of the country." Have you any knowledge of any contractors who have obtained contracts under the Commissioners upon any such terms as are there referred to? No; I have no knowledge of such a thing. My idea of the statement is that it is absolutely untrue.

8150. Have you ever known of any contract being let otherwise than to the lowest tenderer? No, I have not.

8151. And from your experience as a contractor, do you consider that the contracts under the Commissioners are let judiciously and for the benefit of the country? I think they are. I believe the Commissioners have saved money by letting the contracts as they have done. If you would allow me I would make one statement as regards the work I did at the Redfern hay-shed. I was the lowest tenderer for that by £700. The shed is alongside the Prince Alfred Park, and after it was completed a portion of the bank slipped away, and the engineer had an idea that a retaining-wall would be necessary to keep the pack bank up. Mr. Schey, in one of his public articles, said that I obtained that contract for the retaining-wall without competition and by favour, whereas, as a matter of fact, the wall was never built by me or by anybody else. The engineer sent out to report upon the matter declared that it was not necessary to erect the wall. Mr. Schey could have seen that if he had taken ten minutes' trouble, because he lived close by; he could have seen that the wall was never built.

8152. *Mr. Kethel.*] In carrying out the quadruplications and the relaying and reballasting, does the custom of subletting to gangs of men exist, or do you generally carry out the whole work yourself by the men in your employ at day wages? I have carried out everything myself at day wages.

8153. You have had no sub-contracts? Not in connection with the relaying and reballasting, but in connection with the widening of the suburban railways I had sub-contracts for the brickwork. That was the only portion that was sub-let.

8154. So that it is not possible then for sweating to be done by the sub-contractors, as is sometimes alleged? The bricklayers who worked under the sub-contract I have referred to were paid the highest current wages, and the two foreman bricklayers made as much as £10 a week each.

8155. In the case you referred to the whole of the works were done under your own immediate supervision by men receiving daily or weekly pay from you? Yes; and I may say that the men who worked for the sub-contractors under me received their wages through me.

8156. *President.*] Did you take contracts in connection with the railways before the present Railway Commissioners were appointed? Yes, your Honor I have had contracts under the Railway Department for nine years. I have had contracts under Mr. Goodchap and Mr. Cowdery, and both they and all their officers

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officers expressed the utmost satisfaction with the work I did. I did my work well, and I did it expeditiously, and I avoided all causes of irritation and quarrel with the engineers. I believe I have worked under thirty different engineers in the Railway Department since I began contracting, and under about one hundred inspectors, and I think every one of those men could be produced to show that my work had been throughout of good quality. In one instance when I had some work under Mr. Cowdery he wished to alter the design, and he sent for me and asked me if I would give the contract up, and I did so without asking for compensation. I always tried to meet the officers in a fair and reasonable way.

8157. Is there any difference between the way of taking contracts under the present Commissioners and the way they were obtained before the present Commissioners were appointed? The only difference I find is that the present Commissioners are more inclined to cut down prices than was the case formerly. In the case of the Redfern widening the Commissioners were going to pass my tender over if I would not shorten the time, and in the case of the reballasting and relaying they cut the prices down so low that I did not care whether I took the contract or not. As a matter of fact my opinions were so well known that a second contractor came to me and offered to relieve me of the contract without any compensation. I had two or three interviews on that subject, and the contractor who approached me was Mr. Blunt, the son of Mr. George Blunt, the contractor for the Woy Woy tunnel.

8158. Do you know whether the present Commissioners have given any privileges or advantages which were not in existence when Mr. Goodchap was in office? I have had no privileges from them.

8159. *Mr. Eddy.*] In connection with the contract for the widening, Mr. McSweeney, I understood you to state that you paid for all the materials carried. I presume you do not intend to include permanent-way material? No; not permanent-way materials.

8160. Those are delivered by the Commissioners? Yes; I only pay for the materials I supply myself.

8161. Then as to the difference in pay in connection with day labor, do you know what the practice has been in the construction branch under the Minister for Public Works? I think the practice is to give a contractor 15 per cent. over the rate he pays his men.

8162. Is it not 20 per cent.? I am not certain.

8163. If that difference had not been allowed the contractor would be in this position—that he would give all his time and ability and the ability of his staff and the use of his plant to the customer for nothing? The contractor simply would not do the work. He would tell the Commissioners to do it themselves.

8164. He would really have nothing to pay interest upon his plant, or to pay for his staff, to say nothing of his own labour? If he took such a contract, I should say he would be a fool.

8165. I suppose this day labour has only been employed in connection with works in which it is very difficult to apply measurement prices to? In works in which it is impossible to apply measurement prices to.

8166. Is it not a fact that the Commissioners for a long time have been very strong in their insistance on day labour being kept down? I have known them to keep the contractors out of their final money for a considerable time through this day labour cropping up in the certificates. The Commissioners have tried to cut down day labour to the lowest possible point.

8167. The contract for relaying and reballasting is for a term of years, is it not? Yes; for five years.

8168. You told the Commission just now that at one time you had 1,700 men on? Yes.

8169. That was at the time, I presume, when we were pressing a large quantity of work forward, when the lines were in a very bad state? It was at a time when the lines were in a state of absolute mud. When these large crowds of men were working between Colo Vale and Bowral, I went over the line, and it was in a perfect state of mud, and some of the sleepers were so rotten that I could take out the pins with my fingers. There was no resistance whatever in the wood.

8170. Now that the lines have been got into good order, you are not employing anything like that number of men? Nothing like that number.

8171. How many men have you on the lines now? I do not suppose I have more than 200 or 250, if as many.

8172. We are getting now into our normal working? You are certainly getting too low for the contractors.

8173. Now, with regard to the supply of ballast, I should like you to make it clear to the Commission that when you supplied ballast it was in outlying districts where the Commissioners formerly got local men to supply? That is so.

8174. And it was found by you that you could not get on with your relaying work satisfactorily under the old conditions? Yes.

8175. And the Commissioners then entered into an arrangement with you to contract for the supply of ballast in those outlying places at a fixed price? Yes.

8176. And it was only when the Commissioners required ballast in connection with the lifting and relaying that you supplied any? That is all.

8177. And then it was only an uncertain quantity? Yes; we might be called upon to supply 100 yards or a 1,000 yards.

8178. You spoke just now of the deviation between Blaxland and Karabar. That work was done under your relaying schedule of prices? Yes.

8179. And that piece of line is included in the portion you have to deal with under your relaying contract? Yes; that is a portion of my line.

8180. What is about the value of the work? About £2,700, I think.

8181. Do you know of any corrupt dealing between the Commissioners and yourself? No; it is absolutely false for any man to imply such a thing. I may mention that in connection with the supply of ballast, I had actually imported special machinery from America to enable me to supply some of the ballast which I thought might be required, but when those machines arrived here, the Commissioners had cut the work so low that I had to put the machinery into private work, otherwise it would have been a dead loss to me.

8182. *Mr. Eddy.*] I would suggest, Mr. President, that you now hear the evidence of the resident engineers who have been concerned in the measuring up, and certifying to the work performed by Mr. M'Sweeny for the Commissioners.

8183. *President.*] We should like to have them in the box, Mr. Eddy.

Mr.

Mr. David C. Simpson sworn and examined:—

Mr. D.C. Simpson, 6 June, 1892.

8184. *President.*] What are you Mr. Simpson? I am an engineer in charge of the metropolitan division.
8185. *Mr. Young.*] How far does that extend? To Kiama on the South Coast, and to Goulburn on the south; it also includes the suburban district.
8186. Are you resident engineer? No, I am engineer in charge of the maintenance of the lines. I am responsible for the safety of the lines.
8187. You have nothing to do with new works? Not with new works; it is with the relaying and reballasting contracts that I have to do.
8188. Do you measure the work performed by the contractors yourself, or have you assistants? I have assistants to do that.
8189. How often do they measure? Once a month.
8190. And the measurements I suppose are priced out according to the schedule? Yes, at the schedule rates entered in the agreement.
8191. That is according to the contract? Yes, according to the contract.
8192. Is it your business to see that the work on your section is done properly? That is clearly my business.
8193. And if the work is done properly it is you who recommends that it should be passed? I recommend the payments as they become due?
8194. During the progress of this reballasting and relaying, has any work arisen over and above that provided in the schedule, any work that was not contemplated when the schedule was prepared? I think we have added one or two items to the schedule.
8195. What items have they been? I think lifting is one.
8196. Is that extensive? Yes, it is pretty extensive.
8197. Why was that not included in the schedule? I cannot say, I did not prepare the schedule.
8198. I suppose it was known this work would have to be done? It might be included in the relaying, but it really is a separate matter.
8199. *Mr. Eddy.*] This is lifting the road upon the old ballast when it is in a state of mud?
8200. *Mr. Young.*] What do you mean by lifting, Mr. Simpson? You may go on a portion of the old road and say that it should be raised 3 inches. The ballast is then brought forward, and the road is lifted accordingly, and perhaps a few new sleepers are put in to improve the permanent way. That process is apart from re-laying, but at the same time it might apply to re-laying.
8201. Is not lifting an important part of relaying and reballasting? It is an important part.
8202. Then how was it done? The method of fixing the price was arrived at over experimental lengths upon all divisions. Each divisional engineer received instructions to take a test mile, and to carry it out at day-work, and to keep a record of the exact cost. We then met and submitted our various prices, and an average was struck, and the contractor was asked if he would agree.
8203. Was that done per lineal yard? Yes.
8204. To what amount would that lifting come to in the course of the contract? Do you mean the lineal measurement or the amount of money?
8205. The amount of money? I have not brought figures with me, and therefore, I cannot answer the question at once, but if I have time I can obtain the information.
8206. You say there was no tendering for that deviation? No, it was closely allied to the contract then in hand.
8207. And the lifting you referred to ought to have been included in the schedule for relaying and reballasting? I think it ought to have been in the original schedule.
8208. In the relaying and reballasting contracts the Commissioners found the whole of the materials required for the contractor's use? They found all materials.
8209. Then it was a mere question of labour? Yes, it was purely a labour contract.
8210. Almost entirely? Unless of course they were called upon to supply ballast.
8211. And that is measured by the cubic yard? Yes.
8212. In connection with the contract which you have supervised did any work arise other than that already described which had to be carried out by day labour? There has been a good deal of day-labour.
8213. How is that day labour done? For instance, the whole of the lifting and ballasting of the suburban districts was done by day-labour. We were obliged to adopt that system, because the traffic is so very constant, and I don't see how it could have been done in any other way.
8214. And was that paid for at the schedule rate agreed upon? There is a rate for each class of labour entered in the agreement.
8215. What has been the amount of that day labour? I think in my division it has amounted approximately to about £34,000.
8216. That is a very considerable sum? Well, it is a long mileage; it is 13 miles of double line.
8217. That is equivalent to about £2,000 per mile? That amount includes many other things besides, many other capital charges for works throughout the whole division. I can give you the exact sum for that particular 13 miles if necessary.
8218. I should like to have that, and also the portion where it has been expended, and what it has been expended upon because it seems a very large amount. Had you anything to do with the widening of the suburban railway between Redfern and Illawarra Junction? I only take it over.
8219. Yours has been exclusively relaying and reballasting? Exclusively.
8220. *Mr. Eddy.*] You said, Mr. Simpson, that £34,000 had been paid for day labour, on the suburban line? No, sir, not on the suburban line on my division, and I qualified the remark by saying that that amount included a number of other capital charges.
8221. You say that is for the whole division from Goulburn and Kiama, and the Sydney suburbs? Yes.
8222. *Mr. Young.*] The witness did not make that quite plain.
8223. *Mr. Kethel.*] I thought he was distinctly referring to the suburban lines only.
8224. *Mr. Young.*] Are we to understand that that amount covers a large number of other works besides the reballasting? There are a number of other capital charges included.
8225. *Mr. Eddy.*] I think it would be better, Mr. President, if we have a return prepared analysing these payments.
8226. *President.*] I understood Mr. Simpson to promise that he would do that?

8227.

Mr. D. C. Simpson. 6 June, 1892.

8227. *Mr. Eddy.*] Only from his division, sir, but we will do it for all the divisions and also describe the work upon which the money has been expended. (To Witness): I would like to ask you one further question. The charges into which the Royal Commission are inquiring is "that in making contracts with Messrs. Proudfoot & Co., Monie Angus & Co., McSweeney, Gulliver, and Tait, and a number of other contractors, the said Commissioners have displayed either gross ignorance and incapacity, or something worse. That in many cases the contracts were 'bogus' contracts from their inception. That when it was proposed to make these contracts 1,100 men were dismissed from the railway service, and that from the time of such dismissal the said Commissioners have connived at the 'sweating' of the men working on the said railways for the contractors, and that the said Commissioners knew what was going on," and "that, by means of the said 'bogus' contracts made in connection with the said railways, the country has been swindled out of thousands of pounds. That the contractors have made contracts which were intentionally 'bogus' on their first inception, and thus certain persons have obtained large sums of money at the expense of the country." In the several years you have been dealing with contractors work for the Railway Commissioners are you aware of any incident whatever which would justify such a charge as that being made? I know of none. We have endeavoured to carry out the agreements to the very letter.
8228. And you have never signed any certificates for work or money that the Government have not had the full benefit of? None whatever.

Mr. James Fraser sworn and examined:—

Mr. J. Fraser. 6 June, 1892.

8229. *Mr. Eddy.*] Mr. Fraser, your Honor, was engineer in charge of the southern part of the lines. He is now assistant to Mr. Foxlee, but he can speak as to the practice on the southern section at the time he was there.
8230. *President.*] What constitutes the southern section?
8231. *Mr. Eddy.*] It extends to Goulburn and Albury to Hay.
8232. *President.*] You are a resident engineer I understand Mr. Fraser? I was divisional engineer at Goulburn.
8233. For what time? For about eighteen months, sir.
8234. For what eighteen months? From October, 1890, until January of this year.
8235. *Mr. Young.*] Are you engineer for the relaying and reballasting or for new works? I had charge of the relaying and reballasting.
8236. A similar position to that held by Mr. Simpson? Yes.
8237. And your district extended from Goulburn to Cooma, and Albury to Hay? Yes, sir: the whole line south of Goulburn.
8238. Was it your duty to measure that or had you assistants to do that work? No, I measured personally.
8239. Every month? Yes, every month.
8240. And those measurements were carried out at a schedule price? Yes.
8241. And when the computation was made, where was it forwarded to? To the head office in Sydney.
8242. Did you supply all material to the contractors? We supplied the rails, sleepers, and fastenings, and also part of the ballast.
8243. Is it sandstone ballast? No, it is all bluestone in my division.
8244. Has any thing been done on your section other than was contemplated in the schedule? Nothing but what is contemplated in the schedule.
8245. Was any lifting done? Yes.
8246. How was that done? At a schedule rate per lineal yard, which was fixed after the contract was commenced.
8247. To what extent has the day-work been in your section? I had very little day-work, I cannot give you the exact amount, but it was a very small portion of the whole work carried out. Piece-work applied better to the work in my division than it would perhaps in any other.
8248. *Mr. Kethel.*] Is all the work done at per lineal yard, or are there any other measurements? There are cubic-yard prices. All the work is done at schedule rates, at per cubic yard, or per lineal yard, or perhaps per lineal foot.
8249. How many miles of line had you under your control? I had about 800 at that time.
8250. What method did you adopt in checking the measurements of work done by the contractors. What officers did you employ? I did the measuring myself.
8251. Over the whole 800 miles? I personally measured the whole of the work done in my division.
8252. Had you any clerks of works or inspectors? There were inspectors but they made no measurements.
8253. Did they report to you from time to time, or did you at stated periods examine the work yourself and see that it was well done? Most decidedly; I used to take a week in the month going over the whole of the lines to see that the work was properly done, and to make the measurements.
8254. And the responsible officers reported to you I suppose? They reported to me as to the nature of the work.
8255. And how it was performed? Most decidedly.
8256. I suppose you supplied all or nearly all the material used by the contractors in the carrying out of that work? We supplied almost all. The contractors supplied a little of the ballast, but we supplied all the rails, sleepers, fastenings, and things of that sort.
8257. Was it possible for you to give sufficient time to the measuring of the work done by the contractors over such an immense area of country? Only a small portion of that area was covered by the relaying contract.
8258. What length of line would the contractor have in hand at one time? He might have half a dozen gangs. I do not think the contractor ever had more than that number on my division.
8259. To satisfy yourself that the work was properly done by those gangs how many inspectors would you require to have? There was a ganger in charge representing my department.
8260. In addition to those employed by the contractor? Yes; I had a ganger supervising every gang.
8261. Is that the rule in the department? I believe so.
8262. Have you any idea how many men constitute an average gang for this class of work? About thirty-six.

Mr. J. Fraser. 6 June, 1892.

8263. And you say you had a resident ganger supervising each gang? Yes; and he would see that the work of his gang was properly carried out. Of course he understood the work thoroughly, and he could see that it was done properly. Then there is an inspector who looks after the work, and when I go over the road I also see that his is properly done, and take the measurements.
8264. And when you have made your calculations I suppose you give the contractor a certificate for the work he has performed, and that is forwarded through the usual channel to the Commissioners? Yes.
8265. If any work arises during the contract which is not provided in the schedule, what is the method adopted. Who reports the necessity for employing the men, and who has the supervision of them when they are so employed? Do you mean in the case of day-labour?
8266. Yes? In any case where day-labour was required I appointed a ganger of my own to take charge to see that the work was properly carried out, and to take the time.
8267. So that if anything was wrong in the way of money being paid to the contractor for any man who was not employed in the gang it could only be done by collusion between your ganger and the ganger of the contractor? Only in that way.
8268. Have you any means of checking that sort of thing. Suppose such collusion existed, what means would you have of discovering it and checking it? When a gang of men are employed at day labour there is a special ganger whose duty it is to take the time daily, and as the sub-inspector passes over the work almost every day, he would know the number of men employed in that gang. He might not see that the men were working the whole day; but he would know that they were there some part of the day, and therefore he would be in a position to check the ganger's time.
8269. How often do these gangers send in their returns? They enter the time into a book, which is then handed to me, and from those entries I make up my returns and include them in the certificate.
8270. That is the system usually adopted? I believe it is.
8271. *Mr. Eddy.*] You were asked, Mr. Fraser, about being able to inspect such a large amount of line. The relaying contractor only had a comparatively short length to do in your division, I believe? That is so, sir.
8272. Because the largest proportion of the lines under your control had been made in recent years? Yes.
8273. And therefore did not require to be relaid? That is so.
8274. You also have power to get out a special engine and carriage to enable you to pass over the district quickly? Yes.
8275. And by that means you can do three or four times as much work as you would otherwise be able to do? Yes.
8276. You have heard the charge into which the Royal Commission are investigating. I ask you if you believe there is any truth in it? I do not.
8277. You are not personally aware of a single penny having been passed by the Railway Commissioners for work which has not been performed? Not a single penny, so far as I am concerned.
8278. *President.*] Are there any other of these officers, Mr. Eddy?
8279. *Mr. Eddy.*] Yes, sir; Mr. Nicholas, one of the divisional engineers, will give evidence.

Mr. Charles Edward Nicholas sworn and examined:—

Mr. C. E. Nicholas. 6 June, 1892.

8280. *President.*] You are one of the divisional engineers? Divisional engineer of the Central Division.
8281. Of the Central Division; what does that district include? From Strathfield to Gosford with the Hornsby and the St. Leonards Branch; from Granville through to Wallerawang to Mudgee, and also the Richmond Branch.
8282. *Mr. Young.*] Does that district which you are on include Mr. McSweeney's contract? Part of it. From Granville to Springwood.
8283. Are you the district engineer for relaying and reballasting? I supervise that.
8284. Have you a portion of Mr. McSweeney's contract under you? Yes.
8285. What is the other portion you are on? Mr. Proudfoot's.
8286. It is your duty to measure the work. Do you measure it yourself? I have an assistant to measure.
8287. Have you a schedule by which you work? Yes.
8288. And what does that schedule contain? It contains the price at which the work is to be done.
8289. The different classes of work? Yes, the different classes of work.
8290. Every class of work? Yes, every class of work.
8291. Is there everything which has to be done in that schedule? There is necessarily some work which has to be done by day-labour, and that you cannot put into the schedule.
8292. Is that of any moment? It is only a very small portion.
8293. How often do you measure up? Once a fortnight—once a month rather. McSweeney and Proudfoot's work was measured alternate fortnights.
8294. In your district does the contractor get the carriage of material done by the Commissioners? The Commissioners pay for the carriage of permanent-way material.
8295. Is that in the contract? I believe so.
8296. Did you never read the specifications? Yes, I have read them.
8297. You would know from that? Yes, I believe it is so.
8298. It is in the specification? I think so; I have not read the specification very recently, but I believe it is so.
8299. But is it not part of your business to do that? I have not paid for any work recently. I did not return any money for the carriage of material.
8300. No, but is it part of the contract that material should be carried? I believe it is so, otherwise I should have to return it.
8301. It is in the specification, is it not? I believe so.
8302. In the division you are in, is it mainly labour which you measure? For labour.
8303. No, material? Excepting ballasting in some cases.
8304. Is there a schedule for ballast? There is.
8305. Both kinds of ballasting—I mean bluestone and sandstone? For both.
8306. Is there much day-work done in your division? Never, if it is avoidable.
8307. Do you think that in the arrangement of this relaying and reballasting that there is any waste of money? Not that I can see.

Mr. C. E. Nicholas. 6 June, 1892.

8308. Do you think that there is any relaying or reballasting which ought not to have been done? Certainly not. I should like to see a great deal more done.
8309. Do you think that the Commissioners, in the matter of relaying and reballasting, and the work which is generally done in that respect in your division, have dispayed any want of knowledge? Certainly not.
8310. Can you speak from your experience in the Service. How long have you been in the Commissioners' employ—during the whole time of their office? Under the Commissioners entirely, for eighteen months.
8311. During that time, have you ever seen anything that would lead you to suppose that there are any "bogus" contracts, or any contracts other than what are taken by the lowest tenderer? None whatever.
8312. *Mr. Kethel.*] In the conditions of the specification of work for contract here there is one clause, No. 25, that "no free carriage of materials will be allowed." Can you tell us what material that clause deals with.
8313. *Mr. Eddy.*] I think you had better let him see that. That refers, I think, to duplication works, and not to relaying works.
8314. *Mr. Kethel.*] It is duplication works.
8315. *Witness.*] I have nothing to do with duplications.
8316. *Mr. Kethel.*] Oh, you have not. The great part of the work you have is relaying and reballasting at schedule rates? Yes, at schedule rates.
8317. You always avoid having any work done by day labour, if possible? We have distinct instructions to have no day labour where avoidable
8318. It simplifies matters very much, I suppose, where you can have work done by schedule rates, and pay according to the quantities? It saves trouble every way.
8319. In the event of having to put on day labour, what class of work will that be required for, say, in the work you have had carried on in the division of which you have control? There is no change of labour. The contractors' men are working, and if they have to do certain work that they cannot fairly do under their schedule, then they carry it out by day labour. For instance, in slueing a line you cannot pay schedule rates, because you do not know whether the line will have to be slued six inches or six feet; and so it would be impossible to charge schedule rates. Where there are little items of that sort we have to take the men's time and return it as day labour.
8320. What methods do you adopt to prevent any imposition on the part of the contractors, such as returning the time of more men than are employed? My ganger is always there with the contractors' ganger when they are relaying, and my inspector goes along frequently and checks the number of men. I go along also, and see the work which is done, and see that it is done thoroughly, and that the result is satisfactory.
8321. Have you ever had occasion to suspect collusion between your gangers and the contractors' foremen in the matter of sending in false returns? Never.
8322. You are aware that reports have been circulated that such a practice has existed at some time or times unknown or unspecified? I do not know; I am not aware of that. I have never found a case of collusion between my ganger and the foreman of the contractor.
8323. Have you cause to suspect such a thing? No.
8324. *President.*] You have never had any question with the contractors on this point of the time of the employment of men. Have there been any differences between the returns of your gangers and the contractors' men? That will occur necessarily, but when you go into the matter you find it is some clerical error, which can be put right when you get the two gangers together. There is nothing intentional.
8325. You have never found anything intentional? No.
8326. When a discrepency of that kind arises, what steps have you taken to set the matter right? My ganger and the contractors' ganger meet together and go over the evidence, and if necessary the inspector goes into the matter and sees who is right.
8327. Have you ever had to do it? I may have had to do it two or three times in very slight cases.
8328. In these investigations, have you ever had any reason to suspect that there was any collusion between the two gangers? No.
8329. Or carelessness on the part of the inspector? No; I have very good inspectors.
8330. Have you had any difficulty in adjusting the differences between the two? No, not material difficulty; nothing to speak of.
8331. Is that settlement of the differences between the two men left to you? Yes.
8332. And you determine it? I have never had a case of such moment as to necessitate my reporting the matter.
8333. *Mr. Young.*] In the matter of lifting, you frequently have to lift the line at various places? Yes. A settlement occurs, and it is necessary to lift it.
8334. Is there any schedule rate in the original schedule? I believe not in the original schedule; but the original schedule came out before I joined the Department. The rate for lifting was decided upon just after I joined. The matter was brought before a conference of district engineers, who brought in their experience of a portion of the line which they had tried to lift by day labour. They reported the expense, and the price was adopted by the conference on the basis of the joint report.
8335. By the general consensus of opinion? Not opinion, but by the actual facts of what the work had cost.
8336. Their experience? Yes; every man lifted about a mile, and took actual count of the cost of it, and brought the result to conference.
8337. And the value was taken? Yes; and then it was laid before the Commissioners.
8338. In the matter of ballast, that was also not in the original contract? There are various contracts for ballasting, I think.
8339. But was it in the original schedule? Some of it, I believe. I think the Bombo ballast was.
8340. Have you a copy of the original schedule? Yes, I have in the office. I do not know the actual price of the ballast; it is taken from so many places. I use Bombo ballast; I have used sandstone ballast; and I have used ballast from the Emu Plains Gravel Company. I think the sandstone is in the relaying contract.
8341. *Mr. Kethel.*] The blue-metal is only used for finishing? For the top-dressing.
8342. When employing day labour, if you have had to employ it to any extent, is it the custom to pay men only for the time they work, or are there any persons in charge who are paid for holidays? The gangers employed in the day labour are generally the gangers for the contractors who are carrying out the piece-work,

work, and any work which cannot be done as piece-work they take up, and my ganger in charge immediately reports the time while they are doing that little bit of work. It may be an hour or two hours, and he keeps the time it occupies.

8343. And you pay only for the time the men are at work? Actually at work, according to my ganger.

8344. Is it not a fact that gangers not belonging to your staff are paid for work while they are not actually at work? Not that I know of. I have never heard of such a thing.

8345. Are you aware it has been stated in Parliament more than once? I have heard of so many statements being made in Parliament, but I have not attended to them, and I am not sure such a charge was made.

8346. A charge was made that gangers were paid for Sundays, or holidays, or both? Contractors' gangers, or our gangers?

8347. Contractors' gangers? But we do not pay for contractors' gangers, except in cases of day labour.

8348. But are they not included in the labour-sheet? No; I have only to deal with my own gangers. The contractor pays his own gangers.

8349. And they are paid according to the regulations of the Service? My gangers are.

8350. *Mr. Young.*] It states here in a portion of the charge that gangers have been paid for who have never been employed. Do you know any gangers of that description? Certainly not. No ganger is paid for by me who is not on my list of permanent staff, except in day labour work.

8351. *Mr. Kethel.*] How long have you been in the Service? Fourteen years, of which twelve were on construction.

8351½. Were you on the staff? In the Construction Branch.

8352. Then this matter will not apply? Everything there is done under schedule. We have to use day labour occasionally because we cannot include everything in the schedule.

8353. Was any man certified to unless for the time he was actually employed? I never certify to the time of any man employed by the contractor, except in day labour work.

8354. Do you not forward returns to the head office for payment? Quite so, for day labour and schedule work.

8355. The custom is invariably only to authorize payment of these men for the hours they are actually at work? Actually at work, as certified to by my gangers.

8356. *President.*] As to the cost of lifting. You say that an arrangement was ultimately arrived at by the divisional officers meeting and determining the cost, and that the price was then fixed. Do you know whether, previously to that price being fixed, the cost of lifting had been included in the schedule rates? No; it was done just as I joined the Department.

8357. Do you know whether since then the cost of lifting has been included in the schedule rates? In relaying, I believe, they are entitled to make one lift without being paid for it. There is a certain amount of lifting and packing which must be done.

8358. *Mr. Kethel.*] That means lifting and packing sleepers? Yes. The contractor, if he is going to relay must restore the line to its original level, and he may have to lift it again after he has done the work to its level. That would not be paid for as an extra lift.

8359. *Mr. Eddy.*] Mr. Nicholas, regarding the payment of these contractors' men, you only pay for the actual hours that they work? The actual hours.

8360. And all the Government holidays and other holidays granted to the staff, and which our men receive pay for, we save in connection with the contractors' men? Certainly.

8361. And all sickness and other privileges of that sort? The men are only paid while at work.

8362. For the actual hours they work? Yes.

8363. Then this charge which has been made, and into which the Commission are enquiring, do you believe there is the slightest justification for it? Not the slightest.

8364. And you have never certified to the Commissioners to pass any money which the country has not had full value for it? Certainly not.

8365. *Mr. Kethel.*] There is a clause in one of the contracts I see before me here in which it states that no portion of the work shall be sublet without the authority of the Commissioners or their engineer in charge. Does that apply to the relaying. Is such a clause in all contracts let to the contractors by the Existing Ways Department? I am not aware that that is in the relaying contract, but I have never known such a thing as any portion being sublet.

8366. In your opinion, that is not in the relaying contract? I do not remember it. I know it is in many contracts, but I do not remember it there.

8367. *Mr. Eddy.*] Mr. President, you will see on the list of contracts carried out by Justin M'Sweeney that he executed a contract at Parramatta for a subway. Mr. Nicholas was the officer responsible for superintending that work, and perhaps you would like to ask a question regarding it. It is the last except two.

8368. *President.*] I set it is the last but two. Is there anything new in it to attract the attention of the Commissioners?

8369. *Mr. Eddy.*] No; it was let by public tender, and Justin M'Sweeney was the lowest tenderer; but as Mr. Nicholas was the officer responsible for the contract, I thought you might like to ask him questions about it. We have no wish to ask anything.

8370. *Mr. Young.*] In regard to this tender for a subway at Parramatta, I presume, Mr. Nicholas, it is a lump sum tender? I believe it was. It was subject to schedule rates, I believe.

8371. But all you had to do was to see that it was carried out according to plans and specifications? Quite so.

8372. *Mr. Kethel.*] Was there any other additional contracts arising out of it, or any extra work during the prosecution of the contract. Do you remember that. Did the work, as tendered for and accepted, cover the whole of the work. Was there any extras? I am not sure whether the pulling down of the over-bridge was specified. I think it was included in the original contract. I do not remember anything else.

8373. There was nothing except what was let by public contract. That embraced all the work done? I think so, so far as I remember there were some alterations in the arrangements in the yard which were done under schedule rates of relaying contract.

8374. *Mr. Eddy.*] Mr. Robert Kendall, who superintended the work in connection with the forming of the produce market and several works of that nature carried out by Mr. M'Sweeney is the next witness.

Mr.

Mr. Robert Kendall sworn and examined:—

Mr. R. Kendall. 6 June, 1892.

8375. *Mr. Young.*] In this work you superintended at Darling Harbour, how was that let? By contract, sir.
8376. By public tender? Yes, by public tender originally.
8377. Did the lowest tenderer get it? Yes.
8378. What was his name? Justin McSweeney.
8379. Was that by schedule or lump sum? By schedule.
8380. By schedule entirely? The whole of it.
8381. Was it let by schedule? Yes, let by schedule.
8382. Were all these works carried out? Yes, sir.
8383. At these schedule rates? Yes, sir.
8384. Was there anything which arose during the progress of that work that made any difference to this—that altered it in any way? Yes, we decided to alter the use of the building altogether, and convert it into a goods shed.
8385. An alteration which converted it into a goods shed? It was a farm produce market, and we altered it into a goods shed.
8386. *Mr. Kethel.*] Is that the shed which extends down to the Pyrmont Bridge? Yes.
8387. *Mr. Young.*] How did the alterations affect it? We put on two platforms and two annexes, one on either side of the shed.
8388. How was that paid for? By schedule.
8389. In every respect? Yes, I think so.
8390. What amount did it come to in the end? The extension?
8391. The whole work. I see this tender is for £10,489. What did it amount to when you paid for the whole of it? The amount of work carried out there came to about the same as the contract.
8392. I mean the whole of it, with the alterations? Do you mean McSweeny's work?
8393. *Mr. Eddy.*] Might I put in a word of explanation. That is a contract which was let before the Railway Commissioners took office. It was for a large shed at Darling Harbour, and subsequently, when the Commissioners considered the whole of the goods arrangements of Sydney, they decided to divert it from the object for which it was first intended, and to make some alterations, and convert it into a goods warehouse. The Railway Commissioners were only concerned in the slight modifications—perhaps more than slight modifications—made in the shed, and not in the original contract.
8394. *Mr. Young.*] Were these modifications and alterations made before the building was completed or after? They were made before it was completed.
8395. What would the whole of these modifications come to, in addition to this contract? Additions to the shed, £10,500 to £11,000.
8396. The additions? The additions to the shed would be about that amount.
8397. More than the original contract? Yes.
8398. *Mr. Kethel.*] Was it £11,000 in addition to the original contract? In addition to the original contract.
8399. *President.*] That is, the alteration the present Commissioners directed cost £11,000 more than the original contract which was given before the Commissioners took office? Yes.
8400. *Mr. Young.*] What did this contract consist of? There were two platforms, one on either side of the shed, 12 feet wide and 1,000 feet long, and two wings or annexes put on to the building, 22 feet wide, and covered with zinc and iron.
8401. Was all this work paid for at schedule rates? At schedule rates.
8402. Was any other schedule rates added? There were other additional works, such as the foundations for hydraulic cranes, which were paid for at original rates. That was provided in the original contract.
8403. Was there much day work expended over that? No, I do not think there was any day work—very little, certainly. I know there was some little day work in taking down an old shed, or something of that sort; but it was very small work.
8404. Did you receive any designs or plans for these modifications? I prepared the plans myself.
8405. For the modifications? Yes, for the modifications.
8406. And was the work in these modifications of a similar character to that which was done under the schedule? In a great many respects it was.
8407. Have you got a schedule of how the £11,000 was made up? I have not here.
8408. Showing how that was made up? Do you mean the final measurements?
8409. The final measurements? Yes, I have the whole of that.
8410. Showing the variations from this contract? Yes.
8411. I should like to see that.
8412. *President.*] Have you got it here? No, sir.
8413. Was a special schedule prepared, or was the work done on the old schedule? So far as possible we worked under the old schedule, but where there were new works we had to have fresh prices.
8414. *Mr. Kethel.*] I think you said that included wood-blocking for the floor of the shed? No.
8415. How was that done? Carried out by Messrs. Chambers and Grococks; another contract altogether.
8416. Did they supply the blocks or did the Commissioners? The contractors supplied the blocks.
8417. And labour and all? They did everything except provide the cement and the gravel for the concrete.
8418. What was the reason for that? Were you afrid the contractors would not supply it? The Commissioners had a quarry of their own down at Kiama, and they did it for the sake of using the material out of their own quarry.
8419. Did that work also include the shed up near Hay-street, or only the shed near Pyrmont, which was converted into what it is now? That is all.
8420. *Mr. Young.*] Did you measure up all these quantities yourself? The final measurements?
8421. All measurements? So far as I could. For the underground work, of course, I had to depend on the inspector. He supplied the measurements, and I checked them.
8422. Your inspector did that? The inspector under me.
8423. *Mr. Eddy.*] Do you know of any cases in which the Commissioners have connived at the swindling of the country out of any money through these contracts? No, sir, I do not.

8424.

Mr. R. Kendall. 6 June, 1892.

8424. *Mr. Kethel.*] Can you, Mr. Kendall, speaking from memory, give us any idea as to the dimensions of the work which is considered as alterations; this extra work you are speaking of, and which was not included in the original contract? Is it as great as the original contract? Can you give us any idea of the area included by the annexes or wings which have been put on to the original shed converting it to its present purpose? Can you tell us the relative proportions of the original work and of the secondary work? Yes. The original shed was 60 feet wide and 1,000 feet long, and there are two annexes, one on either side, 16 feet wide and about 967 feet long, and inside the other shed two platforms were built. They were the full length of the shed, by 12 feet wide, built of brickwork, with timber deck, and the whole of the building was enclosed with doors. It was originally not intended to have them, but the doors were provided to close the shed at night.
8425. Then the work which was done under the additional contract was equal to or was greater in magnitude than the original contract. Is that so. Were there any platforms in the shed as originally designed? None whatever.
8426. No platforms? None whatever.
8427. So that the platforms had to be constructed to enable you to utilise the whole of the space for goods purposes? Yes.
8428. *Mr. Eddy.*] The original shed was only intended to be a shelter shed like the one at Redfern for the hay and straw traffic, but now it has been converted into a warehouse in which valuable goods are deposited? Yes, sir.
8429. You had to put in foundations for hydraulic cranes, had you not? Yes, sir.
8430. *Mr. Eddy.*] Mr. Mann had charge of the suburban work between Redfern and the Illawarra Junction? He can give you further evidence, Mr. President.

Mr. G. F. Mann sworn and examined:—

Mr. G. F. Mann. 6 June, 1892.

8431. *Mr. Young.*] Were you engineer for the widening the suburban line between Redfern and Illawarra Junction? Yes.
8432. That is the extreme end? From the Redfern Tunnel.
8433. That is a contract let to Justin McSweeny, was it not? Yes.
8434. Do you know how the contract was let? At schedule prices.
8435. Was it by public tender or private? By public tender.
8436. You have seen the schedule rates? Oh yes.
8437. Was it you or your assistants who measured up the work done? My assistants principally.
8438. Did you check them? I have checked them in the office, not on the ground.
8439. What works did they consist of in the schedule? Of widening of earthworks, building retaining walls, and brickwork and ironwork, ironwork in the bridges, and brickwork for the retaining walls, and earthwork for widening the necessary lines.
8440. Did that schedule as made out comprise all the work done in that section? Yes, I believe so.
8441. Did it comprise all? It comprised all.
8442. Was there any work done that did not come into the schedule, and to which the schedule did not apply? Yes, there might be a little—a small portion of work done to which it did not apply.
8443. What was the amount of the contract? I cannot say without the papers.
8444. Approximately? I cannot remember.
8445. It was let originally as a lump sum, was it not? At schedule prices. I suppose they ran out a lump sum.
8446. What proportion was the day work in that contract? The day work was almost nil.
8447. Can you give us an idea of the amount of other work to which the schedule did not apply? We have done very little day work. There were some small things to be done in which we had to employ day labour, but they really amounted to very little.
8448. Did you employ any gangers? No, I have inspectors.
8449. Inspectors—no gangers? No gangers.
8450. Was it your business to see that the brickwork was done in a proper manner, or was it the business of your clerk? It was my business, because I was in charge; I have the supervision of the line.
8451. You had general supervision? I am the engineer in charge of the line.
8452. You had superintendents under you at each particular place to look after certain works? Yes, to look after certain works.
8453. And this comprises all that was done on that work? Yes.
8454. I notice that the contract comes to about £53,000? Yes.
8455. Do you know out of that £53,000 what additional work was done when the contract was completed? Additional work?
8456. How much did it amount to approximately? We have not settled yet.
8457. Not settled? I have not settled yet. There is a matter in abeyance yet. It has not come before the Engineer-in-Chief yet.
8458. Not completed? No, sir.
8459. Do you consider in the letting of that contract and in the general supervision of it, other than what you have done yourself, that the Commissioners have acted judiciously and with judgment? Most certainly.
8460. Do you think the country has suffered by that? No.
8461. Do you think you have had value for your money? There is no doubt of it.
8462. According to the schedule? I think we have had quite value for our money.
8463. Are you of opinion there has been any lack of management in any way which would tend to injure the public or the country? No; most certainly not.
8464. *Mr. Kethel.*] Can you suggest any way whereby the works might be carried out more advantageously for the country? I do not think I can.
8465. Without destroying the efficiency of the work? No; we have had our works carried out extremely well and at a very low rate of prices, and therefore I do not think I would be justified in saying now that a change is required.
8466. You have had a good deal of experience in railway work? Thirty-five years in New South Wales.
8467. You have been here all the time? Yes.
8468. Is the system of tendering and contracting, and carrying out contracts supervising and such like the same as had existence under the previous Commissioner? Exactly, sir.

8469.

Mr. G. F. Mann. 6 June, 1892.

8469. So that the present Commissioners have not introduced any more extravagant method of carrying on work than their predecessors? Not one bit.
8470. Of course you are thoroughly conversant with the matters of which you speak? I am; I have had thirty-five years' experience in New South Wales.
8471. Have you ever known any contracts let either under the present Commissioners now or at any time which you thought might be amended for the better? Never.
8472. *Mr. Eddy.*] As a matter of fact, Mr. Mann, are not the specifications and conditions under which the suburban duplication works have been carried out much tighter in every way than any you have ever had before? I think they are tighter.
8473. *President.*] They are not the same as formerly?
8474. *Mr. Eddy.*] No, sir; we have revised them completely, and made them as tight as they can possibly be made, so that there should be no misunderstanding.
8475. *President.*] Have you compared the new and the old specifications, Mr. Mann? Yes, sir; I am working under the present one, and I have worked under the old ones.
8476. What would be the difference between the two? I think the present conditions are more strict.
8477. Stricter in what way? They do not give the engineers, for instance, the powers they had in the other ones. We have not the same latitude—the conditions bind us more.
8478. And as regards the contractors? As regards the contractors, they are bound in the same way as we are. We have not the same latitude.
8479. Is the supervision of the contractors work more rigid or more lax than it was? It is more rigid because we have a greater number of inspectors. We can put a man wherever we want one.
8480. I see—to inspect the work? Yes; and if we think there is anything radically wrong we apply for an inspector and get him.
8481. What is the difference between an inspector and a ganger? An inspector is a tradesman; for instance, if you have brickwork you have tradesmen to overlook the work, and for timber work you also have an expert.
8482. An expert of that kind of work? Yes.
8483. What is a ganger? He is a man who is in charge of a gang—of a number of men.
8484. *Mr. Kethel.*] Of navvies for instance? Yes; of navvies.
8485. In the carrying out of this large contract to which you are at present alluding, the carrying out by M'Sweeny of the widening of the line from Redfern to Illawarra Junction, what is the length of the section—half a mile or three quarters? A little over a mile.
8486. What length of that line would the contractor have in hand at any one time? He would be working all over it.
8487. How many inspectors or gangers would you have to look after the work carried out over the whole length of that line? Perhaps we would work in some cases with one brickwork inspector, and in some cases with two. It all depended upon the number of men the contractor has at work as to how many gangs would be employed.
8488. That is in reference to brickwork and timberwork, but in regard to other work, the laying of the permanent-way and the earth work? One permanent-way inspector could look after all of it.
8489. So long as the work was done at schedule rates? Yes.
8490. Had there been day work would you have considered it necessary to have more gangers on to keep the time? No, not more inspectors.
8491. Not more inspectors? No; but I should have thought it necessary if I had been doing day work in that way to have had a ganger or timekeeper on to keep the time, and check the contractors return.
8492. But you did very little day work? Certainly; practically nil.
8493. I think, Mr. M'Sweeny, you said that the whole of the day work on the contract would not exceed £2000? I do not think it ought to go to that.
8494. That would be a small item in a contract of £50,000 or £60,000? Yes.
8495. *Mr. Eddy.*] You have had a good deal of experience you said, Mr. Mann, of railway works in the colony. You were working for the new lines department until the Commissioners obtained your service to superintend this duplication work? Yes.
8496. We have had a good deal of evidence about this day labour, and the Commissioners paying more than the daily rate of wage that the workmen themselves drew from the contractors. What was the practice in the construction branch with regard to day labour? The practice there is that the contractors get a certain percentage upon the outlay of their money. They pay their money and we repay them, and therefore they got a certain amount of percentage.
8497. What is the percentage? Supposing they gave 1s. an hour, probably they would get 1s. 1d.
8498. Is there any fixed percentage? No; I think not.
8499. *Mr. Eddy.*] There is a fixed percentage, I believe, and we will have it given in evidence.
8500. *Mr. Kethel.*] Arising out of this question, I will ask you how do you know what wages the contractors are paying the men. Have you any knowledge on that point? We do not know what they are paying until they send their accounts in.
8501. Is it not possible that they might employ a man at 4s., and send in an account to the Department for 7s. 6d.? There is always a schedule for day labor. Whenever day labor asserts itself, a schedule of prices is fixed at so much an hour.
8502. But is it not within the power of the contractor to employ a broken down clerk and send him in to do the work of an experienced navvy, and charge full pay? I do not think so. It would soon be objected to.
8503. Who would object to it? My officers or myself probably. If I saw them working a lot of cripples I would soon stop it.
8504. You claim the right to order a man off if he is not competent. There is a clause in the contract allowing you to do that? Certainly; if we pay so much per hour we will not have cripples.
8505. *Mr. Eddy.*] There was a small work, the deviation of the Western Railway near Blaxland. You have had it in the evidence that it was carried out at a cost of £2,700. It is a small matter, but if you would like to have the responsible engineer who supervised the work, he is here, Mr. President.
8506. *President.*] Yes; certainly.
8507. *Mr. Eddy.*] Mr. Shellshear had charge of the erection of a hay-shed at Redfern.

Mr. Walter Shellshear sworn and examined :—

Mr. W. Shellshear. 6 June, 1892.

8508. *Mr. Young.*] Did you have charge of the erection of the hay-shed at Redfern station? Yes, sir.
8509. Who had the contract for that? Mr. McSweeney.
8510. How did he obtain that? It was advertised for in the press in the usual way. Public tenders were invited, and I believe he was the lowest tenderer.
8511. You say you believe. Did you see the tenders? No, I only saw the schedule which was sent to me when I got my instructions to superintend the works.
8512. Do you know if he was the lowest tenderer? I do not know it from my personal knowledge. I know the custom is to give the contract to the lowest tenderer, and I do not know whether it was departed from in this case.
8513. Had you a copy of the contract? I had a copy of the specification and schedule, but I do not have a copy of all the tenders which were sent in.
8514. Was that contract carried out satisfactorily? Yes, it was carried out satisfactorily.
8515. And in paying for that, did you measure the work up? It was at schedule rates, at per ton, for iron work, and at per square foot for the roofing. It was paid for at schedule rates. The work was carefully measured, and the contractor was paid for on measurement.
8516. Were there any alterations made during the progress of the works? I believe there was some slight alterations, some sky-lights in the roof.
8517. What would the alterations amount to, approximately? I cannot say from memory, as it is three or four years ago since it was done.
8518. You made up the measurements yourself? Yes, with my assistant.
8519. The whole of it? Yes.
8520. And brought in a bill for the same? The certificates were sent in in the ordinary way. The job was measured up monthly, and progress returns were sent in monthly.
8521. *Mr. Kethel.*] You have been a considerable time in the railway service? Ten years and three months.
8522. You were some years in the service before the Commissioners took office? I joined the service in April, 1882.
8523. What position did you fill prior to the Commissioners taking office? I was holding the position of District Engineer, at Redfern, before they took office. I have worked myself up from the position of Draftsman through the various grades until I was District Engineer at Redfern.
8524. What have you been since? Since then I supervised work on the large duplication contracts from Macdonaldtown to Long Cove Creek, and from Long Cove Creek to Croydon; and since Christmas I have had charge of the Goulburn division of the main line.
8525. Were you not employed on the Illawarra line for some time? On the maintenance of it.
8526. What class of labour did you employ on that line? Regular labour or contractors' men. It was entirely regular labour.
8527. The regular staff in the service of the Commissioners? At times we had to have a large number of extra men in consequence of the slips.
8528. That was the season of heavy wet weather? Yes, that was shortly after the line was opened, when we had an exceptional rainfall, and a great deal of damage was done to the railway.
8529. In your experience of the methods of fixing contracts and having them carried out, what is the difference between the system adopted by the present Commissioners and that adopted by the construction branch, or the maintenance branch under the old system when Mr. Cowdery and Mr. Goodchap were in power? The specifications and contracts are practically the same. There have been a few additions, and perhaps, more stringent clauses put in, but practically the principle is the same.
8530. Are they now more binding upon the contractors? The recent specifications are more binding.
8531. The specifications have been revised by the Commissioners since they took office? Yes.
8532. By themselves and their officers? Yes.
8533. Have you seen anything in which you could suggest an improvement in the system of letting contracts, or in the matter of carrying on contracts? So far as carrying out contracts is concerned, they have been thoroughly supervised, and I do not think anything can be done to improve the supervision. I am speaking of the works with which I have been connected myself.
8534. In your opinion, are there a sufficient number of superintending officers to look after the interests of the department when there are all these contracts either at schedule rates, by lump sum, or daily labor? There are sufficient officers.
8535. And you have every reason to believe that the officers are attentive to their duties? All the officers under me are thoroughly reliable.
8536. Have you ever had reason to report any of them for illegal practices? No; I have never had reason to do that.
8537. If you had had any reason you would have considered it your duty to recommend his removal? If I had any doubt.
8538. Of course it would be to your interests to do that, knowing that anything done by your superintendent would reflect upon you? Certainly, if I had a rogue under me I would not allow him to remain and damage my character.
8539. Among the various superintendents you know, have you come across any who were appointed by political influence and not through their competence to do the work which they were set to do? I did not catch the question; do you mean among supervising officers.
8540. Among the supervising officers, have you known of any who you think may have been appointed through political influence rather than because of any general knowledge of their business? Not since the Commissioners took office.
8541. You think not? In the old days I have known of doubtful persons being put in.
8542. But that has been stopped? Since the Commissioners took office.
8543. *Mr Eddy.*] You have heard the charge which the Commissioners are investigating? I have, sir.
8544. Do you think there is the slightest justification for such a charge to be made? There is none whatever.
8545. And as to the political influence that one of the Commissioners has just asked about, do you know

as

Mr. W. Shellshear. June, 1892.

as a matter of fact that since the Railway Commissioners have been in office you have not had put under you one single man who has been placed there because of political influence? No one has been put under me.

8546. There is only one idea, and that is the general efficiency of the service? There has only been one idea, and that is to make the service as efficient as possible.

Mr. David Witherby sworn and examined:—

Mr. D. Witherby. 6 June, 1892.

8547. *Mr. Young.*] Did you have charge of the division on the Western Line between Blaxland and Karabar? Yes.

8548. What did that consist of? It consisted of excavating rock and earth, laying down permanent-way, and ballasting the line,

8549. Who did that work? Justin McSweeney.

8550. In what way? At schedule rates.

8551. I think these schedule rates are the same as those given for some other work. Do you know whether that work was tendered for direct, or was it let on the basis of some other contract? I understood that the schedule came to me from some other contract.

8552. Did it comprise all that was required to be done at that division? It comprised everything except a small amount of day-labour.

8553. What amount did that day-labour bear to the bulk? Very small. It was caused by cutting in a line on a Sunday when we were joining up the works.

8554. Was that work done satisfactorily? Very fairly so.

8555. Did you measure it up yourself? Personally, yes.

8556. Was there any disagreement between you and the contractor as to the measurement? Not as to the measurement.

8557. What as to? As to a further amount which he wishes to be paid for bottom ballast.

8558. It is not settled yet, it is in abeyance? Yes.

8559. Has any work been done during your experience under the Commissioners which has been done other than by schedule or agreed upon terms? Not that I am aware of.

8560. How long have you been with them? Twelve months, about.

8561. That has taken nearly the whole of your time, this deviation? I am on the Lapstone deviation.

8562. The tunnel? Yes.

8563. Do you think the Chief Engineer has acted with judgment in making these deviations? Certainly.

8564. Has it benefited the line in any way? Immensely.

8565. Do you think it is throwing away money to do that? The other way, it is making money.

8566. Are you of opinion that the Commissioners have acted without judgment, and that the country suffers in these matters of deviations and alterations to the railways? I think they are most useful, so far as I have seen, and necessary too.

8567. *President.*] The only other person named here is Mr. J. B. Sutter, who is assistant with Mr. Nicholas.

8568. *Mr. Eddy.*] Mr. Sutter is engaged in connection with the work carried out by the executors of the late David Proudfoot, and you have decided to wait for evidence with regard to that contract.

8569. *President.*] But he was in the work carried out by Mr. McSweeney.

8570. *Mr. Eddy.*] It is only Mr. Proudfood's contract.

8571. *President.*] Then I am mistaken.

8572. *Mr. Young.*] Mr. Eddy, have you any engineer here who has personally measured up any portion of the work done under Mr. McSweeney's contract.

8573. *Mr. Eddy.*] Mr. Fraser has given evidence that he measured up work in the Goulburn district personally measured it every month.

8574. *Mr. Young.*] No, his assistants did it.

8575. *Mr. Eddy.*] The central division of the line includes the Mudgee Branch, and that is why Mr. Sutter's name is here. That really completes the whole of the work carried out by Justin McSweeney, except a bridge in Belmore Park, a small matter of public tender. Then the next contractors are Messrs. Gulliver and Tait, in which Mr. Shellshear was concerned. He can be examined, and then return to Goulburn.

Mr. Shellshear recalled and examined:—

Mr. W Shellshear. 6 June, 1892

8576. *Mr. Young.*] What is this deviation of the line you have been superintending? It is the quadrupling of the main line from Long Cove Creek viaduct, Petersham, to Croydon level crossing, carried out by Messrs. Gulliver and Tait.

8577. Was that let by public tender? That was let by public tender.

8578. Were they the lowest tenderers? I think they were the lowest. I am not sure whether they were the lowest or whether the lowest tenderer threw it up and they were the next; I cannot state positively because in one case the lowest tenderer threw the work up, and the next got it, but in this case I believe, they were the lowest.

8579. What had you to do with this. I see that Mr. Mann has charge? Mr. Mann has charge of it since I have been removed. I have charge of the Southern Division at Goulburn, but I looked after it from the start of the contract up to the middle of January last.

8580. They were half-way through with it then? They were rather more than half-way through with it.

8581. You have heard the evidence given in regard to the work by Mr. Mann? Mr. Mann did not give any evidence about Messrs. Gulliver and Tait. He was on Mr. McSweeney's contract, but the former is the one I am referring to.

8582. Was that contract done in a similar manner at schedule rates? It was at schedule rates.

8583. Did anything arise while you were superintending that line which altered it from the original plans? No, there was no material alteration in the original plans.

8584. Neither in the construction nor the material? No, there was no alteration.

8585. And while you were there did the schedule rates apply to everything that was done? With the exception of some very small items.

Mr. W. Shellshear, 6 June, 1892.

8586. *Mr. Kethel.*] In carrying out this contract, did you allow the contractors to introduce any extra work? There was no extra work which could be possibly avoided. Up to the time I left, the amount of the contract had been £46,000, and out of that there was a small item of a little under £350 for day-work, which is a very small item indeed in connection with such a large contract; and that was in connection with the slewing of the roads, which alteration it was impossible to make at schedule rates. £350 is a very small item.
8587. It is. It could not have come to so much as was originally expected because I said their tender was £52,000? That was up to the middle of January; when I left Mr. Mann came and took charge. The work was then about two-thirds completed.
8588. Were they the lowest tenderers? I cannot say, I believe they were.
8589. *Mr. Kethel.*] It is stated here that they were the lowest out of fifteen? Their prices were very reasonable for the work, and the work was very well carried out.
8590. And whatever extra work was done under the day-labour would be done according to the terms of the contract either added to or deducted from? It would be according to schedule rates.
8591. *Mr. Young.*] Did you employ any gangers? No gangers; I had a brick-work inspector, and an inspector of the permanent-way.
8592. *Mr. Kethel.*] How many miles is it from Petersham to Croydon? A little over 2 miles, but I was looking after the other contract at the same time, from Macdonaldtown to Long Cove Creek.
8593. But the whole range of line under your charge at that time would be between 3 or 4 miles? About 4 miles.
8594. And you are satisfied you had sufficient staff under you, inspectors and gangers, to look after the progress of the works, and to ascertain whether the Commissioners had been either negligent in providing for the proper carrying out of the works or that they were likely to be imposed upon by unprincipled parties who were working? The work was very well carried out.
8595. Was the schedule price very low? It was moderate.
8596. There is one question I want to ask you—Have you ever been aware of any contractor carrying out works since you have been connected with the railway, either under the present Commissioners or previous to their coming, in which they have worked what is known as the truck system? Not to my knowledge.
8597. You have not known of a contractor having a store or establishment in which he was interested and compelling the men to take large portions of their goods from it? I do not know of it.
8598. Do you know whether that is prohibited by the Railway Commissioners in their conditions of contract? It is prohibited in all conditions of contract.
8599. So that any contractor doing that would violate any contract in which he would be engaged? He would commit a breach of contract.
8600. *President.*] That, I think, is all the evidence Mr. Shellshear can give, so that the Commissioners will not require him to remain any longer.

Mr. G. F. Mann recalled and examined:—

Mr. G. F. Mann 6 June, 1892

8601. *President.*] You were the engineer, I believe, connected with this duplication from Strathfield to Flemington? Yes.
8602. Carried out by Messrs. Gulliver and Tait. Yes.
8603. *Mr. Young.*] You were the engineer for this portion of this contract, as well as the other, about which you have already been examined? Yes.
8604. And will everything in regard to the questions asked about that apply to this contract? Apply exactly. I will have to give similar answers.
8605. I presume amongst your various superintendents. Who measured the work? The work was measured every month.
8606. Your superintendent did that? Yes.
8607. How many superintendents have you—these measurers—on the line under your charge? At present I have two.
8608. Have you confidence in their competency? Certainly, because I check their measurements from the plans, when they come in.
8609. You checked them? Yes.
8610. So that if they were to measure, too much or too little, you would find it out? I should find it out immediately.
8611. *Mr. Kethel.*] With reference to the carriage of material other than that supplied by the Commissioners, did they supply all the materials for the permanent-way in this work? Yes. The rails, sleepers, and everything else, was supplied by the Commissioners. The ballast was supplied by the contractors.
8612. Had you anything to do with the arrangement for the haulage of that ballast. That would rest with the Traffic Department? Yes, that is a matter for that department.
8613. Have you any control over the telegraph lines? None whatever.
8614. Suppose you wanted to send a telegraphic despatch to the Engineer-in-Chief in regard to any matter, would you be allowed to do that? I can send a message on service.
8615. Have you known in this or any previous contract, that the contractors either for contracts connected with the construction work, or the maintenance works, have been allowed to use the Railway telegraph system without paying for it? Not for their own private use.
8616. But of course they can communicate with the official staff on service? That would be on service.
8617. But in no other case? A private message, the Telegraph Department would charge for or stop.
8618. *Mr. Eddy.*] Mr. Angus, of Angus & Co., has been here all day, and if you could see your way to question him, before the Court rises, it would not take many minutes and it would be a great convenience.
8619. *President.*] I am afraid we cannot finish with him to-night, because the works carried out by his firm have been very large, but we might begin his examination. So far, up to the present time, we have closed the inquiry into the contracts of McSweeney and Gulliver & Tait, and there remain the contracts of Angus & Co., and Proudfoot & Co. We will go into these to-morrow, I think. Will you, Mr. Eddy, have all the witnesses here to-morrow in connection with these matters, so that we may go as far as we can.

TUESDAY, 7 JUNE, 1892.

[*The Commission met at 11 a.m., in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

8620. *President.*] Is Alexander Archibald Tennant present in Court?

[*Mr. Tennant was called, but did not appear.*]

8621. *President.*] We received from Mr. See yesterday the name of the person who placed certain information in the hands of Mr. Schey. The name is Alexander Archibald Tennant, and the address of that person is 60, Bay-street, Glebe. I understand that this person was duly summoned by the summons of the Commission to attend here this morning, but he does not appear.

Mr. L. W. A. Macarthur sworn and examined:—

Mr. L. W. A. Macarthur. 7 June, 1892.

8622. *President.*] You are a clerk to this Commission, I believe? Yes.
8623. Did you yesterday serve upon Alexander Archibald Tennant, at 60, Bay-street, Glebe, a summons from this Commission? I went to Mr. Tennant's house and saw his wife, and she told me that her husband was not in, and she could not tell me when I would be likely to see him.
8624. What did you do? I left the summons, and told her that it was sufficient service, and that her husband would be liable to a fine of £20 if he did not attend the Court.
8625. What did you give Mrs. Tennant? I gave her an envelope containing the summons.
8626. Will you look at that document. [*Document handed to witness.*] Is that a copy of the summons which you served at 60, Bay-street? The summons was in an envelope, and I did not compare it.
8627. Who put the summons into the envelope? Mr. Allen, the Secretary.
8628. And when it was put into the envelope did you leave it in the envelope and hand it to the person you have mentioned? I handed it to Mrs. Tennant, or at least the person I gave it to said she was Mrs. Tennant.
8629. Was that at 60 Bay-street, Glebe? Yes.
8630. And up to the time you handed the envelope to Mrs. Tennant, the document which was put into the envelope by Mr. Allen remained there? Yes; it did not go out of my possession.
8631. And it was still in the envelope when you gave it to her? Yes, your Honor.

Mr. G. V. Allen sworn and examined:—

Mr. G. V. Allen, 7 June, 1892.

8632. *President.* You are Secretary to the Commission? I am.
8633. Did you prepare a summons for Alexander Archibald Tennant, at 60, Bay-street, Glebe, yesterday, by the direction of the Commission? Yes, your Honor, by the direction of the Commission.
8634. What did you do with that summons after you had prepared it? I showed it to the previous witness, and I put it in an envelope, addressed to Mr. Tennant, in his presence, and told him to take a cab and to serve the summons upon Mr. Tennant or his wife, or at his place of residence.
8635. You put the summons which you prepared in the envelope yourself, and handed it to the clerk? Yes, your Honor.
8636. Is that a copy of the summons which you gave to him. [*Document handed to witness*]? Yes, that is a correct copy.
8637. And was that summons signed by me as President of the Commission? Yes, your Honor.
8638. And it was so signed when you put it in the envelope? I saw your Honor sign the summons, and I took it from your hands and placed it in the envelope in the presence of the clerk, and then I gave it to him to serve.
8639. *President.*] Now, we will proceed with further evidence as to the contracts.

Mr. James Angus sworn and examined:—

Mr. J. Angus. 7 June, 1892.

8640. *President.*] Are you in partnership with any other persons, Mr. Angus? Yes, your Honor.
8641. Who are they? James Angus, junior, William Monie, junior, Samuel William Monie, and William Monie.
8642. *Mr. Kethel.*] How long have these gentlemen been in partnership with you, Mr. Angus? Samuel William Monie and my son have only been in partnership, I think, for about eighteen months. Mr. Monie has been in partnership with me for somewhere about ten or twelve years, and his son, I think, about eight or nine years. Of course I am only speaking from memory.
8643. *Mr. Young.*] What contracts have you had under the Railway Commissioners, Mr. Angus? The first contract I entered into comprised the duplication of the line between Hurstville and Waterfalls, Adamstown to Teralba, Strathfield to Ryde, and Granville to Picton.
8644. *President.*] Those are duplication works? Yes, your Honor.
8645. *Mr. Young.*] I notice here as your first contract the duplication of the line Granville to Picton, Hurstville to Waterfall, Teralba to Adamstown, Strathfield to Ryde. How did you obtain those works? Tenders were called, and we tendered with others for those works at a schedule of prices.
8646. Were you the lowest tenderer? I am informed that we were, but I have no other means of knowing.
8647. Was the work done entirely by schedule? Yes, entirely by schedule.
8648. And did your schedule cover the whole of the work? There were some items which the original tender did not cover, and for these prices were arranged by agreement.
8649. To what extent were they? I cannot say to what extent they would be, but they would not be very much.
8650. Are these works finished? The only work under those contracts that still remains to be finished is the lowering of the grade at Glenleigh, and a little maintenance; I cannot say exactly how much.

8651.

Mr. J. Angus. 7 June, 1892.

8651. What arrangements had you for day works? We had a schedule for day works for the various classes of labour that were likely to be employed on those works.
8652. Was that day-labour schedule given in at the same time as the schedule for the contracts? Yes at the same time as the contract.
8653. Was it given in with it? Yes.
8654. Were there any alterations of any moment in those duplication contracts? No alterations except what became necessary on account of work cropping up which was not mentioned in the schedule. That, however, was of very little moment.
8655. Had any portions of the work to be pulled down and rebuilt? Yes, a great deal of work had to be pulled down and rebuilt.
8656. I mean in the way of new work—had any of that to be pulled down? No new work was pulled down and rebuilt.
8657. You had to pull down old work, I presume? Yes, a good deal of it.
8658. Do you consider that any money was wasted on the construction of that line? No, sir.
8659. Do you think the work could have been done more economically? I do not think so.
8660. You think that the Commissioners and their engineers displayed judgment in those duplications? I am sure they did.
8661. I notice that a further contract of yours was for the duplication of the line between Ryde and Hornsby;—was that obtained in the same way as other contracts? Just in the same way. It was obtained by public tender.
8662. Was there much day-work in respect of that tender? Very little.
8663. Then there is the deviation of line at Bell? That was a different thing altogether. A slip took place at Bell, an engine went over the embankment and the line was blocked, and we were asked to send 120 men up by the next train with tools and everything complete to open out communication again with the Western district.
8664. What schedule rates did you use for that work? The first portion of the work, the opening of communication, was done under the day-labour schedule, but the subsequent deviation was done under the measurement schedule.
8665. *President.*] You say the day-work was done under schedule prices? Yes, your Honor, under schedule prices.
8666. *Mr. Young.*] Then this alteration to curves on the Western line, how was that work carried out? In just the same way.
8667. *Mr. Kethel.*] Is that the schedule under which the work was carried out. [*Document handed to witness.*] It is the schedule attached to one of your contracts? No, sir, that is not the same schedule.
8668. *President.*] Where shall we find the schedule under which these works were carried out? I presume the Commissioners have the tender.
8669. *Mr. Eddy.*] It will be amongst the papers, your Honor.
8670. *Mr. Young.*] I presume there would be different schedules for the different works? They were all covered by one or two schedules.
8671. The whole of them? Yes, the whole of them.
8672. They were covered by two schedules, you say? Yes; there was the Hornsby schedule, which was a separate contract, obtained by public tender; and then there was the schedule in connection with the duplication contracts.
8673. And the whole of the works were carried out under one or the other of these two schedules? Yes.
8674. One of the schedules you say was the duplication schedule? They were both schedules attached to duplication tenders, but they were put in at different periods.
8675. The alteration to curves on the Western line, that was done under the schedule prices for the duplications? Yes; it was the same schedule as applied to the duplications Granville to Picton, Hurstville to Waterfall, &c.
8676. The approximate cost for that alteration was £20,000, was it not? I cannot say from memory.
8677. Was the lifting and reballasting of the Northern line between Ryde and Hornsby carried out under the same schedule? Yes, under the same schedule.
8678. Repairs of line damaged by floods at Bourke, that being urgent was, I suppose, mainly done by day-work? At 4 o'clock in the afternoon I got word from the Engineer-in-Chief inquiring if I could send 400 men, or thereabouts, to Bourke, with tools, tents, and appliances, before or immediatedly after the Western train left; and I replied that if they gave me a special train to go up the Illawarra line I could get the men.
8679. What understanding was there as to payment? Payment was to be at the schedule rate, and the work was carried out under the day-work schedule.
8680. Repairing slips, Mudgee line, that was a somewhat similar work, was it not? Yes, that was a work of urgency, the line was blocked, and men had to be sent up at once to clear the road.
8681. Excavation, filling, laying roads, &c.,- for carriage-shed, Eveleigh, was, that done under the same schedule? Yes, under the same schedule.
8682. And the excavation, filling, laying roads, &c., Homebush carriage-shed? Yes.
8683. And laying in roads, carriage and engine sheds, Hurstville? Yes.
8684. Then, I see there is a contract for culvert under railway near Flemington? I was asked to tender for that work, as I understood, with several other contractors, and our tender was accepted.
8685. That was a special contract? Yes, that was a special contract.
8686. Was the contract for the construction of tramway, Bowral quarry, carried out under the schedule you have already mentioned? Yes, sir.
8687. And also the contract for platforms and waiting-shed at Tuggerah Lakes? Yes; that was carried out under the same schedule.
8688. The whole of the contracts you have done, or are doing for the Commissioners, have been done as the lowest tender? They were done under our schedule, which I am informed was the lowest tender, and nothing has been done except under that schedule.
8689. Did you take over any of the day-work men employed by the Government previous to the duplications being commenced? It was part of the contract that we had to take over the whole of the men employed on the work, and that we should retain their services for a month.

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8690. Was there any agreement as to how you were to be paid for that? No; we were paid according to the schedules, and a bad job it was for us.
8691. You only had the men who were best qualified for the work, I presume? No; we had to take every one, and that was where the trouble came in.
8692. *President.*] But at the end of the month you could weed out the men you did not want? Yes, your Honor.
8693. *Mr. Young.*] Do you know anything of "bogus" contracts? I do not know quite what that means.
8694. I suppose contracts other than those obtained by public tender? There were several of those contracts, but I do not think they can be called "bogus" contracts. They were carried out under the schedule for which we had publicly tendered, and I do not know anything "bogus" about those contracts.
8695. Do you know anything of this charge: "That the contractors had made contracts which were intentionally 'bogus' on their first inception?" I know nothing of that.
8696. Do you believe that there were any such? No, I do not.
8697. You do not know any of your own knowledge? No, sir.
8698. And you have done a considerable amount of contracting work for the Commissioners? Yes; a very large amount.
8699. And if there had been any "bogus" contracts you would have been likely to hear of them? I think I should; but as I said, I do not know anything.
8700. Do you consider that any inspectors or any other persons employed in superintendence in any way, have been appointed through political influence rather than because of their professional knowledge? I have not heard of any being appointed in charge of works.
8701. *Mr. Kethel.*] If an indifferent person was appointed as an inspector of works which you were carrying out, Mr. Angus, would that be in your favour or otherwise; would an unskilful man be less exacting than a skilful man. I put this question in connection with that just asked by Mr. Young as to officers being appointed through political influence? We have had no trouble on our work with the skilled inspectors; but we have had trouble with men who inspected works of which they knew nothing.
8702. We must understand then that it is to the interest of the contractor that the engineer or inspector should be as skilled in his profession as he possibly can be. Such an inspector is better qualified to judge the work which is being carried out than a less skilful person? It is altogether in favour of the contractor to have a skilled man.
8703. In making up your labour schedule for paying by day is there any regular scale adopted by you, or is there any general rule as to the difference between the amount of money you are to receive and the amount you pay the men? In the Construction Department they allow 20 per cent. according to the specification. We have in a measure been guided by that, although not absolutely. I think we have been rather under it than anything else.
8704. And are you aware that the employment of gangs of men by the Commissioners direct was done for the purpose of saving that percentage to the country? The employment of gangs of men very often takes place in cases where measurement cannot be resorted to.
8705. I am afraid I have not made myself very clear. What I mean is this—Before you took over these duplication works there were gangs of men employed on the railway under the Government. Those were the men which I understand you were required to take over when you commenced your duplication contracts and to find employment for? Not only had we to find employment for those men, but what was very much worse for us we had also to take over the contracts which they were carrying on, and to find them in wages.
8706. The point I want to get at is this, would it not have been to the interest of the Commissioners as a matter of economy to have kept those gangs of men rather than let a contract when they knew that a certain per cent. of the money paid as wages would go into the pockets of the contractors? We were only paid for those men at the contract prices, and consequently in many cases we were actually paying the men more than we were receiving for them from the Government.
8707. I am trying to draw a comparison between the work performed by these men before you took them over and afterwards? When we took over these men some of them were getting 2s. a yard in the cuttings, and consequently we had to pay them the same price.
8708. Then these gangs were working on schedule rates for quantities? Some of them, and they were better paid than we were.
8709. How do you account for that; did they have a higher rate for their work? Yes, they had a higher rate for their work; because they were supplied with explosives and all sorts of other things which a contractor has to find himself; and everything considered we were out of pocket by the transaction.
8710. In employing labour do you submit a schedule of rates for the different classes of labour employed. What I want to ask you is this—When you come across a piece of work which cannot be included in the schedule do you charge the same for a man working in the metropolitan area as a man working on the mountains? Yes; the conditions are the same.
8711. The schedule is the same throughout the whole of the Colony? Yes; for instance, the men working at Bourke were paid according to the schedule just as if they had been working on the contract to which that schedule applied. There was no difference.
8712. Is is not generally considered that if you send a man from the metropolitan district into the country there shall be a slight increase of pay? I know that it is customary, but we have never raised a claim.
8713. *President.*] In your opinion was it economical to carry out those works by contract rather than to carry them out as the Commissioners were doing by day-labour? Government day-labour, your Honor, is a very troublesome matter; it is a troublesome matter under any contract. The moment a man knows that he is to work Government day-work, we cannot get any work out of him; we do not get the amount of work out of him for which he is paid.
8714. He works what is known as the "Government stroke," I suppose? Yes, I suppose so, your Honor.
8715. Will you look at this contract. [*Document handed to witness.*] It relates to the duplication of line Ryde to Hornsby. There is a schedule of materials attached, but so far as I can see no schedule of labour; is that so? There is no schedule of labour. 8716.

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8716. I thought you said there was a schedule of labour? Not for the Ryde to Hornsby contract.
8717. But in the other contracts? Yes, your Honor, there was a schedule of labour in the other contracts.
8718. Was there any day-labour under that contract? There was some day-labour.
8719. How was it paid? That contract has not been settled up finally, your Honor, and before that is done the day-labour will not be determined.
8720. Is that the only one of the contracts here mentioned in which day-labour was employed, and for which there was no schedule? Yes.
8721. And that you say still remains for adjustment? Yes, your Honor; it is unsettled.
8722. *Mr. Kethel.*] You have for many years been engaged in carrying out contracts under the Railway Commissioners, I believe, Mr. Angus? Yes; for about 10 or 12 years.
8723. And you have had large experience both of the system of contracting and the method of carrying out the works? Yes.
8724. How does the system adopted by the present Commissioners compare with that in vogue prior to their coming here? The specifications under the present Commissioners are more stringent than they were under the Construction Branch.
8725. *President.*] And is the supervision more stringent? The supervision is equally stringent.
8726. *Mr. Kethel.*] Then you think that whatever alterations have been made in the specifications and conditions have been more in favour of the Commissioners, and harder upon the contractors than previously? Yes.
8727. And that is the only alteration you know of? Yes; that is all I know of.
8728. *Mr. Young.*] Is that the schedule for labour [*handing witness document*]? Yes, sir, that is it.
8729. That is the schedule under which you have carried out all these works, other than the duplication of line Ryde to Hornsby? Yes.
8730. *Mr. Eddy.*] Is it not usual in all contracts to have to provide for extra works that are not contemplated in the letting of the original contract? Yes, sir.
8731. And all day-labour rates that have been put in are rates that you have had to stand competition upon? Yes; they were furnished in the duplication contracts.
8732. And therefore they have been open to competition just as much as if you had put in a lump sum for doing a certain work? Just the same.
8733. Now, in regard to your price for this large amount of duplication work you have had, do you consider that your price for excavation, for instance, is liberal or very hard? It is the smallest price we ever put in for that class of work.
8734. What is the rate? It is 2s. on the large works; that is, for the first contracts.
8735. And you have had to excavate all that heavy rock cutting between George's River and Sutherland while the traffic has been carried on, for the price you have mentioned? Yes.
8736. You have also had a good deal of heavy rock work in connection with the lowering of the grades at Glenlee? Yes. That work will cost us nearer 4s. than 2s.
8737. And yet the Commissioners only pay you 2s. per yard? Yes.
8738. *President.*] Where is Glenlee, Mr. Eddy?
8739. *Mr. Eddy.*] It is beyond Campbelltown, sir, where the large water-main passes over the railway. We had rather a sharp grade there, which controlled the weight of the trains between Picton and Sydney, and we are reducing the grade so that we may be able to take larger loads. (To Witness) Now, in regard to the Bourke floods. You had to send 300 or 400 men away at a few hours notice to do some repairs which were urgently necessary on that portion of the Western line? Yes. We sent about 400 men away with tools, tents, blacksmiths' forges, explosives, and, in fact, everything required.
8740. That was because the work was exceedingly urgent? Yes.
8741. And the same thing happened at Bell? Yes; and also at Mudgee.
8742. Then you had a lot of work between Ryde and Hornsby in the way of making the line secure—that also was very urgent work? Yes; the road was in a terrible condition.
8743. You had to take out the clay bottom and put in solid metal, so as to make the line safe? Yes.
8744. The rainfall had been so exceptionally heavy that trains were getting off the line, and that was why the work was urgent? Yes.
8745. I do not know whether you have read the charge into which this Commission is inquiring, but it is:—"That in making contracts with Messrs. Proudfoot & Co., Monie, Angus, & Co., M'Sweeney, Gilliver and Tait, and a number of other contractors, the said Commissioners had displayed either gross ignorance and incapacity, or 'something worse'; that in many cases the contracts were 'bogus' contracts from their inception; that when it was proposed to make those contracts 1,100 men were dismissed from the Railway service, and that from the time of such dismissal the said Commissioners have connived at the 'sweating' of the men working on the said railways for the contractors, and that the said Commissioners knew what was going on; that by means of the said 'bogus' contracts made in connection with the railways, the country has been swindled out of thousands of pounds; that the contractors have made contracts which were intentionally 'bogus' on their first inception, and thus that certain persons have obtained large sums of money at the expense of the country." In your long experience as a railway contractor in New South Wales, Mr. Angus, do you think there is any justification for that charge so far as relates to incapacity and ignorance? I know of nothing to justify the charge; so far as I am concerned, it is absolutely false.
8746. And as to the question of personal corruption, I suppose you have not the slightest suspicion of anything of that sort? Not the slightest suspicion. With reference to the sweating of the men, I should like to state that yesterday I took one of the wage sheets up haphazard. It related to the Granville to Picton duplication, and I found the average rate paid for labour was 7s. 4d. per day, and that extended to 884 men.
8747. *President.*] Do you recognise any right on the part of the Commissioners to interfere with the rate of pay in any way whatever? Not the slightest.
8748. They have not the right? No, your Honor.
8749. *Mr. Kethel.*] In reference to the matter of letting sub-contracts, Mr. Angus, to what extent has that practice prevailed, or has it prevailed in connection with your contracts? We only let the brickwork and the timber-work on bridges and fences. We have had no fences to speak of on these duplications.
8750. The brickwork and the timber-work can only be done by skilled mechanics, I suppose? Yes; and it

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Mr. J. Angus. 7 June, 1892.

is a straightforward job with which there is no trouble, and you can get the men better placed under a piece-work man than you could under your own men.

8751. Does that practice prevail at all as regards navvies doing rock work? Sometimes it does.

8752. To what extent? We prefer to do the work, but sometimes we let a cutting or two if a man is very anxious to have the job, and if the price meets our view.

8753. You are aware, perhaps, that it has been made a charge—and a serious charge—against railway contractors, that they have adopted this system of subletting extensively, and have thus ground down the rate of pay so that the men are no longer able to earn a fair wage? That cannot apply to our works, because we always see that the men are properly paid, whether employed by a sub-contractor or directly by ourselves.

8754. Have any of the railway engineers or inspectors supervising the contracts you have been carrying out objected to any of your men because they were not sufficiently skilful? Not to my knowledge.

8755. You are aware, I suppose, that they have the right to object? Yes; but it would not pay us to keep unskilful men.

8756. Where it is day-work it does not matter very much to you, I presume—it does not affect you as much as it does the Commissioners and their officers? I think it affects us a great deal more than it affects the Commissioners and their officers, because these day men we employ are taken promiscuously from any gangs which may be employed on schedule work or piece work or, so far as we are concerned, paid by measurement. We could not afford to keep unskilful men in our gangs; if we kept one unskilful man in a gang he would soon demoralise the whole.

8757. It is to your advantage to have the best men you can get for each class of work? We always try to have the best men.

8758. Have you encouraged the truck system in connection with your contracts? No; I have never had anything to do with it.

8759. You always pay in cash? Yes; or in cash orders, which are equal to cash.

8760. *President.*] In reference to the extra works which have been done, works not contemplated when you took the contracts, how was the price for that regulated? By the schedule.

8761. And is provision made in the specifications for any extra work which may so arise? Yes, your Honor, there is provision in the specifications.

8762. That provides that the schedule rates shall be paid? Everything has to be paid by schedule rates under the contract. These additional works might not have been contemplated at the time.

8763. But when they were carried out they were carried out under schedule rates? Yes.

8764. There are no new rates for extra work? No, your Honor; there are no new rates purposely for extra works. There were a few rates which cropped up after the original contract was let.

8765. What had they reference to? Take one item. It was specified in the contract that hardwood was to be used for piles, and the Commissioners wished to substitute ironbark; and consequently a modification of price was necessary to enable us to supply ironbark.

8766. I see. That is where one material was substituted for another, and the material substituted was more costly? Yes; it was only in cases of that kind that there was any alteration.

8767. *Mr. Kethel.*] In the case of the necessity arising for certain work to be done by day-labour, who authorises the men to be placed on that work;—do you judge that yourself, or are you subject to the advice of the resident or divisional engineers? In most cases we get a letter from the Engineer-in-Chief stating that certain work has to be done, and asking us to provide the men. Then an Inspector is sent along to supervise that work, and to show exactly what has to be done. The nearest men are taken, provided they are qualified for the work in question, and the work then proceeds until it is finished; and then the men are sent back to their particular gangs.

8768. You receive instructions from the Engineer-in-Chief? Yes; in most cases from the engineer, but sometimes the Inspector, orders the work to be done. For instance, a broken rail may be discovered, and the Inspector comes and asks for men to do the necessary repairs, and he gets the men.

8769. But the usual custom is to receive written instructions for any work of that kind? That is the usual custom.

8770. In the matter of having to do work that does not come under the schedule of prices for materials and labour, are you asked to submit a price in such a case or does that all come under the schedule rates. Take the case of the laying of a drain or some work of that kind not contemplated in the first instance? There is provision for the laying of pipes and all that sort of thing in the schedule.

8771. Then it is seldom that you have to submit a sub-tender in the course of your contract? We have never done such a thing so far as I know.

8772. The schedule is supposed to cover everything? Yes.

8773. A question was raised yesterday as to lifting, has that work come under your contracts to any extent? No; in our duplication contracts we have to lift the road and lay it, and finish it to the satisfaction of the Engineer-in-Chief.

8774. *Mr. Eddy.*] Now, Mr. Angus, I should like to ask you one question on this subject of day-labour. You do not keep men specially for day-work, but you pick out men from your gangs who are most suitable for the work which requires to be done? Yes sir.

8775. And, as a matter of fact, it is to your interest to have the very best men in your employ? We could not live unless we did that.

8776. Take, for instance, the Ryde and Hornsby widening, where there was not a schedule of prices for day labour, that contract I believe was about £49,000? Yes.

8777. Can you give the Commission any idea of the amount of day-labour in connection with that job? I think, speaking from memory, it might amount to between £300 and £400 altogether.

8778. And therefore, being such a small item, it would not be necessary to ask for a schedule for day, labour? No.

Mr. G. F. Mann recalled and examined:—

Mr. G. F. Mann. 7 June, 1892.

8779. *President.*] What position have you held in connection with the contracts taken by Messrs. Angus & Co.? That of resident engineer for the duplications from Hurstville to Waterfall, Strathfield to Ryde, and Ryde to Hornsby.

8780. *Mr. Young.*] I see you were also connected with the excavation, filling, laying roads, &c., for the carriage-shed at Eveleigh? Yes.

8781.

Mr. G. F. Mann. 7 June, 1892.

8781. You have superintended all these as engineer? Yes.
8782. Have these works been properly carried out? Yes, very satisfactorily.
8783. And are you aware whether these contracts, so far as they have gone, have been carried out at schedule rates? Yes.
8784. Have you taken the measurements yourself? The measurements were taken by my assistants, but I checked them.
8785. Has there been an undue amount of day-labour in connection with these works? No, sir. I may say, in fact, that we have never done any day-work at all.
8786. Have many things cropped up in the course of the work which required an alteration in the prices in the schedule? No.
8787. Do you think the works have been judiciously designed and carried out? Yes.
8788. If it is stated that in many cases these contracts were "bogus" contracts from their inception, do you believe that is true? I know of nothing of that kind. I believe the statement is untrue. I know of nothing which would lead me to believe that contracts of such a character have been carried out.
8789. Do you think that certain persons have obtained large sums of money at the expense of the country in respect of these works? No; of course the money has been obtained at the expense of the country, but the work has been done.
8790. *President.*] The country has got an equivalent for that money? Yes, your Honor, the country has got an equivalent.
8791. *Mr. Young.*] That is what I mean. The country has got the value for the money? Yes.
8792. *President.*] You gave a good deal of evidence yesterday as to the details of the supervising in connection with the contracts held by Mr. McSweeney and other contractors—do you wish to modify your evidence in any way in reference to these contracts? No, sir.
8793. The very same process of supervision has been carried on in all these contracts? Yes, your Honor.
8794. Is there anything you did not mention yesterday which you would wish to mention to-day in reference to the supervision of these contracts of Messrs. Angus & Co.? Nothing that I can remember, your Honor. The same system is carried on right through.
8795. Then, substantially, you would repeat in respect of these works the evidence you gave yesterday in reference to McSweeney's contract, and the contracts of Messrs. Gulliver and Tait? Yes, sir.

Mr. J. B. Suttor sworn and examined:—

Mr. J. B. Suttor. 7 June, 1892.

8796. *President.*] What are you, Mr. Suttor? I am an engineer.
8797. One of the resident engineers? Yes, sir.
8798. *Mr. Young.*] I see you have the supervision of the deviation of the line at Bell, Mr. Suttor? Yes, sir.
8799. And also the alteration to curves on the Western line? Yes, sir.
8800. And the repairs to the line damaged by floods at Bourke? Yes.
8801. And the repairing of slips on the Mudgee line? Yes.
8802. Were you connected yith any other works? Yes, under other contracts.
8803. But not under Messrs. Angus & Co.? No, sir.
8804. In these contracts with which you have been connected, did you measure the work yourself? Yes, I measured it personally.
8805. How did you measure it? On the ground.
8806. Precisely, but by what? According to the schedule.
8807. You returned everything according to the schedule? Yes.
8808. Was there any work at all connected with these various contracts, taking them all through, which involved an alteration of the original design? None whatever.
8809. There were no alterations? No.
8810. Was there any day-work? Yes.
8811. To what extent? I think it amounted to a few hundred pounds in one instance, and that had reference to the deviation at Bell; it was impossible to avoid it. A slip occurred at that place, an engine went over, and a driver was killed, and the road was blocked, and it was desirable to open the line again as quickly as possible. The work was done by employing Angus and Monie's men. It was very urgently required, and as it had to be carried out as quickly as possible, the men were employed at day work.
8812. You say that was done by day-work? Yes.
8813. Were those works done in a proper manner? Certainly.
8814. You think they were done judiciously and economically? Yes, cheaper than we could have done them ourselves.
8815. You think there was no money wasted at the expense of the country? None whatever.
8816. Do you know of any bogus contracts? None whatever.
8817. *Mr. Kethel.*] In regard to the slip at Bell. Was the whole of the work done by day-labour? No, only that portion of the work which we could not measure. You see the road was in a state of mud, and we had to get the water away and restore communication as quickly as possible. All that preliminary work was done by day-labour, but after communication had been restored, day-labour was dispensed with.
8818. The deviation of the permanent-way was done under the schedule? Yes.
8819. And you avoided the day-labour system as far as possible? Yes, as far as possible.
8820. Which did you find the most satisfactory in dealing with work of that sort, schedule rates for material according to contract, or the employment of men on day-work? The schedule rates by all means.
8821. Have you ever had to do with the gangs of men who were working on the lines before the present deviation contracts were entered into? You will remember that some two or three years ago gangs of men were employed by the Commissioners doing piece-work? I had nothing to do with those men, they were employed in another district.
8822. *President.*] So you cannot speak as to the efficiency of their work or otherwise? No.
8823. Is it, in your opinion, the most economical and the most satisfactory way to carry out this work at schedule prices? Yes.
8824. In reference to these repairs to lines damaged by the floods at Bourke—was that work carried out by day-labour? Most of it was, because it was impossible to do otherwise. The line was being washed

away

Mr. J. B. Sutton. 7 June, 1892.

away, and to have delayed operations might have meant a loss of £10,000. It was the desire of the Commissioners to have the damage remedied as soon as possible, and the most expeditious way of carrying out the repairs was by day-labour.

8825. Were you inspecting during the whole of the time that that work was being carried out? Yes.

8826. And you had men under you whose calculations you were able to check? Yes; we had time-keepers checking the work, and I also checked it personally.

8827. How long were you there? We were seventeen days restoring communication.

8828. How many men were employed on the repairs? About 586, of which 400 were contractors' men.

8829. And the rest? They were our own men.

8830. Were they supervising or helping? No, sir; they were our own permanent-way men. There was so much of the line destroyed that we had to get their assistance.

8831. What men had you under you, Government men, I mean, supervising this work? There were inspectors and gangers.

8832. How many inspectors? Two inspectors and several gangers and time-keepers. It was a splendid piece of line to work at. The men had only a few yards to work on, and consequently if one man in the party loafed he would delay the whole lot; under the arrangements which we instituted, one man loafing would block 150 others.

8833. In your opinion, I suppose, the work was carried out economically and properly? Yes.

8834. Without any waste? Without any waste whatever.

8835. *Mr. Kethel.*] What system of check have you in taking the measurements. If it is a mere matter of so many lineal yards of permanent-way there is little chance of error in that, but in other measurements, and I think you said you measured the whole of the work on the Mudgee lines yourself, what system did you adopt? In the first place plans are prepared, generally by the Engineer-in-Chief for the Construction Branch, Mr. Deane, and on each of those plans the cubic areas are written, and we carry out the work according to those plans. That is sent to the Commissioners and they know exactly what is being done. When the contract is let the plans are handed to me, so that the work may be carried out thoroughly in accordance with them, and if, as the work is in progress or when it is completed, there is any discrepancy we are called upon for an explanation.

8836. According to that the quantities can be properly checked at any time? Yes; both on the ground and on the plan.

8837. And at the close of the contract that has all to be thoroughly investigated before the final certificate is given? Yes; there is a complete system of check.

8838. *Mr. Young.*] I suppose the contractor has someone measuring with you? Yes, his engineer; and if there is any difference between us it is settled by the Engineer-in-Chief. We have a conference, and he settles the matter.

8839. *Mr. Eddy.*] In connection with the urgent work at Bell and on the Mudgee line, you made an endeavour to get men locally? Yes, sir; we even offered the Lithgow men 10s., but they struck at that.

8840. And therefore it was really a very cheap arrangement to get the contractor's men at cheaper rates? Yes, it must have been at least 25 per cent. cheaper.

8841. Will you give the Commission your views as to the class of men that Messrs. Angus & Co. put on to these works? I don't think I ever had connection with a better class of men, and it speaks volumes for them that the majority of those men had been with Angus & Co. for years. They were a splendid lot of workmen, and I may say that in seventeen days at Bourke they removed 64,000 tons of stone, and that is sufficient evidence of their capacity for work. At Bell also they removed several thousand yards in a few days. There was not a loafer amongst them.

8842. Then at Bourke, although these men were employed at day-labour so as to enable communication to be restored, when the time came for making the permanent repairs, that was carried out at contract rates? The permanent repairs were carried out by our own permanent men.

8843. I mean putting in the new water-ways, and work of that kind? That was done by contract.

8844. The whole thing was done by public contract? As soon as the first work was done and we could release the day-labour men we called for tenders, and the work was carried out in that manner.

Mr. D. C. Simpson called and further examined:—

Mr. D. C. Simpson. 7 June, 1892.

8845. *Mr. Young.*] You gave evidence yesterday, I think, Mr. Simpson? Yes, sir.

8846. I suppose the evidence you then gave in regard to the contracts of McSweeney and Gulliver and Tait would apply to the contracts of Angus & Co.? I don't exactly follow you.

8847. You have already given evidence to the Commission as to the supervising of contracts held by McSweeney and Gulliver and Tait? I gave no evidence as to Gulliver and Tait's contracts.

8848. Only as to McSweeney's contracts? Yes.

8849. Would the same evidence you gave in respect of McSweeney's contract apply to these contracts of Angus & Co.? ——

8850. *President.*] It is as to your supervising? I simply take the works over when they are completed. I think there is a misunderstanding. I had charge of the relaying and reballasting which Mr. McSweeney carried out, but the works contracted for by Angus & Co. only come over to me as they are finished.

8851. *Mr. Eddy.*] The Commission are simply asking you a question in regard to the lifting and reballasting of the Northern line between Ryde and Hornsby, and the laying in roads at the carriage and engine sheds, Hurstville; as to the construction of a culvert under the railway near Flemington, and the construction of a tramway at Bowral quarry.

8852. *Witness.*] I can only say that these works were very satisfactorily carried out.

8853. *Mr. Young.*] You would say the same with regard to these contracts that you said of McSweeney's? Yes.

8854. Were there any considerable alterations or deviations? Not that I am aware of.

8855. There was nothing about the contracts of Angus & Co. which calls for special remark. Was there anything different about the supervision of these contracts? There was no difference, sir.

8856. And you think they were done judicially and carefully? Yes.

Mr.

Mr. A. Randall sworn and examined :—

Mr. A. Randall. 7 June, 1893.

8857. *President.*] You are one of the district engineers, I believe, Mr. Randall? Yes, sir.
8858. And you have charge of the Hurstville to Waterfall duplication? No, sir; the Granville to Picton duplication.
8859. *Mr. Young.*] You say you had charge of the Granville to Picton duplication? Yes, sir; the work is not yet finished.
8860. Messrs. Angus & Co. are the contractors for that work, are they not? Yes.
8861. How was that work done; how was it paid for? Under schedule rates.
8862. Did you measure the work yourself? Yes.
8863. Have there been any other works which have arisen during the contract to which the schedule has not applied? Do you mean in the matter of day labour.
8864. Any way? That would be all.
8865. Only day labour? Yes; only day labour, and that has been provided for.
8866. Do the schedule rates cover everything? Yes, everything.
8867. *President.*] What amount of day labour have you had on that section? Not much, considering the amount of the contract. I think it has amounted to about 1¼ per cent. Of course, we do not know exactly what it will amount to in the end, as the contract is not yet closed.
8868. How does the day labour come in? In this respect, your Honor, in slewing the lines, in pulling them over from one part to another. Such work as that cannot be measured, and time must be paid for. There are many of these points.
8869. Points of the kind you mention? Yes.
8870. Where day labour is employed in that way, what steps do you take to see that it is properly carried out, and that a proper time is given? We have a timekeeper who goes over the works daily; his record is brought in to me, and also that kept by the contractor, and I go through them myself and find out what each item is for.
8871. You are present on the work, I suppose, or you are in the neighbourhood of the work? Yes; I reside upon the work.
8872. When this day labour is going on, are you present to check it yourself, or do you simply take the figures of your timekeeper? I cannot always be there. Sometimes I have to look after the opening or slewing of new lines, and then I give some little attention to the day labour.
8873. *Mr. Young.*] You have a timekeeper? Yes.
8874. And he checks the day labour? Yes; he is on the ground, and he checks the labour.
8875. Do you think the work has been done judiciously? I am satisfied that it has. Of course, it is to everyone's interests that it should be done judiciously, and that it should be thoroughly well carried out.
8876. *Mr. Kethel.*] What class of ballast do you use on that line? Sandstone ballast.
8877. Is there not a top course of bluestone? Not upon the duplications. There was another contract for ballasting in which bluestone from the Bowral or Bombo quarries was used; but on these works it is entirely sandstone.
8878. Who provides it? The contractors under schedule rates.
8879. How do the rates apply—at the quarry? No; the ballast is measured on the works.
8880. Have the contractors the use of the lines and haulage in bringing that ballast to the point at which it has to be used, or does the department make a charge for that? No; they have the use of the line.
8881. Is that part of the contract? Yes.
8882. So that if any haulage of that sort is done, it is one of the privileges that contractors enjoy. Yes.
8883. Are you aware whether they have any other privilege in the way of hauling? All the materials used in construction are conveyed by the Commissioners.
8884. Where it is so specified? Yes.
8885. That is that permanent way materials are provided by the Commissioners? Apart from that bricks and cement are taken on to the ground by the department for the contractors.
8886. Do not the contractors pay the department for that? No.
8887. Does that come within your own knowledge? It is only what I know generally. I am subject to correction, but I believe that that is the case.
8888. To what extent are the contractors allowed to have their staff conveyed backwards and forwards over the line? To no extent whatever so far as I am aware. I know they have contractors tickets, but I am not aware that they enjoy any other privilege.
8889. Not even the privilege of sending messages over the railway telegraph lines? If they desire to to communicate with the Engineer-in-chief they would have the use of the wires, but generally speaking any messages would go through me, and I am quite sure no private telegrams are conveyed.
8890. I suppose that you as an engineer, apart from the Traffic Department, are privileged to use the wires on departmental matters? Certainly.
8891. Is it not confined to the working of the Traffic Department? No; I can always send any telegrams I require on departmental matters. Of course it would not do to have business of that kind hindered. It has to be facilitated as much as possible.
8892. Do you know of your own knowledge that any contractor has used the railway telegraph lines free of charge for the purposes of his own business? Certainly not; I am satisfied that such a thing does not exist.
8893. You say the ballast provided by the Commissioners comes from Bowral and Bombo? Yes.
8894. And that is hauled over the lines by the Commissioners? Yes.
8895. It is part of the contractors duty to spread that ballast? It is not within this contract. Messrs. Angus & Co. spread the ballast which they themselves provide.
8896. *Mr. Eddy.*] This carrying of contractors materals which you have referred to, Mr. Randall, in connection with these duplication works, that was known, was it not, to all the contractors when they tendered for the work? Yes; and it would regulate the price of their tender.
8897. Therefore Angus & Co. had no privilege which was not open to every other contractor? No.
8898. And the object of giving them free carriage was to keep the price of the work down as low as possible? Of course.

Mr. A. Randall. 7 June, 1892.

8899. The charge which the Commissioners are investigating is:

"That in making contracts with Messrs. Proudfoot & Co.; Monie, Angus, & Co.; M'Sweeney; Gulliver and Tait; and a number of other contractors, the said Commissioners have displayed either gross ignorance and incapacity or 'something worse.' That in many cases the contracts were 'bogus' contracts from their inception. That when it was proposed to make these contracts 1,100 men were dismissed from the railway service, and that from the time of such dismissals the Commissioners have connived at the 'sweating' of the men working on the said railways for the contractors, and that the Commissioners knew what was going on. That by means of the said 'bogus' contracts made in connection with the said railways the country has been swindled out of thousands of pounds. That the contractors have made contracts which were intentionally 'bogus' on their first inception, and thus certain persons have obtained large sums of money at the expense of the country."

So far as you know in your experience in superintending these works for the Railway Commissioners, is there a word of truth in such a charge? Not one word.

Mr. J. Fraser recalled and examined:—

Mr. J. Fraser. 7 June, 1892.

8900. *President.*] In the contracts over which you have exercised supervision, I mean contracts carried out by Messrs. Angus & Co., I suppose the supervision was such as you spoke of yesterday in reference to McSweeney's contract? Most decidedly.

8901. Had you any cause for dissatisfaction with the work done by Messrs. Angus & Co.? None whatever, your Honor. It was good work, and thoroughly well done.

8902. And it was done in accordance with the specifications? Yes, your Honor, in accordance with the specifications.

Mr. A. F. Watson sworn and examined:—

Mr. A. F. Watson. 7 June, 1892.

8903. *Mr. Young.*] Had you the superintendence of the deviation of line at Bell? Yes, sir, I had.

8904. And also of the repairs to line damaged by floods at Bourke, with Mr. Suttor as your assistant? Yes, it being in my division, and Mr. Suttor assisted me.

8905. Those were the only two works carried out by Messrs. Angus & Co. over which you have had any supervision? There was also the repairing of slips on the Mudgee line.

8906. Did you measure these works yourself? No, I did not do so personally. Mr. Suttor did the measuring, but I was responsible.

8907. Did you check the measurements in any way? Well, not individually or personally; I accepted Mr. Suttor's check in the matter.

8908. Do you know whether the quantities were priced out according to the schedule? Yes, sir. The work at Bell and also at Bourke was done at labour prices.

8909. But they were according to schedule prices? Yes, the work was done at schedule prices.

8910. Were those works carried out properly? Thoroughly well, and most energetically.

8911. And advantageously to the country? Most decidedly so.

8912. Do you think that any large sums of money were wasted at the expense of the country over those works? Not at all; the men were treated liberally. Some people might find fault perhaps with the way the men were treated at a time of great pressure. We had to give them some meals and to find them in more comfortable quarters, and there were sundry other little expenses of that kind.

8913. *Mr. Kethel.*] Which you believe were justifiable under the circumstances? Certainly sir.

8914. If you want men to work hard in an emergency, you have to provide them with certain necessaries at your own expense I suppose? That is so.

8915. *President.*] Does that apply to the work done in connection with the Bourke floods, as well to that done at Bell? Yes, your Honor, to both.

8916. Do I understand that part of the work at Bell was done at schedule prices? Yes sir, from the beginning.

8917. But at the beginning, I understood you to say, the work was done by day labour? Yes, your Honor, and what I have stated applied to that.

8918. And after that I understand the men worked at ordinary schedule rates? Yes, your Honor, and then to a great extent these privileges were withdrawn.

8919. *Mr. Eddy.*] As to the men at Bell who received food, a large number of them were sent away in a great hurry were they not? Yes.

8920. And it was only until the men could make their own arrangements for getting food that we took them under our care? It was only until the contractors could make better arrangements for them.

8921. Did you hear me read the charge just now into which this Commission is inquiring? I did.

8922. Do you believe there is a word of truth in it? Not the slightest.

8923. *President.*] That I suppose is all the evidence the Railway Commissioners have to give in reference to the contracts of Messrs. Angus & Co. The only other contracts now are those of Messrs. Proudfoot and Co.

8924. *Mr. Eddy.*] Yes, your Honor, and I understand that Mr. George Proudfoot one of the executors for the late David Proudfoot is in attendance.

8925. *President.*] Then we will take his evidence.

Mr. George Proudfoot sworn and examined:—

Mr. G. Proudfoot. 7 June, 1892.

8926. *President.*] Were you in partnership with your brother, the late David Proudfoot, in carrying out these contracts under the Railway Commissioners? My position was this. I was manager with an interest.

8927. Who was in partnership with your brother? No one.

8928. Was there anybody besides yourself associated with him in carrying out these contracts? Yes, your Honor.

8929. Who was that? Mr. James Fletcher, junior.

8930. What position did he hold, was he also manager with an interest? No, your Honor, he simply had a deed of gift of a certain interest.

8931. Did he actively interfere in the carrying out of any contracts? Not in David Proudfoot's lifetime.

8932.

Mr. G. Proudfoot. 7 June, 1892.

8932. Since his death? Since his death he has helped me to administer the estate, and to manage it.
8933. When did your brother die? On the 20th March.
8934. March of what year? 1891.
8935. At that time were there any contracts with the Railway Commissioners which were still in process of execution? Yes, your Honor.
8936. What has been done with those contracts since then? They have been carried on just the same as they would have been if my brother had been alive.
8937. Carried on by you and Mr. Fletcher? Yes.
8938. Are those contracts concluded or are any of them still in progress? Yes, your Honor; the whole of them are in progress.
8939. You say the whole of them are in progress? Yes, your Honor.
8940. *Mr. Kethel.*] Are you aware how these contracts were obtained? Yes; they were let by public tender.
8941. In every case? Yes.
8942. Were you intimately acquainted with all the contracts? Yes.
8943. I notice that you have one contract for the relaying of the Northern division. Do you know that? Yes.
8944. Then there are also contracts for the Western division Yes.
8945. And for part of the Central division? I do not think that is amongst our contracts.
8946. *Mr. Eddy.*] Perhaps Mr. Proudfoot does not understand the term part of Central division. That is a term used by the department. Mr. Proudfoot's contract was for the whole of the Northern line, and for certain parts of the Western line. From Springwood, westward, was taken by Mr. David Proudfoot.
8947. *President.*] That is the Central division I suppose?
8948. *Mr. Eddy.*] That is our own term. It is an arrangement under which our divisional engineers are placed.
8949. *Mr. Young.*] I see another of your contracts was for raising bank, East to West Maitland? Yes.
8950. And you also had a contract for the deviation of Western railway at Lapstone Hill, had you not? Yes: that was a separate contract.
8951. And the Mudgee line deviations, was that a separate contract? That work was carried out under the relaying contract.
8952. And the improving of grades on the Western line near Minore? That was a separate contract.
8953. And the improving of grades on the Western line near Mombil? Yes; that was the same.
8954. And the improvement of grades on the Western, line near Singleton? That was a special arrangement under the relaying contract.
8955. Which schedule were these later works carried out under, I mean the deviations and improvements of grade? Some of those works were carried out under the schedules attached to the first relaying and reballasting contracts.
8956. The contracts for the Northern and Western division? Yes.
8957. And those contracts, you say, were obtained by public tender? Yes.
8958. Tell me to what other of your contracts that schedule applied? It applied to all contracts with the exception of those for the deviation of the Western Railway at Lapstone, and the improvement of grades on the Western line at Minore and Mumbil.
8959. Those were separate tenders? Yes, but the work was done at schedule prices.
8960. You say the whole of the works were carried out at schedule prices? Yes.
8961. Did those schedules contain day-work prices? Yes.
8962. Were there many extra works in connection with these deviations and the relaying and reballasting? There might be some small items overlooked by the engineer, but they were arranged afterwards.
8963. Was there anything of much moment? No.
8964. Not under any of the contracts? No.
8965. You say these contracts are not completed yet? No; but so far nothing has arisen beyond what usually occurs in any contract; little things crop up which were not foreseen in the first instance.
8966. *President.*] Do you know any firm named Coghlan and Mather, who had a contract? Yes.
8967. Or who did some work? They tried to supply some ballast, but I think they failed.
8968. Where was that? A little beyond Rydal, on the Western line.
8969. Did you ultimately do the work that they undertook to do, in the way of providing ballast and metal? It was originally thought that the Commissioners would supply the ballast, but they could not do so, and the people your Honor has mentioned obtained a small contract, but they failed to carry it out.
8970. Then, what was done? Then the work was given to us.
8971. How was it given to you, by tender? We made an offer to supply the ballast, and after the Commissioners had cut down the price considerably, our offer was ultimately accepted.
8972. Were there any other tenders for that? I believe there were.
8973. Did other people tender beside yourself? Originally the Commissioners received a large number of tenders from different parties, but those parties all failed to provide ballast at the prices they had named. The only way we managed to do the work was by importing the latest American machinery, and carrying out operations on a large scale.
8974. You had a contract for doing that with the Commissioners? Yes.
8975. How was that paid for—at the schedule rate, or in a lump sum? There was a price per cubic yard.
8976. Was that schedule the one determined under the original contracts, or was it a special schedule affixed to that particular contract? It was specially fixed when we accepted the contract.
8977. Was the price increased or decreased? It was a considerable decrease upon what we wanted.
8978. What price did you get? Well, your Honor, I do not care to expose my price to the public.
8979. I do not see how you can keep that back from the Commission? Well, our price was 5s. 3d. per cubic yard.
8980. *Mr. Young.*] Was that sandstone? No; the best bluestone.
8981. *Mr. Kethel.*] Was that 5s. 3d. per cubic yard at the quarry or delivered as needed on the lines? It was the price put into the waggons?
8982. Broken to gauge? Yes, broken to gauge.
8983. What was the gauge to which it was broken? Two and a half inch.

8984.

Mr. G. Proudfoot. 7 June, 1892.

8984. The ordinary blue metal gauge? Yes. The work was taken very cheaply, and it was only by importing special crushers that we could do it.
8985. *President.*] What was the metal supplied for? For ballasting the road.
8986. What was the amount of the contract altogether? I cannot say, your Honor.
8987. Was it a large matter? That I cannot say. It all depends upon the state of the road.
8988. *Mr. Eddy.*] It all depends upon the requirement, Mr. President. The arrangement was exactly described to you by Mr. McSweeney yesterday.
8989. *President.*] Is it still going on? Not so far as we are concerned, your Honor. I may say that I heard Mr. McSweeney's evidence yesterday, and what he stated was substantially correct.
8990. *Mr. Eddy.*] There is some difficulty with Messrs. Proudfoot at the present time, and the Commissioners terminated the contract for the time being. That occurred some months ago; but the arrangement with Messrs. Proudfoot & Co. was precisely the same as that with Mr. McSweeney. As Mr. Proudfoot has explained it was found that certain people who had tendered to the Commissioners for the supply of ballast at different parts of the line could not supply the metal at the rate required, and consequently that the relaying and ballasting work was very much retarded. An arrangement was then made with the late Mr. David Proudfoot and with Mr. McSweeney to supply the ballast required in connection with their own contracts, at a price that we found would be a fair one, looking at the prices paid all over the country by us; and under that arrangement Mr. Proudfoot and Mr. McSweeney were enabled to proceed with the supply of ballasting *pari passu* with the laying of the metal, thus materially expediting the work.
8991. *President.*] In making these arrangements, were any tenders obtained from other contractors?
8992. *Mr. Eddy.*] No, sir. As I said we had to terminate our arrangements with other people, because they could not supply the ballast as we wanted it.
8993. *President.*] Take the case of the firm I have already mentioned.
8994. *Witness.*] Those people were not supplying, and could not have supplied more than 50 or 100 yards per week.
8995. *Mr. Eddy.*] We gave those people I believe our own land to quarry upon, and they were to supply a certain quantity of ballast; but they could not carry out that contract, and other work was being materially delayed, consequently the arrangement had to be terminated, and then Mr. David Proudfoot undertook to supply the ballast, and to put it on the line exactly as he required it in connection with his relaying contract. It was because the public tenders were so unsatisfactory that we had to terminate them in many cases. Some of the small contractors managed to fulfil their obligations, and they have continued to supply the department with ballast up to the present time. I may mention Mr. Smart, of Carcoar. We get from him to this day, because he can supply us with what we require.
8996. *Mr. Kethel.*] Did you have to give the late Mr. David Proudfoot an increased price, or did you make terms advantageous to the department?
8997. *Mr. Eddy.*] We had the prices before us that we had paid at various parts of the line previously. Then Mr. Proudfoot put in a price, and I think we made some reduction in order to get what we considered was a fair price, both for the department and the contractor. The rate determined was, I think, 5s. 2d. or 5s. or 3d. per yard. Possibly we might have been paying more in some places and less in others, of course according to the circumstances; but Mr. McSweeney and Mr. Proudfoot undertook to supply the ballast wherever we required it at an uniform price of 5s. 2d.
8998. *Mr. Kethel.*] I suppose the quality of the stone would in a measure regulate the price?
8999. *Mr. Eddy.*] Yes, the Commissioners had to approve of the stone in each instance, and we had the highest class of stone it was possible to obtain. We, of course, supplied the motive power to take the ballast, after it had been loaded into the waggons, to the spot where it was to be used.
9000. *President.*] Did the Commissioners make any arrangement with Messrs. Proudfoot & Co. about the employment of men in that work?
9001. *Mr. Eddy.*] No, sir, that would be a matter for the contractor to arrange himself. We did not interfere at all.
9002. *President.*] Take the case already mentioned in which the Commissioner granted one of the contractors certain land upon which to quarry. Was there any arrangement between the Commissioners and the contractors as to what men should or should not be employed, or as to how they should be paid?
9003. *Mr. Eddy.*] Most certainly not, sir, beyond having reserved to ourselves the power of putting out of employ any men we may consider objectionable.
9004. *Witness.*] I think it has already been stated to your Honor that when the relaying and reballasting contracts were entered into we took over all the Government men and kept them employed.
9005. *President.*] I am referring as to the payment of the men. Was there any arrangement with the Commissioners as to how the men should be paid?
9006. *Witness.*] If we fail to pay the men the Commissioners have power to keep back our money and to pay the men with that.
9007. Was there any arrangement with the Commissioners as to the payment of them? The rights under the relaying contract would have come in there.
9008. Was there any provision for the rate of commission which should be paid for supervising the work or anything of that kind? No, your Honor, the 5s. 3d. included everything.
9009. There was no arrangement of that kind? None whatever, your Honor.
9010. *Mr. Eddy.*] We know nothing beyond the payment of 5s. 3d. per yard for each yard of ballast put into the trucks. Our engines are hooked on to the trucks, and the ballast is taken to wherever it may be required. We knew nothing, nor do we know anything, as to the rates of pay given by Proudfoot & Co., or as to the men they employ.

[*Prior to resuming after the adjournment for lunch Alexander Archibald Tennant was again called and failed to answer to his name.*]

Mr. Proudfoot's examination continued:—

9011. *Mr. Young.*] Did you object to crush any stone for the Commissioners because it was too hard? No sir.
9012. Do you know of any siding that was lifted up and removed three times? No, sir.
9013. Do you know anything about it? No.
9014. Do you know anything about the siding in the district you had, that is from 105 miles West? There was a siding put in at Rydal.

9015.

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9015. *President.*] Would that be about 105 miles West? About it.
9016. Did you have any siding there? We put one in there.
9017. Was that siding removed at any time? Yes.
9018. How often was it taken up? Only once.
9019. Are you sure of that? Yes, sure of it.
9020. Why was it taken up? Because the quarry was found to be unsuitable.
9021. *Mr. Young.*] Not because the stone was too hard? Oh, dear no.
9022. *President.*] What was done? A new quarry was opened.
9023. Where was that? Near Tarana.
9024. *Mr. Young.*] Was that quarry found suitable? Yes.
9025. *President.*] Was the siding laid down at that quarry removed? Oh, no, the siding is there still.
9026. And the quarry was worked from the time it was opened continuously? Yes.
9027. Was there any other case within your knowledge in which a siding was made and afterwards removed? No, your Honor.
9028. *Mr. Young.*] Was the stone from that first quarry of a very superior quality to that subsequently obtained? No; that is apparently an allusion to the Rydal quarry. We put up machinery there and found the quarry unsuitable and removed the machinery to Tarana.
9029. At whose cost? At our own cost.
9030. The Railway Commissioners had nothing to do with that? Nothing whatever.
9031. Was any additional cost incurred in opening up the new quarry? Yes, of course, but at our expense.
9032. I mean the Commissioners had no extra cost to defray? No.
9033. *Mr. Kethel.*] Did not the Commissioners lay down a siding? No.
9034. That was not done at their expense? Well, a portion of the earth-work for making the connection with the main line, but they had nothing else to do with the cost of opening up the quarry and making the line for our machinery.
9035. Is it not a fact that the Commissioners always lay down these sidings connecting with the main line themselves, that is to say, they employ their own men? Yes; that is inside their own fences.
9036. They allowed you to put the line down outside their fences to the quarry? Yes.
9037. They supplied the permanent way material? Yes; of course we are still responsible for that permanent way material.
9038. *Mr. Young.*] Was there any arrangement made with you to carry out the work in connection with the slips on the Mudgee line at a certain rate of commission for supervision? No; there was no such thing as commission, I never heard of it before.
9039. *President.*] I suppose we can get the pay sheets of the work done by day labour, Mr. Eddy.
9040. *Mr. Eddy.*] We can give you a list of the payments we have made, but you will have to ask the contractors for the pay-sheets. We have nothing to do with the pay-sheets, but simply with the amount of work done; that is returned to us by our engineers, and we do not see the pay-sheets at all.
9041. *President.*] You do not see the pay-sheets at all?
9042. *Mr. Eddy.*] No.
9043. *President.*] Are they not submitted to your officers?
9044. *Mr. Eddy.*] No, only the time made. In the schedule of prices there are certain rates fixed for labourers and tradesmen; and the time these men work for the Commissioners is returned to the Commissioners, and the time is paid for at the schedule rates.
9045. *President.*] I see.
9046. *Mr. Young* (to Witness).] In connection with the slips on the Mudgee line, was the work paid for at schedule rates? I fancy it was day work.
9047. It is the day work we are alluding to? I would not be certain as to whether it was day work.
9048. *Mr. Eddy.*] The work on the Mudgee line was done by measurement.
9049. *Mr. Young.*] That is the slips on that line?
9050. *Mr. Eddy.*] Yes.
9051. *Witness.*] I think it was done by measurements.
9052. *Mr. Eddy.*] We can give you the full particulars as to the amount of work done, and as to the money that was paid, and, if necessary, we could put Mr. Sutter into the box to show how the work was carried out.
9053. *Mr. Young.*] What we want is particulars as to how the work was done and paid for.
9054. *Witness.*] I remember now that the work was paid for by measurement.
9055. *Mr. Young* (to Witness).] I suppose the day work on this contract would only come in in the case of slips where the quantities could not very well be measured. Could you give information upon this point? We have the whole of the information in our office, and I could give you the pay-sheets to show you exactly what was paid. Any information that we have we will be glad enough to give the Commission.
9056. *President.*] The Commission will be glad to have the pay-sheets, Mr. Proudfoot, not necessarily for public use, but for our own information.
9057. *Mr. Young.*] At whose cost were the posts on the railway in connection with this work removed, that is the posts of the fences?
9058. *Witness.*] I do not exactly understand.
9059. Were not some of the fences interfered with by these slips? At whose cost would these be made good? I do not quite gather what you are referring to.
9060. Was there not a misunderstanding between the Inspectors and Mr. Proudfoot in respect of this matter? I do not know of any serious misunderstanding. Of course the manager and his foremen, and the Government Inspectors may nag at each other occasionally.
9061. *President.*] Was there any difficulty in adjusting matters? No, none that I know of.
9062. They were finally adjusted at any rate? Yes.
9063. *Mr. Young.*] Were hundreds of posts placed where they were not wanted? I am at a loss to understand what you are referring to.
9064. *Mr. Kethel.*] Had you to do with the replacing of any damaged fences on the Mudgee line? Yes.
9065. Did you find the material for them? No, the Commissioners found the material; posts, and rails, and wire.

9066.

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9066. *Mr. Young.*] And you have no remembrance of any of these matters that I have asked you about, beyond what you stated? No. There is one thing I would like to mention. Great capital has been made out of the day labour. I would like to say that day labour did not pay us; we lost money by it, and we were very glad when it was terminated.
9067. *President.*] Do you mean on the Mudgee line? No; I mean anywhere; it did not pay us.
9068. *Mr. Young.*] Mr. Schey says this: "Messrs. David Proudfoot and Co. received a contract from the Railway Commissioners for carrying out certain deviations on the Mudgee line of railway. This contract was let privately, no tenders having been advertised or publicly called for. Certain railway contractors were privately notified to send in tenders to the department. I am not aware that any firm tendered for this contract except Proudfoot & Co.; but that firm carried out the work." Now, is that a fact? No; it is not a fact. The fact is, that was part of the relaying contract, and was done under a schedule of prices.
9069. Was the tender called for that portion, or some other portion? I do not know of any other portion being done.
9070. I mean, was the Mudgee line a portion of your main contract originally? Yes; of the relaying contract—from Springwood West to Mudgee.
9071. And that was done by contract? Yes; it was done by public contract. The relaying was done by public contract, and the deviations were done under a schedule of prices.
9072. Then these statements are not true—that is, what I have read to you? No; they are absolutely false.
9073. *President.*] Then the contract for the deviations was publicly advertised, and tenders were called for? Not that I am aware of.
9074. This statement which you have just heard read refers to certain deviations on the Mudgee line. It is alleged that this contract was let privately, no tenders having been advertised or publicly called for? Well, your Honor, the statement is true this far, that Mr. Proudfoot did this work under the schedule prices fixed by the contract for relaying.
9075. Then there was no separate contract for this work on the deviation? No; it was done under a schedule of prices.
9076. *Mr. Eddy.*] I will explain, your Honor, that for years past the Mudgee line has been a source of great trouble in wet weather, in consequence of the class of the earth forming the hills alongside the line. It has been necessary to anticipate slips of earth during wet weather. Sometimes these slips block the line, and at other times render the passage of trains a matter of risk, and men had to be kept to watch the line day and night. The time came when it was rendered positively unsafe to pass trains along the line at all, and we had to discontinue the night service, and substitute a day service. We then decided to lift the line out a short distance from the foot of many of these cuttings, and it was for that work that Mr. Proudfoot, who had contracted for the general reballasting and relaying, and had given favourable prices for earth-works, was paid schedule prices.
9077. *President.*] Then the work connected with these deviations was treated as part of the contract for relaying and ballasting, and was not dealt with as a separate matter?
9078. *Mr. Eddy.*] No; it was considered work that we ought to give to the contractors for reballasting and relaying on that portion of the line.
9079. *President.*] Of what extent were these deviations?
9080. *Mr. Eddy.*] In some cases the line was lifted out for 6 or 8 yards, and in other places we went out 20 or 30 yards.
9081. *President.*] And in taking the line out that distance, would the work of construction be very heavy?
9082. *Mr. Eddy.*] No, your Honor. We did not practically do any filling, but were content to go as far as we could on the made ground. I may explain that in some cases there had been a toe of the bank left on the right hand side of the line. We lifted the line completely to the outside of that toe and left a space, and this gave us a natural embankment to catch any stuff that might slip down. As a matter of fact, since these deviations were made, we have had no trouble with the line so far as slips are concerned, and the work cost, roughly speaking, something like £30,000.
9083. *President.*] How long ago was that?
9084. *Mr. Eddy.*] About a year and a half. I find that the work was finished on the 15th March last year.
9085. *President.*] Since then we have had continuous rain?
9086. *Mr. Eddy.*] Yes, your Honor. Practically, we have made a secure line out of what was formerly a very dangerous one. I find that the actual cost of this deviation was only about £20,000.
9087. *Mr. Kethel* (to Witness).] Were you superintending this work for your brother? Yes.
9088. So that you are fully acquainted with the whole of the circumstances? Yes.
9089. *Mr. Eddy.*] I will put in a few figures to show the Commission the class of work that was done.
9090. *President.*] This apparently forms part of the declaration—the passage that was referred to in Mr. Schey's speech—and so far it appears from the evidence that the whole thing was entirely misunderstood. He speaks of the deviation works as works for which there was a separate contract.
9091. *Mr. Eddy.*] Yes, your Honor. The price under Messrs. Proudfoot's contract for excavating soft soil was 1s. 9d. per cubic yard, and this was looked upon as a reasonable price. We did not expect to get anything better.
9092. *President.*] Do you consider, Mr. Eddy, that by any other mode of carrying out this work it could have been done as economically or as well as it was done by Messrs. Proudfoot?
9093. *Mr. Eddy.*] I do not think it could have been done better. We were quite satisfied with the prices as being perfectly reasonable, and Mr. Proudfoot was most energetic in carrying out works of that nature. In fact, the way in which that work was carried out met with commendation at the hands of the Commissioners.
9094. *President.*] Was this work one of emergency?
9095. *Mr. Eddy.*] Yes, it was a work of emergency. We had to suspend the running of the mail-train at night until we had completed the deviations.
9096. *President.*] Before you commenced these operations you were only able to carry on the day service?
9097. *Mr. Eddy.*] Yes.
9098. *President.*] And it was with a view of carrying on a night service as well as a day service that these works were undertaken?
9099. *Mr. Eddy.*] We had to suspend the night service, and the deviations were made to enable us to revert to the service which was most convenient for the mails and for the public.

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9100. *President.*] Then there formerly was a night service?
9101. *Mr. Eddy.*] Yes.
9102. *Mr. Kethel* (to witness.)] It as been alleged that you yourself, as acting for your brother—that is for Proudfoot & Co., sub-let a large quantity of work from time to time in connection with your railway contracts. Can you tell us to what extent that was done? There was only one case that I know of a small piece of work that was done at Wallace Creek, near Maitland, and that was a very small affair; nothing of any consequence.
9103. Then the work carried out by Proudfoot & Co., was virtually done by their own men on day wages? Yes, on day wages, and the very highest wages were paid.
9104. I ask these questions because it has been asserted that contractors, and I think that Proudfoot & Co. were pointed out as one of the worst, had been guilty of sweating, that is, sub-letting contracts at prices so low, that it was impossible for the men to earn good wages? That is absolutely untrue, and that information has come from a discharged drunkard, a lying scoundrel, named Tennent.
9105. *President.*] What do you mean by a discharged servant, discharged by whom? From our service.
9106. Was Alexander Archibald Tennent, an employee of yours? Yes.
9107. Where was he employed? In the office.
9108. How long was he in the service of your firm? I could not say how long. He was employed by my brother, and after my brother died I discharged him. He was a thorough drunkard, and an unmitigated liar.
9109. In what capacity was he employed? As an accountant; but he knew nothing, or next to nothing about books.
9110. Has he been connected with your office or business in any way since you discharged him? I had to keep him on for about two months after my brother's death, and then I discharged him at the first opportunity.
9111. You do not know how long he was in your brother's employ? No; but I should think about four months.
9112. What has he been doing since? Loafing and sponging about the streets. I have given him a pound or two myself, at least, I have given it to him to give his wife because I understood she was starving.
9113. *Mr. Kethel.*] In carrying on the work with day labour was it customary for the Government to pay you for the gangers you employed, or did you pay them yourself? We paid all the men at specified rates for different classes of men.
9114. And what was the gangers rate? The gangers were put down at 11s. a day, but we paid all our men £4 per week whether working or not, wet or dry, and we lost therefore. Our leading men, that is the platelayers, received 9s. a day. That was all we received from the Commissioners and we had to supply all the tools.
9115. That is what you mean when you say that the day labour did not pay you? Yes.
9116. That is, that the margin was sufficient? No, it left no margin, and we were glad when the arrangement terminated.
9117. Did the Railway Engineers ever allow you any money for the payment of your gangers or others, except when they were working? No. A strict supervision was kept over that day work. There were the Commissioners' gangers, then there were the inspectors, then the assistant engineers, and above them the engineers themselves, and it was impossible that there could be anything wrong.
9118. And they thoroughly checked all your returns of the time worked by the man? Yes; everything was thoroughly checked by the inspectors, and the matter was then passed on to the engineers.
9119. Did you ever, or did it ever come within your knowledge that any attempt was made to introduce the "truck" system? Not that I am aware of; the truck system was dead years ago.
9120. Yes; but it has been asserted that it has been introduced or that an attempt has been made to introduce it lately? We never made such an attempt, and no contractor of any repute would be bothered or pestered with it.
9121. *Mr. Eddy.*] The ballast you supplied to the commissioners was at the rate of 5s. 3d. per cubic yard? Yes.
9122. That would be about 4s. 11d. per ton? Yes.
9123. With regard to the separate tenders were there not three sets of tenders put in, one for relaying, and reballasting, one for lowering the grades at Minore, and the third for the deviation at Lapstone Hill? Yes.
9124. The charge that the Commission is investigating is—"That in making contracts with Messrs. Proudfoot & Co., Monie, Angus & Co., M'Sweeney, Gilliver & Tate, and a number of other contractors, the said Commissioners have displayed either gross ignorance and incapacity or something worse. That in many cases the contracts were 'bogus' contracts from their inception. That when it was proposed to make these contracts, 1,100 men were dismissed from the Railway Service, and from the time of such dismissals the said Commissioners have connived at the sweating of the men working on the said railways for the contractors, and that the said Commissioners knew what was going on. That by means of the 'bogus' contracts made in connection with the said railways the country has been swindled out of thousands of pounds. That the contractors have made contracts which were intentionally 'bogus' on their first inception and thus certain persons have obtained large sums of money at the expense of the country." Have you in your capacity as a contractor obtain from the Commissioners any moneys that the country has not had full value for? No; that statement is utterly false and without foundation; in fact the contrary is the case.
9125. With regard to the sidings you have referred to, you have borne the cost of the work up to the present time? Yes.
9126. And the Commissioners have simply done what was necessary for making the connections of these sidings with the main line? Yes.
9127. That was part of the arrangement under which the ballast was supplied? Yes. Any statement to the contrary is utterly without foundation and without a particle of truth.

Mr. James Angus recalled and examined :—

Mr. J. Angus. 7 June, 1892.

9128. *Mr. Young.*] With regard to this charge to which Mr. Schey refers in his speech—"that the contractors, Messrs. Monie & Angus, have made a present to the Railway Commissioners without any compensation or consideration of £8,500 worth of brickwork." Do you know anything about that? I am not aware of having made any present to the Commissioners.
9129. You know nothing about it? No.
9130. Was it made, in fact, at all? No.
9131. *President.*] Was there any particular piece of brickwork that cost £8,500? Not to my knowledge. Of course we have had pieces of brickwork that cost £8,500, I daresay.
9132. But does the mention of that amount recall to you any particular piece of brickwork? No; certainly not.
9133. *Mr. Kethel.*] Was there not an instance where you tendered for some works, and made a mistake in the price you put in the schedule for the brickwork? Yes; in the Ryde to Hornsby Road.
9134. And you accepted the contract notwithstanding that you had made an error against yourself? Yes.
9135. Perhaps that is the case referred to? It may be.
9136. Would that make a difference of about £8,000 to you? The work is now completed as far as the brickwork is concerned, and I think something close upon 2,000 yards of brickwork have been done on that contract.
9137. That of course is all in favour of the Commissioners and against you? Yes, we made a loss on the brickwork.
9138. *Mr. Eddy.*] I may explain that the Commissioners pointed out the error. This was a case in which there was a manifest error in regard to the brickwork, and Mr. Angus said that he always stood by his mistakes, and he carried out his contracts for 20s. per yard instead of £2, which should have been specified if it had not been for a clerical error.
9139. *President.*] Then this charge amounts to saying that the country received a present of a quantity of brickwork for nothing; that does not seem a grievous matter.
9140. *Mr. Eddy.*] No, your Honor, we should like to have a good deal more done on the same terms.
9141. *President.*] I fancy the country would like the whole of the brickwork to be carried out in the same way.
9142. *Mr. Eddy.*] There were some modifications made in the plans subsequently, of which you knew nothing when you tendered, by which there was not so much brickwork as you had tendered for? Yes, that is so.
9143. You were not aware of that fact when you tendered? No, we knew nothing of it.
9144. *President.*] I understand that Alexander Archibald Tennent was at one time in the employ of Mr. Angus. Was this person Tennent in your employment? He was in our employment for a considerable time on the Waterworks contract, sections 9 and 10, and on section 7 on the Illawarra Railway.
9145. How long would he be in your employment? I think he would be in our employment over two years.
9146. Was he in your employment while you were doing any work for the Railway Commissioners? No.
9147. What character did he bear in your office? We had to discharge him, I think, twice on account of drunkenness.
9148. Was he a competent man, as far as intelligence went? We did not find—
9149. What was he? He was accountant. We did not find so much fault with his work as with the drunkenness; it was on that account that he was unable to do his work properly.
9150. Mr. Proudfoot has stated that he was a man whose truthfulness was not to be depended upon? I did not come in contact with him. He was brought more in contact with Mr. Monie, who had charge of the various works in which he was employed. As to his moral character I could not speak, but I know the circumstances connected with his discharge.
9151. When was he discharged? The last time was towards the end of the number 7 section Illawarra contract, between three and four years ago.

Mr. J. B. Suttor recalled and examined :—

Mr. J. B. Suttor. 7 June, 1892.

9152. *Mr. Young.*] You superintend the work in connection with the slips on the Mudgee line? Yes.
9153. Do you know anything with reference to the day work that was done there? Yes.
9154. What was the method of getting at the day work in connection with that contract? The only day work that was done in connection with the Mudgee slips was work that did not properly come within the measurements. It was the extension of a few culverts which was necessitated because we found that we had to project the line a little further out, raising of formation, slewing roads, &c. That was done by day labour under our own inspectors.
9155. Was any of the earthwork done with day labour? No; not one yard of it.
9156. Was there any fencing destroyed? Yes; that was caused where the contractors were spoiling the earth from the excavation; they were allowing the earth and rocks to fall down the hill and knocking the fencing down. I wrote to them that they would have to renew the fencing at their own cost and that was done.
9157. At the cost of the contractors? Yes. It was done two months after the final certificate was signed.
9158. Who did the fencing? Some of the contractors' men. I sent one of our inspectors up to see that the work was being done properly and pass it. But apart from that there was not a yard of fencing done in connection with the contract—the contractors were not paid for 1 yard of fencing.
9159. Did Mr. Proudfoot sub-let the fencing work, do you know? No, I think not; I know they were his men who did it—men who were employed on the deviation.
9160. *President.*] What was the amount of the fencing? Not much; there may have been 300 yards. The slopes were about 3 in 1, and you may imagine, what the effect of rocks rolling down these slopes would be when they came against the fence.
9161. *Mr. Young.*] Do you know of a siding having been removed three times? No; but I think that I know what was referred to. That was in connection with the relaying contract. It was before Mr. Proudfoot

Mr. J. B. Suttor. 7 June, 1892.

Proudfoot started his relaying. The contract was let to Coghlan and Mather for the supply of metal, and we agreed to allow a certain amount of material for a siding, and made a connection with the main line for them. These men, however, could not complete their contract, and the old siding was taken up, and a second siding was put in when Messrs. Proudfoot & Co. took up the work, in order to suit their crushing machinery. There was no siding removed at the instance of the department three times, or even twice. It is a frequent thing to allow sufficient material to lay down sidings to quarries, in fact, we are glad to facilitate contractors in this way.

9162. Did Messrs. Coghlan and Maher offer to provide improved machinery and go on with their contract? No; they did not offer to supply anything at all. The whole of their affairs were disorganised, and the men could not get their money. The fact of the matter was that they could not break the metal at the price.

9163. *President.*] What stone was it? Blue metal.

9164. They took the contract at too low a price? Yes; it was too low altogether for hand-broken metal. We did not stipulate how it was to be broken, but they proceeded to have it broken by hand.

9165. Then Mr. Proudfoot came in and broke it by machinery? They broke it with both. They broke some of it by hand, and afterwards got machinery up.

9166. *Mr. Kethel.*] Is not hand-broken metal better than machine-broken? No, not altogether. It is rather an advantage to have a little flakey metal for use on the road.

9167. *Mr. Eddy.*] It is a little better for putting on the roadways. Our tramway engineer, always asks us to furnish him with hand-broken metal, but for railway purposes the machine-crushed stone answers our purposes equally well, if not better.

9168. *President.*] Of course, there is no work on the metal itself on the railway?

9169. *Mr. Eddy.*] No. We only use it for packing, and crushed metal is perfect for that purpose.

9170. *Mr. Kethel.*] Perhaps it is better for railway purposes, because, being flakey, it would lie more compact.

9171. *President.*] Do you know whether Messrs. Coghlan and Maher used the "truck" system in paying their men? I do not know anything about that—I do not think they did.

9172. *Mr. Kethel.*] How long were they supplying the department with metal? Only a short time—about three months altogether. I do not think they were obtaining metal the whole of that time, not more than a month or so.

9173. *President.*] Had they any other contract besides that for supplying metal? No, not that I am aware of.

9174. *Mr. Eddy.*] About how much a week did it cost to keep the Mudgee line open until we made these deviations? Over £300 a week. Two ballast trains and several gangs of men were kept going. At one time we had two trains impounded in between two slips.

9175. And with all this expense there was still a great risk in carrying on the traffic? Yes. We have lifted the line now, and these slips now fall into the track where the old line was. Since the deviations were open we have not had an extra man employed in connection with these slips all through. In fact, within two years we will save the cost of the work.

9176. *President.*] Within two years? Yes; that is in the expense that we were formerly put to, and which is now avoided since the deviations were made.

Mr. Edwin Molloy Halligan sworn and examined:—

Mr. E. M. Halligan. 7 June, 1892.

9177. *Mr. Young.*] You had charge of the work under one of Mr. Proudfoot's contracts in the Northern division? Yes.

9178. It was the raising of an embankment from East to West Maitland in one instance? Yes.

9179. And the improvements of grades near Singleton in another case? Yes.

9180. Were these works carried out by Mr. Proudfoot? Yes.

9181. In connection with the relaying and ballasting, are you aware whether that was tendered for? I believe it was.

9182. At any rate, you received a schedule? Yes; I received a schedule.

9183. Was the work done to that schedule? Yes.

9184. Did you measure it off? No, not personally; but it was done by various assistants.

9185. Who were they? Mr. Owen, in the first place, and subsequently Mr. Suttor and Mr. Knox.

9186. Did you check any of their measurements? No; not actually on the ground.

9187. Were there any works actually carried out to which the schedule did not apply? Very little, there was only a little day-work.

9188. To what extent? I could not say from memory.

9189. Was the same schedule used in relaying and ballasting as was used at Maitland? Yes.

9190. And also for the other work at Singleton? Yes.

9191. It was one schedule all through? I think there was an alteration in the earthwork at Singleton. I think there was one price all through for earthwork there, instead of a distinction being made between earth and rock.

9192. That was a special arrangement? A special arrangement, I understand.

9193. What necessitated that? I could not say.

9194. Was there anything in connection with these works that might have been improved upon? Not that I am aware of.

9195. Do you think any savings might have been made? No; I do not think so.

9196. You think the work was judiciously done? Very judiciously done.

9197. Did they display any want of knowledge on the part of the Commissioners or the engineer. I think not.

9198. *President.*] In connection with the day-work that was done on the lines you had charge of, what steps did you take to ensure proper supervision? We simply checked the time with the inspector who was present while the men were carrying on the work, and I would have a good idea on going through the work as to the value of it, and could see that there was no great discrepancy.

9199. Did you employ gangers on behalf of the Commissioners to check the gangers employed by the contractor? Yes; in all cases.

9200. Then the time they rendered was checked by the inspector? Yes.

9201. And then it came before you? Yes.

Mr. E. M. Halligan. 7 June, 1892.

9202. Would the inspector himself have any knowledge of the work that was done by day-labour? Yes; he would have a daily knowledge of it; he would see everything during the day.
9203. *Mr. Eddy.*] You are frequently over your district yourself? Yes.
9204. You have heard the charge that the Commission is investigating? Yes.
9205. Do you consider that the Commissioners have connived at any "sweating" or robbery of the country? No, sir.
9206. *President.*] Have you ever had any difficulty in adjusting the time worked by those men employed at day-work? Very little difficulty indeed. I make my inspector go with the contractor's inspector and settle on the ground, and if there are any disputes I am called in as a sort of referee, and I settle the thing out of hand.
9207. Have you ever had any reason to believe that the gangers employed by you were not faithful and honest men? No, sir; I think they were thoroughly honest men.
9208. Nothing occurred to make you think that there was any likelihood of their colluding with the gangers or contractors? Nothing of the kind occurred, sir. I have such a knowledge of the work myself that nothing of the kind could creep in, and I am satisfied of the honesty of these men who were employed as gangers for the Commissioners.
9209. Were those gangers employed by the Railway Commissioners—I mean were they selected for this particular work—or men who had been employed for any length of time? They were men selected from the best among our other gangs.
9210. Had they held the position of ganger for any length of time, or were they merely put to this work of supervision for a special occasion? Presuming that the work were knocked off to-morrow, they would go back to their own work in their old gangs as gangers.
9211. *Mr. Eddy.*] You mean that they are permanently on the staff of the Commissioners? Yes.
9212. They are not here to-day and gone to-morrow? No, sir.
9213. Your assistants, who supervise these works, are engineers by training? Yes.
9214. And have a good position in the service? Yes.
9215. Some of them have been in our employ only temporarily? Yes.
9216. But most of them have been employed in the Construction Department for years? Yes.
9217. And the gangers you told us of were permanent men? Yes.
9218. Most of them have been in the service for many years? Yes.
9219. And you know them to be thoroughly trustworthy? Yes; I know them to be so myself.

Mr. Watson recalled and examined:—

Mr. Watson. 7 June, 1892.

9220. *Mr. Young.*] You were largely employed as supervising engineer over the works carried out by Messrs. Proudfoot & Co.? Yes; in the Western division.
9221. Who was acting under you? Mr. Knox, for some time, subsequently Mr. J. B. Suttor, and since he left me I have been assisted by Mr. Shettwynd.
9222. Was there much work done by day-labour? There was a good deal at the start of the contract. We were not able to start immediately on measurements, but after about a month it was all measurement.
9223. And in connection with that day-labour, what steps did you take to see that it was properly carried out? We had our Government gangers in charge of the contractors' gangs, to supervise the work, and keep a check upon the men employed.
9224. Then you had your inspectors? Yes; I had then my own inspectors, and special men for the relaying.
9225. Then the matter came before you finally? Yes; I had a number of sub-inspectors, and over them all was a sort of chief inspector, who was directly responsible to me.
9226. *Mr. Kethel.*] You have heard some questions as to a quarrying contract entered into by Messrs. Coghlan and Mather;—were you in charge of that portion of the railway at the time this affair occurred? Yes.
9227. Would you kindly give us an explanation of the matter? Yes. Messrs. Coghlan and Mather started to supply ballast for the railway works, and they commenced to carry out their contract by hunting for stone. They first had to hunt to find the stone. When they got some stone, they broke it out; but we did not approve of it, and they had to go further. They then found some very good stone in a little gulley up the railway, which they commenced to work. They then broke the stone, employing labour to break it by hand, and then a siding was put in. We put a siding in from the railway to bring the ballast to the main line, which was some little distance, and our trucks were running there bringing the stone away; but they found they could not make it pay, and I understand they gave up the job and stopped work.
9228. The contract absolutely fell in? Yes; they could not supply me with the quantity I required.
9229. *President.*] Then the Government made some arrangement with Proudfoot & Co. to take up the work? Yes.
9230. *Mr. Kethel.*] And they commenced operations? They worked the same quarry that had been vacated by Messrs Coghlan and Mather, just beyond Rydal. They went to work, and put up some crushers—jaw-crushers—and worked for a while; but they found it would be more suitable for a large supply of material to go to another place altogether, and they opened up another quarry near Tarana. They put in an extensive siding, erected these huge American crushers, went to work in a thoroughly disciplined way, and supplied us with all that we required.
9231. And they still supply the department? Not on the Western division; work was stopped on the 1st of April last.
9232. Then their plant is now lying idle? Yes.
9233. And you are not taking stone from them at all? Not at present.
9234. *Mr. Young.*] This work was carried out, I presume, under similar conditions to those you have already explained to us? Yes.
9235. That is by schedule rates? Yes; the rate was subsequently settled.
9236. How do you mean? It was not included in the schedule for relaying.
9237. What was not? This rate for supplying ballast.
9238. That has been explained; but with this exception all the rates have been included in the schedule? No; lifting was one item, and hauling ballast was another item.

Mr. C. E. Nicholas recalled and examined :—

Mr. C. E. Nicholas. 7 June, 1892.

9239. *Mr. Young.*] You supervised one section of the work done by Proudfoot & Co.? Yes; from Springwood to Mudgee.
9240. That was done by tender? Yes; on schedule rates.
9241. Have you anything to bring under the attention of the Commission with reference to the work performed? No.
9242. Nothing to add to your former evidence? Nothing whatever.

Mr. D. W. Witherby recalled and examined :—

Mr. D. W. Witherby. 7 June, 1892.

9243. *Mr. Young.*] You supervised the work done at Lapstone Hill? Yes.
9244. Was that done according to a schedule of prices? Yes.
9245. Was any portion done by day-labour? None has been done as yet, nor is any likely to be done.
9246. The work is not finished yet? No; the work is not finished yet.
9247. That was a special public tender? Yes.
9248. *Mr. Kethel.*] It is virtually a new work? Yes.
9249. *President.*] Have you anything you wish to bring under the notice of the Commissioners in reference to this work? Nothing in particular excepting that it will be of very great use to the traffic when it is completed.
9250. But I mean as to the way the work has been carried out or as to the prices? The prices are very cheap. It is a very cheap job.
9251. *Mr. Kethel.*] Are you aware whether Proudfoot & Co. got it by public tender? Yes.
9252. Are you aware what number of other tenders were sent in? I do not know how many others tendered, but Mr. Angus told me he put a tender for the work.
9253. And do you know that Proudfoot & Co. tendered lower than any others? They were the lowest tenderers.
9254. And for that reason they got the contract? Yes.

9255. *Mr. Eddy.*] Your Honor, Mr. Chetwynd, an assistant of Mr. Watson, is in Court and if the Commissioners think fit we will call him.
9256. *President.*] Unless there is any fresh information to be gained I do not think it desirable to call him.
9257. *Mr. Eddy.*] There is nothing beyond what has already been said by Mr. Watson and some others.
9258. *President.*] Then we do not want to hear him. There is one matter, Mr. Eddy, that I would like to ask you about. Is it true that Coghlan and Mather made an offer to the Commissioners to carry on the work of supplying ballast under improved conditions and with improved machinery.
9259. *Mr. Eddy.*] I cannot speak positively, but what I have in my mind is that the work was carried on in so unsatisfactory a manner that we had to make other arrangements. I will put in the whole of the correspondence relating to this matter if the Commission consider it necessary.
9260. *President.*] Very well, that will show the Commissioners what you have done.
9261. *Mr. Eddy.*] Very good, your Honor, I will supply the whole of the particulars in our possession.
9262. *President.*] There were some contracts carried out by a Mr. Blunt?
9263. *Mr. Eddy.*] Not for the Railway Commissioners, your Honor. He was connected with the advertising contract in connection with advertising at railway stations, that was terminated by us, but he has not carried out any works for us.
9264. *Mr. Kethel.*] That was the contractor who constructed the Woy Woy tunnel, was it not?
9265. *Mr. Eddy.*] Yes, but that was under the Minister for Works, and before we took office.
9266. *President.*] Then he has not had any contracts under the Commissioners?
9267. *Mr. Eddy.*] No, nothing beyond the advertising contract, and we inherited that from our predecessors. It appears that there are two Blunts. It is the father who was the contractor for the Woy Woy tunnel, and the son who was connected with the advertising contract. He was not really a contractor—that is the son.
9268. *President.*] There is some doubt as to whether the father is still alive.
9269. *Mr. Eddy.*] At any rate he has not done any work for the Railway Commissioners. I do not know the gentleman in question and therefore I could not very well have entered into any fraudulent contract. I would like to put in a return showing the amount of money passed to Messrs. Proudfoot & Co. for the deviations on the Mudgee line and the slips that were removed there. The deviation cost £22,691, and removing the slips, dangerous rocks, and other materials, £9,799; the two amounts making a total of £32,490. Of this amount over £30,000 was paid for piece-work, and £2,352 for day-labour.
9270. *President.*] Is Mr. Alexander Amos in Court?
9271. *Mr. Eddy.*] He has had no contract with the Railway Commissioners.
9272. *President.*] Is Mr. Monie, of Monie & Angus, in Court?
9273. *Mr. Angus.*] Mr. Monie is not here.
9274. *Mr. Eddy.*] Mr. Angus is a member of the firm whom the Commissioners have always dealt with.
9275. *President.*] Yes; but I am going through the whole of these gentlemen whom Mr. Crick said the Commissioners might call.

Mr. James Fletcher sworn and examined :—

Mr. J. Fletcher. 7 June, 1892.

9276. *President.*] We understand that since the death of Mr. David Proudfoot you have been acting with his executor, Mr. George Proudfoot, in carrying out the contracts with the Railway Commissioners that were in existence at the death of Mr. Proudfoot? That is quite correct.
9277. Before the death of Mr. Proudfoot did you interfere at all in his contracts? No, not in any shape or form.
9278. Only since his death? That is all.
9279. What have you done in connection with these railway contracts? I have never taken any active part in carrying out the contracts. Mr. George Proudfoot is the manager.
9280. And I suppose you could not give us any information? No; nothing whatever.
9281. Is there any information you would like to communicate in reference to these contracts? No. All I can say is that everything I have seen in connection with the work since I have had any knowledge of it has been highly satisfactory. Everything has been conducted in a straightforward manner.
9282. However, you have not taken an active part in the work yourself? No, not in the direct management.

9282½. *President.*] I think Mr. Proudfoot said he would let us have all the pay-sheets and papers?
9283. *Mr. Eddy.*] To what period?
9284. *Mr. Kethel.*] It is the time worked on the Mudgee line principally?
9285. *Mr. Eddy.*] Very well; that can be supplied.
9286. *President.*] We no not want them put in as evidence; but simply made available to the Commissioners for their information.
9287. *Mr. Eddy.*] Very well, your Honor, they will be supplied.
9288. *President.*] Are there any other witnesses?
9289. *Mr. Eddy.*] I would like to call Mr. McSweeney, and question him so as to make this ballast matter a little more clear.

Mr. McSweeney recalled and examined:—

Mr. McSweeney. 7 June, 1892.

9290. *Mr. Eddy.*] In connection with the supply of ballast, Mr. McSweeney, you have incurred a good deal of expense? Yes, I have incurred a great deal of expense in supplying crushers and engines.
9291-2. Will you explain what was done at Razorback? I put in four crushers and a 20-horse power boiler engine at the Razorback quarry, and after I had the work fairly started we had a splendid quality of stone. After the machinery had got fairly to work, however, the stone deteriorated in quality and became soft granite, which the engineer would not agree to take. I was then ordered to cease supplying stone from this quarry, and I have had the whole of that machinery lying on my hands since.
9293. *Mr. Kethel.*] That was on the Picton line? That is just beyond Goulburn at Razorback.
9294. *Mr. Eddy.*] Therefore, from what you say, the Railway Commissioners have not connived at your robbing the country? No; by that ballast contract I have lost nearly £3,000 in that particular quarry.
9295. In carrying out your contract at Darling Harbour you had to remove a lot of rock at the back of the new warehouse? Yes.
9296. What price did you get under your original contract with our predecessor? I had 5s. a yard for the work I took under Mr. Goodchap and Mr. Cowdery, Mr. Sutherland being Minister for Works.
9297. When the Commissioners requested you to do a large quantity of that work did they continue to give you 5s. per yard? No; they cut down my price by a shilling a yard, and 4s. per yard was all I got under the Commissioners.
9298. Then there is no proof, so far as that is concerned, of connivance at your robbing the country? No.
9299. *Mr. Kethel.*] Were you allowed to use the stone you took out? No; that became the property of the Commissioners.
9300. *Mr. Eddy.*] Yes; we made money out of that, we used that for bottom ballast on the suburban lines. The original contract for the farm produce market at Darling Harbour was £14,938, and the final certificate was for £15,431, the area being 60,000 superficial feet. It was then fitted up as a goods warehouse with platforms, &c.
9301. *President.*] It was turned from a shunting shed into goods warehouse.
9302. *Mr. Eddy.*] Yes; the contract price for the extension of the produce market to convert into a goods shed, the contractor being Mr. McSweeney was £10,489 and the final certificate for extending the shed was £11,373. We put up, subsequently, a hay shed at Redfern. Mr. McSweeney being the contractor for this also; he was the lowest tenderer, at £11,044, and the final certificate was for £11,790, the area being 61,000 superficial feet; therefore we put up a shed for £11,790 having a superficial area of 1,600 feet more than the shed which was put up before we took office for £15,431. I would like to make a little more clear to the Commission this question of lifting the lines. I am afraid that it was not put quite clearly at the previous sitting and I think that the arrangement that was made would be rendered perfectly clear if I could put a few questions to Mr. Fraser.

Mr. Fraser recalled and examined:—

Mr. Fraser. 7 June, 1892.

9303. *Mr. Eddy.*] In the original arrangement for relaying and reballasting it was contemplated that the whole of the old ballast should be removed and a new bottom and top ballast put in? That is specified.
9304. But after a time we found we could not afford to do the whole of the work in that way, and therefore we decided to lift the old road a few inches so as to make £50,000 go twice or three times the distance? Yes; three times the distance.
9305. Will you explain to the Commissioners the difference? Under the original arrangement it was proposed to remove the whole of the old ballast that was considered worn out. That would be taken off the road altogether, taken away and thrown over a bank somewhere, then new bottom ballast was to be put in to a depth of 9 inches, and about 5 inches of blue-metal over that. That would entail a considerable expenditure, and instead of that we lifted the road clean out on the old ballast and then had it well packed up, and boxed it up with hard metal. That made a good road, but perhaps not so good as where the road was completely reballasted, but it made a difference of fully £700 per mile in the expense.
9306. And it was only in soft formation that we put in fresh bottom ballast? Yes, only where the formation was soft.
9307. *Mr. Kethel.*] What is it that happens to ballast in the course of time that causes it to be unsuitable? A great deal of the old ballast was sandstone, and in Beater packing it becomes dust, and finally after the stone has been crushed it is converted into mud, and the water remains instead of passing away out of ballast, and you cannot keep the road in proper repair.
9308. And it also causes the sleepers to rot, I suppose? Yes.
9309. *Mr. Eddy.*] But that is not the most serious matter. It causes the whole road to move, and that makes the most trouble.

[*At this stage Messrs. Schey and Crick entered the Court.*]

9310. *President.*] Mr. Schey, we sent for you just now, because you said you would look over those papers in reference to the questions and answers, and point out to the Commissioners what answers you objected to. Have you done that?
9311. *Mr. Schey.*] No, your Honor. As I explained yesterday I spent all the time, in fact more time than I properly had at command, in looking after that witness who was wanted by the Commission, and and consequently the papers had to remain over. Of course, I can indicate some of the questions, and I will endeavour to get some of them out.

Mr. Fraser. 7 June, 1892.

9311½. *President.*] Would you do that by Thursday.
9312. *Mr. Schey.*] I will endeavour to do so.
9313. *President.*] We will not sit to-morrow; will you try and do it by Thursday?
9314. *Mr. Schey.*] Very well, your Honor.
9315. *President.*] Now in reference to this declaration. Mr. Tennent has been summoned by the Commission—we obtained his name and address, and he has been summoned by the Commission, but he has failed to attend; and we think, therefore, under these circumstances you would be altogether absolved from your promise not to produce that declaration. Quite apart from you Mr. Tennent has been found out, and he has had an opportunity of coming to this Commission here and stating himself upon oath any matters that he may wish to state in answer to questions that the Commission may put to him. One of these questions would be to ascertain what he has said in his declaration. As he has not thought fit to attend we consider, that you are relieved from your responsibility to him, and we think that that declaration ought to be produced.
9316. *Mr. Crick.*] Might I ask your Honor if there is any evidence that the subpœna came to his knowledge.
9317. *President.*] Except this, that the subpœna was left at his house in the hands of a lady who described herself as Mrs. Tennent, who answered to the name or the designation of the wife of Mr. Tennent, and she accepted the summons for him. She did say that there was a possibility, or something to that effect, that he might not be in to receive it.
9318. *Mr. Crick.*] We think your Honor, he ought to be served.
9319. *President.*] He has been served, Mr. Crick, in the way in which the Statute requires. If you refer to 44 Vic. No. 1, second section, you will see—"Every person who shall have been served with any such summons, whether personally, or by the same having been left at his usual place of abode." This was left at his usual place of abode.
9320. *Mr. Crick.*] Then it would be presumed that the matter came to his knowledge; but the evidence here rather goes to show that it has not come to his knowledge.
9321. *President.*] That I know nothing about; it was left in the hands of his wife.
9322. *Mr. Crick.*] I understood your Honor to state that according to his wife there was some possibility of his not getting the summons.
9323. *President.*] Yes, so I understood. There was something to that effect, but I forget the exact words.
9324. *Mr. Crick.*] I do not know whether the Commission would summon Mr. Carson Woods to ask——
9325. *President.*] That is another matter. We are simply dealing with this declaration. We were exceedingly loath to compel Mr. Schey to break the promise he has given until the necessary steps had been taken by ourselves to get this witness. That has been done, and we think under the circumstances that Mr. Schey ought to produce that declaration.
9326. *Mr. Crick.*] The declaration is not here now, your Honor?
9327. *President.*] Mr. Schey was summoned to produce the document.
9328. *Mr. Crick.*] He has not seen the summons yet, your Honor.
9329. *President.*] In order to make it perfectly clear, that Mr. Schey was acting under the direction of the Commissioners, and not merely volunteering to come forward, we sent a summons to Mr. Schey, this morning, calling upon him to produce the declaration.
9330. *Mr. Crick.*] We have not received the summons, your Honor.
9331. *President.*] I do not know why that is. Have you not got the declaration here?
9332. *Mr. Crick.*] No, you Honor, it is in my office. We would like to make another effort to communicate with this man. Mr. Schey has that desire.
9333. *President.*] Very well. We will let the matter stand over until Thursday morning, but it must be on the distinct understanding that on Thursday morning the declaration is to be brought into Court, and placed before the Commissioners.
9334. *Mr. Crick.*] Well your Honor it is rather unnecessary to say anything about a distinct understanding. We have no desire to shield this man, any more than we desire to do him an injustice. If he comes into this Court and states what was in his declaration he is free from any prosecution, but even if the declaration is true the circumstances under which he published it to Mr. Schey would give him no immunity from other action.
9335. *President.*] I think you are raising an imaginary danger. I cannot conceive that anything which is brought out before this Commission, which is charged with the duty of making this inquiry, will bring anyone into danger, except in the case of perjury being committed.
9336. *Mr. Crick.*] It may be that the declaration is true but libellous; but, if he repeats it in this Court it may be both true and libellous, and no action may come against him.
9337. *President.*] At any rate the Commission must see this declaration. It is really the foundation of a great many of these charges brought by Mr. Schey, and I should have thought that Mr. Schey would have been only too anxious to show that he had what he considered good grounds.
9338. *Mr. Crick.*] Well your Honor we will have the subpœna on Thursday.
9339. *President.*] The subpœna has been left at Mr Schey's house, asking him to come here to-day.
9340. *Mr. Crick.*] Does it ask for the production of this document?
9341. *President.*] Yes. It was to make Mr. Schey come here under the subpœna of the Commissioners, calling upon him to bring into Court, and produce the declaration of which he spoke.
9342. *Mr. Crick.*] Very well your Honor. We will attend to that subpœna on Thursday morning.

THURSDAY,

THURSDAY, 9 JUNE, 1892.

[*The Commission met at 11 a.m., in Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

9343. *President.*] Mr. Schey, will you go into the box, please?
9344. *Mr. Schey.*] Yes.

[*Mr. Schey here entered the box.*]

Mr. Schey. 9 June, 1892.

9345. *President.*] You have been summoned by the Commissioners to appear here and produce the declaration of this person Tennent. Do you produce the declaration?
9346. *Mr. Schey.*] Your Honor, I am not in a position to produce it.
9347. *President.*] Why?
9348. *Mr. Schey.*] Well, your Honor is aware that Mr. Crick is my legal adviser, and the other day when I was here, the declaration in question was in my possession. Mr. Smith, the Attorney for the Commissioners cast some imputation, I think, as to whether the declaration might be altered. Mr. Crick in reply stated that he would take very good care that it should not be altered, and he asked me therefore to hand him the declaration to be locked up in his safe, so that there should not be any danger of its being shown to anyone until it came into Court. In accordance with Mr. Crick's desire, I handed him the declaration which he locked up then and there. Yesterday, I came down here to the office of the Commissioners to obtain the evidence that was taken on Monday and Tuesday, and at midday yesterday I had only received a small portion of Monday's evidence, and at 3 o'clock the remainder of Monday's evidence and Tuesday's evidence was given to me. I then had to look over the evidence, and see Mr. Crick, if possible; but I could not see him, through the circumstances described before closing time yesterday. I had an appointment with him at half-past 10 this morning, and I went to his office at half-past 10 this morning, and found that he had been summoned by urgent messenger to attend at the Quarter Sessions, where he had been retained some time ago to defend some case, I do not know what. Finding myself in this difficulty, that I had not the declaration which I had been called upon to produce, and I had not seen my legal adviser, I came up here to explain the situation to the secretary, and the secretary of the Commission informed me that he had on my desire interviewed your Honor, who had permitted me to go to Darlinghurst to see if I could find Mr. Crick. I went to Darlinghurst Quarter Sessions, where I learnt that Mr. Crick had just left. I came back immediately from there to his office, and he had not yet returned, but his clerk anticipated that he would be up here. Believing that he would proceed direct from the Darlinghurst Court to this Court, I came immediately over here again. When I came here, the secretary of the Commission submitted the matter to your Honor, and I was told after that to stay until the Court sat; consequently I am here, and not having seen Mr. Crick, and not having the declaration in my possession, I am unable at the present time to produce it.
9349. *President.*] Mr. Schey, you are placing yourself in a very awkward position in not having it. The possession of your solicitor is your own possession in the eye of the law, and Mr. Crick stated on your behalf that both he and you would attend here this morning at 11 o'clock on that subpœna.
9350. *Mr. Schey.*] Well, I duly attended, your Honor, and I had no intention of evading the subpœna, nor do I think that Mr. Crick had any such intention for a moment.
9351. *President.*] What is that, Mr. Schey?
9352. *Mr. Schey.*] I attended on the subpœna, and I had no intention of evading it in any way, neither do I think that Mr. Crick has any such idea. I think it is a matter only of a very short time when Mr. Crick will put in an appearance.
9353. *President.*] Very well, Mr. Schey, we will give you until 12 o'clock to produce the declaration.
9354. *Mr. Schey.*] Your Honor will observe that I am not doing anything which is in any degree wrong. The document was in my solicitor's hands in the ordinary course of professional business, and therefore I have not got it. I have no reason to suppose that my solicitor will not produce it, but I have not seen him, and therefore I cannot hand it in.
9355. *President.*] You must take what steps you think fit to get the document between this and 12 o'clock.
9356. *Mr. Schey.*] It will be apparent to you that if I cannot find Mr. Crick, I cannot produce it, because I cannot force his safe and take the declaration out.
9357. *President.*] I have nothing to say to that. I have said what I have to say.
9358. *Mr. Schey.*] It depends entirely upon my finding Mr. Crick, your Honor.

Mr. William Monie recalled and examined:—

Mr. W. Monie. 9 June, 1892.

9359. *President.*] You are a partner of Mr. Angus, are you not? Yes.
9360. Have you been a partner with him in the contracts carried out by the firm under the present Railway Commissioners? Yes, sir.
9361. Have you taken an active part in these contracts? Yes; an outside one.
9362. An outside one? Yes.
9363. Was any of the work carried out by you carried out by day labour? Yes, your Honor.
9364. What works were carried out by day labour. Slewing the road from one side to the other, from the up line to the down line.
9365. What line was that? Between Granville and Picton, where we had to slew it to deepen the line.
9366. What arrangement was made about that day labour? That was paid for as day labour.
9367. It was paid for as day labour? Yes.
9368. Was there much of that day labour;—what proportion did it bear to the rest of the work? I cannot tell that. It was not much.
9369. Was it a large or a small proportion? No; a small proportion.
9370. Was that the only day labour that you had in your contract? Yes.
9371. Were you present when that day labour was being done? Yes; not all of it—some portions of it.
9372. You had your own gangers? Yes; and our own men.
9373. And your own men;—and the engineer had his ganger too, as representing the Government? Yes; as representing the Government.

9374.

Mr. W. Monie. 9 June, 1892.

9374. Was there any difference between you and the Railway Commissioners with reference to this day work? No; we got a letter from them that this would be required to be done, and we took men there from the nearest cut.
9375. I mean as to the question of time;—you were checked by two gangers and by the inspector? By the inspector.
9376. *Mr. Young.*] Was there any work done other than at the schedule price? I do not understand you.
9377. Was there any other work that was not comprised in the schedule list of rates—any other work done. I may say, for instance, the shifting of a goods shed or the slewing of a line, that could not be put into the schedule.
9378. Did your schedule rates cover everything except your day labour work? Yes.
9379. And these schedule rates were obtained by public tender? Yes.
9380. *Mr. Kethel.*] Mr. Monie, you carried out considerable works under the old Commissioners, before the present gentlemen took office, in conjunction with your partner, Mr. Angus? Yes.
9381. Was there any difference in the method of tendering or constructing under the old system to what there is under the system observed by the present Commissioners and their officers? No; I do not think so.
9382. That is, the same system of measuring up and checking time and work exists now as did previously to these gentlemen taking office? Yes; as when I worked under the late Commissioner and the construction branches.
9383. There were, of course, no re-laying contracts previous to these gentlemen taking office? No.
9384. The line had remained untouched almost? Yes.
9385. In the matter of supervising work, is it as stringent and strict now on the part of the engineers and inspectors as it was under the former Commissioner? Yes.
9386. Do you not get certain advantages now as a contractor, and are you not easier dealt with in certain ways than under the old system? No; I think not.
9387. Do you think they get as much value for the money now as they did before? They do so.
9388. *Mr. Young.*] Did you have a contract for relaying and reballasting between Ryde and Hornsby? Yes.
9389. How was that done? I was never on that line except once.
9390. You know nothing about it? I only travelled over it when it was opened.
9391. You know nothing about it? No.
9392. *Mr. Kethel.*] Were you in charge of the work at Bell, making good the wash-a-way? Yes, I was there. I went there on Sunday.
9393. Did you stay there until the line was made good to enable the traffic to be carried on? Yes.
9394. That had to be done by day work? Yes.
9395. Why had it to be done by day work instead of by schedule rates? The men had to be taken up on one day because a slip had taken place, and it had to be ready for the mail train on the following day.
9396. So that it would be absolutely impossible to call for tenders? It would be impossible because the traffic would then be all delayed and stopped. I stayed until the following morning, until the mail train could go over, and then I came away.
9397. You took a number of men and went up by special train and remained there until the traffic could go on again? Yes.
9398. Is that the principal instance in which you carried out work for the present Commissioners by day labour? Yes, that and Bourke.
9399. Which was a similar emergency work? Yes.
9400. And could not be contracted for? No; not if the traffic was to be carried on.
9401. *Mr. Eddy.*] With regard to the work at Bourke which was mentioned just now, your men had to work under very exceptional difficulties, had they not? Yes.
9402. They were working in mud and water a greater part of the time? Yes; and lying wherever they could. There was no accommodation for them up there.
9403. So that if the Railway Commissioners had taken the work in hand in the ordinary way,—if it were possible to do that, and of course it was not possible,—the men would have asked for a much higher wage than they got under the circumstances? Yes; we paid the men the same wages as we would have paid them where we took them from.
9404. The Commissioners did not pay you anything extra? No, sir.

9405. *President.*] Mr. Eddy, Mr. George Blunt was a name mentioned to us by Mr. Crick. Has Mr. George Blunt had any contracts under the present Railway Commissioners?
9406. *Mr. Eddy.*] None whatever, sir.
9407. *President.*] Has he had any work to do other than under contract?
9408. *Mr. Eddy.*] He has not performed any work of any description for the Railway Commissioners.
9409. *President.*] There is a son I think of Mr. Blunts, and it is stated now that his name is Mr. Thomas Blunt. Has he done any work by contract under the Railway Commissioners?
9410. *Mr. Eddy.*] No, sir, but he was associated with the firm which contracted for the placing of advertisements on the railway station.
9411. *President.*] You mean they put up those coloured placards.
9412. *Mr. Eddy.*] The placards, most of which we have removed. They simply contracted to pay us a certain sum per annum for the right of placing advertisements on the railway stations. But Messrs. Martin and Company was the name of the firm which had the contract with the Railway Commissioners.
9413. *President.*] Did Mr. Blunt get the contract?
9414. *Mr. Eddy.*] No. Messrs. Watson and Martin had the contract.
9415. *President.*] They merely tendered for the contract.
9416. *Mr. Smith.*] No, your Honor. Messrs. Martin and Company were the contractors and they had conveyed the contract.
9417. *President.*] I am asking what connection Mr. Blunt had with the contract? He tendered and did get it.
9418. *Mr. Eddy.*] Messrs. Watson and Martin tendered and obtained the contract.
9419. *President.*] But Mr. Blunt did not get the contract, did he?

9420. *Mr. Eddy.*] I really do not know Mr. Blunt, and never heard of him before in connection with the matter.
9421. *President.*] That is the only connection he could have in reference to the advertisements on the railway premises.
9422. *Mr. Eddy.*] Yes. What I understand is that the firm of Messrs. Watson and Martin secured from the Railway Commissioners the right to advertise on the railway stations, and that, subsequently, in some way or another, Mr. Blunt came into the arrangement; but I have no personal knowledge of Mr. Blunt, and know nothing about him.
9423. *Mr. Kethel.*] But did not Mr. George Blunt still have work on the railway contract on the Newcastle line when you took office.
9424. *Mr. Eddy.*] He may have still had work, because the whole of the Newcastle line was not finished when we took office, and until the completion of the Hawkesbury bridge on the 1st of May we did not take over the line. We would not have anything to do with it, therefore, until it was completed and taken over, and we would not have anything to do with the settlements in connection with the contract which were made before we took it over.
9425. *Mr. Kethel.*] But were there no additional works done by Mr. Blunt after it was nominally taken over by you, and paid for by you when it was under your control.
9426. *Mr. Eddy.*] None whatever.
9427. *Mr. Kethel.*] No extra payments?
9428. *Mr. Eddy.*] No, none at all. There were no payments by the Commissioners.
9429. *President.*] Has Mr. Amos, or any firm with which Mr. Amos is connected, had any contracts under the Railway Commissioners?
9430. *Mr. Eddy.*] No.
9431. *President.*] Has he done any work other than under contract?
9432. *Mr. Eddy.*] He has not performed any work for the Railway Commissioners.
9433. *Mr. Smith.*] Perhaps I might explain a little matter here. All contracts which were going on when the Railway Commissioners took office were being carried out under the Railway Act by the construction department, with which the Railway Commissioners had nothing to do; but when claims matured they were made nominal defendants under the Act. There was an action brought by Amos with respect to which the present Commissioners know nothing. It was brought against them nominally as the statutory defendants, but the real defendant was the Minister for Works in the Works Department.
9434. *President.*] But was that with respect to any works done for the Railway Commissioners?
9435. *Mr. Smith.*] It was for work done by the construction branch under contract under the conditions of the old Act.
9436. *President.*] What was the date when the Railway Commissioners took over the Northern line?
9437. *Mr. Eddy.*] The line was opened as between Sydney and the Hawkesbury River and Mullet Creek and Newcastle, when we took office. On 1st May, 1889, the Hawkesbury bridge was opened, and we then passed the trains right through from Sydney to Newcastle.
9438. *President.*] Then the whole of the line from that time was under your control?
9439. *Mr. Eddy.*] The whole of the line was completed.
9440. *President.*] With the exception of work which had been done between Ryde and Hornsby, was there much work done on the Northern line after you took it over.
9441. *Mr. Eddy.*] Yes, sir; we have had to expend a considerable sum in reballasting. There was a great deal of soft bottom on the line, owing to the number of clay cuttings, and we have had to completely reballast along the Ryde and Hornsby section.
9442. *President.*] I said with the exception of that?
9443. *Mr. Eddy.*] We have had to widen as well as lift. In addition to the duplications from Strathfield to Ryde and from Ryde to Hornsby we have also had to do with the original line, and have had to spend a good deal of money in cutting out the clay bottom, and putting in a good sound bottom ballast and top ballast; and that has been done right through to Newcastle, but that has been carried out nearly all by relaying and reballasting contractors.
9444. *President.*] That is Messrs. Proudfoot and Fletcher?
9445. *Mr. Eddy.*] Messrs. Proudfoot; but between Ryde and Hornsby Angus and Company also did some work.
9446. *President.*] Are there any witnesses, Mr. Eddy, you wish to call on this inquiry?
9447. *Mr. Eddy.*] I think not.
9448. *Mr. Young.*] Mr. Eddy, who had the original contract between Strathfield and Adamstown?
9449. *Mr. Eddy.*] The original tender for the construction of the line?
9450. *Mr. Young.*] Yes.
9451. *Mr. Eddy.*] I do not know; I was not in the Colony.
9452. *Mr. Smith.*] Mr. Amos had the contract No. 1 from Strathfield to the Hawkesbury River; contract No. 2 was an American firm, which constructed the bridge; contract No. 3, known as the Woy Woy, was that of Mr. George Blunt; and No. 4, from Gosford to Newcastle or Waratah, was again Amos Brothers.
9453. *Mr. Young.*] This lifting and reballasting Northern line between Ryde and Hornsby—was that done soon after taking over the line from the Government?
9454. *Mr. Eddy.*] As soon as we had taken over the line; the bottom was so very soft.
9455. *President.*] You had nothing to do with the construction of the line?
9456. *Mr. Eddy.*] No, sir.
9457. *President.*] If there was any fault, it was in the construction of the line before it was handed over?
9458. *Mr. Eddy.*] Yes; in trying to make the line too cheaply.
9459. *Mr. Young.*] The cost of that was £11,000.
9460. *Mr. Eddy.*] It cost a great deal of money; we had to cut the clay out and make a good bed.
9461. *Mr. Young.*] Then the lifting and reballasting had to be done before the line was used?
9462. *Mr. Eddy.*] No; the line was in use; but we found that the trains were getting off the line, and to make it safe for the traffic we had to completely reconstruct it in some places, because, without proper drainage, when the rain comes down the wet works into the soil, makes it soft, and the sleepers move, and the line gets out of gauge.
9463. *Mr. Young.*] I notice that Messrs. Proudfoot had a northern division tender; does that apply to that portion of the line? 9464.

9464. *Mr. Eddy.*] I think you will see from the plan that Messrs. Proudfoot began about Gosford.
9465. *Mr. Young.*] I have not got the plan.
9466. *Mr. Eddy.*] There is one put in in two colors. I think their work begins at Gosford.
9467. *Mr. Young.*] How much was expended per year upon that reballasting and relaying—tell me approximately?
9468. *Mr. Eddy.*] I should think we must have spent quite £60,000. I am speaking quite from memory, and cannot give you the exact figures, but I think we expended £60,000 between Sydney and Newcastle. The piece Messrs. Angus & Co. had in the Ryde and Hornsby district was a length of 13 miles.
9469. *Mr. Young.*] Were you working that line during the time you were raising and reballasting?
9470. *Mr. Eddy.*] Yes, sir; we had to carry the traffic on. Even on the suburban line the traffic had to be carried on in the usual way; and there it was a most difficult task. We had to take all the old stuff out and pack the line up on timbers, and put in the ballast. That is why a great deal of work became more expensive than it would otherwise have been.
9471. *Mr. Young.*] And you think about £60,000 was expended in putting the line to rights before you could work it properly?
9472. *Mr. Eddy.*] Before we could run with that degree of confidence which we ought to be in a position to do.
9473. *Mr. Young.*] That is, between Strathfield and Newcastle?
9474. *Mr. Eddy.*] But I ought to mention that had we not had such an exceptional rainfall, in all probability that expenditure of money would not have been necessary, because you can run on a line with little ballast where there is practically no rainfall, with security; but directly the rain comes down it makes the formation thoroughly soft, if it has not been laid down on plenty of dry ballast, so as to make it unsafe. We had 108 inches of rain in about fourteen months.
9475. *President.*] And it is exceptionally rough country between Strathfield and Newcastle, is it not?
9476. *Mr. Eddy.*] We have had a great deal of rain along the coast line; in fact, in four days we know that more than 22 inches fell. The measure was 22 inches, and it was running over, and that was in May, 1889, just about the Queen's birthday.
9477. *President.*] I remember that.
9478. *Mr. Kethel.*] In taking evidence on the fifth charge, it was shown that there were some officers who were on the personal staff of the Railway Commissioners. Would you kindly make it plain to us what position the personal staff holds as apart and distinct from the other and regular officers of the Department. There was Mr. Nicholl, and there was Mr. D. H. Neale?
9479. *Mr. Eddy.*] Mr. Nicholl is a shorthand writer.
9480. *Mr. Kethel.*] These were called the personal staff?
9481. *Mr. Eddy.*] That portion of the staff which is called the personal staff comprises all the staff in connection with the Secretary.
9482. *Mr. Kethel.*] With the Secretary?
9483. *Mr Eddy.*] All in connection with the Secretary's office.
9484. *Mr. Kethel.*] Those who are not allotted any special portion of the departmental work to look after?
9485. *Mr. Eddy.*] That is it, sir.
9486. *Mr. Kethel.*] So that the Mechanical Engineer on the staff holds a position in the Locomotive Department somewhat similar to the Secretary in the clerical department?
9487. *Mr. Eddy.*] Mr. D. H. Neale is attached to the mechanical staff so that if we have any special engineering question to look up he is free, and has no special routine to look after. He can, therefore, devote all his attention and thought to the question which he has to think out, and we always keep him pretty well filled up with questions which he has to consider.

[*Mr. Crick at this stage entered the Court, accompanied by Mr. Schey.*]

9488. *Mr. Crick.*] Your Honor, I understand it was said this morning that I had made a definite promise to be here with the declaration referred to to-day. I did not make a definite promise. What I said was, "Very well, we will attend to this subpœna on Thursday morning." I could not be here before, because I had to attend at Darlinghurst in the case of a person charged with felony, and I could not leave in the midst of the defence. I also noticed, with regard to this man Tennent, that certain statements have been made here about him. Before I refer to that, however, I wish to read a letter which my client sent as a registered letter to Mr. Tennent:—

(H. 92-65.) 237, Abercrombie-street, Redfern, 8 June, 1892.

Alexander Archibald Tennent, Esq., 60, Bay-street, Glebe, Sydney,—

Sir,

Having made several attempts to see you during the last few days, in the course of which it has become apparent that you will not see me, I now, acting under the advice of my solicitor, write you this letter. Referring to the statutory declaration which you handed to me on 4th February last, my solicitor advises that if you attend the sitting of the Royal Commission to-morrow (Thursday) for which you are already summoned, and give your evidence in the witness-box as you have already set it out in the declaration aforesaid, that no action of any kind can be brought against you, and you will be, in fact, entirely safe. If, however, you still decline to take this safe and obviously proper course, the Commission intend to compel us to produce the declaration in question, in which case you may become liable to prosecution for your action in the matter.

Trusting that you will see the propriety of taking the course suggested herein, which, indeed, is the only manly and proper one which you can take under the circumstances.

I am, &c.,
WM. F. SCHEY.

That letter was registered, and the receipt of the registration is here. I would like to hand it in. That letter, your Honor, would be delivered at Mr. Tennent's residence at 1 o'clock, but we have had no reply to it. Now, with regard to the declaration, I see that this man has been referred to as a drunken blackguard and a scoundrel, showing him to be a man on whose declaration Mr. Schey ought not to have acted. I propose to read a testimonial given by Mr. Proudfoot to this man when he left his employ. The letter is as follows:—

From Proudfoot & Co., Railway Contractors, Sydney.

Mr. A. A. Tennent, Bookkeeper,—

Dear sir, 190, Pitt-street, Sydney, 20 June, 1891.

This is to certify you have been in the employ of this firm for the last ten months as chief paymaster, accountant, and general correspondent, and during that period you gave evidence of exceptional business tact.

We sincerely trust you will not be long in finding another valuable appointment.—Yours, &c.,

GEORGE PROUDFOOT,
General Manager.

That is what Mr. Proudfoot gave this man when he left the firm's employ. Then on 15th April, Messrs. A. A. Gallagher and Co., Mining and General Agents of Sydney, gave him the following testimonial :—

Mr. A. A. Tennent, has been employed in this office for a period of eighteen months in the capacity of chief clerk and accountant.

He is a thorough book-keeper, and is possessed of more than ordinary business tact.

He leaves us now on account of our having to reduce our staff, and we shall be glad to hear of him securing another good appointment speedily.

9489. *Mr. Smith.*] I object to this.

9490. *Mr. Crick.*] You can mind your own business in this matter.

9491. *Mr. Smith.*] I object to the reading of any copies of documents, if the original documents are required to be put in. We have had during the course of this investigation a vast reading of documents, which are not authenticated in any way. If any documents are to be put in, original documents must be put in, and it must be shown how they are come by, and the signatures must be proved in the ordinary way. But taking up the time of the Commission in this way is most improper. If original documents are evidence they can be proved, and this reading here by a person who does not claim to be a party to the proceedings is highly irregular, and it is only done with the object of getting these letters entered on to the minutes of proceedings without having them submitted on oath.

9492. *President.*] So far as the reading of these letters goes the only note which will be taken in the minutes will be that certain letters were read by Mr. Crick.

9493. *Mr. Smith.*] That has not been the course pursued heretofore.

9494. *President.*] This is only a mere side issue, but I do not think we can exclude it, and, for this reason: From the evidence given the other day, it may be that the Commissioners may think very little of the evidence of Mr. Tennent. It may be that very little will appear in his declaration, but on the other hand, it may happen that important matter will come out in his declaration, and then it may be necessary for the Commissioners, if they think fit, to ascertain what kind of character Mr. Tennent has; and therefore I do not think Mr. Crick is irregular in drawing attention to what other people have said of him.

9495. *Mr. Crick.*] We will give evidence that before we took this declaration we asked Mr. Tennent whether he had any references as to his character.

9496. *Mr. Smith.*] The only question is as to the production of the declaration.

9497. *Mr. Crick.*] We must be permitted to produce the document in our own way.

9498. *President.*] I am saying you can read it.

9499. *Mr. Crick.*] I trust I shall not be subjected to interruption from this particular quarter. The next letter is from Mr. W. B. Bradley, of Wentworth Court, Sydney, and is as follows :—

Mr. Alex. A. Tennent, Accountant,—

Dear Sir,— Sydney, 19th August, 1890.

It is with extreme regret I have to dispense with your valuable services as my Secretary for Maryville Colliery Company, which Company you have carefully wound up for me.

I can testify to your sterling ability, and general information on all commercial matters, and indeed it is rarely we meet with such a combination of intelligence and practical application.

Your management of the books and accounts of the South Wallsend Coal Company, and Maitland Coal Company, are a credit to you, and I am certain you will not long remain in finding another situation.

You must let me know if I can do anything to further your interests, meanwhile.

I am, &c.,
W. B. BRADLEY.

The next is from Roberts, Chalmers, & Co., merchants, Sydney, and is dated 18th August, 1888 :—

Mr. A. A. Tennent, Accountant,—

Dear Sir,

We have much pleasure in stating that we consider you are perfectly qualified to fill any commercial position with advantage to your employers and credit to yourself.

We have known you now in connection with railway contracts for a considerable number of years, and can conscientiously recommend you to anyone requiring the services of a thoroughly capable accountant, while your general knowledge of mercantile affairs would be most serviceable to any limited Company.

If necessary, refer to us personally at any time, and wishing you every success,

We are, &c.,
ROBERTS, CHALMERS, & CO.

The next one is from no less a firm than Messrs. Monie & Co., and is as follows :—

Mr. A. A. Tennent, Book-keeper,—

Dear Sir, Kiama, 14 July, 1887.

As our contract here is now finished, we have no further use for your services as book-keeper and paymaster, which positions you have filled for us for the last four years and six months to our entire satisfaction.

We can recommend you as efficient, and you thoroughly understand your duties in connection with public works, and we sincerely trust you will soon secure suitable employment in this or the sister Colonies.

Yours, &c.,
MONIE & CO.

I will hand these in, and ask that they be marked also, your Honor.

9500. *Mr. Smith.*] These are not original documents.

9501. *Mr. Crick.*] I do not care whether they are or are not.

9502. *President.*] They are only handed in for the Commissioners to look at.

9503. *Mr. Crick.*] The evidence I will give directly will be to show that we took these before this declaration was made. The declaration is as follows :—

I, Alexander Archibald Tennent, of 60, Bay-street, Glebe, Sydney, in the Colony of New South Wales, do hereby solemnly and sincerely declare that the manuscript herewith, numbered from 1 to 9 inclusive, has been dictated by me, and that the statements contained herein are true and correct to the best of my knowledge and belief. And I make this solemn declaration believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of Her present Majesty ———

9504. *Mr. Smith.*] Is that the original you are reading?

9505. *Mr. Crick.*] Mind your own business.

9506. *President.*] You had better let Mr. Crick finish. To Mr. Crick :—Is that signed by Mr. Tennent himself?

9507. *Mr. Crick.*] I have the original here.

9508. *President.*] Will you hand up the original, so that we can follow it.

9509. *Mr. Crick.*] If I am permitted to read this.

9510. *President.*] Quite so.

9511. *Mr. Crick.*] We have taken every step to find Mr. Tennent, and having done everything we can to discover him we now hand in the original declaration :—

DECLARATION.

I, ALEXANDER ARCHIBALD TENNENT, of 60 Bay-street, Glebe, Sydney, in the colony of New South Wales, accountant, do hereby solemnly and sincerely declare, that the manuscript herewith numbered from 1 to 9 inclusive has been dictated by me, and that the statements contained therein are true and correct to the best of my knowledge and belief. And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the Reign of Her present Majesty, intituled "An Act for the more effectual abolition of oaths and affirmations taken and made in the various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of voluntary and extra-judicial oaths and affidavits.

ALEX. A. TENNENT.

Subscribed and declared at Sydney, this 4th day of February, 1892, before me,—F. G. FOX, J.P.

Statement made by Alexander Archibald Tennent, Accountant, of 60 Bay-street, Glebe, Sydney, New South Wales :—

1. I was accountant in the employment of David Proudfoot & Co., Railway Contractors.

2. It was my duty to keep all accounts relating to all contracts and works carried out by the firm for the Railway Department of New South Wales. It was also my duty to pay the men on the various contracts and works. I am perfectly conversant with the practice that prevailed in the mode of payment between the Government and the contractors, and between the contractors and the men employed by them.

Messrs. David Proudfoot & Co. received a contract from the Railway Commissioners for carrying out certain deviations on the Mudgee line of railway. This contract was let privately, no tenders having been advertised or publicly called for—certain railway contractors were privately notified to send in tenders to the department. I am not aware that any firm tendered for this contract except Proudfoot & Co., but that firm carried out the work. There was a schedule of prices to the tender by which it is usual and customary in all contracts to pay for the work done. In the works done there were many items for which the schedule did not provide. Work of this kind was paid for to the contractors in the form of day labour. The contractors paid the men 6s. and 8s. 6d., and good men 7s. according to their quality; and were paid by the Railway Department for every man so set to work 9s. a day. Gangers were paid by Proudfoot & Co. 9s. and 10s. per day, and were paid in return by the Railway Department 12s. per day. The work was usually measured by the officers of the department once a month. This measurement was very rough. No attempt was made to determine the quantity of rock removed which was merely guessed, although there was a very large difference in the price for removing rock and softer material. All the time the work was in progress no proper measurement took place. The Government Engineer, Mr. Sutton, and the contractors' engineer, Mr. Burt, merely guessed the quantities as they walked along the line and agreed between themselves as to the quantity to be charged and paid for. Soft material was paid for at 1s. 9d. per cubic yard, while rock was paid for at the rate of 3s. per cubic yard. For allowing the storekeeper, Loneragan, to erect his store on the works, Proudfoot & Co. received from him the sum of £50. The firm made a charge of 6d. per week to each man employed for medical attendance, which sum was deducted even when the man or men only worked one day in the week. The firm appropriated the whole and paid the doctor a portion, not in any case more than 3d. per man, and oftentimes less. The first two payments made by the Government to the contractors on the Mudgee deviations were for day labour only. The pay-sheets were made out by the Government allowing 9s. per day per man, and 11s. and 12s. for gangers. These men were paid by the contractors 6s. and 6s. 6d., and the gangers 9s. and 10s. per day. There was no measurement of any kind until after the second pay. The amounts of these two payments were converted into cubic yards to correspond with the schedule of prices at a date much after the payments were made. An excuse was given for making out fresh sheets by Mr. Watson, stating that he had lost the original sheets, though at the time I had in my possession duplicates which had been signed by the men at the time of payment.

The contractors, in addition to being paid for the work done, were granted permission to use the railways free for carrying workmen, horses, plant, and material. This if charged for, as in other contracts, would have made a very large item. As many as 1,200 men have been despatched from Sydney in two months from the beginning of contract. In this way many of whom were quite unfit for the work, and never made any attempt to start; others made the trip a holiday, at the expense of the Government. It was not necessary to send horses and drays to the Mudgee line from Sydney, as plenty could have been procured in the district where the work lay.

The contractors took over a large quantity of plant, barrows, picks, planks, bars, shovels, and general contractors' plant, the prices being fixed by the Government engineer. They were second-hand, and were not paid for seven months afterwards. This item was over £1,200. The contractors also borrowed a large quantity of plant from the Commissioners for which they paid nothing. They included two rock-breakers, trollies, tricycles, trucks, &c. The contractors had also the use of the telegraph and telephone free of charge. The specification did not provide for any of these privileges or concessions. The contractors were also paid for putting in sidings which were exclusively for their own convenience in getting ballast, &c., and were also paid for opening up quarries (day work), and were then paid for the ballast at the schedule rate. The payments for opening up and laying down sidings were concessions that had no right to be paid for.

Reballasting and relaying the Western and Northern Lines :—Public tenders were called for this work, about twenty firms tendering. Proudfoot & Co. were not the lowest, nor was M'Sweeney on the other lengths; their tenders were accepted after being amended at a conference with the Commissioners. Other tenderers were not allowed this privilege. The works included in this contract were carried on principally by day-work, which was transferred into so many lineal feet and yards to enable it to be in conformity with the schedule of prices. Persons not knowing this fact would not be able to detect the same from the existing vouchers which, of course, represent that so many cubic yards of material had been shifted, and so many lineal feet of road lifted and relaid. Payments by day wage become necessary in this case in consequence of the Commissioners not being in a position to carry out their portion of the contract, which provided that the department should supply to the contractors all material to be used, such as sleepers, rails, chairs, bolts, and fish-plates, points, and crossings, and interlocking gear. No ballast had, at the date of starting works, been provided for, although several contracts had been let where this became a first essential. In consequence many miles of line that had been lifted and relaid were unballasted, to the danger of the travelling public, and had to be done over again the rails being bent. In consequence the contractor was obliged to fork the whole ballast for which he received extra payment. About four months after the date of the contract, a new arrangement or agreement was made with the Commissioners, and the old contract in part abandoned. The new agreement provided that the contractors were to supply four million tons of ballast in place at per yard. To comply with this the contractors procured from America eight stone breakers which were at the termination of the contract, five years, to be taken over by the Commissioners. These crushers were taken to the various quarries free of charge the quarries having been previously opened by the contractors at the expense of the Commissioners, the work having been paid for by day labour. This work included opening up quarries and opening sidings thereto. The contractors under new agreement, were to ballast 10 miles of line per week, but this was not carried as the Commissioners were again unable to supply trucks to carry the ballast or to supply the other material necessary for the work. Large gangs of men sixty to eighty in a gang were only employed half-time, as by the contractors under their contract at schedule rates, as when material supplied by Commissioners was worked up these men were put on at day wages to fill up time. The payments to contractors about four months after the new agreement amounted to from £10,000 to £13,000 per month for each section, north and western lines, while the wages paid by the contractors for the same periods amounted to from £4,000 to £7,000 per month. The difference between the items given shows the actual profits by the contractors for the periods mentioned, namely one month, but, from this must be deducted the cost of plant that might have been procured during the month and the cost of staff at the head office. Shovels were supplied to men at 5s. each. These cost the contractor 2s. 6d. Picks were supplied free by the contractors.

There was an estimate made of the net profits on this work for twelve months by the contractors' engineer and accountant which showed £66,000. This was made out from the results of several months previous work. As an instance of the enormous profits on these works, at Wallas Creek, Maitland, work of excavation supposed to be about 80,000 cubic yards was sublet at 9d. per cubic yard, while the contractors received 1s. 9d. per cubic yard. On this contract the contractor was paid for all delays occasioned by late trains, &c., the time being calculated at day wages, which was again transferred into cubic yards, &c., though no work was done. This kind of transaction represents large sums of money, many thousands of pounds.

At

At the encampment Easter time, 1891, sleepers were laid along the western line between Dubbo and Blackheath. These were adzed ready for laying. They were also bored. All these sleepers without the slightest warning to the contractor were retrucked, and taken to the Southern line duplication (Angus and Monie's contract) to enable that line to be completed or made safe for opening to Campbelltown to serve for the Easter encampment. In consequence of this hasty removal of sleepers, and without warning, Proudfoot & Co.'s men were knocked off, and a claim was made by the firm of £3,000 or £4,000 against the Commissioners. The gangs so knocked off were subsequently, after a great row had taken place, put repacking and lifting road at day-work as usual. This was done to keep the men together and to stop the outcry One big gang was despatched to Bourke by orders of Mr. Watson, engineer, to lift and relay the line there; but they had to return without having done any work, there being no material on the ground. The men had all free passes to Bourke and back. The contractors made a large claim for compensation for this matter. For fencing the line where required the contractors had a schedule price. The Commissioners had to supply fencing material, which was dumped down in heaps anywhere along the line, in many instances away from where it was to be used. The contractors were paid for shifting the fencing material to its proper position.

The work on the dyke at Newcastle of relaying and new sidings was carried out by Proudfoot & Co., this work being most expensive, as the plans were altered from time to time. When work had been completed, or nearly so, orders were received and a new plan substituted, which altered all the features of the work, which necessitated redoing the work. This occurred more than once, so that the last plan adopted bore no similarity to the original plan, which was also carried out. This work was a complete muddle, and cost three times more than if one plan had been used or adhered to. I do not know why there was necessity to change the plans. More than 600 men were employed on the dyke at once. The foreman received £6 per week. This was all done by day wages. The forman's wages were made up by extra gangers being put down in the pay-sheet. All pay-sheets were on this work—also turned into cubic yards excavation and other items, so that it could be made out to appear that payments to contractors were made at the schedule rates. Should the works executed by the firm of Proudfoot & Co. and to above be measured on the recognised principle of cross sections, the amount of work represented in the vouchers would not be found to have been carried out, the difference representing many thousands.

Signed at Sydney, this 1st day of February, 1892, before me,— ALEXANDER ARCH. TENNENT.

F. G. Fox, J.P.

9512. *Mr. Crick.*] This is all the declaration and I will append to it a free pass given to A. A. Tennent which authorises him to travel from Sydney so Newcastle.

9513. *President.*] What do you put that in for?

9514. *Mr. Crick.*] It was originally appended to the declaration by Mr. Tennent himself, but I took it off and attached it to the copy. This work can be easily tested, because this work can be measured now and that part of the declaration can be tested by sending a man to measure the work which is there. However, that is the declaration. Mr. Schey would like now to state the circumstances under which he received that declaration on oath.

9515. *Mr. Smith.*] I object to that.

9516. *Mr. Crick.*] Mr. Schey, wishes to do that to show that he acted with caution in regard to this man. The declaration which I have put in was carefully read over to the man before it was made. As a matter of fact undue care was taken because the declaration was initialled on every sheet by a Justice of the Peace, and I think some of the alterations were initialled by Mr. Tennent himself. That is the object, your Honor. It has been suggested that this man is a worthless character.

9517. *President.*] I think Mr. Schey ought to go into the box and give evidence.

[*Mr. Schey here entered the box.*]

Mr. Schey. 9518. *Mr. Crick.*] You have already been sworn, Mr. Schey.

9519. *Mr. Schey.*] I have.

9 June, 1892. 9520. *Mr. Crick.*] You are recalled on your former oath. Will you shortly detail the circumstances under which you received that declaration and how it came to be made.

9521. *Mr. Schey.*] Shortly before the time I received the declaration I had no knowledge whatever of any such person as Mr. Tennent being in existence. But being on one occasion in a certain place some conversation took place about various railway matters and I was informed that there was a person who could give a very great deal of information indeed about the way in which contracts had been carried out, and I said, "As a matter of fact there are a number of people who give a lot of information, but it is hard to say how much of it is reliable"; and I was informed that the information which this particular man could give was very reliable. At that time my colleague, Mr. Hoyle, in the representation of Redfern in the Legislative Assembly, was with me, and he asked whether it would not be possible for he and I to see this particular man referred to, so that he might tell us what he knew about these matters. We were told it was perfectly possible for such to be done, and that if this man, who afterwards proved to be Tennent himself, called round again an appointment would be made at which Mr. Hoyle and myself might see him, and ask him what he knew about the matter. Shortly after that, such an appointment was made. Mr. Hoyle was unable to attend the appointment, but I myself did. At that time Mr. Tennent did not keep the appointment as he should have done. A few days subsequent to that a fresh appointment, at which Mr. Hoyle was again through business matters unable to be present, was made; but I was present and Tennent was present, and Tennent was asked to relate to me what he knew concerning these matters. He did. He related what appeared to me to be a very extraordinary story. I may say that he related to me considerably more than appeared in the declaration; and I said to him, in fact, "Are you sure this is correct," because I must say, your Honor, that although I had some ideas on the subject I hardly credited that what he had said was correct. He said, "I am perfectly positive of it." "Now," I said, "Will you reduce the matter to writing." He said, "Yes, it will be a work of some trouble, but I think these things ought to be inquired into, and I will reduce them to writing." Then I said, "Well, there is something more than that. You have told such a story that I require some guarantee before repeating it, as to the truth of it. Will you swear to it?" He said, "I am willing to swear to it at any time I may be called upon to do so." I said, "The better plan therefore will be to make it out in the form of a declaration which shall be sworn to before a Justice of the Peace, because I shall feel very diffident about making such a statement unless I have something to support it." He said, "I have no possible objection to doing that." The statement was not written out in my presence. I was told the statement would be written, and as a matter of fact it was written during a period of some few days—not a very great period—but it was during some few days that the statement was written.

9522. *President.*] By whom?

9523. *Mr. Schey.*] Am I compelled to answer that?

9524. *President.*] Yes, you are.

9525. *Mr. Crick.*] He only knows that from hearsay, your Honor. He does not know it of his own knowledge.

9526.

9526. *President.*] You can let the witness answer this very simple question himself, Mr. Crick. If he does not know he can say so.
9527. *Mr. Crick.*] He does not know of his own knowledge.
9528. *President.*] If he does not know that, he can say so.
9529. *Mr. Schey.*] I have already said that it was not written in my presence.
9530. *President.*] Is it in the handwriting of Tennent?
9531. *Mr. Schey.*] It is not so far as my knowledge goes.
9532. *President.*] Did you write it?
9533. *Mr. Schey.*] I did not. It is not in my writing. I wrote no portion of it. But when it was completed it was read over to Mr. Tennent in my presence, and I had already cautioned Tennent that he should be very careful and should not state in the document anything which he was not thoroughly prepared to swear to, nor should he state anything which was not known to him of his own knowledge and which he would not be prepared to prove if called upon to do so; because I told him that, after making such a statement, I would be quite prepared to bring the matter up in the Legislative Assembly, and that, of course, he would be called upon to depose to the facts he had stated. He said that he had not the slightest objection if he was called upon to give all the information there, but he did not want it known, for his own sake, that he was the person who conveyed the information to me in the first place prior to any inquiry being begun. The statement having been read and his agreement being asked he agreed that it was thoroughly true, and in fact he said he had been careful not to put in too much, but that there were other things within his knowledge which were not contained in his statement. I asked him to accompany me to a Justice of the Peace for the purpose of swearing to the document. We went then to the business place of Mr. John Macintosh. Mr. Macintosh was not to be found at the time, and young Mr. Macintosh told us that Mr. Fox, who is a large plumber and iron-worker further down the street, was a Justice of the Peace. I had no acquaintance whatever with Mr. Fox, but with Mr. Tennent I went down to Mr. Fox's place of business and asked him in his capacity of Justice of the Peace to receive the declaration which Mr. Tennent desired to make. Mr. Fox took us into his office and he was careful to ask Tennent if he knew the contents of the document, and whether he made it voluntarily; and in turning over the pages he noticed certain erasures or amendments, where the pen had been drawn through certain words and other words written over. Mr. Fox then asked Mr. Tennent—there was no compulsion in the matter, he did not compel him to do anything—to initial every page, and Tennent did initial every page in my presence and that of Mr. Fox. Mr. Fox himself initialed every page so that there should be no doubt about the document being in the form as sworn, should it be required afterwards, and he also placed his initial against, I think, every amendment contained in the whole document. I do not think there is a single amendment which is not initialed, and I think Mr. Tennent initialed every amendment.
9534. *President.*] Tennent does not appear to have initialed the erasures.
9535. *Mr. Schey.*] Then Mr. Fox has. I have not seen the document to read it and to notice these particulars for some time; but at all events Tennent was sworn and he signed the document, and Mr. Fox signed it also as witnessing the declaration. Referring to these testimonials it struck me also that there might be something against Tennent, and that perhaps he might not be as trustworthy as he represented, and to show his *bona fides* he gave me, within a very brief period after the signing of the declaration, the testimonials which have been produced. Of course he made a variety of other statements to me, and I had no reason whatever to doubt his word. I saw him several times after that, and he always evinced the greatest readiness to give information should he be required at an inquiry. I think that is about all I can state in relation to that matter, your Honor.
9536. *President.*] Very well.
9537. *Mr. Crick.*] There is one question I would like to ask Mr. Schey;—do you know, Mr. Schey, any other George Proudfoot than the gentleman who gave evidence here the other day?
9538. *Mr. Schey.*] I do not know George Proudfoot either by sight or any other way, and I do not know any other George Proudfoot except the one who is the railway contractor.
9539. *Mr. Crick.*] That is the only one?
9540. *Mr. Schey.*] Yes.
9541. *Mr. Smith.*] I think, your Honor, that as the witness has been put in the box, and has made a number of statements, we should be allowed to cross-examine him. He has stated that he refuses to be cross-examined; but what I say is, that if the questions are put to him, and he refuses to answer them, the Commission should decide whether he should reply to them or not. On behalf of the Railway Commissioners I may say that all we wish to do is to ascertain the truth about these matters, and there are certain statements ——
9542. *President.*] Mr. Schey has merely stated the steps which he took to satisfy himself that he was justified in treating this declaration as reliable. What is the object of cross-examing him on that?
9543. *Mr. Smith.*] I want to ask him certain questions.
9544. *President.*] If you write down the questions the Commission will decide whether to put them to Mr. Schey.
9545. *Mr. Smith.*] In due course, your Honor, I will submit them later on.
9546. *Mr. Crick.*] I should like to ask your Honor if Mr. Schey desires to put certain questions which he thinks ought to be asked, will the Commission take them from him?
9547. *President.*] We shall only be too glad to receive any assistance we can get from Mr. Schey. The duty is thrown upon us to make this investigation, and it is very difficult for persons placed as we are to inquire into these matters as fully perhaps as other people may think it desirable. Unless we give up twelve months to the matter, it will be impossible to get all the information; but if matters are brought under our notice we will put the questions.
9548. *Mr. Crick.*] I will advise Mr. Schey to communicate the questions he may think desirable.
9549. *President.*] Very well. These questions which you may think it desirable to ask we will put, and we may also think it desirable on those questions to ask Mr. Schey certain other questions which will be put to him as a witness; and then there may arise the question as to whether he should be cross-examined.
9550. *Mr. Crick.*] He will answer any question put to him by the Commission.
9551. *President.*] I am sure of that.
9552. *Mr. Crick.*] But he certainly will not answer any questions from any other quarter. He will not

Mr. Schey. 9 June, 1892.

not decline to answer so long as it is a proper question, and so long as he has no reasonable grounds for declining.

9553. *Mr. Eddy.*] I do not know whether it is necessary to say anything in regard to that; but I contend that under the Commission we have a perfect right to examine or cross-examine Mr. Schey.

9554. *President.*] That point has not arisen yet. When it does, we will deal with it. At present I do not take the view Mr. Crick does.

Mr. J. B. Suttor recalled and examined:—

Mr. J. B. Suttor, 9 June, 1892.

9555. *President.*] You have been sworn, Mr. Suttor? Yes.

9556. You were the engineer or the assistant engineer for the work done by Messrs. Proudfoot & Co. in the deviations on the Mudgee line? I was the engineer in full charge of the line from start to finish.

9557. You were in charge? I was the engineer in sole charge of the works.

9558. Who was the contractor's engineer? Mr. A. H. Burt.

9559. Do you know if he is here? I cannot say, your Honor. I have not seen him here this morning. He was appointed some little time after the works were started.

9560. Will you state what was the mode of measurement in regard to these works—what steps were taken. Will you please state that step by step? Step by step, your Honor. In the first instance, I believe the Railway Commissioners submitted the matter to the Engineer-in-Chief for Construction, who had the original plans for the works in connection with the Mudgee line, and the officers, I believe, of Mr. Deane, who is Engineer-in-Chief for Construction, prepared certain plans, showing how these difficulties could be avoided by deviation, to a scale of 20 feet to the inch. These plans are now in the office of the Engineer-in-Chief for Existing Lines, on which cross-sections are given showing the distance they have to go at every chain to give the required width; and the areas are also given of the total quantities of excavations necessary to carry out these deviations. The works were commenced, I think, about the 20th October, 1890, and at the end of each month, from the time appointed, we would go through and estimate the quantity of work completed in accordance with these sections. We could safely give a return each month of the work done, because everything is governed by the final measurement. All these measurements went forward until the work was completed, and at that time we went on the ground and measured the whole, and compared the work with the plans. Personal measurements were taken in every case in connection with these works, and I can produce the papers, and plans, and returns, and place everything before your Honor.

9561. Is it true that while this work was in progress no proper measurements were taken? It is utterly false, your Honor.

9562. Is it true that the Government engineer, Mr. Suttor, yourself, and the contractor's engineer, Mr. Burt, merely guessed the quantities as they walked along the line, and agreed between themselves as to the quantity to be charged for and paid for? That is utterly false, your Honor. Actual measurements in all cases were taken; but I may point out that the progress certificates are governed by the final certificates.

9563. There is a difference between working soft material and working rock? Yes.

9564. How was that adjusted? That was adjusted in the following way:—In the first instance, I was favourable to allowing a certain percentage of rock and a certain percentage of soft material. The contractor objected, and said that my allowance was not liberal enough. The matter was then submitted to the Engineer-in-Chief for Existing Lines, and Mr. David Proudfoot, now dead, said he was quite willing to abide by the decision of the Engineer-in-Chief for Existing Lines. The engineer came up and went over the works, and decided what percentage should be allowed. Mr. Proudfoot demurred, but afterwards agreed to his decision, which was to allow 64 per cent. of rock and 36 per cent. of earth.

9565. How was that percentage determined? As he passed through each cutting he would say, "I allow here half rock and half earth," and in another "a quarter rock and three-quarters earth," and in another "three-quarters rock and one-quarter earth."

9566. Who was it determined that? Mr. Foxlee. I have the letter I wrote at the time, and the whole of the papers I can produce to show the progress of the works from start to finish.

9567. Is that the usual way of ascertaining the proportion of soft material and rock? Yes, your Honor; but there is another way of doing it. If you are about to construct a railway line through new country, drill-holes are put down to ascertain the formation, but in this case we did not require to do that, because there was the face of the old cutting showing the stratification. We could see the whole thing right through.

9568. So the drill-holes were not required in this case at all? They were not necessary, your Honor. You could see the whole thing in the face of the whole cutting.

9569. Do you know, in the actual working out the work, whether the percentages you allowed were reasonable? They were reasonable, though considerably less than the contractors claimed; that is, they claimed more for rock then we allowed. The contractor claimed something like 95 per cent. for rock, and he was allowed only 64 per cent.

9570. Then rock pays best, I suppose? It depends on the quality of it. He wanted to put the whole of the stuff in as rock or hard stuff. You have to use powder in blasting for that.

9571. *Mr. Eddy.*] To make it clear, I may point out that the payment for soft stuff is 1s. 9d., and for rock 3s.

9572. *Mr. Kethel.*] Is thats imply for excavating, or does that include the removing of the stuff away? The removing, taking it to the nearest lead. In some cases they had to remove it 200 yards.

9573. And that was covered by schedule rates? Yes.

9574. And they deposited where you ordered them? Yes. In one case they wished to deposit at a particular spot, but I objected, because it would destroy the fence; and Mr. Proudfoot then said that he would place it there, and make good the fence after.

9575. *President.*] It is stated here "that the first two payments made by the Government for the contract on the Mudgee deviation were for day-labour only"? That is utterly false; I can produce my first two certificates, dated 3rd and 18th November, 1890.

9576. Then it stated, as to the first two payments, that the amounts of them were converted into cubic yards to correspond with the schedule of prices at a date much after the payments were made? That is utterly false, your Honor. I had the sections handed to me by the Engineer-in-Chief for Existing Railways,

Mr. J. B. Sutton. 9 June, 1892.

Railways, the same sections that were prepared by the Engineer-in-Chief for Construction; and according to these the works were carried out. If one deviation showed 20,000 cubic yards, any experienced hand could tell at a glance what percentage had been excavated. The whole has been returned according to schedule and cubic measurement, with the exception of day labour, which we could not avoid.

9577. It says here that the first two payments were for day labour? They were not.

9578. It is in reference to these two payments that it is said they were converted into cubic yards to correspond with the schedule of prices at a date much after the payments were made? That is not the case.

9579. It is not true? The certificate would not have passed if I had sent it in for day labour. It would have been returned to me immediately.

9580. Was Mr. Watson engaged as engineer on that line? No. Just about that time he had charge of the maintenance of the line, but later on there was another division created. Mr. Watson was Divisional Engineer in charge of maintenance, and I was Resident Engineer in charge of these works.

9581. Do you know whether the contractors were allowed the use of the railways free for carrying their workmen, horses, plant, and material? Only so far as the material and the men who were employed within the division were concerned; that is, the men they employed on the relaying of the works. I think it is mentioned in the specification that the carriage of the men would be free over the part of the line on which they worked.

9582. *Mr. Eddy.*] If you will refer to the original conditions under which the tenders were advertised, you will see that it is provided in one of the conditions that a free pass shall be given to everyone connected with the words.

9583. *President.*] Then, I presume, that that being in the conditions and specifications, it would be taken into consideration in tendering for the work?

9584. *Mr. Eddy.*] Most certainly. We were anxious to get the work done as cheaply as possible; and if we had put in the conditions that the railway contractors were to have to pay fares for their men and their material, we would have had to pay a greater amount for the carrying out of these works. We should then, as Mr. Schey has charged us in another place, have been guilty of unduly inflating our revenue. We could easily have done that, but we wanted to get our work done as cheaply as possible, and so we provided for this in the specification.

9585. *President* (to Witness).] Then in the declaration it is said that as many as 1,200 men have been despatched from Sydney in two months from the beginning of the contract in this way. Is that true? The greatest number employed at one time on the works was 500.

9586. *Mr. Eddy.*] I fancy that will refer to the whole of the contract, and I believe that at one time they had as many as 1,700 to 2,000 men employed. I think Mr. M'Sweency said he had 1,700 men.

9587. *President* (to Witness).] So far as you know of people who have been brought up in this way by the Railway Department, is it true that many of these men were quite unfit for their work, and never made any attempt to start, and that others made the trip a holiday at the expense of the Government? I can safely say that I believe there is not a word of truth in it.

9588. So far as your actual knowledge goes? Speaking from actual knowledge of the works I carried out.

9589. Do you believe it is true? I do not believe there is the slightest truth whatever in it. I had special opportunities of seeing in that case. The men were delivered on the contracts, and had to pass through a tunnel in returning from their work. I was camped at the mouth of the tunnel, and consequently I could see exactly what they were. As a rule I got advice that so many men were coming, and they arrived in accordance with the advice.

9590. *Mr. Kethel.*] Do you know of the course pursued by the contractor in order to get passes for the men; would this come within your knowledge? Yes; the contractor would come to me for passes to send his men, and before he got them I always ascertained the mileage. I must know that, so as to know what he wanted the men for. I would generally ask him to supply so many men, and I would give him the passes for the number mentioned.

9591. Would your pass carry the men over the line? Over that part where they were working, and wherever the contractor wished to employ them on the works. He would not be allowed to go as he liked. If he wanted them I asked at what particular place, and he would tell me.

9592. If he wished to bring men from Sydney, would that rule apply? In that case he would go to the head office, and some one would see to the despatch of the men after the passes were given.

9593. But in the case of transferring men from one section to another in your division, your pass was recognised by the traffic authorities, and the men received a passage by certain trains? Yes; we always took a goods train that the ordinary public did not use. I could move them backwards and forwards between one section and another without referring to the head office, because we could not allow men to remain idle; we had to remove them to the next work where we required them, and as we required them.

9594. *President.*] Did you measure up more than once a month? Sometimes the contractor asked for a progress measurement, and we gave him one. That is based on the number of men employed. There is a standard rule in the service, and we go by that.

9595. Is that subject to the final adjustment? Yes; that is subject to the final adjustment.

9596. How long did that measurement take you? It would take two or three days there on the ground. We had everything well prepared beforehand in the original sections supplied by the Engineer-in-Chief, and which can be produced.

9597. The original plans, you say, you can produce. Will you bring them? I will, your Honor.

9598. Would it be possible to measure this work now? Certainly.

9599. I mean to have it tested? Certainly, your Honor. It can be tested on the plan or on the ground. I am prepared to go and test it either on the plan or on the ground.

9600. *Mr. Kethel.*] Would the plans and sections as originally taken before the ground was disturbed be absolutely accurate as to the quantity of material to be removed? They were taken prior to the works being started.

9601. But taken from the rough indications on the surface of the ground, would they be a sufficiently accurate check of the quantity of material removed when the works were finished? We took them again when the work was finished. Sections were taken both before the works were begun and after the works were finished.

Mr. J. B. Suttor. 9 June, 1892.

9602. *President.*] Do you know anything of the contractors being allowed to put in sidings for their own convenience? I know nothing whatever of it. I had charge of the whole of these works, and it was always the wish of the Commissioners to assist the contractors as much as possible. If the contractors desired to open a quarry, and the Commissioners were satisfied as to their *bona fides*, they might make a connection with the main line, but everything else was done at the expense of the contractor.
9603. In opening up quarries, who did that work? The contractors did.
9604. Not the Commissioners? No sir. There is not one word of truth in the allegation.
9605. *Mr. Kethel.*] Were any sittings actually put in on the Mudgee line during these repairs and alterations? No.
9606. There were no sidings? None whatever.
9607. Did the contractors open any quarries on that line? Yes.
9608. For the purpose of getting ballast? They opened a quarry within the distance signals at Rylstone. They were allowed to break the stone on the main line within the distance signals. There was no necessity to construct any siding; there being only one train a day there was scarcely any interference with the contractors operations.
9609. Were any other sidings put in for the contractors except those leading to quarries? None whatever.
9610. *President.*] Do you know of any instance in which day work was transferred into so many lineal feet and yards to enable it to be in conformity with the schedule of prices? None whatever.
9610½. In any work you supervised did that ever happen? No sir. The books I have already handed in to the Commissioners will show every mile and yard of work carried out from start to finish.
9611. *Mr. Kethel.*] If such a thing had been done and the return was inaccurate, I suppose the error could be detected? Yes. At one time when the works were started I was doubtful about removing some ballast, but it was ultimately determined that it would be cheaper to leave it and lift the road on top of it, and, therefore, that was done, and the contractors paid so much per lineal yard for lifting.
9612. *President.*] Is this true of any of the works you supervised:—"Payments by day-wage became necessary in this case in consequence of the Commissioners not being in a position to carry out their portion of the contract, which provided that the department should supply to the contractors all material to be used, such as sleepers, rails, chairs, bolts, and fishplates, points and crossings, and interlocking gear"? I do not think there is any truth in that. I remember that at one time during the duplication of the lines some of the sleepers were taken away, but there was other work for the men to do, and they were put on to it. That is a matter which is left to the Engineer in charge of the works. He has to keep the men going. I believe the contractor wanted to do an enormous amount of work, he wanted to do 50 miles in next to no time, but we had not the material at command; it was never contemplated that the work would be done so rapidly.
9613. Was it in consequence of that, that payment by day-wage became necessary? I know nothing whatever it.
9614. *Mr. Kethel.*] In cases where you have not had the necessary material what compensation do you allow the contractors? None whatever; if there is no material they must stand off until we find it for them.
9615. They must discharge the men? Yes.
9616. *Mr. Eddy.*] The Commission will see that there is a provision in the original contract holding us free. I might mention that for about two years we had the greatest difficulty in obtaining sleepers. We gave a bonus and the price of sleepers went up. Still we could not get sufficient, and we were in the gravest difficulty. The heavy rains had so interfered with the bush roads that although lots of sleepers were lying in the bush they could not be carted into the railway-stations, and for about two years it was one of our greatest difficulties to repair the lines and carry on the traffic.
9617. *President.*] The gravamen of the charge is that as a consequence of this material not being supplied the contractors had to resort to day payment; it was turned from schedule rates into day-work.
9618. *Mr. Eddy.*] Unless it was day-work the contractors would not be paid. There is a special provision in the contract relieving the Commissioners from any liability in such a case; but of course if other works were going on or were necessary, and materials were not available for certain work that had been ordered an endeavour would be made to place the contractor's men upon other urgent work, so as to obviate the contractor having to discharge his employees.
9619. *President.*] But then they would work according to schedule prices?
9620. *Mr. Eddy.*] They would work according to the schedule put in by the contractor or when he competed for the work.
9621. *President.*] The charge is that it is done at day-labour.
9622. *Mr. Eddy.*] That is done by schedule.
9623. *Witness.*] The charge is utterly false, as the books will show.
9624. *President.*] Do you know of any case in which the contractor received extra payment for forking old ballast in consequence of the line remaining unballasted through the neglect of the Railway Commissioners? None whatever; the contractors are only paid for the work they do.
9625. But was there any case in which extra payment was given to the contractors for forking any of this ballast? None whatever. If he forked any ballast he received his schedule rate, which is 4d. per lineal yard; that is, if it was metal which would permit of forking.
9626. Whatever payment they received was in accordance with the schedule? Yes.
9627. *President.*] I think these are all the questions in reference to the Mudgee deviation, but we should like Mr. Suttor to be here again in the afternoon and to bring the other papers which he has promised. We should like Mr. Burt to be here also, if possible, the engineer for Proudfoot & Co.
9628. You said, Mr. Suttor, that you would produce your books to the Commission? Yes, your Honor, I do so now. In handing in this book I may state that it contains the whole of my transactions in connection with the department, and each of the returns forwarded by me from the very start to the finish of the work. Many of the letters are private letters, nevertheless I hand in to your Honor the whole lot to substantiate the returns I forwarded to the Engineer-in-Chief and to the Commissioners for payment.
9629. *President.*] Of course these are only handed in for the information of the Commissioners.
9630. *Mr. Kethel.*] Does this book show at all the date on which the contractors commenced work? Yes, sir. I think you will find the date was the 20th October, 1890.

9631.

Mr. J. B. Sutton. 9 June, 1892.

9632. You say that is contained in the returns? Yes, that is the first return; and between the first return and page seventy-four of the book you will see eight returns to the final. They are entered consecutively.

9633. *Mr. Eddy.*] It would not take long, Mr. President, if Mr. Sutton read out the pith of these letters, and perhaps it would make the matter more intelligible, and in any event it would obviate the necessity of the Commission wading through the whole of the letter-book.

9634. *President.*] I do not see the necessity for that, Mr. Eddy, because this is a matter which we shall have to deal with in consultation among ourselves, and so far as the reading is concerned, I do not see that any object would be served.

9635. *Mr. Eddy.*] Very well, Mr. President. My only desire is to facilitate the business of the Commission.

9636. *Mr. Kethel.*] What was the date when the contractors commenced, did you say? 20th October.

9637. And the first return I see is dated 3rd November? Yes, sir; that is about a fortnight afterwards. The headings are not shown in the letter-book, but at the top of the return forms appear the headings, "present return," "previous return" and "total." You will find that the whole thing is carried through to the final. The next return to that agrees with the first total.

9638. After sending these returns in, and estimating the quantities of work done, do you recommend payment to the contractor of the whole amount for all work done, or is a margin left between the amount recommended by you and the money paid? According to the agreement, the contractors were to be paid for the total amount of work done up to the end of the month.

9639. Is there no provision for 10 per cent. to be retained? That is a matter for the Commissioners.

9640. Is there not such a proviso in the printed conditions? Not in all of them. When my returns went in there was a week's work in hand.

9641. The certificate is for the actual work done at the time you make the return? Yes. [*Witness here handed in a number of plans and sections, with pencil marks of the measurements taken on the ground, for the information of the Commission.*]

9642. Did you measure every part of the line? Yes, sir, every part. We might commence at the mile post or the half-mile post, but you will find in this book a complete record of the measurements with the different sections. [*Witness handed in pocket-book containing the measurements, and explained to the Commission the system by which the measurements were made.*] I may say, your Honor, that some reference has been made to the percentage of rock and earth allowed in connection with the work of the Mudgee line. In the letter book which I have already handed in appears a letter forwarded by me on December 6, 1890, to the Engineer for Existing Lines, which I should like to read if your Honor will permit me. It is as follows:—

Sir, Bathurst, 6 December, 1890.

In accordance with your instructions (90–4670) attached, I have the honor to forward the required statement re proportions of rock and earth allowed by the deputy engineer in connection with the Mudgee line deviation. Deviation No. 1, 135-78 to 136-15, 50 per cent. rock, 50 per cent. earth. Deviation No. 2, 136-50 to 136-77, 75 per cent. earth, 25 per cent. rock. Deviation No. 3, 137-19 to 137-27, 50 per cent. earth, 50 per cent. rock. Deviation No. 4, 137-72 to 138-21, earth. Deviation, No. 5, 138-23 to 138-35, 50 per cent. earth, 50 per cent. rock. Deviation No. 6, 138-38 to 138-46, rock. Deviation No. 7, 138-49 to 138-64, rock. Deviation No. 8, 138-69 to 139-4, rock. Deviation No. 9, 139-12 to 139-26, 75 per cent. rock, 25 per cent. earth. Deviation No. 10, 139-33 to 139-43, rock. Deviation No. 11, 139-78 to 140-12, rock. Deviation No. 12, 140-23 to 140-45, 50 per cent. rock, 50 per cent. earth. Deviation No. 13, 140-47 to 140-60, rock. Deviation No. 14, 141-12 to 141-33, rock. Deviation No. 15, 141-50 to 141-62, rock. The total excavations will be about 90,000 cubic yards, and according to the above the total percentage will be about 64·81 rock, and 35·19 earth.

I have, &c.,

J. B. SUTTOR.

9643. *President.*] Those proportions you say were ascertained from observing the stratification in the cutting itself? Yes, your Honor, which was even better than the trial holes adopted by the Construction Branch.

9644. In removing landslips—that, I suppose, was all done by day labour? By schedule, at per cubic yard.

9645. But by day labour? No; by cubic measures.

9646. How did you measure that? By truck measure, your Honor. We take the contents of the waggons, average them, and take the total, and the timekeepers appointed as each waggon is brought out give a ticket to the men of the number of loads. It was in connection with this system that we had occasion to believe that some men were obtaining more than they were entitled to. The matter was placed in the hands of the police, and the contractors were forced to prosecute, and it was proved, I think, that an endeavour had been made to obtain payment for more loads than had really been trucked.

9647. How was that done? By a forged document.

9648. Was that in connection with these works? Yes, your Honor. In some cases where the slip was uniform we might measure it before hand; but where it was slurring and coming down we measured the work by the trucks, and then averaged the contents.

9649. Who counted the number of trucks or drays? We had an inspector, two timekeepers and gangers, and the contractor also had a timekeeper and a manager.

9650. It is difficult to see, then, how any mistake could arise as to the number of drays? There could be no mistake, your Honor.

9651. You said there was some forgery? We proved, your Honor, that this man had not taken the quantity he was to be paid for. He endeavoured to obtain twenty more loads than he was entitled to, and when we examined the books we soon found that he had not carted the number of loads he endeavoured to obtain payment for, and then we prosecuted him.

9652. Then you had an accurate entry of the number of trucks? Yes, your Honor.

9653. And it was by comparing the claim with your records that you found out the mistake? Yes, your Honor. If I may be allowed, I should like to say that certain charges have been made against me by Mr. Tennent. From the start to the finish of these works I never saw Mr. Tennent on the ground.

9654. *President.*] I was going to ask you that question.

9655. *Witness.*] I never saw Mr. Tennent on the ground from start to finish of the work. Another charge is made against me by a certain member of the Legislative Assembly, to whom, in my mind, slander and foul-mouthed ——

9656. *President.*] Never mind that, Mr. Sutton.

Mr. J. E. Suttor. 9 June, 1892.

9657. *Witness.*] The charge was made against me, your Honor, that I had arranged champagne luncheons on the works. I do not boast of these things, but I can say I do not know the taste of spirits or cordials.
9658. Are you aware, Mr. Suttor, of the price paid for excavation work when the line was constructed? Yes, sir.
9659. And you worked out the cost of the whole of this work which was carried out under your supervision? Yes.
9660. And the work carried out under your supervision was, of course, a great deal less than the work done in the construction of the line? Considerably less.
9661. How did the prices work out—were they very much higher under your supervision, or were they less? They were less.
9662. So that although the work was smaller, and the contractor, therefore, had less chance of making a profit, yet you had the work carried out at a lower price than was paid for the larger works in connection with the construction of the line? Yes, and there were greater difficulties to contend with.
9663. No interference with traffic was to be permitted in connection with this work? Quite so.
9664. Therefore it was a far more difficult task than the carrying out of the work when there were no trains to think about? Far more difficult.
9665. *President.*] Is Mr. Burt here yet?
9666. *Mr. Eddy.*] I am given to understand, your Honor, that he is away measuring up the contract on the Lapstone Hill deviation, but he will be here to-morrow morning at the time the Court sits.

Mr. Henry C. Hoyle sworn and examined:—

Mr. H. C. Hoyle. 9 June, 1892.

9667. *President.*] Mr. Schey has stated here upon oath here to-day that you were cognisant of a statement that was made to him by a person named Tennent, which was afterwards sworn to by Tennent. Do you know anything of the document? The only thing I know of the document is this, your Honor: One evening, in the Legislative Assembly, Mr. Schey told me he had such a document in his possession, and some time afterwards he gave me the document to peruse. I perused so much of the document as I had time to do; but so far as the document was concerned I knew nothing of it before that time. I did not know Mr. Tennent, and I had no appointment whatever with him, with Mr. Schey, or with anybody else in connection with the document. As I have said, the only knowledge I have of the document is that Mr. Schey spoke to me about it in the Legislative Assembly, and afterwards put it into my hands for perusal.
9668. When the document was put in your hands for perusal, was it in the form of a declaration? Yes, your Honor.
9669. And it had been sworn to? Yes, your Honor; but as a matter of fact I had so little time at my disposal for the perusal of the document that I did not even ascertain the name which was attached to it. I did not get to the end of the document; but I looked at the end to see the signature, though I cannot say that I recollect what the name was. I was not aware that the name was Tennent until I saw it in print, I think, yesterday. I might explain, if your Honor will permit me, as an endeavour has been made to connect me with this matter, that I received a telegram from a man named Sharkey one afternoon at my office asking me to meet him at his office. I had no time to do so, and I remarked to my clerk that if Mr. Sharkey desired to see me he could do so at my office. Subsequently I received a second telegram or message, I am not certain which, from the same person intimating that he desired to see me upon business which was of great importance to me, and I again remarked to my clerk that I had no time to see Mr. Sharkey, but that if he desired to see me he could do so at my office. Afterwards Mr. Schey called at my office, and left word that Mr. Sharkey desired to see me. I again said that if Mr. Sharkey desired to see me he could come to my place. I afterwards met Mr. Schey about this matter, and I asked him what it was that Sharkey desired to see me about, and if I remember rightly he told me that he did not know what the subject was. I am not exactly certain what Mr. Schey said to me at that time, but I can swear that I had no knowledge that it was about this document in any way whatever. I know there was some talk just previous to this about some political organisation which was to be formed in the interests of protection, and it occurred to me that probably Mr. Sharkey might desire to see me in reference to that matter. As I have told your Honor, I do not know Mr. Tennent, and I would not know him if he were in court before me. I think it very wrong that statements of this kind should be made, and I took the earliest opportunity, after hearing that my name had been associated with this matter, to ask your permission, Mr. President, to make this explanation.
9670. It was with that object that we asked you to step into the box, Mr. Hoyle. Did you read much of this declaration? Well, your Honor, I might have read perhaps half a dozen pages or so.
9671. Was there anything in the declaration that was within your own knowledge? No, sir. I saw at once that the declaration contained matters which reflected upon men whom I looked upon as my best friends. The firm of Proudfoot & Co. is one with which I am well acquainted, in fact both gentlemen are personal friends of mine, and when I saw what the document contained I took very little trouble to read it. As a matter of fact, I was so pressed for time that I was unable to peruse the document.
9672. Do you know of anything in connection with this declaration that you think ought to be brought under the notice of the Commission? Nothing whatever.
9673. Have you seen what these charges are that the Commission are now inquiring into? I have, your Honor.
9674. Is there any matter in connection with any of these charges that you think ought to be brought under the notice of the Commission? If your Honor will permit me to say so the charges are such that I would not bring myself against any man. I look upon these things as an injury to a man's character, and that is a serious thing for any person to do, and therefore I for one would not prefer such charges; but I might tell your Honor and the Commissioners that I have heard these things very often myself. However, I take very little notice of tittle-tattle. When a man comes to me and repeats such statements unless he is prepared at any time to prove those statements I am not prepared to take notice of them. A great deal of what is contained in these charges has been told to me from time to time, but I have never paid much attention to it. I have had quite enough to do to mind my own business.
9675. *President.*] I merely thought, Mr. Hoyle, that possibly there might be some matter which you thought ought to be brought under the notice of the Commission, and if there was we would take that matter into consideration and investigate it. We are much obliged to you for your information.

Mr.

Mr. Foxlee recalled and examined :—

Mr. Foxlee. 9 June, 1892.

9676. *President.*] I think you told us how long you had been in your present capacity with the Railway Commissioners? Yes, your Honor. It was since September last.
9677. And before that I think you said you had been Deputy Engineer? Yes, your Honor.
9678. Had you anything to do with the construction of the Northern line before it was handed over to the Commissioners? Nothing whatever, sir.
9679. Was it on your recommendation that the Commissioners incurred this large expenditure for relaying and reballasting? The late Engineer-in-Chief made the recommendation, sir.
9680. Who was he? Mr. Angus, but I supplemented his recommendation from time to time. I quite agreed that it was necessary to take the work in hand, and to let it by contract in the way it was let.
9681. What steps were taken to ascertain whether this expenditure was necessary or not? The lines were inspected, and the Commissioners were acquainted with their state, and they were advised to relay and reballast certain portions.
9682. But is it not in your opinion a great reflection on the construction of these lines originally that such a large expenditure should be required within such a short time? I do not know that it is a reflection upon the construction of the lines. These lines had been allowed to run down. They had not been maintained properly, and hence the large expenditure necessary to put them in proper condition.
9683. Surely it was a great mistake that the lines were not properly maintained? I think so, your Honor, but whether the money was available to maintain the lines or not I am not of course in a position to say. But that they were not maintained properly is very evident.
9684. And that was before the lines were handed over to the Commissioners at all? Yes.
9684½. *Mr. Eddy.*] I should like the Commission to understand that this was before the Commissioners took office, and when the lines were in the hands of the Existing Lines Branch.
9685. *President.*] I am talking of the Newcastle line.
9686. *Mr. Eddy.*] I am afraid Mr. Foxlee has misunderstood your Honor's questions. Mr. Foxlee, I believe, is referring to the way in which the whole of the lines that were opened for traffic had been allowed to run down.
9687. *President.*] I thought I said the Northern line.
9688. *Witness.*] I thought your Honor was referring to the northern lines generally.
9689. *Mr. Young.* Had you anything to do with the reballasting and relaying of the Northern line Mr. Foxlee? I know what was done. I had to do with the work in general way as Deputy Engineer.
9690. Was that work done on your recommendation? It was done on Mr. Angus' recommendation in which I concurred.
9691. Why did you concur in it. What was the particular reason for that large expenditure? The reason was the deficiency of ballast and the working up of the soft clay formation in between the sleepers.
9692. Was the ballast inferior? Yes; the ballast was inferior in places.
9693. Did the contractor or contractors have to maintain the line for any period after it was completed? I am not aware, but probably they would.
9694. It is the usual thing is it not? Yes, it is usual.
9695. *Mr. Eddy.*] It was not the practice in the Colony until the Railway Commissioners took office. The lines were taken over almost immediately after they were completed, but the Railway Commissioners made representations to the Minister for Public Works that it would be more advantageous to the country if the railway contractors had to maintain the lines for the period of a year after they were opened for traffic. That is now the practice, and it is a practice which is almost universal in England.
9696. *President.*] But it was not the practice here until recommended by the Railway Commissioners?
9697. *Mr. Eddy.*] No sir, the lines were taken over at once.
9698. *President.*] Was this particular line from Strathfield to Newcastle taken over immediately from the contractors?
9699. *Mr. Eddy.*] I believe so, your Honor.
9700. *President.*] That was before the practice obtained of obliging the contractors to maintain the line for a year?
9701. *Mr. Eddy.*] Yes.
9702. *Mr. Smith.*] I might mention, your Honor, that these lines, as probably you may remember, were running some years before communication was completed. The line from Sydney to Newcastle was opened before the Hawkesbury Bridge was built; but it was necessary to cross over Mullett Creek by boat. I remember travelling in 1887 along that line and it was open before that. It must have been in use some two or three years before the bridge was completed.
9703. *Mr. Kethel.*] Perhaps Mr. Foxlee can tell us how long the line was open for traffic before it was reballasted and relaid.
9704. *Witness.*] I am afraid I cannot give that information.
9705. *Mr. Kethel.*] Is it not a most unusual thing for the permanent way to require such a large expenditure upon it in such a short period after its construction? I am not sure how long the line was opened before the reballasting and relaying.
9706. *Mr. Young.*] But the ballasting should not have given way so soon.
9707. *Witness.*] If the ballast has been such as we have now put in it would not have given way so soon.
9708. *Mr. Kethel.*] Was the condition of the line caused by a too thin layer of ballast being placed under the sleepers?
9709. *Witness.*] The Construction Department did not put as much ballast under the sleepers as we are doing, and that would lead to its requiring reballasting sooner than would otherwise be the case.
9710. *President.*] And especially where there is a soft clay bottom?
9711. *Witness.*] Yes, your Honor, because the heavy rainfall which was experienced before he took the work in hand causes the clay to work up from under the sleepers.
9712. *Mr. Kethel.*] Which portion of the line was most defective? A good deal was required to be done between Ryde and the Hawkesbury, and also between the Hawkesbury and Adamstown.
9713. Beyond Gosford? Yes; beyond Gosford there were many soft places where the clay would work up. Even though there might have been a good thickness of ballast, the tendency of the traffic is to work up the clay bottom, especially if there is insufficient drainage, and that is what happened in the case of which we are speaking. The pounding of the traffic, together with the heavy rainfall, would tend to work up the clay into the ballast, and so necessitate its removal.

Mr. Foxlee. 9 June, 1892.

9714. I suppose the country between Gosford and Cockle Creek would be specially liable to that, seeing that it is of a low, flat nature? It was the clay in the cuttings which worked up together with the inferior quality and small quantity of ballast that was the real cause of the trouble. I do not know that the low-lying nature of the ground was very much responsible for it. It was really that there was clay in these cuttings, which, after the rains, worked into the ballast and had to be removed, and that would happen in any case, unless there was a considerable thickness of ballast.
9715. *President.*] It must have been inferior workmanship surely, that rendered it necessary to incur this large expenditure?
9716. *Witness.*] Yes, your Honor. If more money had been spent in the first instance there would have been no necessity for this work now.
9717. *Mr. Young.*] Do you know of any other railway, within two or three years after it was opened, of a length of about 80 miles requiring £60,000 to be expended upon it to put it in good order?
9718. *Witness.*] I cannot call a case to mind, but I know of many branch lines in the old country where they have have had some such trouble. Even on the London and North-Western we had a somewhat similar trouble with clay cuttings.
9719. *Mr. Kethel.*] In specifying for the construction of a line do you state the number of inches of ballast that shall be laid?
9720. *Witness.*] Certainly.
9721. Does that rule apply to all classes of country? Yes; but in carrying out work of course we may think it desirable to vary the quantity, but we have a standard, and that standard applies to all lines.
9722. So far as you are aware, was that standard applied when this Strathfield to Newcastle line was constructed? Probably a standard was adopted but of course I am not personally aware.
9723. Could you not tell when you were examining the ballast, when you were relaying? Yes; by comparing the thickness with the standard. By that means I could form some idea as to whether the line had been constructed in accordance with the plans, but, of course, only approximately, because the tendency of the traffic is to reduce the thickness of the ballast.
9724. You say the real cause of the trouble on the Northern line was the soft formation? Yes.
9725. And the excessive wet season? Yes.
9726. Did you yourself examine the line and ascertain the necessity for this work? Yes.
9727. Personally, I mean? Yes.
9728. Is it your opinion that the work was absolutely necessary? Absolutely necessary to keep the traffic going, and a splendid job has been made of it. I do not think there will be the same trouble again.
9729. Have you put down the same description of ballast as was put down originally? No; we have excavated the soft formation from under the sleepers and put in block slag, and boxed up with the same material, broken to the ordinary 2½-in. gauge.
9730. *Mr. Young.*] What did it cost per mile to do that? I have not the figures before me.
9731. But what was the approximate cost? I am not quite sure. I would rather supply you with the correct figures.
9732. Would it cost £1,000 per mile? I do not think so because the work was done in patches.
9733. If it did not cost £1,000 per mile, as the line is only about 80 miles long, nearly the whole length of it must have been reballasted and relaid? We can supply the actual length done.
9734. *Mr. Eddy.*] It is 101 miles from Sydney to Newcastle.
9735. *Mr. Young.*] At that rate then three-quarters of the whole distance must have required attention.
9736. *Witness.*] A large quantity of it at any rate. We had to slow the trains until we could get the work done; it was necessary to reduce the speed of the trains.
9737. *Mr. Young.*] And this work has added some £700 or £800 per mile to the original cost of the line? About that.
9738. Can you tell us the original cost of the line? I cannot say. I know there are some heavy tunnels.
9739. *Mr. Smith.*] Amos's two contracts were nearly a million.
9740. *Mr. Eddy.*] You spoke about the work having been done in patches, Mr. Foxlee. That I take it does not apply to the 13 miles between Ryde and Hornsby and beyond Hornsby? No, that applies more especially to the line north of the Hawkesbury.
9741. The cost of that section was about £11,000 for the 13 miles, was it not? Yes, about that. It was done continuously from Ryde to about the 25-mile post.
9742. In constructing a line, if the engineer was not allowed to spend more than a certain amount and was told to keep the cuttings to a certain width he could not do the work as satisfactorily as he might wish? Quite so.
9743. And as a matter of fact you know that Mr. Whitton was always fighting that question, and pointing out that if they would not spend the money in making the line in the first instance the maintenance branch would have to spend a great deal more than ought to be the case if the work had been properly done at the start? I heard that was so.
9744. Take the Mullet Creek bank, that is a place at which there has been a constant subsidence of the road? Yes.
9745. *Mr. Kethel.*] Is that subsidence still going on? There is no material subsidence now.
9746. It has got to the bottom, I suppose? I think so, but it has given a great deal of trouble from time to time.
9747. *Mr. Young.*] Have you found some trouble with the Illawarra line? In places, but not to the same extent.
9748. From the same cause? We have had trouble with slips.
9749. But there were no slips on the Northern line? No.
9750. *Mr. Kethel.*] You have had a great deal of trouble, I believe, with the section at Clifton? Yes, because of slips.
9751. *Mr. Eddy.*] But you have had less trouble than you had with the Northern line, because it was ballasted with blue-metal in the first instance? Yes.
9752. Between Strathfield and the Hawkesbury it was nearly all sandstone, was it not? Yes.
9753. And therefore there was a greater liability for the line to get into a state of mud? Yes.
9754. So that if money was saved in the first instance by putting in soft stuff for ballast it has been required to be spent afterwards in taking it out? The money must be spent either at one time, *i.e.*, either when the work is being constructed afterwards or the other.

9755.

Mr. Foxlee. 9 June, 1892.

9755. *Mr. Kethel.*] Can you tell the Commission what is the difference in the cost of blue metal and sandstone ballasting? It varies in every locality. We like sandstone for bottom ballasting, provided that we have hard material for top dressing.
9756. If two quarries were equally handy, what would be the difference in price;—would it be 50 per cent? From 30 to 40 per cent., I should say, in a general way.
9757. You say that wherever you can use sandstone for the bottom layer, you prefer to use it? Yes; it is good enough for bottom ballasting, but it does not stand the beaters; it soon pulverises.
9758. That is an operation constantly required? Yes; it is going on daily.
9759. It is required to keep the road firm and safe? Yes.
9760. *President.*] Have you been furnished with a copy of this declaration, Mr. Eddy?
9761. *Mr. Eddy.*] Yes, your Honor; I have just received it.
9762. *President.*] We shall be glad if you will look into it before to-morrow, and bring any evidence you may think desirable. There is one matter in it which perhaps you may be able to give the Commission some evidence upon now, and that is as to the contractors taking over a quantity of plant—barrows, picks, planks, bars, shovels, and general contractors' plant.
9763. *Mr. Eddy.*] I will go into the box and answer any question your Honor may desire to put to me. I do not know very much about this matter; perhaps Mr. Foxlee will be prepared to answer some questions at once.
9764. *President.*] Very well. We will put some questions to Mr. Foxlee whilst he is here. (To Witness): Is it true that contractors—that I understand refers to Messrs. Proudfoot & Co.—took over a large quantity of plant, barrows, picks, planks, bars, shovels, and general contractors' plant, the prices being fixed by the Government engineer? That is true.
9765. And they were second-hand, and were not paid for seven months afterwards, is that so? The amount has been agreed upon and deducted from the certificate, which, I believe, is now before the Commissioners.
9766. According to this statement, this item was over £1,200? I am not sure of the amount.
9767. You fixed the amount, did you? The amount was agreed upon, your Honor. I did not fix it; my predecessor fixed it. The amount was agreed upon, and it was deducted from the certificate.
9768. Had these been supplied by the Government? They were supplied by the Government at the request of the contractors when they started the work.
9769. That is, by the Railway Commissioners? Yes, sir.
9770. And what was the amount of plant that was supplied to the contractors? I think a list was laid before the Commissioners, comprising tools, barrows, picks, shovels, and things of that kind. I have not the list before me; but I think the details can be supplied.
9771. How long was that plant in use? Some of it was new, and some of it second-hand.
9772. That was when they were commencing the works; but how long had the contractors the use of them? They have the plant still.
9773. I mean before the price was fixed? I think it was some months. They disputed our charges, and there was some delay in settling them. It was some time before we got the thing settled; but we knew we were all right as we had money in hand.
9774. When were these things taken over by the contractors? At the commencement of the contract.
9775. *Mr. Eddy.*] It was to expedite our work, sir, that this transference took place. We had these things in hand after the work in connection with the Bourke floods and at other places, and an arrangement was made whereby the contractors took over the surplus things, and thus facilitated the progress of their work. A price was fixed for the plant, but the contractors thought we were charging too much, and they disputed the amount; and, as Mr. Foxlee has said, the dispute was not settled, but the money was kept in hand by the Commissioners.
9776. *President.*] I thought from this charge that the contractors had the use of these things during their contract, and that when those contracts were completed ——
9777. *Mr. Eddy.*] No, sir. The plant was purchased from us, and now we have terminated the contract an application has been made to us to repurchase the plant.
9778. *President.*] Which, I suppose, you have not entertained?
9779. *Mr. Eddy.*] No, sir. We say that will have to be settled with other disputed items.
9780. *Mr. Young.*] It is also stated in this declaration that the contractors borrowed a large quantity of plant from the Commissioners, for which they paid nothing. Can you tell us anything about that, Mr. Foxlee? I know of no borrowing.
9781. You do not know anything about that? I do not.
9782. *President.*] Did the contractors borrow a large quantity of plant for which they paid nothing? They have had no plant whatever for which they have not paid.
9783. *Mr. Young.*] Some of the articles I find are enumerated. There were two rock-breakers, and trollies, tricycles, trucks, &c. This declaration also says that the contractors had the use of the telegraph and telephone free of charge; do you know anything about that? I know nothing about the rock-breakers and trollies.
9784. *Mr. Kethel.*] Who has charge of this plant? These tools were in the several divisions comprised in the contracts.
9785. Were they in charge of the Divisional Engineer? Yes.
9786. They were under his direction? Yes; all second-hand tools would be.
9787. Then Mr. Sutter would be the gentleman who had charge of them in that division? Mr. Watson in the Western, and Mr. Halligan in the Northern division.
9788. *Mr. Eddy.*] I may, perhaps, be allowed to explain that the two rock-breakers referred to were loaned to the contractors until they could get their own crushers from America. It was to facilitate our own business that this was done. The contractors cabled to America for some specially large crushers, and pending the arrival of that machinery, as we had some crushers in hand, we rented them to the contractors at £1 a week.
9789. *Witness.*] I did not recollect that as the arrangement was not made through me, but I recollect having heard of it.
9790. *President.*] You say the contractors paid you for the use of the two stone-breakers?
9791. *Mr. Eddy.*] Yes, your Honor. It was stipulated that these machines should be loaned to the contractors when they made the bargain for the supply of ballast.

Mr. Foxlee. 9 June, 1892.

9792. *President.*] The gravamen of the charge is that you allowed the contractors to use this machinery without payment at all.

9793. *Mr. Eddy.*] That is not correct, your Honor. The contractors purchased the tools, shovels, and barrows from us at a price they considered too high; and as to the two rock-breakers, they paid rent for those during the time they had the use of them. We will put Mr. M'Sweeney into the box to state what happened to him. He took a lot of things from us, and although he paid the money he considers that he has paid too much.

9794. *President.*] These are charges about Mr. Proudfoot, and we would rather have his evidence.

9795. *Mr. Eday.*] As Mr. McSweeney was treated in the same way, we should like him to give evidence also, your Honor.

9796. *President.*] Yes; but this is a charge directed at Messrs. Proudfoot & Co.

9797. *Witness.*] I now recollect that, your Honor. It was before I took charge however.

9798. *Mr. Kethel.*] The tools and plant, I suppose, would be in connection with Mudgee line deviation, and the two rock-breakers would be in connection with the contract for the supply of ballast?

9799. *Mr. Eddy.*] The tools were for general purposes, sir, and not in connection with the Mudgee deviations particularly. When these contracts were entered into, the work we had been doing ourselves passed into the hands of the contractors, and consequently we had a surplus of tools, and this sale was a business arrangement. The necessity for keeping all these things on our hands passed away, and we handed them over to to the contractors at what we considered a fair and proper price.

9800. *President.*] Do you know of any case in which the contractors were paid for putting in sidings which were exclusively for their own convenience in getting ballast?

9801. *Witness.*] No, your Honor. They laid sidings in two or three quarries for their own purposes.

9802. Do you know whether they were paid for putting in those sidings? They were not paid.

9803-4. Were they paid for opening up quarries? No allowance was made for opening up quarries.

9805. Then both putting in sidings and opening up quarries was done at the expense of the contractors? That is so. We have not made any allowance on account of these works. If they made claims for these things we have not allowed them.

9806. You have never allowed them? No.

9807. *Mr. Kethel.*] You simply provided the permanent-way materials? We have provided them with permanent-way materials, and also laid in the junctions with the main lines.

9808. All the rest the contractors did at their own expense? Yes.

9809. And I suppose you found it necessary to lay in the junctions with the main lines yourself, in order that the permanent-way should not be interfered with? Yes; we could not allow any interference with that.

9810. *Mr. Eddy.*] So that there may be no misunderstanding, sir, we wish to say in regard to Messrs. Proudfoot's contracts that there have been difficulties. Messrs. Proudfoot & Co. have made claims which we did not consider we could meet, and in connection with a disputed item of £30,000 ——

9811. *President.*] What is that for?

9812. *Mr. Eddy.*] In connection with the carrying out of contracts certain claims always arise, and in the course of these contracts claims have arisen for £30,000, and of that amount we have absolutely rejected £22,000; but in the settlement the Railway Commissioners may determine to take over these sidings which Mr. Foxlee has referred to, and in that event we should have to pay for them. We wish the Commission to clearly understand that what Mr. Foxlee is speaking to is only what has happened up to this moment. Later on we may be charged ——

9813. *President.*] Of course, we are only dealing with what has happened up to this moment.

9814. *Mr. Eddy.*] I know that, sir; but we want the Commission to understand this matter clearly, because we may be afterwards charged with having said something here, and with doing someting else later on, although it is perfectly open and above board and a business-like arrangement, and therefore I want the Commission to clearly understand the position.

9815. *President.*] The statement is that the contractors were paid.

9816. *Mr. Eddy.*] That is untrue.

9817. *President.*] But there is a claim from the contractors which the Commissioners have not yet dealt with.

9818. *Mr. Eddy.*] Have not admitted, sir; but still in the general settlements we may deem it desirable to take the whole thing over, and then we shall only pay the contractors for the money they have aleady expended. Mr. Fletcher, of the firm of Proudfoot and Fletcher, is here, and if the Commission desire it he can give some evidence upon this question of the plant.

Mr. James Fletcher recalled and examined:—

Mr. J. Fletcher. 9 June, 1892.

9819. *President.*] It is stated, Mr. Fletcher, that the contractors took over some plant from the Commissioners at a price fixed by the Government engineer;—is that so? Yes, your Honor, that is a fact,

9820. Do you know at what price? The total amount was £1,200 and a few odd pounds. I cannot state the exact amount.

9821. What was the amount that Messrs. Proudfoot & Co. claimed to be entitled to? About £680.

9822. Therefore, they had to pay about twice what they considered was a fair amount? Yes; that is what we say. I might state, your Honor, that I made arrangements about the stopping of money for these tools. Mr. Hall, the Chief Accountant, refused to pass a voucher through until he had deducted that amount. I agreed with him to deduct it under protest, because I thought the Commissioners had charged double the amount for the tools that they ought to charge. The amount is still in dispute. It has not been inquired into lately, but it is to be referred to the Engineer-in-Chief. However, the Railway Commissioners still hold the money. They have the £1,200 and odd pounds.

9823. Is it true that you borrowed a quantity of plant from the Commissioners for which you paid nothing? Not that I know of. Trollies and tricycles are mentioned in the charge, and also two rock-breakers. I understand that it was an arrangement with the Commissioners that these breakers were to be loaned to Proudfoot & Co. at a rental.

9824. At a rental? Yes, your Honor, until we got our own rock-breakers out. The arrangement was intended to expedite matters.

Mr. J. Fletcher. 9 June, 1892.

9825. *Mr. Young.*] Did you pay anything for the use of the trollies and tricycles? We purchased them outright with the other tools. They were in the £1,200 and odd pounds worth of plant included in the schedule.
9825½. *President.*] Have you been paid for putting in sidings for your own convenience? No, your Honor.
9826. Or for opening up quarries? No.

Mr. Justin M'Sweeney recalled and examined:—

Mr. J. M'Sweeney. 9 June, 1892.

9827. *Mr. Eddy.*] When you took over the relaying and reballasting contract for the Southern and South Coast lines did you purchase any tools from the Railway Commissioners? Yes; it was part of the arrangement between the late David Proudfoot and myself and the Commissioners that we should take over the tools which the Government had when he took over the men who were then being discharged. The engineer valued them, and the price he fixed upon some of the tools was as high as you could buy new ones for.
9828. You do not think you obtained a lot of tools at less than their proper value? I think the Commissioners got rid of a lot of rubbish at high prices.
9829. How much did you pay? About £1,400 or £1,500.
9830. Which we have deducted from your voucher, in the same way as referred to by Mr. Fletcher? Yes; the Commissioners withheld over £2,000 from my money.
9831. *President.*] I think, Mr. Eddy, that in the papers you have put in before the Commission there is a document showing the different tenders that were received for the different contracts.
9832. *Mr. Eddy.*] You have the original contracts before you, sir.
9833. *President.*] I have not the documents here. I only want to know whether such a paper has been put in.
9834. *Mr. Eddy.*] That is so, your Honor.
9835. *President.*] And it will disclose the number of tenders and the amount of such tenders?
9836. *Mr. Eddy.*] Yes, your Honor.
9837. *President.*] Because it is alleged here that certain persons who were not the lowest tenderers got certain contracts. That will all appear by the original document, I suppose?
9838. *Mr. Eddy.*] Yes, sir; but, as I have explained before, there are a number of works like the Mudgee line deviations, for which no special tenders were obtained; they were carried out under the schedule of prices in another contract.
9839. *President.*] That appears already from the evidence. It was the schedule attached to the relaying contract for the northern lines. According to the declaration, "Public tenders were called for this work, about twenty firms tendering. Proudfoot & Co. were not the lowest, nor was M'Sweeney on the other lengths. Their tenders were accepted after being amended at a conference with the Commissioners. Other tenderers were not allowed this privilege." That will all appear from the documents.
9840. *Mr. Eddy.*] Yes.
9841. *President.*] Just read that paragraph, Mr. Eddy. I think it refers to a matter which you explained to the Commission the other day.
9842. *Mr. Eddy.*] That is so, your Honor; but it is untrue in saying that about twenty firms tendered, and that Proudfoot & Co. were not the lowest, nor was M'Sweeney on the other lengths. Proudfoot & Co. and M'Sweeney were the lowest, and I explained previously why we had the conference.
9843. *President.*] That is exactly what I say. You have explained the matter already, and there is no need to go over it again. Were the works included in this contract carried on principally by day-work?
9844. *Mr. Eday.*] Certainly not, your Honor. There was a great deal of day-work in connection with the suburban line and in connection with other works, and we are preparing a return to show the total amount of day-work that was incurred in connection with all contracts; and that we shall place before you.
9845. *President.*] Do you know anything of this statement,—that day-work was transferred into so many lineal feet and yards, to enable it to be in conformity with the schedule of prices.
9846. *Mr. Eddy.*] Certainly not. If we had found any of our officers doing anything like that they would have been dismissed from the service.
9847. *President.*] You have never found anything of that sort?
9848. *Mr. Eddy.*] No, nothing of that kind.
9849. *President.*] Or anything to give rise to the suspicion that such a thing was being done?
9850. *Mr. Eddy.*] No, sir.
9851. *President.*] If such a thing was done, who would be the officers that would do it?
9852. *Mr. Eddy.*] Those resident and divisional engineers you have already had in the witness-box, like Mr. Suttor, Mr. Shellshear, Mr. Nicholas, Mr. Simpson, and other gentlemen of that class.
9853. *President.*] Then we must ask the question of all of them, as it has been raised in this declaration?
9854. *Mr. Eddy.*] They are not all here, your Honor, but those who are here will be put in the witness-box presently. But I suppose you will only require those who had the supervision of Proudfoot & Co.'s contracts?
9855. *President.*] Yes; as I understand it. I think I have already asked the question of Mr. Suttor.

Mr. E. M. Halligan recalled and examined:—

Mr. E. M. Halligan. 9 June, 1892.

9856. *President.*] Is it true, Mr. Halligan, that on the contract over which you have had supervision, day work was transferred into so many lineal feet and yards, to enable it to be in conformity with the schedule of prices? It is not true, sir.
9857. Is there any foundation for the statement? Not the slightest, so far as I know.
9858. Are you in a position to know? I am in a position to know. Of course, I have not been able to measure everything myself, but I had no reason to believe that such a thing had taken place.
9859. Who measured the portions you did not measure? Mr. Suttor, Mr. Knox, and Mr. Owen.
9860. Is Mr. Knox here? Yes, your Honor; he is in Court.
9861. *Mr. Kethel.*] Could any of these officers have done this sort of thing without your knowledge? I do not think they would do it.

Mr. E. M. Halligan. 9 June, 1892.

9862. Could they have done it if they were so minded? Yes; they might say that so much had been done, and I should not know without asking them, but I have no ground for supposing that such a thing would be done.
9863. How would it be possible to do that and then adjust the returns. How often are the returns sent in? Once a month.
9864. And how often do you send the certificates for payment? Once a month.
9865. So that, of course, you could not actually detect anything of the sort until the final making up of the measurements? That is so.

Mr. J. Knox sworn and examined:—

Mr. J. Knox. 9 June, 1892.

9866. *President.*] What are you, Mr. Knox? Civil engineer.
9867. Were you connected with Proudfoot's contract on the Northern lines? Since April of last year, your Honor.
9868. Under Mr. Halligan? Yes, as resident engineer under Mr. Halligan.
9869. Did you do any of the measuring up in that contract? Except an interval of about two months, the whole of it.
9870. Is there any truth in the statement that day-work on that contract, or any portion of it, was transferred into so many lineal feet and yards to enable it to be in conformity with the schedule of prices? In my first certificate some little was done in that way, some small amount, but that was my error, and not the error of the department, for which I was seriously rapped over the knuckles, and the error has not been repeated. It was only a small amount.
9871. That you say was in the first certificate? Yes, your Honor.
9872. What period does that extend over? Only one month.
9873. Was the whole of the work during that month done by day-labour? It only refers to one small item.
9874. What was that item? The cleaning up of the Newcastle yard, the cleaning up of the dirt and *débris* in the yard. That was returned to me by the inspector as days, and, in my ignorance, I returned it as day-work. My certificate was sent back with the reproof already mentioned. I immediately referred to the matter, found out the number of trucks that had been filled by the men during the period of day-work, and then I ascertained the correct weight and the number of cubic yards, and so returned it to the department.
9875. *Mr. Smith.*] Was not the effect of that to reduce the amount the contractors were entitled to? Yes; I think it did reduce it.
9876. *President.*] What was the total amount of that? Roughly speaking, about £56.
9877. *Mr. Eddy.*] I think, Mr. President, that is hardly the charge you are asking about.
9878. *President.*] No, it seems to be the other way.
9879. *Mr. Eddy.* (to Witness).] The allegation is that work has been done, and instead of representing truly to the Commissioners that certain moneys had been spent for day-labour that day-labour has been kept out of the account, and so much per yard returned so as to make the account show what it ought not to show? That is not correct.
9880. *President.*] Has that ever been done? I simply referred to what occurred in my case.
9881. *Mr. Eddy.*] The mistake was this, was it not. Instead of charging the contractor with so many yards of stuff at so much per yard, you allowed them day-labour for it? Yes.
9882. That, your Honor will see is hardly the charge?
9883. *President.*] It is just the other way. (To Witness): Is it true that any day-work was transferred into so many lineal feet and yards to enable it to be in conformity with the schedule of prices? Not at all, your Honor.
9884. Never? Not at all; not in my certificates.
9885. Do you know of such a thing in any other person's certificates? I know nothing outside my own.
9886. How did you ascertain the amount of stuff that was removed from this yard? As I said, your Honor, I found out the number of waggons that were filled.
9887. How did you find that out? Through the Traffic Department. I found out the number of waggons that had been taken away.
9888. They were moved by rail were they? Yes, your Honor; and I knew how many yards each waggon would contain.
9889. With the exception of that small amount of £56, no such thing as is stated in this declaration has ever occurred in connection with your supervision? It has never occurred in my certificates.
9890. *Mr. Kethel.*] This instance to which you refer—did that arise during the process of carrying out any contract, or was it merely some extra work? It was in the process of carrying out Proudfoot's contract. They were called upon to do all that kind of work.
9891. Cleaning out a yard? Yes.
9892. Was that in connection with excavating? No; simply clearing up the mess caused by vehicular traffic.
9893. Did that form part of their contract? Yes; they were supposed to find men when required to do anything.
9894. It was not in the process of the ordinary relaying and reballasting contracts, was it? No, sir.
9895. *Mr. Eddy.*] I might explain here that under their contract Proudfoot & Co. were required to do anything that was desired of them, but work of that nature was only done in exceptional cases. When it came to the Commissioners' knowledge that matters of that kind were being given to the contractors we gave instructions that it was to cease, as it was not of sufficient urgency. There is one further point in this declaration which I should like to say a few words upon. It is that the contractors had the use of the telegraph and telephone free of charge.
9896. *President.*] We have already had a good deal of evidence upon that point, Mr. Eddy.
9897. *Mr. Eddy.*] I remember that questions were put to some of the contractors who were carrying on duplication works and that sort of thing, but I do not remember that Messrs. Proudfoot and Fletcher, or Mr. M'Sweeney were asked, and of course their contracts are of a different nature. I would like to say that very soon after Mr. David Proudfoot got to work he found considerable delay in communicating with the District Engineers when using the postal telegraph wires, and he came to the Commissioners and represented that it was very inconvenient, and that it was against our interests as well as his own that there

there should be delay in getting instructions from and communicating with our own officers; and we gave authority for our wires to be used in exactly the same way that they would have been used had our own men been doing this work. The arrangement was made purely for our own convenience, and, therefore, there was nothing wrong in the matter. Mr. J. Knox. 9 June, 1892.

9898. *President.*] But were the contractors allowed this privilege for their own work?

9899. *Mr. Eddy.*] For their own work in connection with the department, but for their own personal convenience we should not have permitted them to use our wires, had we known they were doing so.

9900. *President.*] So far as I can see, after hurriedly looking through this declaration, there are no other matters that we can go into this afternoon, but I shall be glad, Mr. Eddy, if you will go through the declaration, and find out whether there are any other points upon which you desire to give evidence. Of course we should like to see Mr. Burt, the engineer for Proudfoot & Co.

9901. *Mr. Eddy.*] He will be here to-morrow morning.

9902. *President.*] We might also wish to ask some further questions of Mr. Proudfoot.

9903. *Mr. Eddy.*] I should like to know, your Honor, if some special steps have been taken to secure the attendance of Mr. Tennent, because it is desirable that he should go into the witness-box.

9904. *President.*] Unfortunately we have no means of enforcing the attendance of anybody, or the production of any documents. The Act 44 Vic. No. 1 provides that if a person does not attend or does not produce documents he is liable to a fine of £20, but we do not enforce the fine, it is enforced before a Justice of the Peace. If it was before the Supreme Court I should issue a bench warrant, and have him here in a quarter of an hour, if he was within reasonable limits, but I cannot do that as a Commissioner, I am sorry to say. Whether the Legislature will give larger powers to Royal Commissions or not in the future is another matter. Of course, Mr. Eddy you will understand that a document of this kind, although sworn to by way of declaration, if the person who swears it will not come forward here and state what he has to state in open Court, and subject himself to cross-examination, the Commissioners will pay very little attention to his oath otherwise. We treat this matter simply as a suggestion for the Commissioners to inquire into. As to the value of the document itself, that is not worth considering.

9905. *Mr. Eddy.*] The particular reason, or at least one of the reasons, why I raised the question was this: That it was suggested by Mr. Schey that certain persons had an interest in keeping this man out of the way.

9906. *President.*] While on that question I might ask Mr. Eddy whether Mr. Carson Woods, whose name was also mentioned, has had any contracts with the Railway Commissioners?

9907. *Mr. Eddy.*] Not one, sir. The only thing we know of Mr. Carson Woods is that he was connected with some action.

9908. *President.*] In reference to the dump cars?

9909. *Mr. Eddy.*] Yes. I believe he obtained some contract before we took office.

9910. *President.*] But so far as the present Commissioners are concerned he has had no contracts with them?

9911. *Mr. Eddy.*] None at all, sir.

9912. *President.*] I do not see that there is any object in looking after Mr. Carson Woods, he may be as difficult to find as the other man.

9913. *Mr. Eddy.*] It might be desirable, sir, and it certainly would be interesting to hear his version of the pursuit of him the other day?

9914. *President.*] He was the second person mentioned by Mr. Schey, I think.

9915. *Mr. Kethel.*] Can you tell us, Mr. Eddy, whether Mr. Carson Woods has ever been connected with any firm of contractors who have done work for the department since you took office?

9916. *Mr. Eddy.*] I am not aware.

9917. *Mr. Smith.*] I am sure he has not.

9918. If he has had no contracts or business with the Commissioners I do not see that we can call him. We cannot hunt up everybody who appears somewhere or other on the horizon.

9919. *Mr. Eddy.*] It would appear from the evidence given, sir, that Mr. Carson Woods took something from his pocket, and passed it into the hands of Mr. Tennent.

9920. *President.*] Suppose he did, what have we to do with that?

9921. *Mr. Eddy.*] Of course, the charge is against the Railway Commissioners, and I think it would be as well to see what Mr. Carson Woods has to say, because the suggestion was, or at least so I took it, that the Railway Commissioners had an interest in keeping this man out of the way.

9922. *President.*] If you ask us to summon him we will do so.

9923. *Mr. Eddy.*] I think it would be as well, Mr. President.

9924. *President.*] Very well, we will summon him for to-morrow.

FRIDAY, 10 *JUNE*, 1892.

[*The Commission met at* 11 *a.m., in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

9925. *Mr. Smith.*] I understand that Mr. Carson Woods, one of the witnesses summoned, is in attendance your Honor.

9926. *President.*] Very well, we will call him.

Mr. Carson Woods sworn and examined:—

9927. *President.*] Mr. Woods, you have been summoned because it has been stated that you were seen with Alexander Archibald Tennent at a time when Mr. Schey was looking for him, and apparently taking some action with him. Are you acquainted with Alexander Archibald Tennent? I am, your Honor. Mr. C. Woods. 10 June, 1892.

9928. Do you know Mr. Schey? Scarcely.

9929. Do you know him by sight? I might know him. I think he is a big fat man. I do not know that I could recognise him.

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9930. Do you remember seeing him on an occasion recently when you were with Alexander Archibald Tennent? No, sir.
9931. Were you with Alexander Archibald Tennent on Sunday last? I was, your Honor.
9932. Where were you with him—in his own house? Would you allow me to explain, your Honor?
9933. *President.*] Yes.
9934. *Witness.*] Well, your Honor, Alexander Archibald Tennent came to me on Sunday morning, about 9 o'clock, when I was at breakfast. I asked him to take some breakfast, but he would not, he said he was unwell. Shortly afterwards he left, and I made the remark that he looked ill. About 3 o'clock in the afternoon his little girl came to my house and asked if her father was there. I said "No." She said that her father had been out all day, and that he had had no breakfast. I made no further remark, and the little girl went away, but she returned later in the afternoon, and again asked for her father. I told her that she would probably find him in the park, and I advised her to go there and look for him, but she said she was too small and dare not go. About half an hour after that the girl came for the third time, and implored me to go and look for her father, because her mother was really distracted. She said if I would go she would wait in the house until I returned. I put my coat on and went out to look for her father. I went round, and to my great delight I found Mr. Tennent opposite the Victoria Park. I told him that his wife was nearly distracted, but I could get no coherent reply from him, nor could he account to me where he had been. I think he said he had been in the Domain, but at any rate he seemed very stupid and dazed.
9935. Was he under the influence of drink? He certainly appeared to be sick. I think he was under the influence of drink, but I am a strict teetotaller, and I might be biassed. He had been out all the day, he had had nothing to eat, and he appeared to be very ill. Just as I got within a block or two of his house he asked me if I had any change. I said I had, and he asked me to lend him a shilling or two. He said he could not go home without something.
9936. Do you mean something to drink? He did not say that, your Honor, he said without something. Those were his words. I handed him a shilling, or a two-shilling piece, I cannot say which, and I asked him to promise me that he would go down to his wife. He said, "Go right down and tell her." I went to the house and left him, and told Mrs. Tennent that I had found her husband. I am sure I was not more than ten minutes in his company altogether at that time. When I got to the house Mrs. Tennent was in despair, and she told me that I ought to have waited and seen her husband into the house. I then left and went direct home.
9937. Was that the only interview you had with this person Tennent on Sunday? No, your Honor, it was not. Later on, as I had not seen him, I took a stroll out. I generally go to Christ Church, but, thinking over the matter, I thought I would go back and see whether Mr. Tennent was in his house, because if he was not there I thought I might meet him as I was going down town. I called at the house and Mrs. Tennent told me that her husband was there right enough. I saw him in the house, and he still seemed stupid and dazed. The man seemed ill and sick, and as for his wife, she was in perfect despair Then I realised that there was something more serious than drink on him, or at least, I commenced to think there was. I had no knowledge of anything at all; it was only what I inferred.
9938. You had no knowledge, how do you mean? I had no knowledge of anything wrong, but Mrs. Tennent said she was in great trouble about her husband.
9939. Trouble about what—about the state of his health? She said he was ruined.
9940. That he was ruined? That was her word.
9941. Did he leave there with you? No, your Honor.
9942. Were you with him afterwards during that evening at any time? I was with him next morning.
9943. At what time? Early in the morning he came to my house.
9944. What time do you call early? About 6 o'clock.
9945. That was on Monday morning? Yes, your Honor, on Monday morning.
9946. But on that Sunday afternoon or evening, were you again with him at all? No, your Honor. I came up here on Tuesday, and I found that my name had been mentioned.
9947. Your name has been mentioned as having been with him, and apparently trying to get him away from Mr. Schey? I have no knowledge of Mr. Schey.
9948. Did you know that Mr. Schey was looking for Tennent? No, your Honor.
9949. Did you know that Mr. Schey was anxious to bring him before this Commission? No; except what I read in the papers. There was something in the papers on Saturday, but I did not pay much attention to it.
9950. Had you any conversation with this person Tennent as to the proceedings before the Commission? No, your Honor.
9951. Did he tell you anything about him being required to come before the Commission? No, your Honor.
9952. Did you know he had made a declaration upon oath which he had given to Mr. Schey? As a matter of fact, I knew nothing of the matter until I saw it mentioned in the papers. Mr. Tennent never told me that he had made such a declaration.
9953. Outside what you saw in the newspapers, are we to understand that you were not aware that Alexander Archibald Tennent had made a declaration in reference to the contracts of Messrs. Proudfoot? Except what I saw in the papers, your Honor.
9954. *Mr. Smith.*] You have heard now, Mr. Woods, that Tennent did make a declaration? I have.
9955. As a matter of fact, it is not in your handwriting, I suppose? No; I never heard of it.
9956. You knew nothing whatever about it? I never saw it, although I may say that I saw some reference to it in the proceedings of Parliament.
9957. You have already told the Commission that you were several times at Mr. Tennent's house on Sunday? Twice only.
9958. Did you at that time hear that any one had called for him? No, sir.
9959. During the time you were there no message was received that Mr. Schey wanted to see Mr. Tennent? No.
9960. And when you asked for him you were not informed that Mr. Tennent was not at home? No.
9961. He was there in the house? Yes.
9962. And so far as you could gather he was in a very bad state—in fact, suffering from *delirium tremens?*

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tremens? I would not like to say that. I ascertained from his wife that he had not slept for a week, and that he had eaten nothing, and that generally he was in a very bad state.
9963. *President.*] Did she tell you that he had been drinking during that time? She did not.
9964. *Mr. Smith.*] I suppose you are able to judge—I suppose you know how a man looks when he has been on the booze? I do.
9965. From what you could see of him, did Tennent appear to be in that condition? Yes.
9966. Have you been to see him since Monday? I have not. I declined to go.
9967. Do you know whether he is now in the house? I know nothing about him.
9968. Can you give any information that would enable the Commission to discover his whereabouts? No.
9969. Neither in confidence or otherwise;—you do not know where he is? I know nothing about him since Monday.
9970. Now, if any one said that Mr. Tennent was seen to give something to you on Sunday night, round about the house, in the open, would that be true? It is quite untrue.
9971. The only thing that passed between you was the 1s. or 2s. piece which you say you gave to Tennent for refreshment? I think so. There was one other thing I saw in the papers. It was said that I went into the house with a stick and that I came out again without it. I never carried a stick in my life.
9972. I think you stated that on Sunday or Monday you saw Tennent's name in the papers in connection with the declaration; is that not a mistake? It was on Tuesday morning that I saw his name, but I think I also saw it in the evening papers on Monday.
9973. When you saw Tennent at 6 o'clock on Monday morning you did not know that he had any connection with Mr. Schey or with any declaration? I did not.
9974. Now about this man's character; you have known him for some time past? I have known him since he was in the employ of Mr. David Proudfoot.
9975. And since that time has he had any employment—any general or regular employment? Do you mean since he left the employ of Mr. David Proudfoot?
9976. *Mr. Smith.*] Yes?
9977. *Witness.*] Not to my knowledge.
9978. Since that time how has he been earning his living? I cannot say. I am not acquainted with his private affairs.
9979. But has he had any employment to your knowledge? Not to my knowledge.
9980. Has he asked you to get him a billet, or to assist him in getting a billet? No.
9981. Has he applied to you to relieve his distress? Yes. I have not been to his house more than about six times, but one one occasion ——
9982. Is he a Canadian or an American? Neither; I think he is Scotch. On one occasion, when the bailiffs were in his house, Tennent came to me in great trouble, and asked me to go and see his wife and set her mind at rest; and he also asked me to go and see the money-lender and plead with him. That was the first time I went to Mr. Tennent's house.
9983. You had known him before that as being connected with the late David Proudfoot? That is all.
9984. Have you at any time since you have known him, or rather during the present year, seen him under the influence of drink before Sunday last? I have.
9985. Under what you considered the influence of drink? Yes.
9986. Did you see him pretty frequently during the month of February last? I cannot say that. Sometimes several months would elapse without Tennent coming to my place; then he might drop in once or twice in a week, and then I might not see him again for another month.
9987. You do not know whether he was on the spree on the 1st or 2nd of February of this year; what I want to get at is this. The declaration before the Court was made by Tennent on the 1st February, a declaration which may or may not amount to a criminal charge, and I want to know whether, from your knowledge of him, he was on the spree at that time; whether he was likely to know what he was doing? I cannot say of my knowledge. I can only say of my belief, because whenever he was on the drink he avoided me.
9988. Now, another name has been mentioned here—Mr. Sharkey; do you know him? I do.
9989. Do you know him in any way in connection with Mr. Tennent? I know that Tennent went very often there.
9990. You mean where he lived; what is his address? Mercantile Chambers.
9991. *President.*] What is Mr. Sharkey? He is a surveyor.
9992. *Mr. Smith.*] Was he not some years ago in the Construction Branch of the Railway service? I do not know that. Mr. Sharkey told me that he was in the service of the Queensland Government.
9993. Has he an office in the Mercantile Chambers now? Yes.
9994. Do you sometimes go there? Very seldom.
9995. Have you had any contract with the Railway Department since the late Commissioner left office? Unfortunately no.
9996. You have had no contract of any sort or kind? No.
9997. Have you been interested with anybody else in any contracts. We know that you soldsome dump cars, have you made any sales of anything else to the department? No.
9998. Any patent rights or anything of that kind. Of course I do not know that you have, I only want to find out? Not in any way whatever.
9999. Directly or indirectly you have had no connection with the department? Not at all.
10000. And no connection with any railway contractors? Not one.
10001. When Mrs. Tennent spoke about her husband being ruined did you understand that he was likely to be subjected to prosecution, or that he had lost his money? I thought he had done something which would endanger his position or his chances of getting employment.
10002. You were not able to make any more out of it than that? No; I did not wish to inquire.

Mr. Arthur H. Burt sworn and examined:—

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10003. *President.*] What are you Mr. Burt? I am engineer for Messrs. Proudfoot & Co.
10004. You are a civil engineer? Yes.
10005. Were you acting for Proudfoot & Co. in the deviations on the Mudgee line? Yes, your Honor.
10006. As engineer? Yes.
10007. Who was the Government engineer? Mr. Suttor.
10008. In ascertaining the quantity of soft material and rock removed, what method of computing the quantities did you adopt? We took measurements monthly, computed them on the cross sections, and calculated the quantities from the cross sections.
10009. Was that done entirely by Mr. Suttor? We made the calculations together monthly.
10010. How was the percentage of rock and dirt ascertained? It was decided some months after the contract had commenced by Mr. Foxlee who came up to the works. Mr. David Proudfoot said he would leave the matter in Mr. Foxlee's hands to strike an average. Mr. Proudfoot had claimed a larger percentage of rock than Mr. Suttor would allow, and Mr. Foxlee came up and determined what percentage should be rock, and what should be earth.
10011. And his determination was accepted by Mr. Proudfoot? It was after some demur.
10012. And it was on that estimate that you made these calculations? Yes, your Honor.
10013. Were any trial-holes put down before the percentages were ascertained? No, your Honor, we could easily see the nature of the material from the sides of the cutting.
10014. The face of the cutting would disclose exactly what the proportion was? Yes, your Honor, much better than trial holes.
10015. Could you yourself from that, ascertain whether the percentage agreed upon was a fair percentage of the rock that was displaced in the cutting? In my opinion it was a very low estimate.
10016. It is stated here that no proper measurements took place while this work was going on. Is that true? It is not true.
10017. It is stated that "the Government Engineer (Mr. Suttor) and the contractors' engineer (Mr. Burt), merely guessed the quantities as they walked along the line, and agreed between themselves as to the quantity to be charged and paid for." Is that true? That is false.
10018. Was day-labour employed in any portion of this work? On some portions it was, but very little.
10019. It is also stated in this declaration that "the first two payments made by the Government to the contractors on the Mudgee deviations were for day-labour." Is there any truth in that? It is not true.
10020. Can you state how much was paid for day-labour. Was it in the first payment or second payment? It was comprised under the contract. We extended a few culverts and other small things, and we employed masons at our schedule rate to finish them. This was a very small item, and it is the only day-labour that I can recollect.
10021. Was any day-labour employed to remove the stuff that slipped down on to the railway? The stuff from the slip was measured by the number of loads. Mr. Suttor and I agreed upon the measurement of the dray loads, and put a man on to check the number of drays which passed on to the bank, and the quantity removed was ascertained in that way.
10022. And not merely by the employment of day-labour? No, your Honor; that was only employed where it was impossible to measure the excavation.
10023. Is it true that there was no measurement of any kind until after the second pay? It is not true.
10024. When was the second payment made? It would be some time in October, I should say.
10025. How many months after the work was begun? The second month. The men were paid monthly.
10026. Then it is stated that "the amounts of these two payments were converted into cubic yards to correspond with the schedule of prices at a date much after the payments were made"? That is wrong, your Honor.
10027. Is there any truth in it at all? Not the slightest.
10028. Was any of the work that was done as day-labour converted into cubic yards to correspond with the schedule of prices? No.
10029. *Mr. Young.*] Where was the earth deposited that came from the slips? Some of it on the side of the banks and some down in the valley; wherever we could get rid of it with the shortest lead.
10030. Was it used for the deviations at all? Some of it was used to widen the banks.
10031. The declaration says, "The amounts of these two payments were converted into cubic yards to correspond with the schedule of prices." You say that was not done? That was not done.
10032. Have you got the pay-sheets of that date, or the date of the last amount attached to these measurements? Yes; I have got my certificates.
10033. We would like to see them? I can produce them this afternoon.
10034. Is there anything to prevent these deviations being measured now? No; most of the work can be measured very easily. Of course, where slips came running in it would be difficult to measure them, but that is a small percentage of the total work really done.
10035. These slips were done, I presume, by day-labour? They were taken away in drays by day-labour, and we measured the cubic contents of the drays, and took the total quantities from these.
10036. Were you engineer for any other works besides these? The whole of Messrs. Proudfoot & Co.'s contracts.
10037. The whole of them? Yes.
10038. *Mr. Kethel.*] Had you any interest in the contract, or were you simply a salaried officer? I was simply a salaried officer.
10039. And you had no interest whatever in it? None whatever.
10040. You would not derive any profits from it if any extra profits were made by the contractors? None whatever.
10041. *President.*] The declaration says, "As many as 1,200 men have been despatched from Sydney in two months from the beginning of contracts in this way, many of whom were quite unfit for the work, and never made any attempt to start; others made the trip a holiday at the expense of the Government." Is that true? No; that is not true. Mr. David Proudfoot was most particular as to the class of men he sent on to the work.
10042. But were 1,200 sent up from Sydney in two months? I should say certainly not.
10043. You saw what class of men they were? Yes.

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10044. Is it true that many of the men were quite unfit for the work, and never made any attempt to start? No; such men would not be granted passes to go on to the contract.
10045. Who selected the men? Mr. Proudfoot himself.
10046. In Sydney? Yes; all the men sent from Sydney. I think he saw everyone who went on to the work.
10047. They were engaged by him personally as being fitted for the work? Quite so.
10048. When they were employed on the work were any of them discharged a short time after? Yes; that would occur anywhere. In sending a large body of men away you always find that a certain percentage are loafers, and are no good, and you must get rid of them as soon as possible.
10049. *Mr. Young.*] In the relaying of the Northern and Western lines, did the Railway Commissioners have all the materials to be used, such as sleepers, rails, chairs, bolts, and fish-plates, points and crossings, and interlocking gear, ready at the proper places for the work when required? Yes.
10050. In every case? In every case for relaying or re-sleepering.
10051. Was ballast at the time of starting works provided for? The Commissioners had a considerable stock of ballast at depôts along the line, which was for the purpose of reballasting and for repairs.
10052. Is it true that "in consequence of no ballasting having at the time of starting works been provided for, although several contracts had been let, where this became a first essential, that many miles of line that had been lifted and relaid were unballasted to the danger of the travelling public? No, that is not true.
10053. And it was not to the danger of the travelling public? No.
10054. And it had not to be done over again? No; it had not to be done over again.
10055. The declaration then says that the rails were bent, and that in consequence the contractor was obliged to fork the old ballast? I never heard of the rails being bent.
10056. Was the contractor obliged to fork the old ballast? Yes.
10057. Why was that forking required? In lifting the roads the ballast, as a rule, is worn out on the older parts of the line. To make a good job of the lifting and packing it is necessary to separate the good stone from the dirt, and we arranged a price at so much per lineal yard for forking and cleaning the ballast. Had that not been done new ballast would have had to have been supplied.
10058. *President.*] Then it is economical? Yes. Instead of our ballast price it was a matter of 4d.
10059. *Mr. Young.*] Was that caused in consequence of the absence of material? No.
10060. Do you know of any time during that contract for the Northern and Western lines when a new arrangement or agreement was made with the Commissioners and the old contract in part abandoned? No; the old contract has never been abandoned.
10061. Is it a fact that the contractors were to provide 4,000,000 tons of ballast? No.
10062. Is it a fact that large gangs of men, sixty to eighty in a gang, were only employed half-time? That is not true.
10063. Is it a fact that to fill up the other half of the time they were put on day wages? No.
10064. And did you measure the work up at Wallas Creek, Maitland. Yes.
10065. What did that consist of. Can you explain the nature of the work? Wallas Creek was a large lagoon, and when the Maitland Council were forming an embankment around it, to save it from the floods caused by the rising of the Hunter River, it was arranged that it should be filled up and drained on the other side of the dam which was constructed across the lagoon for about 20 chains in length. The work in which we were engaged to do was the filling up of the lagoon.
10066. Was that part of the railway contract? No. It is within the railway property, within the railway fence.
10067. Why did it want to be filled up? To connect with the town dam. Had that not been done this would have been a stagnant pool for 20 chains long inside of the dam.
10068. But is it inside the railway fence? It is alongside the railway. I was wrong in saying it was inside the railway fence. It is close alongside the railway fence.
10069. Did you do it for the Railway Commissioners? Yes.
10070. Do you know how it is that the Railway Commissioners had anything to do with it? I think it was an arrangement with the Maitland Council.
10071. *Mr. Eddy.*] I may explain that this depression is upon the property of the Railway Commissioners, and the Maitland Council pressed us to do this work, because the lagoon would be very unhealthy to the town, if it were not filled up. We felt that we were under an obligation to do it, and we arranged to fill up the depression, and so get rid of the stagnant water which would otherwise have collected there.
10072. Was it as much as about 80,000 cubic yards? No; about half, if I recollect aright.
10073. Have you got your measurements? Yes.
10074. We would like to have them? Yes; you can have them this afternoon.
10075. Was it payed for by schedule rates? Yes; by schedule rates.
10076. Is it true that on this occasion the contractor was paid for all delays occasioned by late trains, &c., the time being calculated at day wages, which was again transferred into cubic yards? No; it was all by measurement.
10077. Is it a fact that at the Easter Encampment in 1891, sleepers were laid along the western line that between Dubbo and Blackheath, and that these were adzed ready for laying? Yes.
10078. And they were also bored; and without the slightest warning to the contractor, were retrucked and taken to the southern line duplication—Angus and Monie's contract? That is true.
10079. What was the cause of that? Our men, who were engaged in relaying, were stopped ——
10080. But did Mr. Proudfoot put in a claim of £3,000 or £4,000 in consequence? He did.
10081. Against the Commissioners? Yes.
10082. On that account? Yes.
10083. Was there a great row in connection with the matter? No; there was no row that I know of.
10084. Were the men put on repacking and lifting the road at day work? Yes; they were put on lifting the road.
10085. At day labour? No; at schedule rates.
10086. Was it done to keep the men together and stop the outcry? No, it was not.
10087. Was a big gang dispatched to Bourke by order of Mr. Watson, Engineer, to lift and relay the line there, and that they had to return without having done any work? No; a few men were sent to Bourke

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Bourke by order of Mr. Watson, from the re-sleepering gang. There were fifteen or sixteen at the most.
10088. Was there any material on the ground when they arrived there? I think the material was there, but the men sent were not accustomed to that sort of work, and did not take their tools with them.
10089. Whose fault was that? I think it was partly Mr. Watson's fault, and partly the fault of our ganger.
10090. To send men unused to the work and without tools? If we had had sufficient notice what they were required for, we would have provided them with tools.
10091. *President.*] Was it in connection with the Bourke floods? No; it was a long time afterwards.
10092. *Mr. Young.*] Were they sent up to keep them out of the way? No; not at all.
10093. Was it a fact that the Commissioners had to supply fencing material which was dumped down in heaps anywhere along the line? Yes.
10094. And was the contractor paid for shifting that? No; it was at our request that the material was put in depôts, instead of being scattered along the line. It was easier to handle.
10095. *President.*] It was handled at the cost of the contractors? Yes.
10096. *Mr. Young.*] You did some work at the dyke at Newcastle? Yes.
10097. Did you measure that? Yes.
10098. Were plans altered from time to time? They were slightly modified.
10099. Have you got these various plans? I have not any of them in my possession. I think the work was done from the Government plans.
10100. Can they be obtained? I have no doubt they can be obtained from the department.
10101. *Mr. Eddy.*] We will put in the plans presently.
10102. *Mr. Young.*] When the work was completed, or nearly so, were orders received and a new plan substituted which altered all the features of the work? No.
10103. Did it necessitate the redoing of the work? No.
10104. Did the last plan adopted bear any similarity to the original plan? I think there was only the one plan and no alteration would be shown on that.
10105. On one plan? Yes.
10106. *President.*] Were those alterations extensive? No; very slight.
10107. And they will be shown on the plan itself? Yes, your Honor.
10108. Were these alterations a complete muddle? No.
10109. *Mr. Kethel.*] What was the nature of the work? Extending sidings to cross over the roads for the accommodation of the coal traffic.
10110. On Bullock Island? Yes.
10111. Were there 600 men employed on the dyke at once? The greatest number of men that we had employed was ninety-five.
10112. Ninety-five, and not 600? Yes; that is exclusive of the ballast train which we ran between Bullock Island and the mainland. I daresay there were thirty men employed on that train, but that was not in connection with the Bullock Island work, but with the other work.
10113. If it is asserted that that was done by day-work, is that true? No; it is false.
10114. Or that all pay-sheets on this work were also turned into cubic yards, excavation and other items so that it could be made out to appear that payments to contractor were made at the schedule rates? That is wrong. It is not true.
10115. Was there any excavation at all in the work? There was a little filling up of holes and forming of the ground for the extension of sidings.
10116. *Mr. Young.*] Should the works executed by the firm of Proudfoot & Co. be measured on the recognised principle of cross-sections, would the amount of work represented in the vouchers be found to have been carried out? That is absurd, because the work could not be measured by cross-sections. Cross-sections would not show any of the work.
10117. Can the work be measured in any way? Yes; it can.
10118. Would the difference betweeen the actual measurements and the measurements paid for represent a difference of many thousand cubical yards? Certainly not. I believe an officer of the department has measured it since, within the last few months.
10119. *President.*] Who is that? Mr. Fraser.
10120. Is that true, Mr. Eddy, that Mr. Fraser measured it?
10121. *Mr. Eddy.*] Yes, we had the work at Newcastle remeasured by Mr. Fraser.
10122. *President.*] Mr. Fraser is here.
10123. *Mr. Eddy.*] Yes, he is here. May I point out that Mr. Burt when he made the remark that it would not be possible to measure the excavations referred to Newcastle, and not to Mudgee, because of course that is possible.
10124. *Mr. Young.*] And can the Maitland work be measured?
10125. *Witness.*] Yes, that can all be measured.
10126. Where was the earth taken from? Are you referring to the Maitland embankment or to Wallas Creek?
10127. Wallas Creek? The Wallas Creek was filled from the slope of the hill at the side of the lagoon.
10128. How can that be measured now? The cross-sections were taken before the work was touched.
10129. Cross-sections were taken? Yes.
10130. And you have them? Yes, we have them. At least the department had them.
10131. *Mr. Kethel.*] Were there two different jobs at Maitland? Yes, there were two different jobs—the Wallas Creek work and the Maitland embankment.
10132. To what extent was the system of sub-letting contracts for earthwork carried on under your management? Wallas Creek is the only one I remember now that was sub-worked. I am sure it was the only one.
10133. What portion was sub-let? There were 28,000 yards removed by sub-contract, if I remember aright.
10134. Excavating and removing, and filling in? Yes, and forming.
10135. The whole of it was done by sub-contract? Not the whole of the work. The whole job included 40,000 cubic yards.
10136. That portion of it? Yes, that portion was.

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10137. Has this practice of sub-letting existed in connection with any other contract? No.
10138. And you believe that 40,000 cubic yards of that was let? No, about 28,000 yards.
10139. Was that not in direct contravention of the conditions of the contract? Not that I am aware of. It is not unusual to sub-let earthwork in that manner.
10140. While you were carrying on the firm's works in the western district did you have anything to do with the opening of a quarry? Yes.
10141. To obtain ballast? Yes.
10142. Had you to do with the laying of sidings? Yes.
10143. To bring that ballast on to the main line? Yes.
10144. What men were engaged in opening out the quarries, and by whom were they paid? Our own men, and paid by us.
10145. So far as you know were there any concessions made by the Commissioners with regard to paying part of the expenses of these men's labour in opening up the quarries? No.
10146. The whole expense of the cost of the labour engaged in that work, do I understand, was paid by the contractor? By the contractor altogether.
10147. The laying and removing of sidings from the main line of railway into the quarries, by whom was that work performed? We carried out that work.
10148. At whose expense? At our own expense, but an arrangement was made with the Government, I believe, that they would pay us if they took over the quarries at the end of the contract.
10149. What portion of the materials for these sidings was supplied by the Government? The rails, sleepers, and fastenings, points and crossings, and the interlocking gear.
10150. They still remain the property of the Government then? Yes.
10151. What portion of the permanent way in connecting with the main lines was performed by the Government people? Up to the Government fence.
10152. Then you were not allowed to interfere with any portion of the line when connecting with the quarries inside the Government fence? No.
10153. Only from the fence into the quarry itself? Yes, into the quarry.
10154. Do you know whether any other concessions were made by the Government to Messrs. Proudfoot & Co. in connection with these quarries? That is the only arrangement I know of, that in the event of the Commissioners taking over the quarries, the contractors should be recompensed for the expense they had been put to.
10155. At a valuation to be fixed at the time of taking over I suppose? Quite so.
10156. Did you receive any stone-breakers or rock-crushers from the Commissioners for the use of the company? Yes; two.
10157. Where did you use them? They were used at Bullock Island. I think they are there now on the slag heap.
10158. Where they used on the Western-line at all? They were for a short time.
10159. When were they removed? I forget the exact time, but I think it was towards the end of last year.
10160. You say they were used at Bullock Island? Yes.
10161. For crushing ballast? For crushing slag.
10162. For us on the work you were doing at the island? No, for the main line.
10163. Do you know on what terms the Commissioners granted the two rock-crushers to Messrs. Proudfoot & Co? If I am not mistaken, we pay a rental of about £1 a week each.
10164. For what time? So long as we have them.
10165. Are they still in the possession of Messrs. Proudfoot? No; they are on the Commissioners property at Bullock Island.
10166. Has anyone handed them over again to the Commissioners as not being further required? No; but the work is not being carried on just now. Our new crushers arrived some months ago.
10167. So far as you know, they are still in your possession, and therefore, you are still liable to pay rent for them? Quite so.
10168. That is the only concession you are aware of in relation to opening the quarries, the stripping of them and preparing for getting stone? That is all.
10169. And the laying of the sidings? That is all.
10170. So far as you are aware Proudfoot & Co. have received no further concessions from the Commissioners? I have mentioned everything.
10171. *Mr. Young.*] Was there a specification for the deviations on the Mudgee line? Yes, the specification relating to the relaying and reballasting. That work was done under the reballasting contract.
10172. You have read the specification I presume? Yes.
10173. It is alleged that the contractors had the use of the telegraph and telephone free of charge. Was that provided for in the specification? Not directly in the specification, but it was almost a necessity to have quick communication between the different gangs just in the same way that if the department were carrying out the work they would require to use the telegraph lines.
10174. *Mr. Eddy.*] This Mr. Tennent, who has made this declaration, was he employed upon the works? He was not employed on the outside works; he was in the office.
10175. Simply in the office? Yes.
10176. Where at? In Phillip-street, Sydney.
10177. And therefore he was not in a position to speak of his own knowledge of these proceedings on the works? No; he could not have known.
10178. Are you aware of any case in which men have been working at day labour prices, and the money value of that labour has been converted into measure equivalents? I know of no such case.
10179. And you have had the preparation of all the facts on which Messrs. Proudfoot & Co. would send in their accounts to the Commissioners? All accounts have been made out and sent in by me.
10180. What is about the length of your relaying and reballasting contract? About 1,200 miles.
10181. Mr. Tennent has stated that you were to supply about four million tons of ballast in place at per yard. Would not 1,000 tons per mile on all the existing railway be a splendid lift to the road? It would. It is more than we are using.

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10182. Therefore, Mr. Tennent's statement provides 4,000 miles at 1,000 tons per mile for about 4,000 miles of railway? Yes.
10183. And therefore, it is a preposterous statement? It is.
10184. Of your contract, which you say is 1,200 miles in extent, there is a good deal of what is practically good line? Yes.
10185. Now, as to the work which you say was sub-let in connection with the filling up of the depression at Maitland. Was that the easier or the heavier part of the contract? That was the easiest part of the work. The heavier part of the work and the most expensive part of the work we did ourselves.
10186. So that if you get an easy thing here and there you have a large quantity of expensive work to carry out? Yes.
10187. Take the work of lifting the level of the railway so as to enable us to carry on the traffic in flood-time. I believe you have had to bring the earth required for that work from long distances? Yes; 7 or 8 miles.
10188. And your contract price is how much? 1s. 9d.
10189. Do you think you make a large profit out of that? We are losing by it.
10190. Because the men have to travel by train? Quite so; and they have to wait for the traffic.
10191. So that if you get a good thing here and there you have bad things to set against it? Quite so.
10192. In regard to forking old ballast. How much did the Commissioners pay for the separation of stone from the dirt? Fourpence per lineal yard.
10193. And a yard of new stuff would cost how much? About 5s. 3d.
10194. Therefore, every yard of stuff we gain by an expenditure of 4d., saved us 4s. 11d.? Yes.
10195. So that it was not a very unwise proceeding? I should think not.
10196. You have explained the matter of fencing to the Commission? Yes.
10197. But there was a case in which you did receive some small payment for shifting a quantity of fencing material? Yes.
10198. The Commissioners did not deliver the material, but they had a stock on a contract further on? Yes, on Monie & Angus' contract.
10199. Where they were doing some deviation work? Yes.
10200. And you were instructed to remove the material from where it was stocked to your own work? Yes.
10201. That did not involve a big expenditure, I suppose? About £24 or £25, speaking from memory.
10202. We have heard something about a claim for £3,000, put in on behalf of Messrs. Proudfoot & Co., because of material being withdrawn for more urgent work in connection with the Southern Line duplication. Was such a claim ever paid? No, sir.
10203. Then as to the gangs sent to Bourke, they were not sent for the purpose of lifting as stated in this declaration? No.
10204. They went there to put in new sidings for a carriage shed? Yes.
10205-6. And in consequence of not taking the right tools they were put on to some other urgent work that was going on at that time? Yes.
10207. The materials for the sidings were all there, were they not? I believe so.
10208. The urgent work that the men were put on to do was some deviations in connection with the wreck of the line that had previously occurred? Yes.
10209. And the men were kept at work until they completed the work which they were originally sent to do? Quite so.
10210. And you were only paid for the number of yards according to the schedule of prices? Yes.
10211. And not by day labour? No.
10212. It was only for the actual work the men performed that you were paid for? Quite so.
10213. There was no compensation in connection with that journey to Bourke? We were paid for the time of travelling to Bourke because, of course, we had to pay the men while they were going from one job to the other.
10214. And if any claim has ever been sent in it has never been acknowledged, nor has anything been paid? No.
10215. Now in carrying out the works at Newcastle the levelling that was done was paid for by day labour, was it not? Yes.
10216. Why? Because there was a lot of pieces of timber and old rubbish which had to be shifted which it would have been impossible to measure, and the only way by which a satisfactory solution could be arrived at was to pay for that work by day labour; and the Government kept a check upon it by their own inspectors.
10217. You were paid by day labour, simply because it was impossible to pay for it fairly in any other way? Yes, it was impossible to measure.
10218. The work that you were engaged on at Bullock Island was laying a lot of sidings, was it not? Yes, a great many.
10219. And how much did the alterations amount to, of which so much has been made. Practically, only shifting about half a dozen sets of points, because Mr. Russell the contractor, for removing the coals for the Commissioners, represented to the department that his work would be facilitated somewhat if that slight modification was made? Yes.
10220. That is all the alteration that took place? Yes.
10221. *Mr. Eddy.*] The whole alteration was only a question of about £250, and it was done to facilitate our contractor for shipping all our coals at Newcastle.
10222. *Mr. Kethel.*] That was a deviation from the original plan?
10223. *Mr. Eddy.*] That was the complete muddle which has been referred to and which was supposed to have cost three times more than if the one plan had been adhered to.
10224. *Mr. Kethel.*] What proportion did the cost of day labour bear towards the whole contract?
10225. *Witness.*] It was very small. I can tell you exactly this afternoon.
10226. *Mr. Eddy.*] We will put Mr. Fraser in the box, who will speak to having remeasured this work, and I think he will be able to give the Commission all the information they want.
10227. *Mr. Smith.*] There is one question I should like to ask Mr. Burt. I would like to ask him if it is a fact that when he went as contractors' engineer with the Government engineer a basket of champagne and other aids to measurement went with them?

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10227½. *Witness.*] No; it is false.
10228. *President.*] Where does that come in, Mr. Smith?
10229. *Mr. Smith.*] Your Honor will find it in Mr. Schey's speech, as reported on page 6291 of *Hansard.* (To Witness), Is there any justification for that statement at all?
10230. *Witness.*] There is no foundation for it, whatever.
10231. *Mr Eddy.*] Have you ever seen Mr. Suttor take alcohol in your life? Never.
10232. You know him to be a total abstainer? I do.

Mr. J. Fraser, recalled and examined:—

Mr. J. Fraser. 9 June, 1892.

10233. *President.*] I understand, Mr. Fraser, that you have done some remeasuring, which has been referred to? Yes, your Honor.
10234. What measuring have you done? I measured the whole of the work done by Messrs. Proudfoot and Co. on the northern division.
10235. Is that since their work was finished? It is very recently;—since the work was practically finished.
10236. When was it done? In the beginning of February last. Proudfoot & Co. have done very little work since that time in connection with the relaying and reballasting contract.
10237. How long were you employed in that work? Some weeks.
10238. Did you ever go over the whole of the work? Yes; over the whole division.
10239. Did you do that work yourself separately or in company with Mr. Burt? I did it all myself, with the engineer for the division, Mr. Halligan, and his assistant.
10240. Quite apart from the contractors? Yes; quite apart from the contractors.
10241. And what was the result of your remeasurement? I verified the measurements that had been sent in by the Government officer, Mr. Halligan; I found the returns and the vouchers to be perfectly correct.
10242. In any instance did you find any fault with the measurement? No; I do not think there was even a trifle.
10243. In taking these measurements did you merely take Mr. Halligan's figures, or did you go into the matter yourself? I went over the whole thing myself.
10244. With independent calculations of your own? Most decidedly. I could not check the measurements without going over the work and measuring it myself.
10245. You could not do it properly? Of course not, your Honor.
10246. *Mr. Kethel.*] Did you compare your corrected measurements with those of Messrs. Proudfoot & Co.? I compared them with the accounts rendered by our own engineers. In some cases Messrs. Proudfoot & Co's. accounts were in excess of ours; I verified our measurements.
10247. You are not prepared to say to what extent they exceeded your calculations, I suppose? No; I cannot say.
10248. But in some instances you say the contractor's measurements exceeded yours? The difference was not in actual measurement; it arose from new claims put in by the contractors. In actual measurement I do not think there was any important difference.
10249. Then wherein was the difference? In outside claims, which were entirely disallowed by the Commissioners.
10250. Did you also measure the work at Bullock Island? Yes.
10251. What was the nature of that work? Laying in a number of new sidings.
10252. Was that work done according to the schedule under which Proudfoot & Co. carried out their other contracts for the Commissioners? Yes.
10253. So they were paid at the same rate as that class of work would be paid for on any other part of the line? Yes.
10254. Except, of course, the one or two special items referred to by the last witness? Yes. There was one item of levelling the formation. It was a series of mud heaps—little heaps measuring, perhaps, not more than a yard, but still it was sufficient to prevent us taking cross-sections.
10255. Was that the only item allowed for? It was the only item allowed for by day labour.
10256. There was no other day labour? I think there was another little item. Bullock Island is a sort of depôt for all sorts of permanent way materials. There were a number of rails left there, and piles of timber, &c., and they had to be shifted.
10257. That, I suppose, would interfere with the coal traffic? No; because the material was left lying on open spaces clear of the roads, but still where the new roads had to be laid down. Consequently, it had to be shifted, and we could only do that work by day labour.
10258. And, with that exception, the whole of the work was done according to schedule? Yes.
10259. And you have since verified the measurements? Yes.
10260. *Mr. Young.*] Did you measure the work at Wallas Creek? No; I did not measure the embankment there. That had been measured and remeasured at different times.
10261. Did you measure the work on the dyke at Newcastle? Yes; I have just been referring to that.
10262. Would the plans show now the work that was done on the dyke? The work done at Bullock Island is shown on the plans.
10263. *Mr. Kethel.*] There were a number of railway sidings on the Island, were there not, previous to this work being undertaken? There are a great number of siding there.
10264. But those were additional sidings? Yes; to provide additional accommodation to meet the increased traffic.

[*Mr. Eddy produced to the Commission a plan showing alterations to the dyke at Newcastle, which he explained.*]

10265. *Mr. Young.*] Did you measure the work on the Western line at all, Mr. Fraser? No; I did not.
10266. *President.*] Do you know who did that? Mr. Suttor.

Mr. J. B. Suttor recalled and examined :—

Mr. J. B. Suttor. 10 June, 1892.

10267. *President.*] I believe you remeasured the work at Wallas Creek, Mr. Suttor? Yes, sir, I did.
10268. Will you state what steps you took in making those measurements? I took the sections, your Honor, and measured the whole of the work. I think you will find in the letter-book which I have already handed in, a copy of my returns.
10269. *Mr. Kethel.*] Did you measure the quarry from which material was excavated, or did you measure the space that had been filled up with that material? I measured the space filled up, and also measured the excavation at Lochinvar and at other places as near as I could get it. Where there was a doubt we took what exists.
10270. Do you say some of the material was brought from Lochinvar? Yes; some of the stuff was taken from there.
10271. Did the schedule rates apply to raising the embankment from East to West Maitland? Certainly.
10272. *Mr. Young.*] Did you make your measurements in company with the contractors engineer? No; I did not measure with the contractors engineer.
10273. Why did you measure it? I was simply acting in the division, and to satisfy myself when I took charge that the previous returns were correct, I made these measurements.
10274. You measured the work for your own satisfaction? Yes.
10275. From the sections? Yes.
10276. And did you do the same with the work at Bullock Island? I had nothing to do with that.
10277. *President.*] In the remeasuring did you act independently of the contractor? Yes; altogether independently.
10278. When you compared the two measurements was there any difference? I did not make any comparison. I was only in the district for a few weeks, and as the returns were still going in I made this remeasurement to satisfy myself that the returns were correct. Mr. Halligan resumed after I left.
10279. Do you know whether the measurements you made are identical with the measurements sent in to the Commissioners? I believe they are.
10280. But you have not compared them? I did not compare them but I know they are identical because the returns are carried forward.
10281. *President.*] We can ascertain that I suppose, Mr. Eddy?
10282. *Mr. Eddy.*] Yes, sir; in fact the work can be measured if necessary. Mr. Suttor says, he speaks from an actual knowledge because each account that comes forward has upon its face the total result of the previous accounts.
10283. *President.*] Then he would find that the total was the same?
10284. *Mr. Eddy.*] Yes.
10285. *Witness.*] Here is the return, your Honor, 49,673 cubic yards.
10286. *Mr. Kethel.*] That is on the progress certificates? Yes; the work is still going on, but it will be completed shortly.
10287. And there will be an adjustment when the whole work is finished? Yes; I believe the work will be finished in the course of the next fortnight.
10288. *Mr. Young.*] The works are not yet finished you say? They are still in progress. When the work is finished we shall retake the sections, and remeasure from start to finish.
10289. What means is there of checking the present calculations? The cross-sections. [*Witness handed in further books to explain the system of measuring in connection with the railway contracts.*]

10290. *Mr. Eddy.*] If your Honor will permit me I should like now to hand in two or three papers. I should like to put in for the information of the Commission a resolution adopted by the Railway Commissioners in reference to the sending of telegraphic messages free of charge. On the 3rd January, 1891, we agreed as follow:—"Resolved that any messages required to be sent between the relaying contractors and the officers on the business of the department, be sent free of charge over the wires of the department in the same way as departmental messages." That is signed by all the Commissioners. Then in regard to day labour this was a communication sent by the then Engineer-in-Chief, Mr. Angus, to all his officers. "Day labour—relaying contracts. I must call your special attention to the question of day labour done by the relaying contractors, as the Commissioners have advised me that they will not pass any day labour accounts unless they are of such a special nature that no price will be applicable. You must not allow any day labour to be done without special sanction, or without advising me. I shall be glad if you will acknowledge the receipt of this."
10291. *President.*] What is the date of that, Mr. Eddy?
10292. *Mr. Eddy.*] 17th April, 1891. Then at one of our special locomotive and permanent way Committee meetings we passed this resolution: "Directed in connection with the relaying and reballasting contracts that no payment at day labour prices for work performed shall be passed without the signature of the three Commissioners." I might explain here that in connection with the Railway Act the signatures of two Commissioners are sufficient for any purpose, but amongst ourselves there are certain things we have an understanding upon that they shall not be dealt with unless all three Commissioners are present. I put that resolution in to show the feeling the Commissioners had with regard to this matter. And then to show further that the contractors have not obtained from us any advantage which they ought not to get, I may be permitted to say that when we took office we put a large number of good carriages into stock, and this replaced a large number of old carriages that were not fit for passenger traffic. We spent a little money upon these old vehicles to make them comfortable as sleeping places for workmen scattered about the line, instead of allowing the men to sleep on the wet ground and in tents, we had a lot of these carriages fitted up so that the men might have some degree of comfort; and when we transferred the bulk of these men to the contractors, we told the contractors that they might have the use of these carriages for the workmen at a rental of 10s. per week per vehicle. The next document I desire to put before the Commission is a report by Mr. Foxlee upon the Mudgee line deviations. We called for a report in December last on the effect of the expenditure we had incurred in connection with that line, and Mr. Foxlee then made this report:—"I have to report that the deviations on the Mudgee line have so far served the purpose for which they were intended. Since the completion of the work, I have had these portions of the line carefully watched, and from reports to hand

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it is apparent that during the late heavy rains the line would have been blocked in places but for the deviations. From 135 miles 70 chains to 136 miles 15 chains, large stones and earth have in places come down, and are impounded in grips left for that purpose. At 136 miles 50 chains and 136 miles 66 chains, two large slips are on the move, also at 141 miles 60 chains, but no danger is anticipated, in consequence of being impounded in a similar manner to stones and earth now covering portions of old line at former mileages. At other mileages 138 miles—139 miles 20 chains, and 141 miles 20 chains—in the troughs left for falling stones, by means of raising formation and slewing of the old road as far over as the nature of the ground would permit, have also had the desired effect. Large stones have come down from top of cuttings, and instead of rolling on to the line as before are impounded in these troughs. But for the deviations during the late heavy rains it would have been necessary to have had a large number of men employed to keep the line open, in addition to flag-men at cuttings during the passing of trains. Early last year, previous to the deviations, and in order to keep the line open, we had employed fully sixty men and two ballast trains. Up to the present date we have passed through a severe season without the employment of these additional men and ballast trains. The removal of soft material and benching on top of cutting Capertee Tunnel (125 miles) has also had the desired effect. Previous to benching on top of cutting the uphill side should spill over on to the line, but now remains on the benching left for its reception. It must be gratifying to the Commissioners to know that the above works have so far proved equal to their expectations, and, in addition to adding to the safety of the line, have reduced considerably the cost of working." I might here ask whether it would be convenient for the Commission to make an inspection of this Mudgee line. We could leave Sydney in the morning, and be back again in the evening. I think it would be rather interesting to the Commission to inspect these works, because they are big works, and at a small expenditure we have made perfectly safe what was considered rather a dangerous line.

10293. *President.*] We do not think it would be necessary for the Commissioners to do that, Mr. Eddy.

Mr. A. F. Watson recalled and examined :—

Mr. A. F. Watson. 10 June, 1892.

10294. *President.*] In this declaration it is stated in reference to the Mudgee deviations that: "An excuse was given for making out fresh sheets by Mr. Watson stating that he had lost the original sheets, though at the time I had in my possession duplicates which had been signed by the men at the time of payment." Is there any truth in that? I know nothing about the loss of any sheets by the department. I remember that on one occasion the contractor came to us for certain information in reference to the labour that had been employed, and we allowed him to take a copy from our timekeeper's returns.

10295. Take copies of what? Copies of our gangers' reports.

10296. *Mr. Eddy.*] Your Honor will remember that it has already been given in evidence that the contractor had his timekeepers and gangers, and the department also has its men to check the time; and Mr. Watson instances a case in which the contractor lost his sheets and came to us for information.

10297. *President.*] The contractor would then have to take your time?

10298. *Mr. Eddy.*] He was willing to take our time in making up his pay-sheets.

10299. *Mr. Kethel.*] At what period did this occur?

10300. *Witness.*] At the beginning of the work, and before we were thoroughly well organised. The contractor rather leant upon us for information.

10301. *President.*] The effect of that, I suppose, was, Mr. Watson, that instead of the contractor going by his own time he went by yours? Yes, your Honor; and we were willing to oblige him in that matter.

10302. I notice the declaration further alleges: "One big gang was despatched to Bourke by order of Mr. Watson, engineer, to relift and relay the line there"? Yes; that was so, your Honor. I was away at the time, and the work was very urgent, and I ordered my assistant to send a number of men up to Bourke. He went to the nearest gang employed by the contractors, and gave instructions for a number of men to be despatched at once. About sixteen men were taken and sent right away to Bourke, prepared to lay in sidings for carriage sheds; but when they got there they found that earthwork was required. Before they could commence to put on the permanent-way, and as they had not the wheelbarrows, planks, and shovels necessary to do this work, they were supplied with some tools by the Inspector, who put the gang doing certain work on the deviations round the new flood openings.

10303. Then their work was utilised? Yes; and it was subsequently measured up.

10304. And how was that work done—under schedule prices, or by day-labour? Yes; and brought into schedule prices; it was simply earthwork.

10305. At schedule prices? Yes. The men were employed in that way to start with, and subsequently they were put back to complete the sidings for the carriage-shed—the work they originally went up to do.

10306. As soon as that work was ready for them? Yes; the material was on the ground, and everything ready, but it was necessary to do some earthwork before the permanent-way could be laid.

10307. *President.*] Mr. Eddy, can you tell us how this large expenditure on the Northern line—£60,000 I think it was stated at—was worked in the account; how is that item entered in the accounts of the Commissioners; is it put to capital account or against capital account?

10308. *Mr. Eddy.*] No, sir. The reballasting has been a charge against a special vote from Parliament for reconstructing the permanent-way. We had a vote of a million of money for making up the deficiencies in the maintenance of the line and for improving the rolling-stock, which had also been allowed to deteriorate very sadly; and we have adopted the plan of putting this special work of reballasting to the one million vote.

10309. *President.*] As against that vote?

10310. *Mr. Eddy.*] Yes.

10311. *President.*] Does that relate to the whole of the reballasting and relaying all over the line?

10312. *Mr. Eddy.*] Not relaying; that we pay for out of the ordinary working expenses.

10313. *President.*] The reballasting, then, is against that special vote?

10314. *Mr. Eddy.*] Yes, your Honor, this expenditure is being extinguished at the rate of £75,000 per annum, until presently the million will cease to be a charge against the capital of the railways.

10315. *President.*] Does that include the ballasting all over the lines, or merely on the Northern lines?

10316. *Mr. Eddy.*] All over the lines, sir.

10317. *President.*] The other lines, except the Northern line, have been under the Railway Department for some years, have they not?

10318. *Mr. Eddy.*] Some of them, sir. They have been opened at different dates, as shown in the annual reports. Some of the lines had only been opened a few months.
10319. *President.*] Was there any reballasting wanted on those lines?
10320. *Mr. Eddy.*] Take the Illawarra line for instance. There were certain soft places which we had to deal with. In fact, from Sydney to Hurstville we have had to do a good deal of work, because the line was originally ballasted with sandstone, which very quickly works into mud; but down at the other end of the Illawarra line the permanent-way was originally ballasted with blue metal.
10321. *President.*] When this vote of a million was granted by Parliament, was it explained to Parliament that that was one of the objects for which the money would be applied?
10322. *Mr. Eddy.*] Oh, yes. We also told them that we intended to put a lot of relaying to that vote, but we have struggled on and managed to pay for all relaying up to the present time out of current working expenses. I may say that during the last three and a half years we have paid out of current working expenses £230,000 for relaying, as against about £190,000 for the previous fifteen years of the existence of the railways, and we have at the same time reduced the working expenses by 5 per cent., which, on three millions of money, is an important item—over £150,000 a year.
10323. *Mr. Young.*] That million of money, I suppose, comes out of loan account?
10324. *Mr. Eddy.*] Yes, it is loan account; but there is a provision in the Act, authorising the raising of a million, and authorising the setting aside of £75,000 per annum as a sinking fund for the repayment of capital and interest.
10325. *Mr. Young.*] How many years will it take before that is wiped out?
10326. *Mr. Eddy.*] About fourteen or fifteen years the way the Treasury are doing it. If we went to to the bank we should wipe it out much more quickly, because we should get the benefit of compound interest.
10327. *Mr. Young.*] It is considered as portion of the working expenses?
10328. *Mr. Eddy.*] It will be deducted from the net earnings paid to the Treasury. But of the million of money we have roughly allocated about £600,000 for improving the rolling-stock and £400,000 for improving the permanent-way; but the paying of it off is really a relief to the capital account, because the money has been saved previously that ought to have been spent out of working expenses.
10329. *Mr. Young.*] Was that £60,000 expended upon the Northern line taken from that?
10330. *Mr. Eddy.*] Yes; out of the £400,000. That £60,000 is the amount roughly stated. We will give the correct amount later on.
10331. *President.*] Can you tell us when the Ministerial statement was made in reference to this million loan?
10332. *Mr. Eddy.*] I think it would be early in 1889, but I can give you the correct date this afternoon. The loan was made consequently upon the reports of Mr. Price Williams and Mr Thow.
10333. *President.*] Those reports related to the rolling-stock?
10334. *Mr. Eddy.*] Yes; but it was on those reports that the Government obtained the vote from Parliament.
10335. *President.*] What we want is the allocation of a portion of that to reballasting?
10336. *Mr. Eddy.*] That was a question for the Railway Commissioners. We only asked Parliament for a million of money. It was an arrangement of our own as to how the money should be allocated, but Mr. McMillan, who was the Minister at the time, gave a rough indication of the manner in which the money would be used, but we were not bound in any way.
10337. *President.*] That is what I want to get at?
10338. *Mr. Eddy.*] It was simply to give Parliament a justification for asking for such a large sum of money.
10339. *President.*] That is what we want.
10340. *Mr. Eddy.*] You shall have that speech.
10341. *Mr. Kethel.*] *Hansard* would be the best.
10342. *Mr. Eddy.*] You shall have the speech in *Hansard*.
10343. *President.*] Can you tell us where Mr. Angus, the engineer, is, Mr. Eddy.
10344. *Mr. Eddy.*] I know nothing more than was stated in Court the other day that he is in Queensland. I believe Mr. Angus has been retained by a contractor named Rodd to give professional evidence in an action against the Queensland Railway Commissioners.
10345. *President.*] We should like very much if we could have his evidence, but I am afraid a summons from the Commission here to Mr. Angus in Queensland will not be sufficient. Do you wish to give any evidence upon the matter in this declaration, Mr. Eddy—I mean personally?
10346. *Mr. Eddy.*] Not personally, sir.
10347. *President.*] Do you wish to call any evidence?
10348. *Mr. Eddy.*] We will put a little information before you as to the original contracts entered into by Proudfoot & Co. and McSweeney. The declaration states that the prices of those tenders were not the lowest prices. Mr. Foxlee has worked out the figures very carefully, and he will give you evidence as to the result.

Mr. John Philip Sharkey sworn and examined:—

Mr, J. P. Sharkey. 10 June, 1892.

10349. *President.*] What are you? I am a civil and hydraulic engineer.
10350. Do you know a person named Alexander Archibald Tennent? Yes.
10351. Will you look at this document and tell me if that is in your handwriting. [*Original declaration handed to witness*] ? Yes; that is in my handwriting.
10352. When did you write that? Some time at the end of January or the beginning of February.
10353. Of this year? Yes, your Honor.
10354. How did you come to write this out? For a long period I have been acquainted with Mr. Tennent, and as I was connected with the late David Proudfoot in business to some degree——
10355. In what degree? We lived in the same house. We were very intimate. There was hardly a day that we had not a conversation, and he consulted me upon matters connected with his business.
10356. Who is that? The late Mr. David Proudfoot. I also prepared tenders for him for the various contracts that were advertised for. I was so intimate with him that on many occasions I lent him money, and

on

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on other occasions I honored his orders, all of which were promptly repaid. I became acquainted with Tennent, who was Mr. Proudfoot's accountant, most trusted servant, and confidental man in that way.
10357. Were you otherwise connected with any contracts which Mr. David Proudfoot carried out with the Railway Commissioners? I was not connected in any way with any contract, but I may say that my connection with the late David Proudfoot was such that he offered me the position of engineer to take charge of all his contracts, but I had to decline the position at the time for the reason that I was carrying out the Penrith water-works; but I promised him that after I had completed that work I should be free, and would have no objection to enter his service.
10358. As a matter of fact you were not connected with any of his contracts? I was not connected with any contracts.
10359. Were you on any of the works he carried out? I was not.
10360. Now will you tell the Commission how it was that you came to write this declaration for Tennent? When Mr. Tennent was dismissed by Proudfoot, he having had acquaintanceship with me frequently came to my office, with the view of seeking employment or seeking my recommendation for employment. On occasions he expressed himself very strongly about the manner in which the work was carried out under the Proudfoot contracts, and at that time, having attended a meeting of the Engineering Association down at the Glebe, at which a brake was being tested—a new discovery of a brake principle—I met there Mr. Schey and Mr. Hoyle, and after discussing the merits of the brake the conversation took a general character. Mr. Hoyle was mentioning something about the Baldwin engines, and Mr. Schey who was a little distance away did not quite hear. But, after this the conversation merged into other matters, in the course of which I said that there was a man who seemed to be reliable, who had been in the employment of Proudfoot & Co., and who had lately been dismissed, and who was making statements which, if at all true, showed a bad state of affairs so far as these contracts were concerned.
10361. That is Mr. Proudfoot's contracts? Yes. Mr. Hoyle asked me who this man was, and I told him that it was a man named Tennent, and that he was a reliable man. He said, "can we get to see him," and just about that juncture Mr. Schey came over, and, as he did not seem to understand the nature of the conversation, it was related to him. I told him the man could be seen, and he asked me if I could make an appointment for the man to see them. I said I thought I could, and that the next time he came into my office I would mention the matter to him, and that if he was agreeable to an appointment I would send a telegram to Mr. Schey. The man came in and said that he was perfectly agreeable to an interview with Mr. Hoyle and Mr. Schey, and I accordingly sent a telegram that the man would meet them. Mr. Schey came in, but not Mr. Hoyle, and Tennent did not attend either, and as he explained, it appeared afterwards, his absence was owing to the fact that his wife was ill. On the second occasion another appointment was made, at the instance of Mr. Schey this time, and they both kept it. Mr. Hoyle, I think, was requested by Mr. Schey to attend, but he did not turn up. Mr. Schey and Tennent attended, but what the nature of the conversation was I do not know, as I was attending to my own business in another room. The result of it, however, was that Tennent agreed to make a statement—to reduce it to writing, and that was done. At least, Mr. Schey asked me if I would take down a statement in writing, which I agreed to do, and I took down the statement.
10362. Was Mr. Schey present when the statement was taken down in writing? Oh no, he was not, nor had I the opportunity or the time to take the statement down on the one day; I had to do it in pieces. I think it took me two or three days, because I could only give an hour or so at a time to the writing of the document. At a subsequent time, on the recommendation of some members of Parliament, it was considered desirable to have it put in the form of a declaration.
10363. What members of Parliament? Some persons, I understood from Mr. Schey.
10364. Oh, you do not know of them yourself? No; I think the matter was mentioned to Mr. Sheldon by me and he advised that it should be put in the form of a declaration.
10365. How did you take down this statement? Well, I had considerable practice in the taking down of statements, so that it was very little trouble to me.
10366. I do not mean the mere writing, but how did you take it down from Mr. Tennent? Tennent spoke it out faster than I could write. He did it intuitively.
10367. I see. It is exactly in the words of Tennent himself? Yes.
10368. Did you suggest any matters to him? I did not. The statement is just purely and simply as he spoke it out to me.
10369. Without any suggestion on your part? I do not think I made any suggestions. I was not aware of the facts. When I had the conversation with Mr. Schey and Mr. Hoyle I did not know the nature of the evidence. I did not know the details, but simply his words that he knew sufficient or something like that,—that if the whole facts of the case were known to the public it would be bad for some persons. As to the particulars, however, I knew nothing about them until I came to take down the statement.
10370. Did you make any suggestions as matters went along? No, I did not, for I did not know what he was going to state.
10371. You did not know any of the details? No. I knew the circumstances under which the Railway Commissioners carried out their railway works. I was one of the contractors' engineers on the works from Strathfield to Flemington. I was intimately acquainted with the matter from my own knowledge, and my opinion was of such a high character, as to the way in which the Commissioners carried out their work, that I did not really believe the statements made by Mr. Tennent. What I did on my part was entirely to oblige Mr. Schey in the matter, and when I took any part in the affair I was under the firm belief that it would not go any further than to cause an inquiry by the Commissioners or some other authority, as to the manner in which this work of Proudfoot's was carried out. If I had for one moment thought that the matter would take the form of a charge against the Commissioners, whom I believe to be thoroughly upright and honorable men, from my own knowledge of the way in which the work was carried out, I would never have had anything to do with it. I am also acquainted with Mr. Foxlee, and I was under him in the mountains for a considerable time. I consider that the Colony has gained materially by the introduction of that man into the Colony. I was an engineer in the Railway Department of this Colony for six years under Mr. Whitton, and I consider he is the ablest engineer we have had here at any time.
10372. What state was Tennent in when he gave this information? He was in his ordinary state of mind.
10373. But we do not know what that is? I have never known him to be anything but a sober man. I have

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have heard it said that he had been dismissed twice for being intemperate by Monie, Angus, & Co., but I have never known him to be under the influence of drink, except once.

10374. Yes, but at the time that he came for you to write down this statement? He was always sober, except on one occasion not long since.

10375. I am not asking you about any other times, but I want to know what his condition was when he came to you to make this statement? He was perfectly sober. I am a temperance man myself, and if a man had drunk any grog I am sure I could detect it upon him.

10376. Did he appear to be suffering from the effects of drink? No, he did not. He was perfectly sober, and did not seem to be affected by any influence at the time.

10377. *Mr. Smith.*] Of course, all you did in the matter, as you have said, was perfectly *bona fide*. Yes; I did not think it would take any other form than that of perhaps causing an inquiry as to Proudfoot's contract. I was impressed at the time with the belief that this man was a strictly honorable man; and knowing him to be such, and I believed that if what he said was true, in the interests of the public, some inquiry should be made.

10378. Do you know anything about any other members of Parliament, except Mr. Sheldon, who were seen about this matter? No, I do not. Mr. Sheldon happened to come into my office pretty frequently, and this thing being about, of course, I told him.

10379. And, except for the way Mr. Hoyle and you met in the first instance, he had nothing to do with the matter at all? No.

10380. Mr. Hoyle was not present at any of the meetings with Tennent? No. His connection ceased at the first interview.

10381. When neither he nor you understood what was to be said? Yes.

10382. What did you do after the statement was drawn up. You drew up a declaration? I then submitted it to Mr. Sheldon, at the time the statement was completed, Mr. Schey suggested that it should take the form of a declaration, and as Mr. Tennant had no objection even to swear to what he had stated, I drew out that declaration.

10383. You got the ordinary form of declaration? No, it was a written form.

10384. But you had the printed form by you? Yes, I had the printed form to guide me.

10385. You did not go before the Minister? I had nothing more to do or say with it.

10386. Then I suppose you gave this to Mr. Schey and Mr. Tennent. I suppose they went away with it? They met at my office, and I handed these papers over to them, not to Mr. Schey but more to Mr. Tennent, because I insisted, having some little interest in Mr. Tennent, that he should be protected in some way from the broad use of this document, and I suggested that some form of document should be made up, which would prescribe the use of the declaration. So it was by my suggestion that a document was made up that the declaration should be only shown to a limited number of persons, and so on.

10387. And you drew up the pledge? Yes; that is the document I am speaking of.

10388. And you put in the names of certain members of Parliament to whom the declaration was to be shown? I inserted the names at the instance of Mr. Tennent.

10389. Well, then it was Mr. Tennent who suggested these names? Yes, some of them. Mr. Schey suggested some, and Mr. Tennent others.

10390. It was suggested that it should not be shown to Mr. Suttor? That was Mr. Tennent's suggestion.

10391. Of course your idea was that this would have been shown to the Commissioners, and that they would hold an inquiry? Yes; I would have had nothing to do with it, if I had any idea that it was to be made the basis of a private charge against the Commissioners.

10392. You did not suggest that it should be shown to the Railway Commissioners at all? No; I never suggested anything. I merely took down the names.

10393. But you drew up a pledge, which had the effect of saying that the declaration could not be shown to the Commissioners without committing a breach of honor? Well, it never struck me in that way at the time. If it had, I would have suggested the names of the Railway Commissioners as among those to whom the declaration should be shown.

10394. But it did not suggest itself to you? No.

10395. Then that document was really for the purpose of being shown to the Railway Commissioners? No; I did not say that at all. I did not know what the object was; but it never struck me that it would be used antagonistically to the Railway Commissioners.

10396. What I mean to say is, that when you drew up this document, it was quite by oversight that you did not suggest its being shown to the Railway Commissioners? Yes.

10397. Mr. Tennent did not object to its being shown to the Railway Commissioners? No; it was not suggested.

10398. Did it ever strike you to ask Mr. Tennent—did it strike you to suggest to him to see Mr. Foxlee. I suppose he was the engineer responsible for this? Yes.

10399. Did you suggest that Tennent should see Mr. Foxlee or any of the Commissioners? No; it never struck me. If you will understand my position, you will remember that when I mentioned the matter to Mr. Hoyle and Mr. Schey it was more in the way of conversation.

10400. More accidentally than anything else? Yes.

10401. Of course you did not tell Mr. Hoyle all the particulars, because you did not know them yourself? No.

10402. Tennent previous to that had not told you anything like what was in this declaration? No.

10403. He simply told you he was in the employ of Proudfoot, and that he could give some important information about the management of railway contracts? Yes.

10404. You did not know that there was to be any reflection cast upon your old friend David Proudfoot? I did. I told Tennent that his statements were a reflection upon the manner in which the work was being carried out; but I did not know whether it was under the present *regime* or during the time David Proudfoot was alive.

10405. Did you not know that the present Proudfoot company were carrying on contracts for your old friend David? Yes; I am aware of that.

10406. He died under a medical operation? Yes. I went to his funeral.

10407. Did it strike you that you should see the representatives of his estate, and get Tennent to go and see them? No; it did not strike me.

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10408. Although you had been very friendly with his brother—that is David Proudfoot? Yes; I was friendly with David Proudfoot.
10409. And he had so much confidence in you that he was going to appoint you his engineer? A person may be friendly with one brother but not with another.
10410. Is it not a fact that you are very friendly with George Proudfoot? No; it is not. I never was friendly with him in my life, and never will be.
10411. You have never met him;—he is a stranger to you? I know him sufficiently not to care to meet him again.
10412. All these matters which Tennent spoke of, which Tennent told you about, were matters that did not occur in George Proudfoot's time? I cannot say when they occurred. I did not go further into the matter than to take down this statement.
10413. Did you take down a draft of that statement? No; I never did. That is the original statement as it was made, just as it is there.
10414. Then, beyond these people that you have named, as far as you know, was anybody else consulted about this matter—any of the other officers of the department? I do not know what became of the document.
10415. I mean whilst it was in course of preparation? No; none that I know of; none whatever.
10416. And you did not get any assistance in preparing it? No; none whatever.
10417. Do you know where Tennent is just now? No.
10418. Are you sure of that? Yes; perfectly sure.
10419. Of course you know where he lives? Yes; I know where his place of residence is.
10420. Do you know whether he has been on the spree during these last few days? I do not know. I met him here, I think it was last Monday week; he came to my office, and I told him that he ought to come up here and give evidence.
10421. Oh, he did come to you? He came to me on Monday week, and I told him that he should give his evidence, and that the Court would protect him if he spoke the truth.
10422. *President.*] And what did he say? He went away hurriedly.
10423. But what did he say? He did not say that he would; he did not say anything.
10424. *Mr. Smith.*] Of course you knew all the time that he was the man who made the declaration that was referred to in Parliament? I did.
10425. And you never felt it your duty to communicate with the Commissioners? No; I did not think it was my duty at all, but that it would be brought out in the ordinary course of things. I did not think it was my duty to say anything, or to approach the Commission about the matter.
10426. *President.*] There is one matter in this declaration that we have not made any inquiry into, and I should like to ask Mr. Burt a question or two.

Mr. Burt recalled and examined:—

Mr. Burt. 10 June, 1892.

10427. *President.*] In dealing with the Wallas Creek work, the declaration says, "On this contract the contractor was paid for all delays occasioned by late trains, &c., the time being calculated at day-wages, which was again transferred into cubic yards, &c., though no work was done." Was that true? Not in the slightest. The traffic had nothing whatever to do with the work at Wallas Creek;—it was apart from the railway altogether.
10428. That being so, of course all the rest of the statement as to the time being calculated at day wages, though no work was done, is also untrue? Yes. The traffic has nothing whatever to do with that work, and no allowance was made for any delays on account of trains, &c.
10429. *Mr. Kethel.*] It has been stated in evidence that the stuff was taken out of an adjoining hill, and removed by carts? Quite so.
10430. *President.*] I think, Mr. Suttor, you said you had some book to show us?
10431. *Mr. Suttor.*] No, your Honor. The information is in the book already handed in.
10432. *President.*] Oh, very well.
10433. *Mr. Eddy.*] I should like to ask Mr. George Proudfoot one or two questions.

Mr. George Proudfoot recalled and examined:—

Mr. G. Proudfoot. 10 June, 1892.

10434. *Mr. Eddy.*] Can you give the Commission an idea of the maximum number of men you have had on your works at any one time? About 3,000.
10435. It is stated in this declaration that you paid your men 6s., and 6s. 6d., and good men 7s. per day. Will you tell us what the average rate of pay of your ordinary workman has been? Yes. On the Mudgee line, where 140 men were employed, the average rate was 7s. 9d. per day, that is exclusive of gangers; on the Western line, where there were 1,743 men, all told, the average rate was 7s. 7d. per day, again exclusive of gangers; and on the Northern line, where 1,141 men were employed, there the average was 7s. 5d. per day.
10436. *President.*] I may say that Mr. Proudfoot put in his pay-sheets for the Commissioners to look at. We have looked at them and we find that the rate of pay ,for workmen ranges from the least one or two only were paid 7s. to 7s. 6d., 8s., and 8s. 6d.
10437. *Mr. Eddy* (to Witness).] Then the gangers.
10438. *President.*] We have looked through the papers ourselves. The gangers were paid 11s. and 12s. per day.
10439. *Mr. Eddy* (to Witness).] And we allowed 12s. In some cases you had to pay your supervisors very much more? Oh, yes, very much more for men of trust, as managers and sub-managers.
10440. Did you get any allowance on that account? Nothing whatever for managers or timekeepers.
10441. Then you had to defray the cost of this supervision out of any difference between the pay to the workmen and what you obtained from the Commissioners—that had to provide for all management expenses? Yes.
10442. *President.*] Are the management expenses heavy? Yes, pretty heavy with us.
10443. *Mr. Eddy.*] Mr. Burt, the engineer, had to be paid for, and all the inspectors and gangers, and a large office staff, and your own plant, and everything of that sort? Yes, we had a very heavy plant; it stands in our books at £100,000, including stone-crushers.

Mr. O. Proudfoot. 10 June, 1892.

10444. Were all the gangers paid for at the rate of 12s. per day, by the Commissioners? Not all the gangers; we received 10s. for the excavating gangers, and 12s. for the plate-laying gangers.
10445. So that all the gangers were not paid 12s., but that was only paid for the skilled men who looked after the plate-laying? Yes.
10446. What position did Mr. Tennent occupy with you? Did he know as to the settlements of the Commissioners with you? No, he knew nothing whatever about that; he did not know anything about the amounts paid. This [*holding up a roll of papers*] represents the extent of the work done by Mr. Tennent during the time he was in our office as our professed accountant.
10447. Would he know the actual claims made upon the Commissioners? He had no idea whatever. In fact, no claims were made during his time.
10448. And if he should have ascertained that you had put in claims for a certain amount upon the Commissioners, would he be aware of the amount of money the Commissioners paid you in respect of these claims? No, nothing at all.
10449. So that he might be under the impression that a great many accounts were paid in full that were actually reduced by the engineers? I do not know what he could have known about it.
10450. *President.*] Were these pay-sheets before him? Sometimes.
10451. Were these Mudgee pay-sheets before him? Oh, yes; those were.
10452. So that from these pay-sheets he would be able to ascertain the amount paid by you to your men? Yes; but that would not include all.
10453. I am only taking these as a specimen. Had he other pay-sheets besides these before him? Oh, yes.
10454. You say he was an accountant; what had he to do as accountant? I think I made a mistake in calling him accountant. He was more there as a general clerk; he never started any books. All our books were started by the accountant now in the office.
10455. You say he was in the office, and that these pay-sheets were kept in the office? Yes.
10456. And he could have access to them? Yes.
10457. And as far as you know he had access to some of them? Yes.
10458. And you say that according to these pay-sheets the rate of payment to your men averages from 7s. 9d. to 7s. 5d.? Yes.
10459. That he would have ascertained from these pay-sheets? Yes.
10460. *Mr. Eddy.*] Therefore, with the hard facts before him, he could have known what the amounts were, but he makes this improper statement as to the wages drawn? Yes.
10461. It is stated in the declaration that men and material were carried over the railway free of cost; is it not a fact that the conveyance of the men was part and parcel of the original contract? Yes.
10462. All the tenderers knew that? Yes.
10463. And their prices were put in with the full knowledge that that would be allowed? Yes; if that were not allowed you would have to pay a much higher price for your work.
10464. The contractors would have considered that in framing their tenders, and we should have had less in revenue than would be represented by the extra cost of the work? Yes.
10465. And the country would really have had to pay more for the work? There can be no question about that.
10466. Your engineer stated that no payments have been made by the Commissioners for the opening out of quarries or laying down of sidings to quarries; I suppose that you confirm that? Yes, certainly.
10467. As to the free use of the telegraph, was not that concession made to expedite the work of the department only? Yes; that was your own wire only.
10468. It was only for the purpose of expediting the work that it was used? Yes; for communication between the various officers engaged on the work.
10469. *President.*] I think, Mr. Eddy, that you said that the same consideration was given to other contractors. You produced the minute in reference to it to the effect that the same concession was given to all contractors.
10470. *Mr. Eddy.*] It was only given to contractors under this arrangement. It was not given to the contractors for the duplication works, but only under the relaying and reballasting contracts. Similar concession was given to Mr. M'Sweeney in connection with his section of the line. (*To witness*): You would not use that privilege in connection with the Zig Zag contract? Oh, no; you could not.
10471. That is a separate contract and a different matter altogether. It is only in connection with the relaying and reballasting? Yes; that is all.
10472. There is one statement in the declaration to the effect that a claim was made for £3,000 or £4,000 in connection with your not having material to carry on some work on the mountains. You have not obtained any money in connection with that? Not one penny.
10473. It is further stated that a similar claim was made in connection with sending some men to Bourke. Was that a fact? No; I think the men all got employment.
10474. No allowance was made in connection with that? No.
10475. In connection with the work at Wallas Creek you appear to have sub-let some portion of it; was that the easiest part, or an average portion? It was the easiest portion of the work, and the men wished to get it, and it was given to them; we did not want them to take it particularly, and that is all I have to say about it.
10476. Did you supply the necessary plant? I think we provided the planks and barrows.
10477. And you kept the most difficult part of the work for yourself? Yes; I had the most expensive portion of it.
10478. You had the heavy part of the work to carry out alongside—the lifting of the line above the flood level? Yes.
10479. That cost you more to carry out, and you only got the same price for it, namely, 1s. 9d.? Yes.
10480. Therefore, if the easiest part of the work was done cheaply, it would not be fair to take that as a fair average price for the whole? No; we made a loss on our part of the work, and any saving on the Wallas Creek job did not compensate us for our loss.
10481. Do you consider 1s. 9d. a fair price? I think so.
10482. You say you were not compensated for any loss of time owing to the delay of trains, &c.? No.

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10483. In connection with Bullock Island, we have before us a statement that the plans were altered, and that the work cost three times as much as if the plans had been properly made out at the start? Is there any truth in that statement? No, it is not true.
10484. There were some slight alterations made? Yes. They gave us a little more work to do, perhaps, but there was no matter of doing the work twice over, or anything of that sort.
10485. *Witness* (addressing the Commission).] I believe a reference was handed in as one given by me to Mr. Tennent, may I see it, your Honor.
10486. *President.*] There is what does not purport to be the original but simply a copy of a testimonial given by you.
10487. *Witness* (*looking at document*).] I do not think I wrote anything of this sort, your Honor, I should like to see the original. I do not think I wrote such a document as that.
10488. *Mr. Smith.*] I suppose, generally, when a man leaves your employ, you do not not desire to do anything to injure him? No, I have something better to do.
10489. *Mr. Perkins.*] Would you explain to the Commission how you came to give that character to Mr. Tennent? After Mr. Tennent was discharged he came pestering me, saying his wife was starving, and asking me to give him a reference, as he could not get employment. I declined to give him a reference —Mr. Fletcher was with me—but at last I said, "Go and write something that you consider a fair reference, and bring it to me, and I will consider the matter." He went away and returned with a reference written out for me to sign. I looked at the reference, and looked at the man, and I said, "Mr. Tennent, I don't sign this." He asked me why, and I said, "I will not sign it, because it is not true, you know it is not true." He said what will you sign, and I said, "I will not sign this. I will sign a statement that you have been so long employed, and that I trust that you will soon get other employment, but more than that I will not sign."
10490. Did you see Mr. Tennent again; did he come to your office again after a reference? Did he come with reference to some type-writing? Yes; he came to the office, and wanted me to give him £1, stating that his wife was starving. I said to him, "Mr. Tennent, your wife may be starving, but you smell very strongly of liquor." He said, "Can I go into the office and do some type-writing," and I said, "No; our people are fully engaged, and you cannot go there." That is the last time I saw him.
10491. Did he say anything to you for refusing him? No, not that I can remember.

10492. *Mr. Eddy.*] I have had a return prepared, showing the actual expenditure on the line between Strathfield and the Hamilton Junction, and the expenditure since the Commissioners have been in office for reballasting represents a total of £49,000. I said £60,000 previously, but at the time I was only speaking from memory. The £49,000 includes the material used and the labour, and also the engine-power and other expenses in connection with the work. £31,477 of that has been paid to the various contractors, M'Sweeney, Angus & Co., and Proudfoot & Co.
10493. *President.*] What does the balance of £18,000 represent?
10494. *Mr. Eddy.*] That has been expenses incurred by the Department—the Railway Commissioners' own staff and their own material, which they have supplied. I would like, also, to state what will be well known to everyone who has the control of many thousands of men, that it is not an infrequent thing to find irregularities in connection with pay. All through my railway career it has been our endeavour at all times to have such checks in connection with the making of payments of money as to prevent any possibility of fraud, but, even under the most strictly-worked systems, you do find, sometimes, collusion between men, and irregularities in connection with pay. Therefore, even if this informant had been correct in his statement, the proper course would have been to have brought to light at once what he knew, because the administration surely would not wink at any irregularity of the kind. I may mention that at the present time, in connection with the pay-sheets at Eveleigh, we are prosecuting a man who has occupied the position of time-keeper, and who has included in the pay-sheets the wages of two men at various times who have not been really at work. It has been proved against him that it is a case of forgery, and he has been arrested and committed for trial at the police court. The man has confessed his guilt, and a man with a suspicious mind, such as we have been dealing with, might just as well have brought a charge against the Railway Commissioners in this case as in any other.
10495 *President.*] In connection with all these contracts, Mr. Eddy, have you ever had any reason to suspect that there was any collusion such as you refer to?
10496. *Mr. Eddy.*] We have not had, to my knowledge, a single instance.
10497. *President.*] Nothing of the kind has been brought under the notice of the Commission?
10498. *Mr. Eddy.*] Nothing.
10499. *President.*] Nothing that would raise suspicion of that kind in the minds of the Commissioners?
10500. *Mr. Eddy.*] No. In connection with the Appeal Courts that we have held under the Act we have had several cases in which men had been improperly entered for pay they had not earned, and I have had them picked out. There are no less than five cases that we have adjudicated upon since we have been in office. They are trivial cases, but the discipline is so strict that, immediately the officer controlling the men finds that an irregularity has been committed he dismisses the man affected, and then the man has the right to appeal to the Commissioners, and thus the matter is brought under our notice. I mention these cases to show that there may be irregularities, but that there is no justification for attacking the Commissioners because of them.
10501. *President.*] There is one matter independent of these two charges we have been inquiring into, and that is in reference to the charge of false answers being made to questions asked in Parliament. The Railway Commissioners sent to this Commission all the questions and answers that have been asked in or supplied to Parliament. These are all printed, and we have placed them in the hands of Mr. Schey, and asked him if he would point out those answers which he considered to be false answers to questions which were put in Parliament. The only one to which Mr. Schey drew the attention of the Commissioners was that in reference to Mr. Hall, which we have already investigated. Since then Mr. Schey has been repeatedly requested by the Commission to mention those cases he referred to, but he has not done so up to the present time. He has not mentioned a single case in which, as he alleges, a false answer was given to a question in Parliament. I do not think, therefore, that we need waste very much time over that, and the more so that it appears to me that, if a false answer is given to a question in Parliament,

the member of Parliament has the remedy in his own hands. If it is a false answer he can always have the matter referred to again and a correct answer supplied to the question, but, as far as I can make out, that course has not been adopted, and, though Mr. Schey has had these papers for some three and a half weeks, he has not sent to the Commission any questions which he thinks have been wrongly answered. Therefore, I think, at present, it will be necessary for Mr. Eddy, if he will be good enough, to go into the box just to answer a few general questions. I will also ask Mr. McLachlan to go into the box afterwards.

Mr. E. M. G. Eddy further examined :—

Mr. E. M. G. Eddy. 10 June, 1892.

10502. *President.*] Mr. Eddy, is it true as far as you know that on any occasion since the Railway Commissioners have been in office, a false, erroneous, or misleading answer, has ever been given to any question asked in Parliament? Not knowingly, sir.

10503. Have the Commissioners ever been requested to give a different answer to a question to that which they gave in the first instance? Requested by whom?

10504. By anyone—members of Parliament or otherwise? Oh, no; no one interferes with our questions or our answers in that way.

10505. Well, but when a question is answered in Parliament, I presume it is within the right of any member of Parliament to challenge the answer? Now, I understand. No, I am not aware, except in the case of Mr. Schey, that any answer given by the Commissioners has been questioned.

10506. What case do you refer to? The case now before the Commission.

10507. Oh, but I mean specific cases in Parliament? Oh, no, your Honor, I know of none.

10508. *Mr. Smith.*] In one of the pages of *Hansard*, what are alleged to be the false answers are set out by Mr. Schey.

10509. *Mr. Eddy.*] We dealt with the question of the servant, that was one matter mentioned by Mr. Schey. He also said we gave false answers in regard to the cost of the alteration of the platforms to admit of the running of certain engines; that I explained to the Commission.

10510. *President.*] You said the small amount of £50 referred only to the suburban line? Yes. And that was what the question in Parliament referred to.

10511. As was clearly shown by the question. And the larger amount, spoken of at the subsequent meeting, referred to the whole of the platforms throughout the Colony? Yes. Mr. Schey stated in regard to the question asked by Mr. M'Court, referring to Monie and Angus' contract, that the answers were wholly misleading and partly false, and wilfully false. I say that the answers were perfectly true. He made a statement with regard to the whole of that contract, that there had been certain things done with the contractors against the interests of the country, and we deemed it desirable to place a statement before Parliament, explaining the whole position.

10512. Then you did lay the matter before Parliament? Yes; we laid it before the House the next night.

10513. Did those papers show that your answers were correct? No, your Honor, that was really the answer. Mr. M'Court made a certain statement in the House, and we prepared a statement instantly, and laid it on the table of the House.

10514. Was that paper ever challenged by any member of the House? Not by Mr. M'Court, and I do not think it was challenged by anyone except Mr. Schey in his speech.

10515. But apart from this speech? Not that I have heard of.

10516. How long before the speech was it laid before the House? It was laid on the table on the 4th February, and the speech was made on the 9th March.

10517. Is there any other case? He deals with the alterations to the platforms, the answers regarding which he stated were wilfully and intentionally false.

10518. Was there not something about a car that was built for Lord Jersey? Yes, your Honor, Mr. Schey asked a certain question regarding the cost of building a new State car for his Excellency the Governor, and in giving our answer we put in something more than he wished to have. The whole of the papers have been put in, the whole of the facts asked for were given, but the statement was rather too full to suit Mr. Schey.

10519. Other questions were asked about the tunnels being too low? With regard to the tunnels being too low, Mr. Schey has made certain charges with regard to the over-bridge at Eveleigh. In widening the line, we made a new opening and put a skew bridge up. Before the bridge was designed, and before the work was commenced, we decided to somewhat lower the grade there, and when the work in connection with the bridge was completed, the formation was lowered. Mr. Schey stated more than once that a mistake was made in the construction of the bridge, and that the funnels of the engines were knocked off, and that then we had to lower the line. I have not heard since I have been in the Colony of the funnel of an engine being knocked off, and certainly no funnel was ever knocked off in that tunnel, and the lowering of the line was arranged for before the bridge was designed.

10520. And not in consequence of a funnel being knocked off? No. Then, with regard to the Newtown bridge Mr. Schey stated that a mistake was made by our engineers in putting castiron girders in to carry a road over the railway, and he has quoted as his authority for that a report of Sir John Fowler's in regard to certain bridges on the London, Brighton, and South Coast railways. The London, Brighton, and South Coast Company had an unfortunate accident, a castiron girder bridge giving way and letting a train through. In railway bridges we have given up using castiron girders to carry railways over roads, rivers and so on, and we have adopted steel as being more reliable; but that is quite a different thing to carrying a road over the railway. The difference between a train weighing hundreds of tons passing over a girder at 40, 50, and 60 miles an hour, and a horse and dray and a tram motor passing over a public road is very great. That was one thing that Mr. Schey attacked us upon, and we said that quite the right thing had been done. The girders were cast in the Colony, and if we had imported steel girders I daresay we should have been attacked because we did not get the girders in the Colony.

10521. You might also have been attacked on the ground that the work was too strong for the traffic over it. It would have been objected to on that ground? Perhaps so. If the Commission would like to see it, I have Sir John Fowler's report on the bridges on the Brighton line, in which he dealt with the question of railway across bridges, and not bridges across railways.

10522. The Company had to spend very large sum over their bridges? Yes, they are going to do so.

Many

Mr. E. M. G. Eddy. 10 June, 1892.

Many of the railway companies have been altering their bearings in connection with bridges for many years past, the London and North-Western in particular. I spoke to Sir John Fowler about this, and told him the story that had got about here, and he gave me a letter saying that his report dealt with the question of carrying railway traffic over bridges.

10523. With the exception of these matters referred to in this speech have the answers to any of the questions submitted by you to Parliament ever been challenged? I am not aware of it, had it been so we should have dealt with the question immediately.

10524. In preparing the answers to questions for Parliament do you delegate that to any of your officers, or do you see that the answers are correct before they are laid before Parliament? The practice is that the moment the questions come, the Secretary obtains from the officers concerned, the facts required to enable us to answer the questions. He then puts the answers into shape and sees the Commissioners with these answers, and we personally go through them with him to see that they are in proper form to go before the House. They are then sent to the Minister who reads the answers to the House.

10525. *President.*] We do not think it necessary to ask Mr. McLachlan anything. Could you, Mr. Eddy, furnish the Commission with that report of Sir John Fowler's which you have spoken of?

10526. *Mr. Eddy.*] Yes, I will.

10527. *President.*] Subject to the production of that document, and, possibly we may consider it desirable in reference to some matters to have an independent survey or measurement as to which I express no opinion at present, the Commission will now stand adjourned *sine die*.

WEDNESDAY, 22 *JUNE*, 1892.

[*The Commission met at* 11 *a.m. in the Equity Court, Chancery-square.*]

Present:—

His Honor JUDGE OWEN (President).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

10528. *President.*] We received from Mr. Schey a list of witnesses whom he thought the Commission ought to examine, together with certain questions which he thought ought to be put to the witnesses. We have summoned those witnesses, or some of them, before the Commission to-day.

Mr. John Richard Palmer sworn and examined:—

Mr. J. R. Palmer. 22 June, 1892.

10529. *President.*] Were you ever in the employment of Proudfoot & Co. or the late David Proudfoot? No, your Honor.

10530. Were you ever in the employment of any of the contractors who have done work for the Railway Commissioners? No, your Honor.

10531. Do you know anything of these matters which the Commission have been inquiring into? No, your Honor.

Felix Avis sworn and examined:—

Mr. F. Avis. 22 June, 1892.

10532. *President.*] What are you? I was a time-keeper in the employ of Messrs. Proudfoot & Co.

10533. Are you still in their employment? No, your Honor. It is over twelve months since I left their employment.

10534. Were you in the employ of Mr. David Proudfoot? I was in the employ of Mr. David Proudfoot—for a short time with Mr. George Proudfoot.

10535. On what contracts were you employed? On the Western lines.

10536. In what work? Relaying, lifting, and packing. My section was between Blackheath and the Zig Zag.

10537. You say you were a time-keeper? Yes, your Honor.

10538. Was a time-keeper employed by the Government to check your times? There was a Government ganger with each gang along with Messrs. Proudfoot's men to watch and check the work.

10539. Then there was one employed to check your work? The Government ganger or the Government inspector kept the time of the men for each gang and also the work.

10540. Was there anything in the work that you had to complain of or thought was improperly done? No the work was always properly done to my knowledge. I was up and down the 19 miles of my section every day; sometimes I walked, and sometimes I went on the trains, but I have often walked the whole length one way.

10541. Was the time properly kept? Yes sir, the time was properly kept. Each man had a number, and when I went round I called out a man's name and asked him for his number. I may say that the man had a fresh number every four weeks. I used to go from gang to gang and ask each man his number, and I used to get the time they worked from the ganger, and check it with the Government ganger.

10542. Was there any difference between you and the Government officer as to the time? No; none at all. I never heard of any complaints during the time I was on.

10543. What else had you to do besides checking the time? If I saw anything going on which was not right, I had to report to the head office.

10544. Did you make any such reports to the head office? On one occasion the men had placed some sleepers too near passing trains, and I think a couple of cocks were knocked off an engine several times which caused considerable unpleasantness, and Mr. George proudfoot had some printed notice put up.

10545. Was that the only complaint? Yes; to my recollection during the time I was there. Of course, it is twelve months since I left.

10546. During that time had you any opportunity of observing how the work was being carried out by Messrs. Proudfoot & Co.? I had. There was great rivalry between each gang as to who could get the largest amount of work done. After I had visited one gang and gone to another, the ganger would ask me how the others were getting on, and how they stood. There was great rivalry during the whole of the time.

Mr. F. Avis. 22 June, 1892.

10547. Did you observe anything of any kind in the work which you think was badly done? The work on my section was well done.
10548. And so far as you can judge in accordance with the contract? Yes. I have been there when Mr. Suttor came around, and he appeared to be thoroughly satisfied.
10549. Did you see any of the measurements taken by Mr. Suttor? I believe I have seen him take measurements on two occasions.
10550. Was there any day-work on the portion of line you were engaged on? Yes, your Honor.
10551. How was that paid for; how was it measured up? The Government inspector, and the contractors ganger measured the work which was to be charged for as day-labour. They settled that between them. If there was any extra work, such as the fall of an embankment, or anything of that kind, during the night, it would be shifted by day-labour.
10552. That would be measured by the time the men were occupied? Yes; so many men, so many hours.
10553. Were you aware of those returns being changed into lineal measurements? No; I had nothing to do with the measuring.
10554. Were you aware or did you hear that anything of that kind was done? No.
10555. *Mr. Young.*] It was your duty, I suppose, to take the day-work time? It was my duty to take the men's time.
10556. Did you keep a separate account of the day-labour and the measurement work? No, that rested with the ganger and the Government inspector. I only kept the men's time.
10557. You had nothing to do with separating the day-work? No, nothing at all.
10558. You simply kept the men's time generally? Yes, I kept the time and made out the pay-sheets.

Thomas Rickwood sworn and examined:—

Mr. T. Rickwood. 22 June, 1892.

10559. *President.*] What are you? A bricklayer.
10560. Were you ever in the railway service of this Colony? Yes; I have been inspecting for them once or twice.
10561. Inspecting brickwork? Yes.
10562. You say once or twice? I was on one or two odd jobs, light jobs, the last one I was on was between Croydon and Granville.
10563. What brickwork was done on the Croydon to Granville section? There were a large quantity of platforms, bridges, and culverts.
10564. Whose contract was it? I had one or two contractors to contend with, I had Mr. Ahern, Messrs. Gilliver and Tait, Messrs. Monie and Angus, and Mr. Kerle.
10565. Who had the contract for the work between Croydon and Granville, was it carried out by one contractor? No, your Honor, there were four different contracts. Mr. Ahern had one, Messrs. Gilliver and Tait another, then Monie and Angus, then Mr. Ahern again, and Mr. Kerle.
10566. Were you inspector over all these contracts? Yes, your Honor.
10567. Was the work done to your satisfaction? A slight dispute arose which led to a law suit.
10568. In reference to what work? To some work at Homebush.
10569. Whose contract was that? Gilliver and Tait's.
10570. You say that was at Homebush? It was at the Homebush station, the platforms, and bridges.
10571. What objection did you take to the work there? The levels were wrong, and the platform walls had to be altered.
10572. Did you find out that error? Yes, your Honor
10573. Was it pointed out to the contractors? Yes, your Honor.
10574. What was done by the contractors then? They took down the walls and rebuilt them.
10575. When they were rebuilt were they done properly and to your satisfaction? Well, of course there was always a number of small items arising under the contract. In this case the joints were very large, but no doubt that was owing to the bricks.
10576. Did you make any complaint to the Railway Commissioners as to the way in which the work was carried out? I made a statement inside of our business, and the work was remedied.
10577. By the contractor? Yes, your Honor, so far as I know anything about it.
10578. When the work was remedied by the contractor was it then done in the way in which you thought it ought to be done? Some of it has been altered since I have been away. There were one or two little differences when I left, but so far as I can learn, I think they have been remedied since.
10579. What were those matters you objected to and which you say have been remedied since you left? They were alterations to ends of platforms, and little items of that kind.
10580. *Mr. Young.*] Were there any plans and sections of that work? Yes, sir.
10581. Were those plans departed from when the work was carried out? Oh, no. I think the work was carried out as near the plans as it could be.
10582. Then, if the work was carried out in accordance with the plans it ought to be all right? Yes, sir, the work came in all right.
10583. Had you any other objection to the work over and above that you have already stated. Was there anything beyond the joints being a little thick; were the bricks bad? No, I cannot complain about the bricks.
10584. Was the cement bad? No, I could find no fault with the cement. We tested it a few times, but found nothing wrong.
10585. You say these works were carried out in accordance with the plans and specifications? Yes, sir.
10586. What was your particular duties, were you inspector of brickwork only? Yes, chiefly. I was appointed on that condition.
10587. You are a practical bricklayer? Yes, sir. I worked for the Government for nine years, on and off.
10588. You think that in a general way the work was done as it ought to be? Yes, sir. As I said before there are always a number of small troubles in all contracts. Of course, I might be wrong in the matter.
10589. Still, in a general way, if there was any little matter wrong it was remedied? Yes, sir.
10590. You have nothing particularly to complain of in the work? No.

Mr. T. Rickwood. 22 June, 1892.

10591. And you think, generally speaking, that the work was well done? Yes. The complaints I had to make were as to the way in which I had been treated.
10592. What was that;—has that anything to do with this work? Not a bit. Of course, I had to take a stand against the work at different times, but there is always a slight amount of trouble, and in this case I had a good deal of work to contend with.
10593. You say you were not satisfied with the treatment you received? I have been pretty well ruined over it.
10594. Are you in the employ of the Government still? No, sir.
10595. Did you resign? No; they had no more work for me.
10596. Did they give you no reason for your dismissal;—was it simply that there was no more work, or was there some other reason? It was simply that they were shortening the staff.
10597. That is the only grievance you have against the department? I have no grievance.
10598. *President.*] Had you any grievance with the contractors? No; not in regard to their work.
10599. You say you have been ruined,—in what way do you mean? As I told you before, I had to make a stand against some of the sub-contractors. Of course, I could not be there all the day, and my attention was called to their work several times, and I had to exercise my duty, and, as a consequence, an action was brought against me by a man who considered that I had got him dismissed.
10600. Who brought the action? One of the sub-contractors.
10601. Then it was a sub-contractor who was the cause of your ruin? Yes; of course the Government did not take any part in it.
10602. When you found fault with any of the work you laid a complaint before the officers of the Commissioners, I suppose? Yes, your Honor.
10603. When those complaints were laid before the officers of the Commissioners, did they take action to have them remedied? Yes; the contractor was written to, and the work was taken down and rebuilt.
10604. *Mr. Kethel.*] Were the materials used in the work—the bricks and cement—up to the requisite standard of quality? Yes. There was one fault, perhaps, with the bricks, that they were too small, and caused more joints; but I had no fault to find with the work. It was substantial. There were items I had to complain about, inside our business, as there are in all cases.
10605. Was one of the reasons for your objection to the work that there was a deficiency of cement? My objection was chiefly to the levels. I also had to complain about some stonework.
10606. Were you inspector of brickwork over the whole of that section? Yes; brickwork and stonework.
10607. Had you any assistance? No.
10608. Were you able to inspect all the materials, and all the work, over such a large section? I did the best I could; I worked many hours, to the utmost of my ability.
10609. When you made reports to the officers in charge, complaining of the nature of the work, were they always ready to back you up, or did they show any tendency to favour the contractors? I saw no attempt to favour the contractors.
10610. Your objections were supported, and what you deemed defective work was rectified? Yes.
10611. In an answer you gave a few moments ago, you led us to believe that when the work was finished, or taken out of your hands, there were a number of objectionable items which have been remedied since? No; I withdraw that. I mean to say that there were a few little items which were not finished, but which Mr. Mann said would be seen to. I have not been there since, but I presume those matters have been seen to.
10612. Are you aware that a report was circulated to the effect that a part of the work which was done under your superintendence consisted simply of dry bricks laid and pointed on the face, with no cement or grouting at the back? It is unknown to me; I never heard anything of such a thing.
10613. *President.*] So far as your observation went, nothing of that kind happened? Not while I was there, your Honor; but, of course, I cannot say what happened after I left.
10614. *Mr. Kethel.*] I suppose the engineer or ganger in charge of these works would look after matters while you were absent? The contractors had nothing to do with that.
10615. Was the great bulk of the brickwork on these contracts sublet? I believe so; so far as I can understand it was.
10616. Was the work done by these sub-contractors equal in point of care and skill to the work done by the contractors-in-chief, or by the departmental men? Well, sir, that is a queer question to ask. I suppose that a man who has a job tries to make the best he can out of it, that is all I can say. No doubt more time might have been spent over the work, and the work might have been made stronger, but so far as I could see the work done was strong enough for anything.
10617. You have told us that a quantity of the work you condemned was out of level. Was it not the engineer's place to see that the levels were given before the foundations were put in? Yes; all I can say is that Mr. Simons tried it, and I was there at the time, but whether he tried it on the last occasion, before the bottom went in, I cannot say.
10618. Is it the duty of the contractors to get the levels before they commence any brickwork, or is it your duty or the duty of the engineers to give them the levels? They do it at their own risk, and take the levels themselves. They generally get a bench mark given to them, and work from that.
10619. So that they are responsible if the work is done out of level? Yes.
10620. *Mr. Young.*] You did not pass any bad work, I suppose? I did not.
10621. *Mr. Kethel.*] Did the superintending engineer ever pass any work you objected to? Not to my knowledge.
10622. Were you interfered with in any way in the execution of your duty by any of the other officers of the department? No, sir; not in any way. They generally assisted me all they could.
10623. *Mr. Eddy.*] You have been brought here, Mr. Rickwood, in support of the charge against the Railway Commissioners that they, by collusion with the contractors, have swindled the country out of thousands of pounds. Do you know of anything to justify such a charge? I do not.
10624. You were employed by the Railway Commissioners to safeguard their interests? Yes; and I think I did so, and ruined myself over them.
10625. The question arose just now as to your services being dispensed with. Your services were dispensed with because the work you were employed upon came to an end—is that not so? Yes.
10626. No other reason was given? No, sir.

Mr. T. Rickwood. 22 June, 1892.

10627. Then you referred to an action that had been entered against you, and in which damages were awarded against you. After that, did not the Railway Commissioners have a very special investigation made into the circumstances of the case? They did.
10628. And then, as they thought that this action had been brought upon you because of some indiscretion on your part, and not because of any malice against the contractor, did not the Railway Commissioners interest themselves to try to get the damages reduced? Yes.
10629. And they were successful? Yes.
10630. So that they protected you as much as they could against your own indiscretion? Yes.
10631. *Mr. Eddy.*] I can put in the papers relating to this matter between Mr. Rickwood and one of the contractors, if you care to look at them, Mr. President.
10632. *President.*] Perhaps they might be put in for our perusal.

Ellis Edward Lees sworn and examined:—

Mr. E. E. Lees. 22 June, 1892.

10633. *President.*] What are you? Well, I generally follow navvying.
10634. Have you been working for any of the railway contractors? Yes.
10635. Which of them? Messrs. Monie and Angus.
10636. Where were you working for them? At Katoomba first.
10637. And afterwards where? At Picton.
10638. How were you employed there;—what were you doing on that contract? Navvying—shifting muck, as it is termed.
10639. Take the work at Katoomba;—was anything done there by the contractors which you thought was improper? I thought some of it was overdone.
10640. Overdone in what way? Well, when I first went there there was a new road which had only been in use for six months. We had to put in another cutting to pull the line over again, and between the new road we were putting in and the old road there was a bank of extra mud that was not in the measurement, and that was shifted and put into the bank. At the same time I noticed that stone taken out of the cutting was used as ballast, and was not put into the bank.
10641. What was the result of that, because I do not quite follow your answer? Some stone which was taken out of one of the cuttings was used as ballast by the firm. It was used for bottom ballasting on the road, and it was not put into the bank. I do not know whether it was measured for that purpose; I cannot swear to that. All I know is that it was used as ballast, and not as muck.
10642. *Mr. Young.*] Was it fit for ballast? Yes, sir, it was.
10643. It was good stone? Yes; it was the only stone thereabouts, unless they went off the road for it.
10644. Then, if due allowance was made in the measurement, there would be no harm in the contractors doing what they did? I cannot say anything about the measurements.
10645. But if due allowance was made, would there be any objection to the contractors doing as they did? I cannot say.
10646. *Mr. Kethel.*] Had not the contractor to ballast the line also? According to the specification, I was given to understand that ballasting was a large part of the section.
10647. And was it not within the right of the contractors to use any material they found suitable, instead of throwing it out? I never heard of it in any contract work, sir.
10648. What do you think was wrong in this matter? I thought it was being paid for twice.
10649. *President.*] Do you know anything about its being paid for twice? I cannot swear that, but I thought so. One thing I am certain of, that a portion of the mouth of the cutting on the bottom side for spoil, while the extra muck was used on the bank.
10650. Who was the contractor for this? Angus, Monie & Co.
10651. And who was the Government engineer when this was done? I cannot say.
10652. When was this done? I started at the latter end of 1890.
10653. Was that the only thing you had to find fault with in the work done at Katoomba? So far as that went, I thought the country was paying for two roads instead of one.
10654. *Mr. Kethel.*] Are you aware whether the engineer in charge had not good reason for selecting another road. Was it not possible that the first embankment might have been insecure, and that a fresh deviation was made in order to render the line perfectly safe? The old road was there, and then there were two deviations. That, I consider, was paying three times for the one road.
10655. *Mr. Young.*] Do you know anything of the arrangement for paying for that? No, sir; I cannot say what the arrangements for paying were. The old road was put in by Mr. Whitton's party previous to my going there.
10656. *President.*] That was the road as originally constructed? Yes, your Honor; and then a new road has been put in since the Commissioners entered office, and we went up to put in a third.
10657. *Mr. Kethel.*] You were not there when the first deviation was made? No.
10658. Is the second deviation further in? It is right in the solid; it goes in nearly on to the road.
10659. Is that this side of Katoomba? Yes, sir; from the Katoomba level down into the 33.
10660. I suppose this was done not by the contractors, but with the knowledge and consent of whoever was engineer in charge of the work? Yes.
10661. It could not have been done in ignorance? No; they must have had orders.
10662. *President.*] Was there any objection to the packing of the road at that point? That did not belong to their section, but to Proudfoot's section. The packing was inferior. What I noticed in that section was simply this: I walked along the line on several days, and I noticed that the stuff had only been taken from between the sleepers and not from under the sleepers. It is no use putting down a road if you do not take something from under the sleepers and give a new foundation.
10663. Where did you notice this? The other side of Katoomba.
10664. *Mr. Kethel.*] How were you able to tell that? I was there when the men were working.
10665. *President.*] That you say was on Proudfoot's section? Yes, your Honor; I did not go beyond Katoomba. I did not work on that section.
10666. How far did that extend? About a mile and a half or 2 miles.
10667. Just outside Katoomba? Yes, your Honor; that is where they started.
10668. *Mr. Young.*] Was it beyond Katoomba? You might say it was in Katoomba.

Mr. E. E. Lees. 22 June, 1892.

10669. Between Katoomba and Blackheath? Yes; between Katoomba and the next station.
10670. *Mr. Kethel.*] Is the line laid on rock or are there any soft places? It is not supposed to be on the rock, it is supposed to be so much above it.
10671. But does not the ballast rest on the rock? They did not go on to the rock.
10672. But the line is laid on rock is it not? Not always.
10673. Was there no play foundation along there? In some cases it is softish, the region thereabouts is of a sandy nature. It will stand on a perpendicular, until it is broken, but when once it is broken it becomes soft, and, therefore, makes an inferior bank.
10674. *Mr. Young.*] Before you get to Katoomba the first line was the original one, was it not? Yes; that was put in in Mr. Whitton's time, and it starts at Leura.
10675. That was done under the Construction Department? Yes.
10676. What was the next work? The next was a deviation made at Katoomba by the Commissioners.
10677. Was that in the bank or outside the bank? In the bank; In the solid; it was shoved over to cut off the road.
10678. After that second line was made where was the third line cut? Further in again, closer to the road.
10679. Was there any particular reason for that? I cannot say. I do not see why a man should make two bites of a cherry.
10680. *Mr. Kethel.*] Did it lessen the curves? It did; but it did not lessen the grade.
10681. *Mr. Young.*] Was that the same? Yes.
10682. In every case? There it was.
10683. In all three lines? I believe so. I do not know what the old line was, but the first deviation went at 63—33 and it is that now.
10684. *Mr. Kethel.*] Was the second deviation made by the Commissioners own staff or by contract? It was supposed to be by contract.
10685. Who was Engineer-in-Chief at the time? I cannot say.
10686. Was it Mr. Angus? I have heard the name; but the firm being Angus & Co., I did not know which was which.
10687. *President.*] Passing from the Katoomba work you say you were afterwards employed at Picton? Yes, your Honor.
10688. Was there anything there you objected to? I saw a quantity of material shifted, paid for as muck, and used as ballast. The whole of the Picton yard, or the bulk of the yard except a small bit near the coal stage was ballasted in that way.
10689. *Mr. Young.*] Was it fit stone for the purpose? Yes; it was better than the material they were fetching, but as I said it was taken out as muck.
10690. *President.*] Then the ballasting did not suffer? No; your Honor.
10691. You say it was better stone than was being obtained elsewhere? Yes.
10692. Did you see an adjustment of the measurements? No, I did not; I saw the measure several times, but whether they allowed for anything I could not say.
10693. It was only what you thought? Yes; that is what I thought.
10694. Was that all at Picton? No; we packed a portion of that road, in some places we took the top ballast off, but the sleepers were not shifted. I saw the measurement of the road, and I noticed that all the work was measured alike.
10695. How did you know it was all measured alike? I saw the tape on one piece of it—I saw no difference. I do not know whether there was any allowance.
10696. Could you tell anything from the fact of seeing the tape on the works? You could see them measure from end to end, and the width from edge to edge, but whether any allowance was made I cannot say.
10697. Is it not possible to make reductions? It is possible, but I do not know anything about their reductions.
10698. *Mr. Kethel.*] What is the difference in the two classes of work which you say were measured as one? The one was packing only to the top of the sleepers and the other to the bottom of the sleepers.
10699. Of course that would make a great difference in the value of the labour? Yes.
10700. And also in the material? Yes; because less ballast is required.
10701. *President.*] Do you know of any place where the line has subsided since the contractors finished work? Yes; one place.
10702. Where is that? At Spaniard's Hill.
10703. Where is Spaniard Hill? It is just this side of Douglas Park.
10704. On the Sydney side? Yes, your Honor. The road was a new one there, it had been just put in and handed over to the Commissioners, and a few days afterwards I saw the permanent way men lifting it. The whole of the top ballast I saw there had gone on to the sleepers. A few weeks afterwards I went over the road, and I saw that it had been blinded with ballast fetched by McSweeney's men.
10705. To fill up the subsidence? To put top ballast on it.
10706. *Mr. Kethel.*] Was it a clay soil? Yes; it was material taken out of the cuttings.
10707. *President.*] What length of line subsided? I did not measure it, but I should say a few chains.
10708. Have you any objection to find to the foundations of any of the bridges? I do not know about the bridges, I only worked on one. I may say that I heard that some of the bridges were dealt with in a very inferior manner. In pile-driving the bottom was not reached, and what is more the material put in is not up to the standard.
10709. Where were these bridges? I cannot say, I was not on them.
10710. *Mr. Kethel.*] Have you any knowledge of pile-driving? No; I have not.
10711. *President.*] Do you know Mr. Robert Murrell? I have heard the name. He is supposed to be a Government time-keeper on the section for McSweeney & Co.
10712. Do you know whether he can give any information? I do not know the gentleman in person.
10713. Who was he employed by—the Commissioners or the contractors? He is supposed to have been a Government paid officer. There was another officer of the same sort at Katoomba, on Proudfoot's section.
10714. You have mentioned something of the work between Leura and Katoomba;—what do you know of that? It is from Leura to Katoomba that the deviations were made—two were made instead of one.

10715.

Mr. E. E. Lees. 23 June, 1892.

10715. *Mr. Kethel.*] Was that subsidence on the Picton line near Douglas Park made good by the permanent way men? It was lifted by the permanent way men.
10716. And made good by them? Yes. I do not know whether there was any difference between this contract and the old ones. Under the old conditions the contractors were supposed to keep the road in repair for some considerable time after it is completed.
10717. *Mr. Eddy.*] You are here in support of a charge against the Railway Commissioners, that they have been in collusion with the contractors, and have swindled the country out of thousands of pounds? I did not say anything about swindling.
10718. But that is the charge you were brought here to support. I ask you if you know anything to justify that charge? I do not know of anything more than I have already said as to materials having been paid for more than once.
10719. You stated, I think, that the contractors have been relieved of the maintenance of the line near Douglas Park;—do you know the conditions of that contract? I do not know anything about the contract, but there is one contract about which as yet I have not been asked any questions, and which was not carried out in a proper manner, according to my opinion.
10720. I ask you do you know anything about that contract at all? I do not.
10721. *President.*] You say there is another matter you have not been asked about;—what is that? That is the reballasting and lifting—McSweeney's contract.
10722. Where is that? I believe it runs from the Parramatta Junction to the top of the hill, and I do not know how much further. That road was treated in just the same fashion as I spoke of just now in connection with the Katoomba line. The stuff was only taken from the middle of the road between the sleepers, and nothing was taken from under the sleepers, and the consequence is that the work falls wholly and solely upon the permanent men. Three days after a piece had been lifted past my camp, I looked down the road, and it was as crooked as a dog's hindleg or a ram's horn. A new road should be straight.
10723. *Mr. Young.*] That was on the Southern Line? Yes.
10724. For how many miles? I cannot say how many miles of the road has been done in that fashion. A portion of the road between Spaniard's Hill and the watering-place on this side have not been done at all.
10725. You mean to say that the line at that point was not packed at all? Very little; only a mockery. The road will speak for itself. It is there with the muck under the sleepers.
10726. *Mr. Kethel.*] Were you working on that section? No; I merely watched it with my eyes, and I saw there was a deficiency in some way, but I cannot say how much.
10727. *Mr. Eddy.*] Do you mean to say that the Railway Commissioners have paid for this work when it has not been done? I do not say any more than I have already said.
10728. But this is a charge against the Railway Commissioners of swindling the country? You do not think I am going to say that the Commissioners have swindled the country, unless I know what their books consist of.
10729. *President.*] The witness simply states certain facts. He says he does not know anything about the payments.
10730. *Witness.*] If the work has not been done in a proper manner, I do not blame the Commissioners, but those who ought to have looked after it for them.
10731. *Mr. Eddy.*] We want to ascertain the facts. It it no use to state here that things have been done if they have not been paid for.
10732. *Witness.*] I do not know anything about the payments.
10733. *President.*] I think Mr. Eddy before proceeding with another subject, we had better clear up the matters referred to by this witness.
10734. *Mr. Eddy.*] Very well, sir, we will put Mr. Suttor in the box.

Mr. J. B. Suttor called and examined:—

Mr. J. B. Suttor. 23 June, 1892.

10735. *President.*] Were you Government Engineer for the Railway Commissioners on the Katoomba line? I was, sir. I was engineer for the Katoomba deviation.
10736. Were you also on the Picton line? No, your Honor.
10737. *Mr. Kethel.*] Were you in charge of the Katoomba line during both the deviations which were alluded to by the last witness? Yes, I was in charge during the whole of the deviations.
10738. During the first and second? Yes. Possibly, it would be better if I gave a history of the thing from the start.
10739. *President.*] You have heard the evidence given, I suppose? Yes, your Honor.
10740. *Mr. Eddy.*] We have heard of a line at Katoomba which was altered, and which on a subsequent occasion was again altered to another position. Was not the first position for that line made hurriedly to enable the traffic to be carried past a slip that had occurred? Yes.
10741. And therefore, before plans or anything could be prepared you had to create a line to carry the traffic? Yes.
10742. Subsequently the Commissioners decided to improve the curves at that part? Yes.
10743. That part of the road was an 8-chain curve was it not? It was originally an 8-chain curve, but subsequently, we made it 12 chains.
10744. Now, as to the stone that was not thrown over to form the embankment, will you explain to the Commission what really did occur? When it it was decided to put in a 12-chain curve, there was a surplus of excavation over the embankment; there was a surplus of about 9,000 yards, and the balance of that 9,000 yards was run to spoil when the embankments had been completed.
10745. *Mr. Young.*] It has been stated in some cases that stuff was put to spoil and paid for twice? There was no such case. The contractors were paid simply for the excavation.
10746. *Mr. Kethel.*] Yes, but the last witness told us his impression was that the Commissioners had first paid for excavating the rock, and had afterwards paid for it as ballast?
10747. *Witness.*] Certainly not. Of course the contractors had a right to get ballast wherever they liked.
10748. *Mr. Eddy.*] But there was a surplus of cutting over embankment? Yes; about 9,000 yards.
10749. And that had to be put to spoil somewhere? Yes; there were about 25,000 yards to come out.
10750. And you only wanted 17,000 yards to make up the embankments? Yes.
10751. Some economy was effected, was it not, in regard to stone used as ballast? Certainly.
10752. Will you explain that? In places where the stone was good the contractors spoiled it, and we used it afterwards for ballast, and saved as much as we could.

Mr. J. B. Sutton. 22 June, 1892.

10753–4. The usual course was followed? Yes.
10755. *President.*] Is that for the benefit of the contractor or the department? For the benefit of the department.
10756. *Mr. Eddy.*] You have never passed the same stuff at full prices twice over? No.
10757–8. Not a yard? No.
10759. We have heard something about ballast being put in and the road not being lifted. I take it, if the road is not lifted you would not have passed any payment for lifting? Certainly not.
10760. But is it not a fact that the road there was in a very bad condition after wet weather through the old system of having border stones? Yes.
10761. And we gave directions for those stones to be removed, did we not, so as to enable drainage to take place? Yes; to liberate the water from the sleepers. The sleepers were simply floating in mud, and after the stones were removed there was a marked improvement in the condition of the road.
10762. *Mr. Young.*] We have been told that the sleepers were not packed at Katoomba? That is not the case; they were thoroughly packed. I have not passed anything unless it was done to my satisfaction. The line has stood until to-day; nothing has been done to it since.
10763. It is not a correct statement, then, that nothing was put under the sleepers? Certainly not.
10764. *Mr. Eddy.*] You mean to say that where we have paid for packing and lifting that work has been done? Yes.
10765. There were parts of the line, I suppose, which were not lifted at all? Certainly.
10766. *President.*] Then it has not been paid for? Certainly not.
10767. *Mr. Kethel.*] Is it possible for a person walking along the line to tell whether the sleepers have been packed or not? Yes; you can tell where the line has been packed or lifted. You have only to put an engine over it, and you will soon see if anything has been done.
10768. I mean, could a person just walking along the line see whether the sleepers had been packed or not? Yes; he could tell. The line, if nothing has been done to it would be up and down, and if you put an engine over it the defects will exhibit themselves at once.
10769. *Mr. Young.*] The last witness told us that the line 2 miles beyond Katoomba was not packed? Particular attention was paid to that. That is around the sharp curves at Pulpit Hill; it is from 66¼ miles to 68½ miles.
10770. *Mr. Kethel.*] The witness told us that he walked along that portion of the line, and he could see that it had not been packed? I personally examined the whole of it. There is no difficulty in telling whether the road has been disturbed or not.
10771. *Mr. Eddy.*] I wish the Commission to clearly understand the state of things. There are very large sections of the line where the border stones have been removed so as to permit of better drainage where we have not lifted or reballasted; and although the Commissioners have been making extraordinary efforts during the last three and a half years to improve the state of the permanent way and have lifted and reballasted some 500 or 600 miles of line there is still a great deal not yet touched.
10772. *Witness.*] There are miles of it not yet touched.
10773. *Mr. Eddy.*] We want the Commission to understand that we do not profess to have renovated the whole of the lines.

Mr. A. Randall called and further examined:—

Mr. A. Randall. 22 June, 1892.

10774. *Mr. Eddy.*] You have heard the evidence given by the witness, Lees. He spoke of one of the new lines near Spaniard's Hill having been taken over by the department immediately after it was finished. Was it not a fact that under the contract the contractor only had to maintain one line? Yes, sir, that is so. He had only to maintain the up line.
10775. And at Spaniard's Hill, for the purpose of improving the curves, the Commissioners abandoned altogether the old lines and made two new lines? They did. They straightened the line there and improved both the gradients and the course of the line; and the down line not being provided for in the maintenance, by the contractors, was handed over to the department and we took charge of it immediately.
10776. And as in the general duplication contract the contractor had only to maintain one line, the Commissioners took over the maintenance of one of these new lines in lieu of having to maintain the old ones? Yes, they put on their ordinary fettlers to maintain the down line, the contractors in the meantime going on with the up line, and maintaining that for six months according to their contract.
10777. So that nothing was done by the contractor beyond what was in his contract? No.
10778. We have heard about the line not being properly packed. Do you know of anything that the contractors have been let off doing which they were called upon to do under their contract with the Railway Commissioners? Nothing whatever, sir. In fact it would be to their interests to properly pack the line, otherwise they would have to go over it again and again. It is to their interests to do the work properly in the first instance.
10779. *President.*] Do you know of any subsidence of the line? That particular portion of the line has subsided from time to time.
10780. You mean at Spaniard's Hill? Yes, your Honor. The contractors make up the line in the usual manner by earth work. That was part of their contract, and they are simply paid for the material taken out. Afterwards there was a slight subsidence; it was really only very slight. We have been very fortunate in having wet weather, so that the greater part of the subsidence occured before the ballast was put on; and that of course was made good by the contractors.
10781. Then the Railway Commissioners had not to make good, at the expense of the country, work left undone by the contractors? Not at all, sir. Everything was thoroughly done and in a satisfactory manner.
10782. *Mr. Eddy.*] A previous witness gave some hearsay evidence in regard to defective bridges that have been passed. You superintended the building of all the bridges, did you not? Most of them, but I think there was a bridge near the ballast quarry at about 46–20 which was built before I took charge.
10783. Who was the superintending engineer? Mr. Mack was the district engineer at that time, but the inspector who supervised the work is here now.
10784. So far as your knowledge goes, are you aware of any defective bridge existing along that line? No; the bridges are thoroughly and faithfully built. The last test made only the other day showed that; in fact, no bridge could have stood the test better.

Mr. A. Randall. 22 June, 1892.

10785. That was the bridge there has been a lot of talk about, and about which the Commissioners have been attacked? Yes.
10786. *President.*] Where is that bridge?
10787. *Mr. Eddy.*] At Glenleigh. There were a number of articles in the *Sunday Times* about this bridge being insecure long before it was even built. The Commissioners have since thoroughly tested the bridge. They have appointed a Board, consisting of the leading engineers in the Colony—Mr. Darley, Mr. Hickson, Mr. Deane, and Mr. Foxlee—to report upon the plans. We have even gone to the expense of sending the plans to Sir John Fowler, and he and all these other gentlemen say that the bridge is an excellent one. Then, before we opened the bridge for traffic, we tested it with one of the heaviest Baldwin engines, and the tests came out most perfectly. Still more recently, the Baldwin Engine Commision have tested the bridge, which, as I said before, is one in reference to which a number of statements have been made as to its insecurity.
10788. *Witness.*] The tests were very severe, and the results were most satisfactory. The instruments showed that there was no oscillation whatever, not even a vibration.
10789. *Mr. Eddy.*] We could not hope to get a more perfect test.
10790. *Witness.*] In pulling up suddenly, where the bridge might have carried a little forward, there was not the slightest indication of such.
10791. *Mr. Kethel.*] Is it a timber bridge? Yes; it is on piles, and is one of our tallest bridges.
10792. *President.*] Are they supposed to be concrete foundations? In some cases concrete foundations are put in, but in this case the bridge is constructed upon piles driven 38 feet into the ground. The contractors could not supply sufficient power to draw one of these piles.
10793. But some of the bridges have concrete foundations, have they not? Yes.
10794. Is it true that in any of these foundations the concrete has not been properly put in, but that a lot of loose rubble was thrown in and a thin coat of concrete put on the top? No, sir; that is not true.
10795. Did you examine these foundations before the bridges were put up? I have examined some of them, or if I have not done so, the inspectors have. In reference to the bridge I spoke of just now, and which was erected before I took charge, the inspectors saw the bottom. In that particular case the bottom was hard shale, and a layer of concrete was put in before the sill was placed upon it; and that was thoroughly examined and tested before the sill was fixed, and the other concrete put above and around it.
10796. *Mr. Kethel.*] Did you superintend the construction of this pile bridge? Yes.
10797. What was the nature of the bottom? Rather soft. You can imagine that by our having to drive 38 feet down.
10798. Did you drive right home to the rock? We drove it to the test—a quarter of an inch test with a ram of 1 ton 5 cwt., and a 10-foot drop.
10799. What would be the result if you kept driving after that test? You might possibly have to drive 100 feet in a place like that.
10800. Would there be any likelihood of splitting the pile if you drove further? There would be if we got on to rock bottom.
10801. Do you shoe the piles? Yes; they are all shod.
10802. Then I suppose there is no danger of the piles going down? No; if you let them stop for a week you would have great difficulty in driving them again.
10803. When driving piles have you always an officer in charge to see that the work is done properly? Yes; he sees the test blow before the pile engine is removed.
10804. You take every precaution, and I suppose the same rule applies to viaducts and wherever you use timber? Yes; just in the same way.
10805. *Mr. Young.*] Were you the engineer at Picton? Yes, sir, from Granville to Picton.
10806. *Mr. Eddy.*] Did you pass any work twice? No; we only measured the material once. Everything which has been taken out there was measured and paid for accordingly.
10807. *President.*] Nothing was paid for twice? Nothing whatever.
10808. *Mr. Young.*] It has been mentioned here that stone which was cut and which was suitable for ballast, was paid for twice. Do you know anything about that? The contractors are paid the ordinary excavation rates for any stone they take out. If there is any stone suitable for ballast the contractors can use it. They are paid, of course, for ballast supplied. In some cases they had to purchase a piece of land to cart the earth to spoil. Some small quantity of stone was found suitable for ballast, and the contractors can do as they like with it. That is not paying twice for it.
10809. *Mr. Kethel.*] If, when a contractor is carrying out a job he comes across a bit of good stone do you allow him the privilege of using any portion of that for ballast if you think it is suitable? Yes; provided that it is not required for filling.
10810. If it is required for filling would you allow the contractor to use the stone on condition that he supplied other filling? Yes; such a thing has not occurred at this place, but that is the usual rule. In our case we have had more earth than we knew what to do with.
10811. Then if there was no use for the stone you did no injury to the Commissioners in allowing the contractors to take it if it was found suitable for ballast purposes? No. As I said, such a thing has not occurred at Picton, but it has on other contracts. It is the ordinary rule—in fact, it is usually specified. The contractors may use the stone provided there is no deficiency for filling; and if there is a deficiency they must get the material from the cutting or elsewhere. There is no loss to the Government by that.

Mr. George Bogue sworn and examined:—

Mr. G. Bogue. 22 June, 1892.

10812. *Mr. Eddy.*] You have had the inspection of bridges that have been put up between Granville and Picton in connection with the widening of this line? Yes.
10813–4. You have heard a statement made in regard to the concrete for the foundations of some of these bridges. Have you ever passed rubble in cases where concrete was to be put in? No, sir; nothing of the sort.
10815. Have the foundations all been properly carried out? Yes, sir; in every way.
10816. Have you ever passed more work than the contractors put in? No.
10817. Do you know of any bridge which has been put up by the contractors working for the Railway Commissioners between Picton and Granville that is defective? No.

Mr. C. Bogue. 22 June, 1892.

10818. All the bridges, in your opinion, are good bridges? Yes; they are all perfectly sound in every way.
10819. And the contractors have given to the Railway Commissioners value for the money paid to them? Yes.
10820. *President.*] Do you personally examine the foundations of bridges as they are being put in? No sill has been laid on concrete in any foundation from Granville to Picton which I have not examined, and every one is perfectly sound.
10821. There is no case where a little rubble was thrown in and a thin coating of cement put over? No.
10822. If it had occurred you would not have passed it? Of course not.
10823. *Mr. Young.*] Did you see any concrete put in? The bridge at Douglas Park is the only one out of the whole number that I have not examined. When they were pile-driving at Spaniard's Hill my attention was drawn to the work, and I carefully examined the foundation. It was a hard shale. I went back again when the concrete was put in, and I took a pick and sounded it, and found that it was solid concrete. There was only a foot of it, and it was not a difficult matter to test it.
10824. Was that bluestone concrete? No, sir; it was sandstone.
10825. What gauge was the stone? Two and a half. That was the limit, but of course there was some smaller stone.
10826. What sand did you use? I do not know about the sand.
10827. Was it soft or sharp? It was sharp, clear sand.
10827½. *Mr. Kethel.*] I suppose it came from the river-bed at Menangle? I think most of the sand was brought from Menangle.
10828. *Mr. Randall.*] If I may be permitted to interrupt your Honor, most of the sand came from Liverpool. It was good wash sand from the bed.
10829. *Witness.*] It was good sand, and the stone was broken to gauge.
10830. *Mr. Kethel.*] I suppose the material has to be submitted for approval before it is used? No, sir.
10831. Have you not to approve of the quality of the material before you allow it to be used? No, sir.
10832. *Mr. Randall.*] I may explain that every cask of cement is to a sample that has been tested in the department. Every shipment of cement is tested before it is allowed to be used.
10833. *Mr. Kethel.*] Then the inspector has nothing to do with that?
10834. *Mr. Randall.*] No, sir.

Mr. Charles Newman sworn and examined:—

Mr. C. Newman. 22 June, 1892.

10835. *President.*] What are you? A bricklayer.
10836. Were you in the employment of any contractors? Yes, sir.
10837. Which of them? Mr. McSweeney, Mr. M'Master, and also for a sub-contractor at Burwood whose name I do not know. That was the last work I had on the railway, and I was only a week on that job.
10838. What were you doing on these contracts? On Mr. McSweeny's contract I worked at some walls to carry the decking for the platforms where they landed the goods and also some crane-pits. For Mr. M'Master I worked on the Liberty-street wall, where the crack was, and I afterwards worked on the retaining-wall at Burwood.
10839. That was under the sub-contractor? Mr. McSweeny was only the head contractor.
10840. What was the character of the bricklaying done on these different jobs—take first McSweeney's contract? I do not know exactly whether it was done according to specification or not, but, to my thinking, the work was done in an inferior manner.
10841. In what way? In its not being flushed up and grouted properly.
10842. Will you explain yourself a little more fully? The work should be grouted as we lay each course of bricks; that is, the vertical joints should be grouted or filled in with cement.
10843. And you say that was not done? Not in all cases.
10844. In how many cases was it omitted;—to what extent was it not done? I cannot say.
10845. Was it only with one brick or more? It happened in a great many of the walls. We were rushing one another. There would be a couple of men on each wall and they would try to get done before another set of men, and their work would be scamped over.
10846. Can you point out where this occurred? Yes, sir.
10847. Will you describe it now? I cannot do that without being down in the sheds.
10848. Do you know whether that work has since been repaired? No; I do not.
10849. *Mr. Kethel.*] Can it be repaired? I do not think it is in any way detrimental to the work. I think it is strong enough to carry what is required. The walls are not more than 4 feet thick, and they are plenty strong enough to carry what they are required.
10850. Would it be possible to discover this without taking the walls to pieces? By drawing a brick you might get at it.
10851. Would it not be a difficult matter to draw a brick if it is set in cement? It all depends on the cement.
10852. *President.*] Do you say there was no cement put between the bricks? They were buried in cement, but they were not flushed or grouted. After a course is laid we are supposed to throw cement in between the uprights.
10853. Who had the superintendence of that work? A Mr. Payton.
10854. *President.*] Who is he inspector for? For the Government, I believe.
10855. Was he about while this was being done? He was backwards and forwards from one end of the building to the other.
10856. *Mr. Young.*] Could he have seen it? I cannot say.
10857. *Mr. Kethel.*] I suppose you took care that he could not see it? ——
10858. *Mr. Young.*] Did you do your work in that way? Yes; same as the others.
10859. *President.*] In order to beat the other gangs you did a little quicker work? Yes.
10860. *Mr. Kethel.*] Had you anything to do with finding materials? No; the work was day-work on walls.
10861. *Mr. Young.*] Were these retaining-walls? No; they were walls to carry the decking of the platforms where they placed the goods.

Mr. C. Newman. 22 June, 1892.

10862. *Mr. Kethel.*] What thickness would these walls be? About 14 inches, I believe.
10863. *Mr. Young.*] There would only be one longitudinal joint in that? Yes.
10864. Is that the joint you speak of that was not filled in? Yes; and the cross joints sometimes we rubbed cement over to make it appear that the work had been flushed or grouted.
10865. *Mr. Kethel.*] Are you supposed to grout each course? I do not know; we did not do it.
10866. Did you get instructions to do it? No; we got no instructions whatever; we were only told to build the wall. We were told by the inspector to look out and keep the last three courses well grouted up.
10867. What height is the wall? About 3½ feet or 4 feet.
10868. *President.*] Do you consider that the contractor, or the Government officer, or the contractors' inspector was in any way to blame for this? I do not blame the contractors in any way, but I blame the inspector for not looking after it properly.
10869. Although you did your best to conceal your bad work from him? Yes; we did our best.
10870. *Mr. Eddy.*] Where was this inferior work put in? In the new goods shed at Darling Harbour. It is about three years ago since I was working there.
10871. Is it the large shed that abuts on the Pyrmont Road? Yes.

Mr. Justin M'Sweeney called and further examined:—

Mr. J. M'Sweeney. 22 June, 1892.

10872. *Mr. Eddy.*] You have heard the evidence given by the last witness, Newman;—are you aware of this inferior work he speaks about? No; his statements appear to me to be false from beginning to end.
10873. Will you tell the Commission what connection Newman has had with your work? When I commenced to build the platform walls I employed eight bricklayers on day-work. Newman was one of them. The walls were fourteen inches, and I set them out and supervised almost the whole of them myself. My instructions to the bricklayers were to do the work thoroughly well, and so far as I could see they did it well. When the walls were finished the bricklayers were out of employment. Newman came to me and begged of me to give him something else to do, and I sent him out to my private house to pull down a water-closet and build a small wall. He and another man took five days to do work which ought to have been done by one man in three days. When I spoke to Newman about the excessive time he tried to throw the whole of the blame on the other man. He said it was the other man's fault; he told him that the job was taking too long, and that they would get into trouble. After that Newman came to me again for work, but I refused to employ him any longer at day-work, but there were some pits to be built at Darling Harbour in the shed, and I told him I would let it at piece-work, labour only. In carrying out this work Newman had to employ some men, and on the pay-day my manager gave Newman the money to pay the men whom he had employed. Newman left his coat and trowel in the shed, slipped through the men, got on the other side of the building, and came over to look at the Town Hall clock as he said, and see whether it was time for knocking off. He had the money to pay the men with when they knocked off, but instead of doing so he slipped away. The men came out to my house on Saturday night, but I was not at home, and they left word that they had not been paid for this work. On the following Monday I met the men down in the shed at Darling Harbour, and they told me that they had been to Newman's house, and that his wife had not seen him for some days. He had left her to starve, and had drunk the money the men had earned. On the Tuesday I paid those men a second time for the work they had done. That was the last I saw of Newman. But I am prepared to say this, if Schey and Newman will come down to the shed and indicate to me any wall—and there are about 150 platform walls and about twenty pits—if they will point out anything in any wall or pit I will pull down that part of the work at my own cost to show that it has been thoroughly well done. The work was done under the superintendence of Mr. John Payton, an officer who has been employed by the Government I think for about thirty years. He was appointed by Mr. Goodchap, and he worked under Mr. Cowdery and the present Commissioners continued him as Inspector until this work was finished. Mr. Payton is not in Sydney now, but he can be called here in a week's time. I say I am prepared to pull up any part of the work which Schey or Newman say is inferior. So far as Newman is concerned my manager cautioned him more than once to do his work well. When a bricklayer is laying bricks in cement he knows he should keep them wet, but Newman did not do this, and he was cautioned by my manager, and he was threatened with the sack; and if there is a single brick on that job that is not well laid it is through Newman's own scheming and dishonest nature. He had cement to do the work with, and, so far as I know, the work was thoroughly good, but I am prepared to pull it to pieces if they will come and indicate any part which they say is not well done.
10874. *Mr. Newman.*] May I be allowed to ask Mr. McSweeney some questions. I should like to ask him in reference to the statement that I got the pay of the men, and as to my leaving my wife in a starving condition. I think I should be allowed, in view of the character he has given me, to call witnesses to refute those statements.
10875. *President.*] You did not give yourself a very high character.
10876. *Mr. Newman.*] I should take it as a favour if your Honor will allow me to go into the box again. I may say that I am quite willing to go with anyone you may appoint and pick out this work. Certainly it would cost money, but I am a most unwilling witness here. It is through no fault of mine that I am here.
10877. *Witness.*] I may say, your Honor, that when I was standing outside the door with my manager Newman came up. He called my manager aside and said to him, "I do not know what I have got to say to-day." I said to Newman, "I know what I am going to say. I am going to give you a character."
10878. *Mr. Newman.*] I should like to refute the charges made against me. I think it is very unfair that such statements should be made about me.
10879. *Witness.*] I do not think it is the first time he has employed men and not paid for them, your Honor. I have a man in my employment now who told me only yesterday that Newman had done the same thing in another case. He got work done, and then did not pay the men for it.
10880. *President.*] What questions do you want to ask, Mr. Newman?
10881. *Mr. Newman.*] I should like to make a statement. I can say this so far as the crane pits are concerned. I put 4½-inch instead of 18-inch work, and that I can easily prove.
10882. *Witness.*] That is where we stepped the work on to the solid rock.
10883. *President.*] I think that will do so far as your evidence is concerned, Mr. McSweeney. If Mr. Newman wishes to go into the box and make a statement, he may do so. 10884.

Mr. J. M'Sweeney. 22 June, 1892.

10884. *Mr. Newman (having entered the witness-box).*] Well, gentlemen, after I had been doing some day-work for Mr. McSweeney, he thought so badly of me that so far from my begging for a job he sent me and a man named Parsons to his own place to do the work spoken of. We had a lot of pulling down to do and cleaning bricks. We had no labourer to attend on us, and this man Parsons was a laggard. On the Saturday Mr. McSweeney wanted us to work late, in order to finish the job. Parsons refused; but Mr. McSweeney kept me on to finish it. After that work was done, he told me to see him at Darling Harbour. I went down there and saw Mr. McSweeney, and he let me this brickwork, at the paltry price of 15s. per thousand—a price at which he knew no man could thoroughly do the work. I started these crane pits, and when I came down to take the gauge-rods to get the proper size, I found that in certain places I could only put in 4½ brickwork, or perhaps 6 inches; and as I came up it kept getting wider towards the embankment until it got to 18 inches, which was the required size. That was well grouted up against the rock; but in my estimation the work is not fit to carry hydraulic cranes. As to the character Mr. McSweeney gave me, that I think has nothing to do with this inquiry. As to the payment of men, I may say that Mr. McSweeney gave me £5 for four men for five and a half days' work. I left the men, and told the Manager I would go to Redfern Railway and see if I could find Mr. McSweeney, and ask him for more money; but unfortunately I did not find him, and in looking about for him I got a drink or two into me. The men went to my place, and then they went to see Mr. McSweeney, and Mr. McSweeney, not wishing to get exposed, I suppose, paid the men some of the wages due to them.

Mr. William Alexander Oakley recalled and examined:—

Mr. W. A. Oakley. 22 June, 1892.

10885. Were you in the service of Messrs. Gilliver and Tait? I was, your Honor.
10886. When? In May, 1891.
10887. What were you doing? I was engineer for the contractors.
10888. Who was the Government engineer in charge? Mr. Walter Shellshear
10889. What line were you on? On the section between Long Cove Creek and Croydon
10890. Have you anything to point out to the Commission as to the way in which the work was done on that line? Not unless you wish to ask me anything, your Honor.
10891. *Mr. Young.*] What was the character of the work on that section? It was duplication work.
10892. What did it include? Cuttings and brickwork—in fact, all the work generally connected with duplications.
10893. Did you superintend this? Yes; on behalf of the contractors.
10894. Was the work done properly? No; it was not, at least in lots of cases.
10895. In what way was it not done properly? In many cases the embankments were not made up to what they ought to have been.
10896. Not so high? They were not made up to the full width, as shown on the plans.
10897. Was there the proper slope? The embankments were not made up in accordance with the sections and plans, nor were the cuttings the width they ought to be.
10898. Were the widths right from the top? In some cases they were not.
10899. Were they less? Yes.
10900. Can you point out those cases? I can by referring to some notes I have.
10901. *President.*] You were the Engineer for the contractors? Yes.
10902. And you passed that bad work? No, I did not. I was only on the contract for a short time, and I found out certain mistakes, and I was told to leave.
10903. By the contractor? Yes, no doubt at the instigation of the Government engineer, Mr. Walter Shellshear.
10904. *Mr. Kethel.*] Why do assume that? Have you any reason for believing it? Yes, because it was after these mistakes were found out that I received notice to go, from the contractors. In one case, between Ashfield and Croyden, I found out where a wall had been put some 6 feet off the Government property—that was off the right alignment—and it necessitated the building of a much higher retaining wall than was shown on Mr. Foxlee's or Mr. Angus' plan.
10905. *Mr. Young.*] Was that on private ground? It had the effect of giving a long strip of land at mileage 5·16 from Ashfield to to the adjoining property-owners. If measurements were taken at that point, my statement would be proved correct.
10906. How much do you say the wall was out? About 6 feet.
10907. Six feet out? Yes, it was that much out of the right alignment, and it has caused the line near Ashfield station to curve in a most unsatisfactory way, and not at all in accordance with the plan
10908. *Mr. Kethel.*] Is that on this side of Ashfield? It is on the right-hand side going to Croydon from Ashfield.
10909. *President.*] Did you point this matter out to Mr. Shellshear? It was pointed out to Mr. Wallace, the manager for Messrs. Gilliver and Tait.
10910. Did you bring it under the notice of Mr. Shellshear? It was brought under his notice, and I got notice to go.
10911. Did you bring it under his notice? No; I brought it under the notice of Mr. Wallace, the manager for the contractors.
10912. How do you know that it came under the notice of Mr. Shellshear at all? I know this, that after I took certain measurements to prove this work, Mr. Wallace told me I had to go, because I was finding out certain mistakes in the work.
10913. *Mr. Young.*] Was that wall removed? No, it is still in existence.
10914. *President.*] Then it is quite possible to verify your statement? Yes; measurements taken at mileage 5·15 or 5·16, will prove what I say.
10915. *Mr. Kethel.*] You say the effect of this mistake is to cause the line to curve in a very unsatisfactory way? Yes, and you can see that when you stand on the Ashfield station platform.
10916. *Mr. Young.*] Did you find any other defects? Yes; on the opposite side of the line, on a Mrs. Smith's land, several feet had been taken, doubtless to make up the right width, and to remedy the mistake on the other side.
10917. *President.*] Several feet taken away from a private owner? Yes, from Mrs. Smith.
10918. Has she complained of it? I do not suppose she is aware of it yet, your Honor.
10919. How much will she get if what you say is correct? I should think about 4 or 5 feet.

Mr. W. A. Oakley. 22 June, 1892.

10920. *Mr. Young.*] Is that an embankment or a retaining-wall? It is a cutting, and I believe they are about to build a retaining-wall.
10921. *President.*] Do you know of any case where the contractors have sold quantities of earth? Yes, your Honor, in a great many cases a lot of material was sold from the cutting. I know that a quantity of stuff was sent to the brickworks at Croydon to be made into bricks, and other material was sold to a Mr. Marks. A number of pieces of land, I believe, have been made up with material obtained from these contractors.
10922. Who were the contractors who sold? Messrs. Gilliver and Tait.
10923. Would that make very much difference? Yes, because the banks have been put in slack, and the curves were not made in accordance with the plans.
10924. That, I suppose, was in order to have more earth to sell? That is what I take it to mean, your Honor. The banks are very slack in several cases.
10925. Will you mention where this has been done? In one case which was pointed out to Mr. Shellshear, when I was setting out the ballast widths, I noticed that the embankment had not been made up to within 2 feet of its proper width. Mr. Wallace's attention was first drawn to the matter, and Mr. Shellshear came and looked at it, and he said it was near enough.
10926. *Mr. Young.*] Are the widths marked on the plans? They are marked on the sections.
10927. *Mr. Kethel.*] Is it not absolutely unsafe to run trains on an embankment 2 feet narrower on the top than it ought to be? I think it is. I have a section here showing what the new embankment ought to have been, but if an examination is made the embankments will not be found anything like the width shown here. This section shows 15 feet from the centre between the two rails to the top of the embankment. [*Sketch produced.*]
10928. This only shows an embankment on one side? That shows the type of embankment which is supposed to have been followed throughout.
10929. *Mr. Young.*] The width on the top of the embankment is not marked on this sketch? I think there is a line showing that. I think it is 15 feet from the top of the line to the centre of the embankment.
10930. Is this an embankment as it should be? Yes, that is taken from the Government plans. It is a type drawing.
10931. *Mr. Kethel.*] Had the work been going on for some time before you were engaged? Yes. A Mr. Stephens was in charge of the work prior to my going there.
10932. I suppose the department furnished all the plans and detail drawings for carrying on all the different classes of work? Yes.
10933. And they are in the possession of the contractors, I suppose? Copies of them.
10934. So that you, as contractors' engineer, would be able to verify the measurements of the different classes of work? Yes.
10935. *Mr. Young.*] Were you there at the beginning of the contract? No, sir; the work had advanced some months.
10936. Were the plans there when you were there? Yes.
10937. The original plans? Yes.
10938. You were not there when the work was set out? No. On 14th May I had a notice from Messrs. Gilliver and Tait accepting my services as engineer, and I entered their employ on the 24th May, 1891.
10939. Did you do any measuring in connection with this work? No, measuring up.
10940. You did no measuring? I did no measuring-up of any portion of the work, but I set out certain portions.
10941. Did you do that setting out yourself? Yes; and it was checked by the Government engineer.
10942. You set out the work yourself? Yes; some portions of it.
10943. Did you set out that part which was wrong? No; certainly not. That work was finished.
10944. That was finished when you went there? Yes.
10945. Do you know whether any alterations were made in the work after the contract was entered upon? Alterations were made in the size of walls. In some cases the size was reduced from that which was shown on the plan.
10946. Were the platforms altered in any way, or were any extra platforms put down? No; but there was a slight alteration in the level of the platform at Ashfield station from the original plan.
10947. An alteration in the levels only? Yes; in the levels.
10948. You say you had nothing to do with any measurements whatever? I set out some portions of work myself, and in connection with the platform wall at Ashfield, I measured up the concrete for the manager.
10949. Apart from that mistake in connection with the wall, do you know of any other places along the line where errors have occurred? Yes; on this side of the Liverpool Road Bridge, on the left-hand side going from Croydon to Sydney.
10950. What took place there? Sufficient cutting was not excavated according to the plans and sections.
10951. It was not taken out as shown in the section? No; it should have gone further back, according to the sections.
10952. In what way further back? In width.
10953. Was it wide enough for the various lines which it was intended to put upon it? Yes; but it was not the width as shown on the sections.
10954. Was any different strata met with? No; I think not. It was all good soil, but this is the effect of what took place. If the work was paid for according to plan there would be more work paid for than was actually done.
10955. But I presume the work would be measured; did you measure it? I measured it, and found that it was wrong.
10956. Did you make up any pay-sheets with the Government engineers? No; that was done by the manager.
10957. You say the manager did that? I think he did, and, so far as I could see, he was paid for the work according to the plan.
10958. Was it not your place as engineer for the contractors to make the measurements? It should have been, but I was only with them for about four or five weeks.
10959. Four or five weeks altogether? Yes.

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10960. Is there any other place where you think an error was made? There are several places along the embankments where the material has not been put in which should have been put in. That high embankment at Summer Hill, just after you pass the bridge from Lewisham, is deficient in this respect.
10961. Is there a sufficient width of embankment for the lines that run upon it? There is sufficient material put in to enable the sleepers to be laid, but it is not the width as shown on the section. It has not gone far enough beyond the sleepers.
10962. Was there sufficient earth in the cutting? There was not sufficient taken out at the point I speak of.
10963. Do you attribute the deficiency in the embankment to the deficiency of cutting? No, there was plenty of material taken out, and a large quantity was sold which might have gone into the embankment.
10964. Is there any other place you can mention? No, I cannot remember, now.
10965. *President.*] Do you remember the subway at Summer Hill? Yes.
10966. Was there anything wrong there? It was not in accordance with plan. There should have been 10 feet from the underneath portion of the rail to the pathway below, and I believe it is only about 8 feet.
10967. You say it is 8 feet instead of 10 feet? Yes, your Honor.
10968. Where was that? That is in the Summer Hill subway.
10969. Is that in what you call the wing-walls? That would include the wing-walls and the side walls.
10970. Was any other mistake made in the Summer Hill subway? There was very little drainage put in the walls, and I anticipate trouble because of that later on.
10971. *Mr. Kethel.*] Have any apertures been left in the wall? Only in some portions.
10972. You believe that there are an insufficient number of weep-holes? Most certainly, in many places there is a deficiency of weep-holes for the drainage.
10973. Did I understand you to say that if the material taken from the cutting had been put on the embankment it would have made it the specified width? I should think it would and more, judging from the enormous quantities taken away to make up land in and around Ashfield, and also sold to the brick-makers.
10974. Therefore, in your opinion, the contractors have wronged the Commissioners by selling for their own benefit some of the material obtained from these excavations, and which should have been put into the embankments to make them in accordance with the specifications? Decidedly.
10975. *President.*] Was that pointed out to the officers of the Commissioners? It was pointed out I know in one case to Mr. Shellshear, because I had been asked to set out the ballast widths, and when my pegs were put in they were shown to the Government engineer, and he ordered them to be set back. The pegs were set back, and the widths were less than they ought to have been.
10976. When you say this has been done, did you see it done yourself? Yes, I saw it done myself.
10977. Are there any other matters you wish to mention—is there anything further about the walls and foundations? Yes; in many cases the thickness of the walls is less than that shown on the plans. At point 5-16, which I have before alluded to, the wall was reduced very considerably. I do not know whether the work has been paid for according to plan. If so, more has been paid for than was done. For instance, I have a section here which shows that the wall at the basement should have been four bricks thick. It is only put in three and a half and the measurements graduated up something in this fashion: Three and a half bricks thick was reduced to two and a half. At three again, it was reduced to two, and two and a half was reduced to one and a half. That would mean considerably less brickwork than was shown on the plan.
10978. *Mr. Young.*] But if it was found not to be necessary, and was deducted, that would be a saving, would it not? Yes, if it was deducted.
10979. Suppose the engineer in his judgment considered that there was no need to build a wall according to the measurements in the plan, what then? I suppose it would be wise not to do it, but seeing that this wall was higher than was provided for in the plan, and seeing the material that has to be retained, I anticipate there will be trouble with this wall in the future.
10980. That is your opinion? Yes.
10981. *President.*] What are your qualifications, Mr. Oakley? I am an engineer and architect; I have done nothing else all my life.
10982. What training have you had as an engineer? I served my time with Mr. Whitehead in the county of Somerset, in England, and I was brought up under one of the Royal Engineers. I was engaged on prison buildings chiefly.
10983. *Mr. Young.*] Have you been used to retaining-walls and that sort of thing? I had not been used to railway work before I came here.
10984. *President.*] You say you had not been used to railway work? No, your Honor.
10985. *Mr. Young.*] You have not had much experience of retaining-walls? I have not.
10986. And yet you offer an opinion? I give an opinion upon what I have seen. I saw that wall at Liberty-street, Newtown, and in my opinion that wall gave way, owing to want of proper drainage at the back, and it has been rebuilt without proper drainage.
10987. With respect to these embankments, who is the proper person to decide the width over and above what is required for the lines? I should think the engineer who prepared the plans, but these alterations, so far as I can make out, were made by the Inspecting Engineer or the Resident Engineer.
10988. Is it not sometimes possible to make a saving when you come to the actual doing of the work? Yes; very considerably sometimes. If you could sell this material instead of putting it into the embankments, great profit could be derived from it. I maintain that the Government Engineer should see that proper measurements should have been made up.
10989. While you were on the contract, was anything done in your knowledge to favour the contractors, other than what you have already described? Yes; at one place at Ashfield we put in an enormous amount of concrete, and I was asked by the manager to obtain a measurement of what had been put in. I gave a measurement, and it was not sufficient for him; he wanted more, and he said he would leave it to me to put right. I do not know how it has been paid for. I have not seen the bill.
10990. Did you measure it? Yes.
10991. With the Government Engineer? No.
10992. Then you have no knowledge of whether the Government Engineer measured it? No; but I should presume it has been paid for, according to the plan as is provided in the specification.

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10993. *President.*] However, you know nothing about it? No, your Honor; not about that.
10994. *Mr. Young.*] You have had nothing to do with the measurements? No; they were done by the manager and the Government Engineer and Inspector.
10995. Whether they were overpaid or not, you do not know? No; I do not.
10996. *Mr. Kethel.*] This bridge you were speaking of at Liberty-street, Newtown, was that constructed under your superintendence? I had nothing to do with that.
10997. Was it built before you went on the works? Yes; I saw it giving way, and I watched it for some time, and I saw it pulled down.
10998. Do you know the cause of it falling? From what I saw, I should think that the wall had been pushed out bodily by pressure of the material at the back of it. There was not sufficient drainage behind the wall, and I anticipate that the same trouble will occur with other walls.
10999. Then that would be the fault of the design, and not the fault of the contractor? If the walls had been reduced, as they have been reduced at Ashfield, it would not be the fault of the design.
11000. But you are not in a position to say that this wall fell because the dimensions had been reduced? No, I am not.
11001. *President.*] Do you know a case where a wall was built higher than was necessary? Yes; at the point 5-15 the wall is higher on account of its not being on the right alignment.
11002. What difference would there have been? There would have been a difference in the slope of the ground.
11003. What would be the difference in height? It makes a difference of about 3 feet. It was only shown on the plan as about 3 feet 6 inches, but it was built up to about 6 or 7 feet.
11004. *Mr. Kethel.*] What length is that? Several chains.
11005. *Mr. Young.*] Was it a level wall? No, it was a graded wall.
11006. Is it for the purpose of retaining the embankment, or is it simply a boundary wall? I should think it is intended to retain the embankment.
11007. *President.*] Do you know of any instance where a fence was put in the wrong place? Yes, at the point opposite the cart subway at Ashfield the fence is not in the right position according to plan. As I said before, it encroaches on the land of Mrs. Smith, and I take it that that has been caused by the mistake on the other side.
11008. *Mr. Smith.*] Would you let me ask the witness to point the place out on the plan? Well, about here. The wall ought to come in here.
11009. Please mark it on the plan? It is here. I was asked to set out this line of fencing, and I found that some one had set it out before, and that my pegs were considerably out from the other pegs. I made inquiries who had set out the line, and I was told it was Mr. Shellshear. It had encroached on Mrs. Smith's land about 6 feet. This wall ought to have been 6 feet further out. You only want to stand at Ashfield platform to see it. The curve comes out very awkwardly on account of the setting out of that wall.
11010. That is where you say the line does not come out to the boundary? From this point towards Croydon.
11011. We will put a B here and an A here;—is that right? Yes; that is it.
11012. *Mr. Young.*] In regard to the 6 feet of encroachment on Mr. Smith's land, had you the deed of the land so as to get the proper area? I had a copy of the plan from the deed.
11013. And you surveyed the land? Yes.
11014. The whole of it? Yes.
11015. And found that was the correct point? Yes.
11016. Did you do that on both sides of the line? Yes.
11017. On both properties? Yes.
11018. Is it an extensive property? Not Mrs. Smith's, but on the other side it is a very large property.
11019. You measured the whole of that to get the right point down to the line? Yes; I took my data from the plan.
11020. And it was from the survey you made that you say it is so many feet wrong? Yes; from measurements taken from the position I found that was wrong.
11021. How many acres are there in that? Several chains long and several chains wide.
11022. *Mr. Smith.*] You surveyed the whole paddock? Yes; the whole of that paddock.
11023. *Mr. Young.*] Twenty acres? I think it is quite that.
11024. Did you measure the whole of it? I had nothing to do with that.
11025. Still it is all on the deed? I should take it, because it is all fenced in in one place.
11026. How did you get that line to the rail? From the data given on the plan and the railway lines and the sections.
11027. *Mr. Smith.*] On which plan;—you mean this plan? On the plan in the section. If you have the sections I think I can show you better. I think it is the sectional plan.
11028. I have nothing else other than this. Show where you made your survey from;—are you an engineer? Yes; I am an architect and engineer.
11029. And a photographer? And a photographer.
11030. Where did you survey it from? From the rail.
11031. You did your survey from the rail? Yes.
11032. What sort of an instrument did you use? A theodolite.
11033. You know how to use a theodolite? Yes.
11034. And then did you keep a record of your survey;—did you make a plan of it? No. When I left Messrs. Gilliver and Tate's service I wrote this letter, which I intended to send to the Railway Commissioners to point out all these things. That was very soon after I left the contractors, because I considered I had been badly treated by Mr. Shellshear, and I wrote this letter, which I intended to send to the Commissioners.
11035. *Mr. Smith.*] That is the original? Yes; and after this letter was written I decided not to send it, and hearing of this Commission I put it in the hands of Mr. Schey, and I take it that a lot of these questions have been framed from this letter.
11036. *President.*] Mr. Schey has mentioned your name, and a number of questions he wished to have asked? I believe these questions are framed upon this letter, as far as I can learn.

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11037–8. Why did you not submit that to the Commissioners, if you thought they had been badly treated? I intended to bring the matter before them, but I have not had fair treatment from them.
11039. When was that letter written? On the 24th June, 1891.
11040. A long time before this Commission was appointed? Twelve months ago. I intended to put this letter in the hands of a member of Parliament to have questions asked on the subject.
11041. You said you first thought of sending it to the Commissioners? My first thought was to send this letter to the Commissioners, but I did not do so, as I considered myself illegally removed from the Railway Department by the Commissioners.
11042. When were you removed from the Railway Department? About two years ago.
11043. Then it was before you wrote that letter? No; after I accepted employment in the service of Messrs. Gilliver and Tate.
11044-5. I ask if you were removed from the service of the Railway Commissioners? Yes; nearly two years ago.
11046. If that letter was written one year ago, it must have been a year and a half when you were removed from the Railway Department? No; it was after. I left the service in 1889.
11047. *Mr. Kethel.*] You were a year away from the Railway Commissioners? Yes.
11048. *Mr. Smith.*] He left the service since September, 1889.
11049. *Witness.*] Yes.
11050. *President.*] You wrote that letter in June, 1891? Yes.
11051. And you wrote that letter a year and a half after you had been removed from the Railway Commissioners? Certainly.
11052. That is what I asked before, so that at the time when you wrote that letter and intended to submit it to the Railway Commissioners, you must have had your grievances against them in your mind? Certainly.
11053. Why, then, did you not send that letter to the Railway Commissioners? Because, in my estimation, I had not received fair treatment from the Commissioners when they dealt with my case.
11054. And you thought that was sufficient reason not to let the Railway Commissioners know that in your opinion they had been treated wrongfully by the contractors? Yes. Another reason was, that the contractor had not wronged me, and I could quite see that it was in the interests of the contractors I should leave their employment. They had not done any wrong to me, and I thought to myself, I will let the matter drop, so far as this letter is concerned, until I can get questions asked in Parliament, which will have the same effect.
11055. *Mr. Young.*] What had the Commissioners to do with it if you were employed by the contractors. You were employed by the contractors? Yes.
11056. Then why complain to the Commissioners; they did not employ you? Because I thought it was in the interests of the public that these matters should be brought forward.
11057. But the Railway Commissioners did not employ you, and did not discharge you? No.
11058. Where is the grievance then? That was in a prior case. I was removed from the Civil Service by the Commissioners, and that case is not ended to my mind yet. I have been over two years from the Commissioners, and I contend illegally, and that case is pending between the Commissioners and myself.
11059. *Mr. Smith.*] Is there any case pending? ——
11060. *President.*] That is the reason why you did not inform the Commissioners of a case where they had been robbed by the contractors? That is a portion. I considered he was wrong, and I did not consider that the Commissioners, after the treatment I had received from them, would take much notice from me.
11061. You did not consider that it was the country which was being injured? I did, and hence my reason for placing the matter in the hands of a member of Parliament, that justice should be done, and that it should be brought up.
11062. *Mr. Kethel.*] It appears to me, Mr. Oakley, that your grievance is against Mr. Shellshear? Yes, partly. I was brought into collision with Mr. Shellshear some two or three years ago, and I blame him for removing me from Gilliver and Tate's contracts, because when I endeavoured to find out from the contractors the reason of my removal, I went to Mr. Tate, and found out from him that he had no feeling against me, and that nothing I had done wrong in the work had caused my removal. I was advised by Mr. Tate to see Mr. Wallace, who was the manager, and from a conversation I had with Mr. Wallace I could see that Mr. Shellshear was the means of my removal, and I attributed this hostility of Mr. Shellshear to the fact that I had found out certain mistakes for which I considered he was responsible as the Government engineer.
11063. Did you take any steps to acquaint Mr. Shellshear or the inspector that they were doing this, or did you allow it to pass without comment? It was well known that, in the interests of the contractors, I should have nothing more to do with it. It had nothing to do with me, although it was distinctly specified that no soil was to be sold, but I did not know whether the contractors had permission from the Government to sell the stuff or not.
11064. *President.*] Do you know now? Yes; I know now that there were thousands of loads disposed of that should have gone into the embankment.
11065. What I mean is do you know that the contractors did not get leave? No; I do not know that.
11066. That is what I want to know? But I know the names of persons who have bought the soil.
11067. *Mr. Smith.*] I would like to ask Mr. Oakley a question or two. In the first place, you left the contractors, and you got no satisfactory reason for knowing why you left them? No.
11068. Had you anything to do with the setting out of the sub-way at Summer Hill? Yes; I had.
11069. How many times did you try to set it out? I cannot tell that. I know that every time I tried to set it out there was something wrong about it.
11070. I only ask you because I thought you did not know why you had left the contractors' employ. Who had to pay for the setting out of this subway these different times at Summer Hill. Was it the contractor or the Government who had to pay for setting it out? I cannot say. I was paid by the contractors.
11071. How long have you practised as a photographer? I am only an amateur photographer.
11072. And when were you admitted as a Member of the Institute of Civil Engineers? I have not been.
11073. I thought you said you were a civil engineer? No, I did not.
11074. Then you are not a civil engineer? Yes; my qualifications are those of a civil engineer. I have done nothing else all my life.

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11075. You have never been acting as draftsman in the Railway Department? Yes; I was for several years, and that is part of the qualifications of an engineer.
11076. That is where you got your qualifications as an engineer? Yes; partly.
11077. *President.*] You were making plans of boilers, were you not, in the Railway Department? No, your Honor. I gave evidence about some boiler material which was in the Stores Department.
11078. Did you not give some evidence about plans? No; I think not, your Honor.
11079. *Mr. Young.*] You were in charge of a store? I was in the Locomotive Department, and I had charge of some engineering stores.
11080. *Mr. Smith.*] You were storekeeper for some time? I was acting storekeeper. I was sent down from the Locomotive Engineer's office to make certain alterations in the shop called No. 15.
11081. And that is where you got part of these qualifications? No; that has nothing to do with it. I have gained my qualifications from experience of sixteen or eighteen years. I have done nothing else all my life.
11082. Do you know how work done on the railway line is paid for, whether by measurement or by plan? It could be paid for by measurement.
11083. Do you know whether this work was paid for by measurement or by plan? I cannot say.
11084. The whole of the evidence you have given is based upon the assumption that the work is paid for by plan? Decidedly.
11085. What knowledge had you of this starting point or the measurement of that line you refer to? I endeavoured to get this, but I made a start with Messrs. Gilliver and Tate.
11086. Did you get it? No; but I will show you how I got it. I got it from Mr. Stephens, who was engineer to the contractors before me, and he told me all the data on which the work was set out from the existing line, from the outside rails from Sydney, on the road from Parramatta.
11087. So that the whole statement you have made was based on some information you got from a man named Stephens? He is the contractors' engineer now. He is a man who held a position in the Civil Service for many years.
11088. I suppose if you had the title deeds you could make a survey? I could.
11089. Have you ever tried to make a survey from title deeds? Yes.
11090. On what land and what place. Where did you ever make a survey from title deeds? From this point here.
11091. What title deeds did you have? The plan attached to the title deed.
11092. What title deed? A copy of the plan attached to the title deed was placed in my hands and I was told it was the title deeds plan, and from that I made my survey.
11093. *President.*] That is a survey from the plan and not from the deed? Yes.
11094. *Mr. Smith.*] So that all you know about this is that you made your survey based upon the position of a rail—that is all? Yes; that is all.
11095. And where did you take your starting point on that rail? From the rail itself; from the outside edge of the rail.
11096. At what point of the rail; rails are rather long things? From the outside edge of the rails.
11097. But at what point of the rail? From the outside edge.
11098. That is the outside edge; but from what point. Will that give you a starting point of a rail 30 feet, 30 feet, or 20 feet long? I am only talking about the width.
11099. How can you measure it if you had no starting-point? No doubt the proper data should have been marked on the plan.
11100. You had no proper data for a starting point? Nothing but the rail.
11101. That was the rail running from Sydney to Penrith? Yes; that is how I accounted for all this work being set out wrongly.
11102. Had you any data for setting out that subway at Summer Hill? Yes; there was a plan.
11103. You took Mr. Stephens' place? Yes, I did.
11104. Why did Mr. Stephens leave the contractors? I heard on account of drunkenness and the mistake which had been made.
11105. Drunkenness on the part of the contractors was it? No; drunkenness on the part of the engineer and Mr. Stephens; and I believe for the same reasons he left the railway employ.
11106. And after he had left the contractors he gave you this data? Yes; I asked him.
11107. And was he sober when he gave it to you? I think he was.
11108. You think he was then? Yes; I am sure he was. Mr. Stephens is a gentleman, although he drinks a little.
11109. *President.*] And you never verified the data yourself? Yes; I took the measurements from the full sections shown, and I found this was several feet short from the section shown on the plan. If the section is measured across it will be found that this section is several feet slack, or several feet less than it should have been.
11110. What do you mean by several feet less? Several feet narrower.
11111. You mean the distance between the railway fence was less? There is a wall on each side.
11112. Do you know the railway fence? Yes.
11113. Are there any fences there? Yes.
11114. Is the distance between the fences less than before the contract? I cannot say that.
11115. You have stated that in laying out this side here that the adjoining property, belonging to Mr. Pope, had got a lot of extra land? I did not mention any name.
11116. Did you mention the owner? Yes.
11117. And you say that Mrs. Smith has some land taken from her? Yes.
11118. Do you know whose land that is you have marked B? I do not know.
11119. And you say that the line was laid out so that an owner has got more land than he ought to have? Yes; 6 feet more than he ought to have.
11120. Do you know if the railway fences have been shifted? I believe they have been. If you take the measurements at the point I have given you, from wall to wall, you will find that the wall is not in its proper place by nearly 6 feet.
11121. And if the wall were put out to its extra distance it would have made the line 6 feet wider? Yes.
11122. And it would have cost so much more to make it? Yes; but it would have been a wise thing to do, because if it had been done it would have avoided an awkward curve at Ashfield station.

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11123. If you had been the engineer-in-charge you would have spent extra money to make it wider? I should have done it to make the curve easier; I should have made use of as much as I could of it to get an easier curve.
11124. What is the curve at that point? I do not know.
11125. Do you not know the radius of it? No.
11126. Have you any idea at all? I have no idea at all. But these points are easily proved by measurements. If you take the plan and measure this it is very easily proved.
11127. Is not a 25-chain curve a very fair one; a very fair and easy curve? It would be an easy and fair curve.
11128. Do you think the curve there is 25 chains? I have no idea what it is.
11129. You have no idea what it is; none at all? No.
11130. *President.*] Do you know whether it is an easy or sharp curve? Yes; it is a fairly easy curve, but it might have been made easier still.
11131. *Mr. Smith.*] Do you think it is as easy as 25 chains? It may be.
11132. Do you think it is fully 25 chains? I cannot say, I do not know what the curve is there.
11133. Just look at the plan here where you have marked it, will you say it is not 50 chains? Yes; it is marked here as 50 chains.
11134. Will you undertake to say it is not a 50-chain curve? I will not undertake to say that.
11135. Is not that a very easy curve? Yes; a very easy curve.
11136. And, therefore, your evidence is that the curve was made sharper than necessary? I did not say that.
11137. I understood you to say that you would make it an easier curve? I say it might have been made easier if the work had been put in its proper place.
11138. *President.*] I thought you stated that it should have been widened at considerable expense to make it a considerable curve, and that if you had had your own way there you would have advised it to have been widened to get that result? I maintain that if the stuff had been put in, that ought to have been put in, and had not been deposited on the different pieces of land in Ashfield, the curve might have been easier still.
11139. *Mr. Smith.*] Independently of that sold for brickmaking materials, do I understand you to say that a great deal was sent to spoil? Yes; there is a piece of land at Matilda-street made up 3 or 4 feet all over the paddock.
11140. That has been at the cost of the contractors? It was done because it was an easy lead.
11141. But they still have to run it to spoil? Yes.
11142. Would it not have been easier for the contractor to put it on the line? No.
11143. This excessive stuff, were they paid for it when they ran it to spoil? They were paid for cutting it.
11144. Not for the stuff they ran to spoil? They were paid again by the people who bought the material, I take it.
11145. I do not mean the stuff sold to the brickmakers, but this stuff put over in Ashfield;—were they paid for this? I know they were paid for it, because I can give you the names of people who bought stuff; people who are prepared to come here and produce receipts for the material.
11146. Now, about this wall which you say was built wrong, would you swear it was not built on the line of the old fence? I cannot say; I have not seen that portion for some time.
11147. Do you know whether the railway line at the point where the sub-way goes in is in accordance with the boundary of the title deed;—will you undertake to swear it is not? I will undertake to prove that that that fence ——
11148. How will you prove it? By taking and showing you the place.
11149. That will not help me? You can see from the plan.
11150. That will not help me for I cannot tell from the plan, nor can any other human being, you see you will have to give me a starting point? The starting points were taken from the roads.
11151. Suppose this Commission wanted to go out and identify the place, could you give them a starting point? Yes; I could give them a starting point from which this information might be obtained.
11152. Where was the starting point? It was a peg in a paddock, there was a certain peg from which I was told to make a survey.
11153. That is all you know about it;—with this plan before you you cannot find out whether it is right or wrong? There is sufficient mistake to show it. If you go to Ashfield and look along the line of fence you can see it, and also this subway which goes right across here owing to this mistake in the wall.
11154. What mistake? In setting out this wall. There is a wall along here from 5·16 to Ashfield.
11155. There is no wall here at all? There is a wall right along here, and it is quite out of alignment as shown on the plan. The section will show the wall.
11156. How long were you on this contract of Gilliver and Tate;—I ask you to remember this because you are a little bit mixed about your dates? I will tell you. The letter which I received from Messrs. Gilliver and Tate that my services were accepted was dated 14th May.
11157. Of what year? 1891.
11158. When did you start work? On the 25th May.
11159. Did you remain there? I had very abrupt notice to clear out.
11160. When did you get this notice to clear out, what was the date? It was on the 16th June. The letter was as follows:—"Dear sir,—We beg to inform you that your services will be dispensed with in one week's time from date," on that I wrote—"Dear sir, ——"
11161. *President.*] You were there three weeks' time? Yes; and I continued on the work for some time trying to find out the reason of my removal, and I gave annoyance to the contractors by doing so, because I asked Mr. Gilliver whether he had considered the matter about my removal, and he said, "I have seen quite enough. You have been about the last two weeks looking at the work, and I have seen quite enough to tell me that we do not want you here."
11162. *Mr. Smith.*] Beyond the place you have referred to here, is there any other place, so far as has come under your notice, where the curves were not carried out according to the plans, consequent on material being taken away? If the material had gone in, the curves would have been made much better than they are.
11163. But is there any other place? No; I cannot point out any other place now, as it is twelve months ago since I had anything to do with the work.

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11164. You cannot point out any other now? I cannot point out any now, I dare say I could if I went along the line.
11165. You have seen other places? I have seen where the curves might have been taken out if that material had been put in.
11166. By spending money you could put in easier curves? No; by putting in the material taken out.
11167. So that if you had been appointed the engineer for permanent-way you think you could have saved money to the country as the result of it? Yes; I dare say I could. I am sure I could. I consider there has been a great waste of expenditure on the walls along the line, and the work has been very much under-inspected.
11168. And your idea about that subway and some other places is that there will be a lot of trouble in the future for want of sufficient drainage? I am sure of it, not only sufficient drainage, but sufficiently good material used in the cement nor tar.
11169. Now, we want to deal with the question about the quantity of drainage;—have you had any experience as a civil engineer to qualify you to speak on that subject? Yes.
11170. Where? In England.
11171. What experience had you in England in making subways? I told you just now I have not had anything to do with railway works.
11172. Have you ever made a subway in your life except this one you tried three or four times to set out and failed? I did not say I failed in this. Mr. Tate told me he believed I was right in my survey of that subway and that Mr. Shellshear was wrong. You have only to look at it now to see whether I am right or wrong. Ask a qualified man, and he will tell you whether I am right or wrong.
11173. I suppose you cannot get a better qualified man than yourself? Well, seeing I know where the points are, I might point it out to him; but I should not like to undertake the work.
11174. As a matter of fact about these embankments which you say were not made to the proper width? Yes.
11175. You say that certain embankments were not made to the proper width? Yes.
11176. You do not know whether they have been paid for according to plan or to measurement? The specification says that the work will be paid for according to plan. I maintain that if they have been paid for according to plan that a lot of material has been paid for which has never gone in.
11177. You have in your hand a copy of the specification? No; I have not.
11178. I thought you brought it into court? No; I have a similar one.
11179. Will you turn it up and show the Commission the place where it says it will be paid for according to the plan;—this is the actual one, it will help you perhaps? Seeing that the work was so much under-inspected, I do not see how the work could be paid for by measurement.
11180. This is the portion you are speaking of? After there is another clause.
11181. Remember you are on your oath? I have a copy here, and I fancy they are all the same.
11182. *Mr. Eddy.*] What contract is that? It is the Ryde to Hornsby line.
11183. This has nothing to do with the matter under consideration.
11184. *Mr. Smith.*] You are on your oath, and I do not want to put words into your mouth, just point it out; I do not think I need trouble you; as a matter of fact it is not in it, because the Commission have the original contract; I only gave you the opportunity to protect yourself;—can you tell me, as you know so much about this contract of Gilliver and Tate, whether there was an excess of material taken out of the cutting more than was necessary for the embankment? Yes; I think there was a certain amount of spoil.
11185. Over and above the embankment? Yes.
11186. Can you give the Commission any idea as to the probable amount of the surplus? I cannot say.
11187. There would not be 1,000 cubic yards? More than that I should say.
11188. Will you undertake to say there were 40,000 cubic yards? I cannot say that. I know there were large cuttings.
11189. There was an enormous amount of stuff sent to spoil? Yes; that an enormous amount of stuff went to spoil is evidenced by the pieces of land which were made up round and about Ashfield. I believe the Ashfield Council bought a lot of stuff from the contractors, and I was asked by an inspector in the Education Department what the price was, as he wanted to fill up the school yard at Ashfield.
11190. There was one little thing you said last time you were examined, that you were secretary of a dismissed officers' association or something of that sort? No; I said I was acting secretary to an association of officers who considered that they were illegally dismissed from the Civil Service.
11191. Not from the railway service? Yes; from the railway service.
11192. Does that association include persons who have been dismissed by the contractors as well? No; civil servants; men who have been dismissed through the wrongful administration of the Civil Service and Railway Acts. There was a large number of men who consider that they have been illegally dismissed, and they intend to form an association to bring the matter under the notice of the Government.
11193. *President.*] Will it not be the simplest way to test this question by an action of law? I have been already at law; but because my declaration was wrong I failed. I could not carry it on myself, and so we collectively intend to try to bring the matter under the notice of the Government to get redress if we can.
11194. *Mr. Kethel.*] With reference to this matter to which you have alluded as being out of line, was the earth worked to that embankment made to one or both sides? It was on one side in some cases and on the other in another. For instance, if measurements are taken from 377 on the right-hand side, mileage 3·77 to Ashfield, there is a heavy embankment; and if measurements were taken along that you will find that the bank is very slack. That is on the right-hand side to Croydon; and further on, on the left-hand side, is where I set out the ballast widths, and where the pegs were set back by Mr. Shellshear.
11195. But if the original embankment was retained and the addition made, some at one point at one side and further along on the other side, how could the Engineer-in-charge move the line on one side; would not the old original embankment be the starting point from which additions would be made? Yes; that was shown in a section coloured partly red and partly green, showing the old and the new work. I maintain that a portion ought to have gone in which has not been put in according to the section.
11196. How would it be possible for a man in doubling the width of an embankment to be 6 feet out.

Would

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Would not the original part of the embankment be 6 feet out if the addition is 6 feet out of the measurement. If he is simply adding 10 or 15 feet or 20 feet to the width of the railway embankment, then is it possible that the whole work will be 6 feet more on the one side? I say it is 6 feet less on the one side. From that point 377, there is a deficiency, and on the other side further down there is an excess on the right-hand side.

11197. Yes; but when the work was simply adding a certain number of feet of widths to the original embankment? No; but that has not been added; and I show from the section I had just now there is supposed to be 15 feet from the centre of the road to the top of the embankment. That is the plan giving the new banks, and it is not so. If a measurement is taken now as the line is laid down you will find there is not sufficient material by a long way. There are not 15 feet from the centre of the road to the top of the embankment.

11198. But what I want to get at, Mr. Oakley, is this: The original railway embankment you assume as correct, and the boundaries on both sides correct. In this one spot to which we allude, where there are 6 feet too much or too little, the earthworks have consisted of simply adding a strip of embankment on to the original embankment? Yes.

11199. Then the original embankment must be 6 feet out if the addition is 6 feet out? Not necessarily.

11200. That is what I cannot understand; how an addition to the works should make it wrong on both sides. The original side must have been wrong? The additions have not been put in; there is a slackness in the embankment.

11201. But the slackness in the embankment will not cause the whole work to be moved over bodily to the one side? Yes; at the point where I speak of the whole road has been moved bodily to the left-hand side.

11202. The original as well? Yes; the whole lot has been removed bodily from centre to centre to the extent of 6 feet.

11203. There is another point which is not clear to my mind. You declare that the top of the embankment was 2 feet too narrow, that there was a difference of 6 feet at the bottom of the slope. I understood you to say that? At this point at Ashfield where I maintain the whole is out several feet from the proper alignment. If a true measurement is taken at mileage M. 5·16 over the embankment from the left-hand wall to the right-hand wall it would be found to be out.

11204. In this case you say the whole of the original embankment has been moved over? No, it is not sufficiently wide as shown in the section. At 5·16 which is the point I have brought under notice before there is not sufficient width of embankment as shown in the section.

11205. That is not the point I want to clear up. It is this: How is it possible that the whole line will be 6 feet too far south, we will say without interfering with the original railway line which has been standing for so many years? That portion has been altered a lot on this part. From this portion down to the Ashfield Station, it has all been moved considerably.

11206. And this embankment of the line has been wrongfully done? Yes.

11207. Under the additional works? I said there ought to be 6 feet more embankment on the one side, which would have made the line go easier into Ashfield, as intended on the plan. The plan is right but the work is wrong.

Mr. Shellshear recalled and examined:—

Mr. Shellshear. 22 June, 1892.

11208. *Mr. Eddy.*] You have had a long experience in laying out railway works? Yes, I have been at it a good many years.

11209. And you were in the service of the New South Wales Railway Department long before the Commissioners took office? I have been in the service more than ten years. I joined it in April, 1882.

11210. You are a member of the Institute of Civil Engineers? I am.

11211. And before you become a member of that institution you must show you have had considerable experience in carrying out works of large magnitude? Yes, I may say that I hold the certificate of Proficiency in Engineering Science from the Glasgow University.

11212. Did you lay out the boundary walls at 5·15 chains from Sydney? The boundary walls was built on the line of fence which was in existence at the time the works were started. It is built exactly on the fence line. The outside face of the wall is on the fence line.

11213. There has been no allowance of 6 feet to the adjoining owner? There has not been an allowance of 6 inches, much less of 6 feet.

11214. *President.*] When you say the old fence, what do you mean? The old fence which has been our boundary for thirty years.

11215. *Mr. Eddy.*] Did you lay out the railway boundary in connection with the new road on the opposite side of the line adjoining Mrs. Smith's property? No, the surveyor who prepared the plan for resumption put in the pegs on the ground, and I did not interfere with the resumption pegs.

11216. And, therefore, Mr. Oakley is under a wrong impression when he says you laid it out? I did not lay that out at all. I merely pointed the pegs out to the Engineer who succeeded Mr. Oakley.

11217. When was the resumption made? The resumption was made in connection to the alteration on the line.

11218. When was that? Just before the contract was let.

11219. We arranged with the Council of Ashfield to get rid of a level crossing at Alt-street by making a new sub-way under the railway at the western end of Ashfield Railway Station, and we had to purchase the land about a year and a half ago. (*To witness*): We have heard of certain walls being built of a less thickness than was originally intended. If that occurred it would be so much money saved to the Commissioners in the expenditure? Of course, in carrying out the work some of the ground we had to deal with was very good while other portions were very bad, in the bad portions I carried out a thicker wall than was shown on the plan.

11220. That could not be foreseen in making out the plan? No. Where the ground was good we reduced the walls in proportion, and where it was bad I increased the thickness of the walls.

11221. But the variations in thickness would be paid for. If you had to put a thicker wall the contractor was paid for the extra thickness, but if the wall was erected with half the thickness the Commissioners would pay so much less? The contractors were paid for the actual measurement of the work put up.

11222. Not in accordance with the plan? Not at all.

Mr. Shellshear. 22 June, 1892.

11223-4. *President.*] There would be a reduction if the wall was thinner? Yes; an increase if the wall was thicker.

11225. *Mr. Eddy.*] We have heard something about an embankment? If an embankment was not made of the width originally intended, the contractor would be paid so much less money? The contractor was paid for the amount of the excavation taken out of the cutting and he had to get rid of the material. Of course, if he had made it too narrow he would have to make it up with the ballast.

11226. But the Railway Commissioners would only pay for the actual quantity of earth put down for widening the embankment? Yes; for the actual amount of work.

11227. And it is not correct that the payments were in accordance with the plan, but they were made in accordance with the actual amount of work done? The actual amount of work done was what the contractors were paid for.

11228. And the final certificates have not yet been passed? No, not yet sent in; the work is not yet completed.

11229. *President.*] And the work done is ascertained by actual measurement and not by reference to the plan? By actual measurements only.

11230. *Mr. Eddy.*] We have heard certain material having been sold to outside parties. Material I take it, means earth or clay for brickmaking. Had you not a large amount of stuff which they had to dispose of? There must have been over 40,000 cubic yards to dispose of for which we had no possible use and which we had to get rid of. It rested with the contractors to get rid of it. It was not our business to get rid of it.

11231. And if the contractors had the good fortune to find clay suitable for brickmaking, it was a stroke of luck for them? It was a stroke of luck for them. It had nothing to do with the department.

11232. And in accordance with the practice of the department we had nothing to do with that? Yes; that is so.

11233. We have heard from Mr. Oakley, that he attributes his dismissal from the service of the contractors to some influence you brought to bear. I take it in carrying out the duties of your office you did not bear any ill-feeling against any of the contractors? I bear no ill-feeling towards anyone. I have no cause of ill-feeling towards Mr. Oakley.

11234. And I take it you would respect a man who fought for his employers' rights more than one who sacrificed them? Certainly.

11235. Did you use any influence with Messrs. Gilliver and Tate to cause them to dismiss Mr. Oakley from their service? No. I used no influence whatever. I made a certain complaint to them with respect to the Summer Hill sub-way and other matters where he gave me an immense amount of trouble.

11236. You did not do more than your duty called for? No.

11237. And you did not apply for him to be dismissed because of some personal feeling? No; I had no personal feeling whatever towards him in the matter.

11238. I think that clears up most of this. I would like to ask you, if you know of any case in which the intention of the Railway Commissioners to improve the curve along the suburban line has been departed from in carrying out the works? No; in many cases I was able to get easier curves than were at first contemplated. That was the case in Summer Hill and Ashfield. And at the end of the bank were it joins the viaduct, I reduced it from 40 to 80 chains, and in several cases where I could flatten out the curves I did so. I did this if it would improve the road and be of advantage in every way.

11239. As a matter of fact you and your colleagues know that the Commissioners wanted to flatten every curve where it could be possibly done so as to get easier running? Yes. Every effort was made to flatten the curvage as much as possible.

11240. You have heard from Mr. Oakley that it is his opinion that the tipping of more earth in certain places would have resulted in getting easier curves. The mere tipping of earth alone does not give an easier curve. You would have to incur a large expenditure by shifting the road? If we had tipped much more we should have been over in the street.

11241. Your difficulty has been to get the four lines there without resumption? Yes. The principal difficulty I had on this work was to keep clear of the Councils, for if you went an inch inside their land they would be on to you, and so would be the property owners.

11242. And in many cases the walls have been put up to avoid a large expenditure in purchasing property outside our boundary? If the walls had not been put up it would have meant an enormous amount for resumption. Far more than the walls have cost. The smaller walls cost £2 or £3 a yard, and if we had had to resume property it would have cost three or four times that amount.

11243. Take Summer Hill for instance? Yes.

11244. Before the Commissioners handled these plans it was intended to pull down a public house at the corner and take part of the road? Yes.

11245. And by simply pulling down some station building and putting up a retaining-wall we saved roughly over £20,000 at that one place? Yes. The original estimates for the resumption was over £20,000. The cost of the brickwork at Summerhill west from the viaduct, not including the viaduct at all but right through from Summer Hill, was about £4,500.

11246. So that we saved about £16,000. Now, take Newtown. By departing slightly from the original plans, prepared before the Railway Commissioners took office, we avoided pulling down a Roman Catholic Church, diverting the road, and a lot of other expenditure of that kind. The saving in the resumption there would very nearly pay for the works.

11247. And we have got the station in a far more convenient position? Yes.

11248. Generally the works were carried out in that way? Yes; the main object was to avoid resumption as far as possible.

11249. And you, as a member of the Institute of Civil Engineers and having had a large railway experience, would not come, and lightly as Mr. Oakley has done, say that these works have been carried out in anything but a business-like way? I consider the works have been carried out in a very satisfactory way. Taking the works all round I consider them good.

11250-1. *Mr. Kethel.*] Mr. Oakley alluded to a brick wall which had been built at Liberty-street, Newtown, which had fallen in because it has been to weak to sustain the pressure behind it, or the drainage behind it was not satisfactory. Do you know anything about the construction of the wall and its failing? That wall was a wing of an extension to the bridge. I may state that the ground there was very bad. The

foundations

Mr. Shellshear. 22 June, 1892.

foundations went down between 10 and 11 feet below the surface, and I got below the foundations of the old wall. I was not altogether satisfied with the ground, still I was frightened to go any lower below the old bridge; so I put 10 feet of concrete in that wall bringing it close up to the surface and pipes were provided and put through the walls at intervals for drainage, and the wall was over 6 feet 2 inches at the bottom. Shortly after the wall was built the Water and Sewerage Board constructed a sewer down the middle of the street, and I noticed shortly after their excavation a slight crack which developed into a couple of inches. I attributed that to the water in the soil being drained off causing shrinkage in the foundation. When I came to inquire the depth of the sewer I found it was some 18 inches below the bottom of my footing. If it had not been for the footing of the old bridge I would have taken the foundation lower, but I was afraid of interfering with the alterations of the old bridge if I did so.

11252. It was improving a part of the bridge? It was the curve-wing of the abutment wall. It was only a small matter; it is a pity that these things should happen, but you cannot foresee that it would be undermined by a sewer.

11253. But you see that Mr. Oakley attributes the whole matter to defective construction? The wall was faithfully carried out, and to show that it was faithfully carried out where the crack occurred it broke right through the solid bricks. It was cracked right through in consequence of the settlement in the foundation. If it had been bad work the bricks would have drawn out, but it cracked right through the solid work from top to bottom. I attribute the crack to water finding its way from the bottom into the sewer, and of course it was impossible to take it down lower without the risk of bringing down the old bridge.

11254. That is your explanation of that? Yes, that is my explanation.

Mr. William Gilliver sworn and examined:—

Mr. W. Gilliver. 22 June, 1892.

11255. *Mr. Eddy.*] You have heard the evidence given by Mr. Oakley? I heard part of it. He has given a good deal of evidence in regard to the width of embankments. He says that the banks have not been made to the width laid down on the plan, and he says that if the works are paid for according to the plan the contractors will receive more money than they are entitled to receive.

11255½. Are you paid for the work in accordance with the plan or in accordance with the amount of stuff you put into the bank? We are paid at the cubic yard for excavation and cuttings.

11256. Therefore the width of the bank has nothing to do with the actual payment? Nothing whatever.

11257. You are only paid for the stuff you take out of the cutting, and deposited upon the banks where you are told to put it? That is so.

11258. In regard to the brick walls you are only paid for the actual work you put in? Yes, Sir.

11259. And therefore, there could be no improper payments made by the Railway Commissioners to you even if the work does differ from the plans as submitted to you? None whatever. They are thickened and thinned, and we are paid by the cube for the whole lot.

11260. For the actual work done? Yes.

11261. The charge the Railway Commissioners are enquiring into is, "That in making contracts with Messrs. Proudfoot & Company, Monie, Angus, & Co.; McSweeney, Gilliver, and Tate; and a number of other contractors—the said Commissioners have displayed either gross ignorance and incapacity, 'or something worse.' That in many cases, the contracts were 'bogus' contracts from their inception. That when it was proposed to make these contracts 1,100 men were dismissed from the railway service, and that from the time of such dismissal the said Commissioners have connived at the sweating of the men on the said railways for the contractors, and that the said Commissioners know what was going on. That by means of the said bogus contracts made in connection with the said railways, the country has been swindled out of thousand of pounds. That the contractors have made contracts that were intentionally bogus on their first inception, and thus certain persons have obtained large sums of money at the expense of the country." Do you know of anything in connection with your business as Railway contractors to justify such a charge as that? Nothing whatever.

11262. Have you ever got a penny of money from the Railway Commissioners that you have not properly earned? No, certainly not. There is some small matters in dispute, a little extras here and there.

11262½. Yes; but you want to get what the Railway Commissioners have not yet said you are to receive? That is so.

11263. And you are not complaining that we have given you money you have not earned? Too little sometimes.

11264. As a matter of fact, I do not think I have ever spoken to you? I do not know that you have.

11265. Therefore you would not enter into an unholy bargain of this sort without seeing the persons who are paying you? I saw tenders invited in the ordinary way, and I got a copy of the specification, and saw the plans in the tender room and I tendered. I do not know anyone in the office except the man in charge of the plans and specifications in the contract room.

11266. Mr. Oakley has given his opinion pretty freely as to the engineering abilities of the officers under the Railway Commissioners, and setting himself up as having greater experience than any of these officers he has been criticising. Will you tell us what your experience of Mr. Oakley's abilities were with regard to engineering? Well, I had to dismiss him, from what our manager told us that he had tried to set out some work. He had set it out on different occasions in three different ways, and each time we took it up, we thought it would be the last time; but it went on for three different times, and so I dismissed him at a moments notice, and gave him a week's salary.

11267. *President.*] Was that the Summer Hill subway? Yes.

11268. He had been in your employ for three weeks? Yes.

11269. Is that the only engineering work he did for you? He found fault with everything done. We came to the conclusion that he used to read the plans upside down; but I do not know whether it was so or not.

11270. I mean apart from the way of reading the plans. What actual work did he do for you other than this subway? Setting out.

11271. Did he say any other work besides this? I think he set out some portion of the retaining wall.

11272. Was that rightly done? I cannot say. There were some other things.

Mr. W. Gilliver, 22 June, 1892.

11273. *Mr. Eddy.*] You do not think, with the experience you had of Mr. Oakley, that the Railway Commissioners would have been wise to put the spending of half a million of money on the suburban lines in his hands as against the engineers to carry the work out? I should hardly think so.

11274. We have heard about your selling certain earth from the cuttings. Clay I think it turned out to be. Was that any part of the arrangement, that if you got the permission of the engineers, to remove any material? We made the embankment as full as the two fences would allow. Then we disposed of the surplus material. That was no advantage to us, as we had to carry it much further in some instances to deposit it and get rid of it, than we would have if we had had to put into the banks. If there had been sufficient room on the Commissioners' land between the fences ——

11275. But we were so pressed for land inside the fences that we had to place the soil elsewhere? Yes; that is because we had made the embankment too wide, and it is pushing the fence out. The onus is thrown upon the contractor both as to substance, both in height and width, and we have to maintain it for twelve months afterwards. If it is not sufficiently long, you hold some 10 per cent. of the money from the contractor, and he has to make the work good again at his own expense. It is not likely we would make it slack for the sake of getting rid of a few yards of soil.

11276–7. *Mr. Kethel.*] When Mr. Oakley was in your service, Mr. Gilliver, did Mr. Shellshear, who was the Government Engineer, ever make any representations to you that that man's presence on the works was displeasing to him, and ask you to dispense with his services? No, never. He, together with our inspector, Mr. Beck, and our foreman bricklayer, complained of the way in which the work was set out under the contract. We have to set out the work, and it is then checked by the Government Engineer. The whole onus and responsibility is thrown on the contractor.

11278. So that we are to understand that Mr. Shellshear had no act or part whatever in the dismissal by you of Mr. Oakley from your service. None whatever—he was simply dismissed for incompetency.

11279. *Mr. Eddy.*] I would like to put in a paper written by the Engineer-in-Chief for construction detailing what is the practice of the department for years past with regard to the day-labour question. That will be information for the Commission.

11280. *President.*] Certainly.

11281. *Mr. Eddy.*] Then, here are the original papers with regard to the reballasting the Ryde and Hornsby line, and also the final certificates in regard to the various contracts you have before you. [*Documents put in.*]

11282. *President.*] There is only one other witness I wish to make any remark about, and that is Mr. Charles Palmer. It appears that the first person of the name of Palmer whom Mr. Schey mentioned was Mr. John Richard Palmer, called this morning, and he said that he knew nothing whatever; he had never been connected with the Railway Department or the contractors, and knew nothing about the subject matter of this inquiry. Then Mr. Schey mentioned another person of the name of Mr. Charles Palmer, of Church-street, Parramatta. He was here until quite recently, and understanding some way or another and thinking he would not be required this afternoon he has gone away; but I am informed by Mr. Allen that he stated he did not know what he was called for, and he did not know anything in reference to these matters, and therefore I do not think it necessary for the Commission to take any further steps in requiring his attendance here. That being so we have examined all the witnesses that Mr. Schey mentioned with two exceptions. One is a person of the name of Fox, whose address is not given, nor his christian name, we only know that his surname is Fox; and, of course, it is impossible for this Commission to summon any person if they do not know his christian name and address. There is also a —— Newman, a person whose christian name is not given, nor his address; but he is said to be a brother of Mr. Charles Newman, who was here this morning, we do not think it necessary to call him. There are two other persons, Mr. Doyle, of Kiama, and Mr. Ross, of . These persons reside some distance from Sydney. We did not think it necessary to call them, at any rate, until we had heard what the witnesses here to-day had to say, and after hearing their evidence we do not think it necessary to call them. Mr. Schey also suggested that we should call certain contractors for the purpose of asking certain questions; but it appears to us that the whole of the questions he wishes to have put to these persons and all the information which he wishes to get out from them the Commissioners have already elicited, or it is contained in the documents which are now before the Commissioners. That is to say we have a contract and the tenders in reference to all the works which have been undertaken, and do not think it necessary to ask the questions or to investigate matter further which Mr. Schey has mentioned, and for that reason, as I have stated that we have already elicited all the information sought to be got, by these questions, and we have got all the papers in connection with these matters. The Commission now stands adjourned *sine die*.

MONDAY, 25 JULY, 1892.

[*The Commission met at* 11 *a.m., in the Equity Court, Chancery-square.*]

Present:—

HIS HONOR JUDGE OWEN (PRESIDENT).

ALEXANDER KETHEL, Esq., J.P. | JOHN YOUNG, Esq., J.P.

[*Alexander Archibald Tennent was called; but did not appear.*]

Mr. G. V. Allen called and examined:—

Mr. G. V. Allen, 25 July, 1892.

11283. *President.*] I understand, Mr. Allen, that application was made to you, or through you, by Mr. Alexander Archibald Tennent that the Commission should hold a special inquiry for the purpose of giving him an opportunity of verifying the statement contained in his declaration.

11284. *Witness.*] That is so, your Honor.

11285. *President.*] Will you state the circumstances under which he made the application?

11286. *Witness.*] On Thursday, the 14th of the present month, Mr. Tennent called at the office of the Commissioners, and stated that he desired to know whether the Commission would grant him a public sitting to give him an opportunity of proving the statement contained in his declaration. I asked him why he did not appear in answer to the summons that was issued to him on the 6th of last month, and he said he had a satisfactory explanation to give of his absence; but he declined to give it unless he was placed

placed in the witness box. I consulted with your brother Commissioners who were then sitting in your room, and introduced Tennent to them, and he again, in their presence, demanded a public sitting for the purpose I have stated. Some conversation ensued, during which he declined to say why he did not respond to the summons, and expressed a desire to set himself straight before the public, and to substantiate his charges; and he also made charges against some other persons. Mr. G. V. Allen. 25 July, 1892.

11287. *President.*] With which we have nothing to do; it is outside this Commission.

11288. *Witness.*] Yes, your Honor, but in connection with the declaration. In consequence of the interview the Commission decided to afford Tennent the opportunity he asked, and I wrote to him that afternoon, registering the letter at the General Post Office, telling him the decision the Commission had arrived at; but up to to-day I have received no reply.

11289. *President.*] Did he state anything about calling witnesses, or giving a list of witnesses in support of his statement? He stated that he would give the names of twenty witnesses as soon as he knew whether the Commission would grant him a sitting, and also say where a large number of documents could be found which would prove everything he had sworn. Since writing to Tennent and telling him the decision the the Commission had arrived at, I have, at the direction of your Honor, written again to inform him that the sitting would take place to-day at 11 o'clock, and asking him to send me the names of the witnesses whom he wished to be examined. That letter also was registered; but Tennent has not replied to it in any way.

11290. Have you seen Mr. Tennent since then personally? No, your Honor; I have not.

11291. He has not called at the office? No, he has not.

11292. When was Mr. Tennent informed that we required the list of witnesses he wished to be examined—how long ago? He was verbally informed by Mr. Young and Mr. Kethel on Thursday, 14th instant; and he was informed in writing by me on the 19th instant, and again on the 21st.

11293. Have you anything else to inform us of? Nothing else, your Honor.

[*Alexander Archibald Tennent was again called and did not answer.*]

11294. *President.*] It is quite clear that Mr. Tennent does not intend to appear, and therefore, so far as his evidence is concerned the Commissioners can take no further action in the matter. But we had another object in calling this meeting to-day. We have received a letter from Mr. John McElhone requesting us to examine a witness of the name of Palmer, as he had given certain information which Mr. McElhone very properly thought should be brought before the Commissioners. We have, therefore, summoned Mr. Palmer to appear to-day, and we have also requested Mr. McElhone to be good enough to be in attendance to assist the Commission if there should be any matters within his knowledge that ought to be brought under our notice.

Mr. Isaac Palmer was then called in:—

11295. Before being sworn, said: Who is going to pay me for attending? I have been had once and I am not going to be had again.

11296. *President.*] I do not quite understand what you mean.

11297. *Witness.*] I was on an arbitration case, and I was not paid for attending; and my time was stopped by the Government, and I was discharged for that after serving thirty years under the Government.

11298. *President.*] We have nothing to do with that. What is your occupation?

11299. *Witness.*] I am travelling for Mr. Tooth, or rather for the firm.

11300. *President.*] In attending to-day to give evidence before the Commission have you lost your appointment or do you lose a day's wage? I do, sir; and besides I have to keep a horse.

11301. What I want to know is whether by coming here to-day you lose a day's wage? I do, sir; I lose my commission.

11302. You get commission on your work? Yes, sir.

11303. *President.*] Then we shall arrange that you shall be paid, and the Secretary will give you a cheque for the amount which we consider you are entitled to.

11304. *Witness.*] Very well, sir.

[*Witness was then sworn and examined.*]

11305. *President.*] What is your name? Isaac Palmer, at least that is the name I have gone by for the last thirty odd years. Mr. I. Palmer. 25 July, 1892.

11306. Before you got this appointment which you now hold what were you? I have been a railway inspector; I was on the railways for thirty years before I was put off the work.

11307. What were your duties as railway inspector? I had to see that the road was laid down properly, and to pass all the timber, rails, and railway materials used in laying the road.

11308. Was that under the construction branch? Yes; that was under the construction branch. I was on the permanent-way before I was with the construction branch. I was appointed by Mr. Whitton on to the new work.

11309. Have you filled any appointment of that kind since the present Railway Commissioners have been in office? No, sir. I applied for a pension, but I could not get it.

11310. You have had no employment under the Railway Commissioners? Well, I did a little. That was to look after the unemployed at Adamstown, who were widening the road to put down a new set of rails, and I also had charge of a ballast train at Campbelltown.

11311. Were you employed by any contractors under the Railway Commissioners? I was.

11312. Who were they? Proudfoot and Monie and Angus. I also did a little under Mr. McSweeney.

11313. Was that employment during the time of the present Railway Commissioners? That is within the last twelve or eighteen months.

11314. What were your duties? When I was with Mr. Proudfoot, I was in charge of a gang. Then they removed me to manage a section. Before that I was in charge of a ballast train for Messrs. Monie and Angus. I did a little plate-laying for them, and also for McSweeney.

11315. Have you any complaint to make of the work done by these contractors? Not the least, sir.

11316. Take them separately—take the case of the work that was done by Messrs. Proudfoot;—have you any complaint to make of what they did? No, sir.

11317. You were employed as ganger by them? For five or six months before I left, I was manager of the section between Springwood and Lithgow. 11318.

Mr. I. Palmer. 25 July, 1892.

11318. But you were employed as a ganger before that, were you not? Yes, sir.
11319. And as a ganger, did you notice anything wrong with the way in which they allowed for labour? No, sir. My work was done honestly and fairly, and I got credit for it.
11320. Were you aware of any improper work being done by any other ganger? No, sir; I never troubled myself about the other gangers. I looked after my own men and my own work. I always tried to do my best—let others do what they like.
11321. Did you ever hear of contractors receiving pay for double the number of men who were employed? No.
11322. Did you ever hear of Messrs. Proudfoot, or any other contractors charging two days' work for one? I cannot say I ever did.
11323. Did such a thing ever happen in a gang over which you were ganger? No.
11324. Did you ever hear of it being done in reference to any other gang? I do not know that I did.
11325. Did you ever make a statement to that effect? No; I never heard of such a thing before.
11326. Then do I understand from you that there was nothing in this work calling for complaint or comment on your part, and no matters that ought to be brought under the notice of the Commissioners? No, sir; I know my work was done honestly and faithfully. What I did I got credit for. I do not think anything is to be gained by "slumming" work; you can get on just as well by doing it faithfully as by "slumming."
11327. I have asked you in reference to the contracts of Messrs. Proudfoot. Do you give the same answers in reference to the contracts of Messrs. Monie and Angus and Mr. McSweeney? I do, sir.
11328. *Mr. Young.*] Were you acting as inspector during the time of the present Commissioners? No, sir.
11329. Then you know nothing of these matters? No, sir; I had nothing to do with anything outside my own work. I was employed by the contractor, and what I was employed to do I did to the best of my ability.
11330. Under the three contractors you have named? Yes, sir.
11331. And in each case the work you did was done properly? It was.
11332. You know nothing of any improper work done? No.
11333. *Mr. Kethel.*] Do you know of any matters connected with these works or any works which in your opinion ought to be brought under the notice of this Royal Commission? Well, no sir, I do not; I have nothing whatever to say. I am not going to interfere with any matter which has nothing to do with me. I have been persecuted once already. I was thirty years under the Government, and I think in view of the way I was persecuted for giving evidence in the M'Sharry case I should be allowed to make some explanation.
11334. *President.*] Certainly you have a right to explain, but at the same time if these are matters within your knowledge which ought to be brought under the notice of the Commission it is your duty, as a citizen of this community, to bring them forward.
11335. *Witness.*] Well, I know nothing about them, sir.
11336. *Mr. Kethel.*] You state now positively that you know of nothing wrong which you think this Commission should be made acquainted with.
11337. *Witness.*] I have nothing to do with it.
11338. *Mr. Kethel.*] I am asking you the question.
11339. *Witness.*] Well, I do not know anything about it. If I am not engaged why should I interfere with other people's work.

Mr. John McElhone sworn and examined:—

Mr. J. McElhone. 25 July, 1892.

11340. *President.*] I have mentioned your name, Mr. McElhone, as having drawn the attention of the Commission to certain statements made by Mr. Isaac Palmer. You were in Court while Mr. Palmer gave his evidence? Yes; that is the man I referred to.
11341. Do you wish to say anything in reference to the evidence he has given? Well, your Honor, all I can say is that he has perjured himself grossly. The statements he has just made are at variance with what Palmer himself told me. If you will allow me I will state what I know of this matter, and how it came about. Sometime ago I noticed in the newspapers that one Palmer had been called before the Commission and denied all knowledge of these matters. I then thought that was the man I had seen. Afterwards I noticed that a second Palmer had been called, who also could give no evidence, and then I wrote to the Commission what I had heard, and how I came to hear it. I think it was on Sunday, 7th February last, I was going by the mail train to Tamworth, when I met a person I knew, and in the course of conversation he made statements to me about swindling on the railways of a very serious nature, and he further said that from what he had heard he believed the Commissioners were mixed up in these swindles. I said I was satisfied myself that the Commissioners were incapable of being party to defrauding the Government or any one else. Such a thing might happen among the officers under the Railway Commissioners, but, if so, it was without the knowledge of the Commissioners themselves, and if it did come to their knowledge I said I was certain they would punish the offenders. I further said that when I returned to town I should certainly inform the Railway Commissioners of what I had heard, in order that they might take action if they thought proper. The gentleman with whom I had this conversation asked me not to mention his name, and he gave me the name of a Mr. Palmer who lived somewhere near Parramatta as the person who had first told him of the matter. I could not get Mr. Palmer's exact address, but I learned that he had a son who was a builder in Parramatta, and who would give me the father's residence. On my return to town I saw Mr. McLachlan, the Secretary to the Railway Commissioners, and I told him of what I had heard—in fact, I wrote it down in pencil. I made a memorandum of what I had been told. One part of the statement was that this man Palmer had been working as a ganger for Messrs. Proudfoot & Co.
11342. *Mr. Perkins.*] I should like, your Honor, to have the name of Mr. McElhone's informant, because this is a serious charge against my clients, Messrs. Proudfoot & Co.
11343. *Witness.*] I have no objection to give the name. It is Mr. Thomas Moxham. As I said, I was going to Tamworth when I heard the statement. I was riding in a second-class carriage having a smoke, when Mr. Moxham got in, and commenced a conversation as I have described. I asked him for the name of his informant, as I said I meant to let the Commissioners get to the bottom. All sorts of lies were being uttered about the Railway Commissioners, and I meant to get to the bottom of the matter, so that they

they might take action. I saw Mr. McLachlan, the Secretary for Railways, and wrote down what I desired to say. Some time afterwards I was asked to meet Mr. Waller, who had been deputed by the Minister for Works, or by the Railway Commissioners to make an investigation and, if possible, find out Palmer. I met Mr. Waller in Pitt-street, and in a little while Palmer came in. I had never seen him before to my knowledge. I know nothing about him. His statement then was something similar to the statement he has just made to the Commission. He had been employed thirty years on the railways in various positions from that of porter to looking after the condition of the rails when they had been taken over from the contractors; and that when he had finished the laying of the line through Woy Woy tunnel, he was told his services were no longer required, and he reckoned that was done because he gave evidence in the M'Sharry case. He said he did not want to go back into Government employ, but if he could get compensation he would not only prove what he had said but a great deal more; and he further said he had written documents by the late David Proudfoot telling him how to swindle the Government by charging two days work for one. Palmer said he would prove not only Mr. Proudfoot was connected with this sort of thing, but also that Messrs. Moonie and Angus, and others, had swindled the country, and he led me to believe the Railway Commissioners were in the swindle. He said he had done this sort of thing himself, as the servant of Proudfoot, and the Commissioners had no knowledge of it at all. How he left the service of the contractor, he explained, was this. There was a certain rate of pay per day—I think he said the Commissioners allowed the contractors 9s. per day per man, and as the contractors only paid 8s. they made 1s. per day, per man. After a time the contractors cut down the wage to 7s., and then they wanted to reduce it again; and as he would not consent to that he was told to clear out. After hearing this statement I remarked to Mr. Waller, "Whether it is true or false this man is a thorough scoundrel, because on his own admission he has made up these false pay-sheets; and now he wants to turn informer." Palmer first said he was a party to this swindle and when the contractor wished to cut down wages he would not do so, and he was, therefore, told to go. Palmer said he replied "You can afford to pay me, because I have helped you to rob the Government by charging two days' work for one." He told us he could prove the truth of his statement conclusively by written documents which he had in his possession from the late David Proudfoot; and he further said that other contractors had done the same thing. Mr. Waller, a gentleman I have known for many years, was present during the conversation, and I thought, in justice to the Railway Commissioners, seeing that so many scandalous lies were about, this statement ought to be brought under your notice.

Mr. J. McElhone. 25 July, 1892.

11244. *President.*] No doubt you are quite right Mr. McElhone, and we are obliged to you for the action you have taken.

11345. *Witness.*] I simply give this statement as it was made to me, I said to Mr. Waller, after hearing Palmer's story, "This man's a scoundrel on his own showing." I may say that I went to Mr. McLachlan and told him of the matter, and then I learned that Palmer was dismissed before the present Commissioners took office, and, therefore, they could not grant him any compensation. I then tried to see Mr. Lyne, the Minister for Works, but he was too busy, and instead I interviewed Mr. Barling, the Under Secretary who brought in Mr. Deane, the Engineer-in-Chief for Railways, and I told them what I had heard. Finally I got a note from Mr. Barling on behalf of the Minister, saying, that the Railway Commissioners were the persons to deal with the matter. But, as I have told your Honor, the Railway Commissioners told me they had no power to give Palmer any compensation. I was tired of the matter and let it drop, until I became acquainted with the proceedings of this Commission. When I saw in the daily press that one Palmer had been called, who knew nothing of the subject, I thought I would let the Commission know what was within my knowledge. If the contractors are guilty of swindling the Government, let them be punished; but if this man has slandered the contractors, they will be able to take action to punish him. This was the only object I had in view, and Mr. Waller, who is in court, can corroborate what I have said.

11346. *President.*] We do not require any corroboration of what you have said. This only shows that the statements of a discharged servant when he feels aggrieved, and of the same servant when he is put in the witness-box to speak upon oath, do not always agree. He then tells a different story.

11347. *Witness.*] But there is worse than that. This man has sworn that he never made such a statement. I heard him, and Mr. Waller heard him; and he has gone into the box here and perjured himself, or else I am a liar.

11348. *Mr. Eddy.*] When Mr. McElhone gave this information to the Commissioners, which he has just repeated to your Honor, we felt that if the statement were true our officers must be concerned in the matter, and that the wisest course to adopt would be to obtain some gentleman from outside the service, to investigate whether it was true or otherwise. We have employed Mr. Waller on a good many occasions to make important inquiries for us, and we therefore requested him to investigate this matter. Mr. Waller is in Court, and can go into the witness-box, if your Honor thinks proper, and give his version of what took place.

11349. *President.*] In what way has Mr. Waller investigated the truth?

11350. *Mr. Eddy.*] Mr. McElhone gave to the Commissioners, through our Secretary, a statement of all that had been said by this Mr. Palmer, a statement which reflected ——

11351. *President.*] I know that; but in what way has Mr. Waller investigated the matter? The charge is that certain contractors charged two days' pay for one day's work.

11352. *Mr. Eddy.*] This statement was given to Mr. Waller with instructions to see Mr. Palmer, and get some facts, so that the whole thing might be investigated. But his attempt to elicit facts was as unfruitful as your Honor's attempt this morning.

11353. *President.*] Very well, Mr. Waller may go into the box and state what he has done.

Thomas Francis Waller sworn and examined:—

11354. *President.*] It has been stated, Mr. Waller, that you made an inquiry into the truth or otherwise of the statement made by Isaac Palmer. Will you inform the Commission of what you have done?

Mr. T. F. Waller. 25 July, 1892.

Yes, your Honor. I sent in a report of what I have done, but I can shortly tell you. I called at Palmer's house twice, and mentioned to him exactly what Mr. McElhone stated he had said as regards certain transactions by the contractor, and I asked him if the statement was true. He said, in reply, that the statement was true enough. I said, if it is true the Railway Commissioners would like to get proof,

Mr. T. F. Waller. 25 July, 1892.

so that they may take some action in the matter; and then he commenced to tell me about the wrongs he had suffered at the hands of the department, how he had been dismissed without notice, and for no just cause. I pointed out that the dismissal had taken place before the Railway Act came into force, and therefore the Commissioners could not be blamed for doing him an injustice. If there was any wrong done to the country, I told him it was clearly his duty to tell what that wrong was, and then afterwards he could take what action he thought fit against the proper authorities in order to get re-instated in the service, or compensated for the wrong done him, if any; but that was a matter completely outside the charges. However, after twice visiting him and talking to him very plainly on the matter, he certainly told me in the first instance that he had documents, written documents, which would make the contractors unable to deny his allegations; and subsequently he told me he was afraid he had destroyed these documents. I mentioned that I thought it was a very peculiar thing that he should get rid of documents of such an important character, and I asked him when he got rid of them, and he said, "Only lately." Well, to make the matter short, your Honor, Palmer then said he must decline to give any information in proof of his statement, or of the even worse things which were going on at the present day, quite unknown to the Commissioners, and which would surprise them very much if they only knew. He would give me no proof, nor anyone else, unless he was compensated. He said he did not want to go back into the Service, because he said he could live very well outside the service, and it would not suit him to return; but he wanted compensation in money for the loss of his position, for being turned out without having done wrong. I told him that the Commissioners could not possibly entertain a matter like that, which would mean bribery and corruption. He would either have to give the information straight out, or let it alone. I told him that no offer would be made by the Commissioners at all. Then the matter went from that stage, as Mr. McElhone has just explained, to the Minister, Mr. Lyne, to see if he would go into the matter, and he declined to take it up.

11355. Were you present when the interview took place between Mr. McElhone and Palmer? Yes, your Honor; it was in my office.

11356. In your presence? Yes.

11357. You heard the latter portion of Mr. McElhone's evidence? Yes, your Honor; and it is quite correct.

11358. *President.*] I suppose there are no further matters to which you want to draw our attention, Mr. Eddy?

11359. *Mr. Eddy.*] No, sir.

11360. *President.*] Then the duties of the Commission, so far as the taking of evidence is concerned, are closed finally.

ROYAL COMMISSION ON RAILWAYS.

APPENDICES.

THE following documents put in as exhibits during the inquiry are referred to in their alphabetical order in the Report of the Commissioners :—

Appendix A.

Locomotives ordered and received since Railway Commissioners took office.

THE following are the particulars bearing upon all the locomotives ordered by the Railway Commissioners since taking office, both on capital and renewal account :—

SUPPLY OF TEN PASSENGER "MOGUL" ENGINES, 1888.

(CAPITAL ACCOUNT.)

ON the 4th September, 1888, the Locomotive Engineer reported that he had no idea that the condition of the locomotive boilers was so defective as he had actually found them to be, and that the matter was so serious, that an order for at least ten new locomotives should be cabled at once to the Baldwin Company, as it would be at least ten months before any engines could be obtained from the local contractors, who were constructing fifty engines, and then perhaps only two from each.

On the 10th October, 1888, the Agent-General was instructed by the Secretary for Public Works to invite tender for ten engines, and on the 8th November, plans and specifications were forwarded to England. The Baldwin Company was also asked to give price and time.

(On the 22nd October, 1888, the Railway Commissioners came into office.)

Cablegram from The Agent-General to The Minister for Public Works.

21 January, 1889.

WORKS letter 10th October; ten locomotives, nine tenders received; highest £3,150; lowest Vulcan £2,375; ship two twenty-one weeks, whole two months later. Dubs £2,430 quickest delivery, begin shipment May, complete July, usual erecting facilities required, quotations based on prompt reply.

The Acting Secretary for Railways to The Under Secretary for Public Works.

25 January, 1889.

"I HAVE to inform you that this department is urgently in need of additional locomotive power, and as the "locomotives ordered to be made in the Colony cannot be supplied for some time it is imperatively necessary "that a supply should be obtained from abroad.

"The late Minister for Works approved of offers being invited from English and American firms "for ten (10) passenger locomotives, and, offers having been received, the Railway Commissioners have "approved of the acceptance of Messrs. Dubs and Company's tender to supply the ten (10) locomotives "required at £2,430 each, they undertaking to begin shipment in May, and to complete the supply in "July next.

"I shall be glad if the necessary intimation is made through the Agent-General by cable, and letters "written to Messrs. Dubs and the Agent-General confirming cablegram, and asking, as the engines are "urgently required, every expedition should be used to complete the supply. At the same time kindly "advise Treasury to place the Agent-General in Funds to meet the cost of order."

The question was submitted to the Minister, and on the 11th February Cabinet approved of cable being sent accepting tender of Dubs and Company for the supply of ten engines at £2,430 each.

Cablegram sent by the Public Works Department on 11th February.

ACCEPT the offer Dubs and Company ten engines, £2,430 each. Urgently required.

Cablegram from The Agent-General to The Secretary for Public Works.

13 February, 1889.

DUBS can now only undertake ship seven locomotives August, three September. Shall I accept. Please telegraph reply quickly.

Cablegram

Cablegram from The Agent-General to The Secretary for Public Works.

REFERRING to my cablegram of 13th February, Dubs pressing. Immediate reply required.

The Secretary for Railways to The Under Secretary for Public Works.

15 February, 1889.

I AM instructed by the Commissioners to state that they have decided to still accept Messrs. Dubs' tender although date of shipment has been made later by three months, which is entirely owing to the delay in forwarding to England the acceptance of the tender, the original offer being to commence delivery in May and complete in July, if the tender were accepted at once.

The Commissioners will be glad to learn from Messrs. Dubs what additional price would be charged if an order were given to substitute copper fire-boxes and brass tubes for steel.

Cablegram sent by The Secretary for Public Works to The Agent-General.

20 February.

ACCEPT Dubs' modified tender and cable extra cost if copper fire-boxes and brass tubes be substituted for steel.

Cablegram from The Agent-General to The Secretary for Public Works.

21 February.

HAVE accepted Dubs' tender, if you have copper fire-boxes and brass tubes, £335 each extra. Please telegraph reply quickly.

The Commissioners thereon minuted:—"The Commissioners will be glad if a cablegram is sent authorising copper fire-boxes and brass tubes for the ten engines."

The Minister for Public Works and Railways (The Hon. Jas. Fletcher) approved on 25th February, and the following cable was sent the same day by Public Works Department to Agent-General:—"Supply copper fire-boxes and brass tubes for ten engines—Dubs."

TWENTY-FIVE GOODS ENGINES, 1889.

(RENEWAL ACCOUNT).

IN connection with the manufacture of locomotives in the Colony, it will be remembered that the Atlas Company in 1887 agreed to supply twenty-five goods, and Thos. Wearne twenty-five passenger engines, and the matter was in their hands for a considerable time. It was seen early in 1889, however, that the local makers could not complete the contract, and as it was an urgent necessity that additional engine power should be obtained the question was forced on the Commissioners to obtain locomotives from other sources, and it was consequently decided in May, 1889, to ascertain what could be done in the way of getting engines quickly from England.

The Acting Secretary for Railways to The Under Secretary for Finance and Trade.

9 May, 1889.

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the sending of the enclosed cablegram to the Agent-General. The despatch of the message is recommended in consequence of the Atlas Company declining to proceed with their contract for the manufacture of twenty-five engines, and in order that the traffic may be continued.

"Obtain Beyer's quotations for twenty-five goods engines like the last specified, excepting larger, stronger boilers; tubes one three quarters or one seven-eighths; total heating surface 1,450; front truck swing link arrangement."

Cablegram from Agent-General to Colonial Treasurer.

17 May, 1889.

REFERRING to your telegram of 9th May, Beyer's quote engines, delivered steam Sydney, £2,970, f.o.b. England, £2,590 each. Reply is urgently required.

The Acting Secretary for Railways to The Under Secretary for Finance and Trade.

20 May, 1889.

I HAVE the honor, by direction of the Commissioners, to enclose herein a cablegram *re* Messrs. Beyer, Peacock & Co.'s offer to supply engines, and shall be glad if you will be good enough to arrange for its transmission to the Agent-General.

"Railway Commissioners consider Beyer, Peacock's offer engines very high, considering price they offered, supply engines February, eighty-seven; decide to call for open tenders. Specification mail this week."

Cablegram

Cablegram from Agent-General to Colonial Treasurer.

22 May, 1889.

FOWLER says engines of 1887 different, and cannot be compared present offer, cheaper than those supplied 1885, by more than £200, considering increase freight, price materials, and size engines. Reply quickly. Makers very full.

Letter from the Chief Commissioner to The Hon. The Colonial Treasurer.

Sir, 23 May, 1889.

The Commissioners will be glad if a communication can be made to the Agent-General by this mail asking for tenders to be invited as quickly as possible from the following firms:—

Messrs. Beyer, Peacock & Co.
Dubs & Co.
The Clyde Locomotive Works.
Neilson & Co.
Kitson & Co., Leeds.

for 25 goods locomotives, in accordance with the specification and blue prints sent by this mail, and to cable the results so soon as they are known, giving prices. Engines to be delivered in steam on rails in Sydney.

The engines are urgently required, and consideration will be given in settling question to early delivery.

I am, &c.,
E. M. G. EDDY.

Approved.—W. McM. (Letter sent on 23rd May, 1889.)

The Acting Secretary for Railways to Under Secretary for Finance and Trade.

23 May, 1889.

I HAVE the honor to inform you that we are sending by mail, addressed to the Agent-General, specification and blue prints for additional goods locomotives referred to in cablegram of 20th instant. Will you please intimate this by letter to the Agent-General.

The Acting Secretary for Railways to under Secretary for Finance and Trade.

27 May, 1889.

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the enclosed cablegram to the Agent-General:—

"Engines.—Railway Commissioners decided to call for tenders. Communication sent you by Thursday's mail."

Cablegram from Agent-General to Colonial Treasurer.

8 August, 1889.

TENDERS for twenty-five goods engines; Dubs, £2,860; five shipped thirteen months, five per month after. Neilson, £2,865; whole, sixteen months, Redfern. Clyde Locomotive Works, £2,900. Beyer, £3,000; both Redfern, twenty-three months. Kitson, £3,100; Redfern, twenty-five months; duplicates extra, from £1,300 (Dubs') to £1,550 (Kitson's). Offers cannot be kept open. Immediate reply requested.

The Acting Secretary for Railways to Under Secretary for Finance and Trade.

9 August, 1889.

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the enclosed cablegram to the Agent-General:—

"Accept Dubs' tender."

SIX TANK ENGINES, 1889.

(RENEWAL ACCOUNT.)

THESE engines, in all their working parts, wheels, cylinders, &c., &c., were duplicates of a large number of goods engines on the lines which had been built by Beyer, Peacock, & Co.; and, to insure certainty of interchangeability of parts, it was most desirable that these engines should be constructed from the original patterns.

Letter from Acting Secretary for Railways to The Agent-General, 30th May, 1889. Sent through Treasury Department.

I AM directed by the Railway Commissioners to forward herein indent for six tank locomotives, to be ordered from Messrs. Beyer, Peacock, & Co.

Particulars and drawings of engines required are enclosed.

The Commissioners will be glad if you will ask Beyer, Peacock, & Co. to quote prices for the supply of these engines delivered in steam, Redfern, and cable such prices as soon as obtained.

Cablegram

Cablegram from The Agent-General to The Colonial Treasurer.

27 July, 1889.

BEYER will supply tank locomotives referred to in Railway letter of 30th May at £2,780 each, delivered in steam on rails, Redfern. Three engines within 18 months, the whole 19 months from date of acceptance of tender. Please telegraph reply immediately.

Acting Secretary for Railways to The Under Secretary for Finance and Trade.

29 July, 1889.

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the enclosed cablegram to the Agent-General:—

"Beyer's Tank Locomotives.—Time required to execute order excessive; engines urgently "required. What time can be taken off?"

Cablegram from The Agent-General to The Colonial Treasurer.

30 July, 1889.

IN consideration of penalties stipulated Beyer cannot undertake to earlier delivery six engines. Will do utmost to anticipate if entrusted order. Reply.

Acting Secretary for Railways to The Under Secretary for Finance and Trade.

8 August, 1889.

I HAVE the honor, by the direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the enclosed cablegram to the Agent-General:—

"Beyer's Tank Engines.—Time too great. Obtain tenders for ten additional goods engines. "Specification 318."

Cablegram from The Agent-General to The Colonial Treasurer.

10 August, 1889.

BEYERS say can deliver six tank engines one month earlier, but will not be bound by penalty. Must know at once. Further time might be saved if Government pay difference between cargo steamer freight and sailer.

Acting Secretary for Railways to The Under Secretary for Finance and Trade.

12 August, 1889

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the following cablegram to the Agent-General:—

"Accept Beyer's tender for six tank engines, cancel order for ten additional goods engines"

SIX TANK ENGINES, 1890.

(RENEWAL ACCOUNT.)

The Secretary for Railways to The Under Secretary for Finance and Trade.

16 June, 1890.

I HAVE the honor, by the direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the following cablegram to the Agent-General:—

"Please obtain Beyer's price, date delivery, six heavy tank engines, similar present constructing; expedition essential."

Approved.—W. M'M., 18/6/90.

Cablegram from The Agent-General to The Colonial Treasurer.

24 June, 1890.

REFERRING to your telegram of 19th June, Beyer's price tank engines £2,915 each, delivered at Sydney in steam, July and August, 1891. If entrusted with order does not involve any obligation. Imminent rise in the price of materials. Immediate reply requested.

The Secretary for Railways to The Under Secretary for Finance and Trade.

27 June, 1890.

I HAVE the honor, by the direction of the Commissioners, to ask that you will be good enough to arrange for the transmission to the Agent-General of the following cablegram:—

"Commissioners will accept Beyer's offer two nine one five for six additional tank engines."

AND further to place the sum of £17,490 to his credit in London, to meet the accounts when rendered.

Approved.—W. M'M., 30/6/90.

FIFTEEN NEW DOUBLE BOGIE SUBURBAN TANK ENGINES.

(RENEWAL ACCOUNT.)

THE urgent necessity for additional tank engines for working the largely-increased suburban passenger traffic was forced prominently upon the Commissioners, in consequence of so large a number of the trains being run by tender engines which had to travel in one direction with tenders in front, this system of working being not only unsatisfactory in regard to time-keeping but also objectionable so far as security in working was concerned. It was therefore decided to order some additional passenger tank engines.

In July, 1890, Messrs. Beyer, Peacock, & Co.'s Sydney Agent quoted £2,925 per engine delivered in steam Sydney, and if ordered immediately, delivery to commence in March and complete June, 1891, Sydney five months later.

The Secretary for Railways to The Under Secretary for Finance and Trade.

28 July, 1890.

I HAVE the honour, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the following cablegram to the Agent-General:—

"Sydney agent, Beyer Peacock; offers fifteen locomotives; price quoted considered high; communicate with firm; cable best terms; modified wheel-base as agreed with agent."

Cablegram from Agent-General to Colonial Treasurer.

31 July, 1890.

REFERRING to your telegram of 11th July, Beyer, regret in consequence of special type engine and uncertainty regarding labour market cannot reduce price (£2,925) named by agent; a despatch on the subject will follow.

The Secretary for Railways to The Under Secretary for Finance and Trade.

4 August, 1890.

I HAVE the honour, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission to the Agent-General of the cablegram quoted below, accepting Messrs. Beyer, Peacock, & Co.'s offer to supply fifteen locomotives at £2,925 each, and further to place the sum of £43,875 to the Agent-General's credit in London to meet the cost of the order, to be paid from the vote for the purchase of stores.

"Beyer's engines; accept price; urge early delivery."

Approved.—W. McM., 5/8/90.

FIFTEEN PASSENGER ENGINES.

(PARTLY CAPITAL ACCOUNT AND PARTLY RENEWAL ACCOUNT.)

ON the receipt of a letter from the Agent-General, dated 16th May, 1890, it became apparent that some special steps should be taken to avoid further loss of time in connection with the proposed locomotive works, and Mr. Thow was sent to England by the Commissioners in August, 1890, in order to definitely settle the plans for the locomotives, which were to be built in the Colony, so that the order for the materials which would be required to be sent out could be placed with manufacturers several months earlier than would be the case if the settlement stood over until the Managing Director arrived in the Colony. Sealed instructions were also sent by the following mail directing him how to act in case the proposal for starting the works fell through, as, by cable received from the Agent-General a few days after Mr. Thow left, difficulties with the Company appeared likely to arise. Under these instructions Mr. Thow was to arrange, in connection with the settlement of the plans, for the co-operation of certain leading eminent locomotive engineers in England, the names being suggested to Mr. Thow and letters enclosed to them.

This will explain the reference to names in the Agent-General's cable of the 10th October.

The Secretary for Railways to The Under Secretary for Finance and Trade.

30 August, 1890.

I HAVE the honor to ask that you will be good enough to arrange for the transmission to the Agent-General of the enclosed cablegram, respecting the contract for the manufacture of engines in the Colony:—

"Locomotive Contract.—Erecting of shops has not commenced; Railway Commissioners are anxious to know what steps have been taken; locomotive stock is in an unsatisfactory condition, and they must lose no time in placing orders abroad unless work immediately commenced. Consequences of delay serious; uncertainty very prejudicial to our interest."

The Secretary for Railways to The Under Secretary for Finance and Trade.

8 October, 1890.

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the following cablegram to the Agent-General:—

"Locomotive Works.—Altered proposal quite different to conditions under which tender was made, and cannot be accepted. We are so urgently in need of locomotives that decision must be come to this week. If engines cannot be built here, as originally arranged, and delivery commenced 1st July next, as undertaken, contract must be cancelled. Drummond, senior, or engineer of equal standing, must be resident here. Thow must cable early as possible; designs recommended in conjunction with Webb."

Cable from The Agent-General to The Colonial Treasurer.

10 October, 1890.

No prospect of contract on original lines being carried out by Drummond and Party; shall notify them cancelled, reserving all rights. Webb now unable to act, his Board objecting; Aspinall in America; will not return for some time; Worsdell reported resigned and unwell. Shall I ask Johnston, of Midland, to act; have considered position with Thow. To avoid delay I recommend you to authorise him to discuss types with Beyer Peacock, with a view to their naming price for fifty, subject to your approval. Informed they are at present in good position to execute orders. Telegraph reply quickly.

The Secretary for Railways to The Under Secretary for Finance and Trade.

13 October, 1890.

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the following cablegram to the Agent-General, and also letter confirming the same:—

"Locomotives.—Your message 10th October. Thow should work out with Dubs and Neilson's, Glasgow. Standard plans specially considering Caledonian new main line goods and passenger engines. Services rendered to Thow should be paid for so that Commissioners may be unfettered when considering placing orders."

Cable from The Agent-General to The Colonial Treasurer.

15 October, 1890.

YOUR telegram 13th. Thow will see Dubs and Neilson at once as you request.

Cablegram from Mr. Thow to The Commissioners.

22 October, 1890.

EVERY condition fully explained. Neilson, Dubs, Beyer, all consider Caledonian engines unequal duties you specify. We have agreed on the following dimensions of the locomotives for main line passenger traffic and for existing rails. . . . . Beyer will begin delivery, Liverpool, May next; average five monthly; price £3,300. Dubs, August next; Glasgow five monthly; price, if fifty ordered, £3,010; if twenty-five ordered, price £30 additional. Neilson, December next; Glasgow for twenty-five engines; £3,100 each. Makers ask £450 for delivery, each steam Sydney. These engines difficult to proportion; required great care necessary they be successful; strongly advise you order from Beyer; cannot recommend Neilson's design. Necessary decide early; other orders pending; will cable coal and suburban Friday.

Cablegram sent by The Railway Commissioners through The Colonial Treasurer to The Agent-General.

23 October, 1890.

INFORM Thow, general proportions, passenger engine approved; boiler pressure not less 160 pounds; early delivery great consideration. Beyer's price, however, too much; agree placing order, fifty engines Beyer if price reduced to £3,200; failing this, order Dubs; cable arrangements made; make usual agreement as to mileage run here.

Letter, confirming above cablegram, sent to Under Secretary for Finance and Trade, on 25th October, with request to transmit it to the Agent-General.

Cablegram from The Agent-General to The Colonial Treasurer.

24 October, 1890.

BEYER, Peacock, have accepted your offer of £3,200 f.o.b., Liverpool; usual mileage conditions if delivered steam Sydney, £450 additional; say if you desire the latter; reply.

The Secretary for Railways to The Under Secretary for Finance and Trade.

27 October, 1890.

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission to the Agent-General of the following cablegram:—

"Your cable 24th; fifty engines Beyer, contract steam Sydney; should like lower delivery terms if you could arrange; make stringent agreement date delivery."

The

The Secretary for Railways to The Under Secretary for Finance and Trade.

28 October, 1890.

I AM directed by the Commissioners to inform you that an order for fifty engines for main line passenger traffic at £3,650 each, delivered in steam in Sydney, has been given to Messrs. Beyer, Peacock, & Co.; and to ask that you will be good enough to place the sum of £182,000 to the credit of the Agent-General in London, to meet the accounts when rendered, to be paid from the vote for the purchase of stores.

Delivery to commence at Liverpool in May next, and on an average five per month after.

Approved.—W.McM., 30/10/90.

In letter of 31st October, 1890, the Agent-General states that it was not without much hesitation that Mr. Peacock consented to accept the offer of £3,200 per engine, as the engines required were of an exceptional design and type requiring great skill and care in construction, and were also unusually heavy.

As to amount of freight the Agent-General considered it reasonable, as it is difficult to get ships to take large boilers, except at high freights.

TWENTY MINERAL TANK ENGINES, 1890.

(RENEWAL ACCOUNT.)

THE ordering of these engines arose—as in the case of the fifty passenger engines—from the falling through of the proposal to erect locomotive workshops in the Colony.

On the 24th October Mr. Thow cabled to the Commissioners:—

"Dubs, Beyer, self, have agreed tank mineral shunting engine; duplicate throughout; goods; Dubs' contract 205 class single bogie each. * * * Dubs will begin delivery, Glasgow, July next; five monthly; price £2,250; steam Sydney £2,600. Beyer, July next—Liverpool, £2,400; Sydney, £2,775. Cannot recommend Neilson's design; advise you order twenty from Dubs."

The Secretary for Railways to The Under Secretary for Finance and Trade.

27 October, 1890.

I HAVE to inform you that the Railway Commissioners will be obliged if you will kindly transmit the following cable to the Agent-General:—

"Thow's cable; mineral engine dimensions approved, except tank should carry 1,800 gallons, 3 tons coal; will use also for banking on main line. Order twenty from Dubs; steam Sydney.

The Secretary for Railways to The Under Secretary for Finance and Trade.

Sir, 28 October, 1890.

I am directed by the Commissioners to inform you that an order for twenty tank mineral shunting engines, at £2,600 each, to be delivered in steam, Sydney, has been given to Messrs. Dubs & Co., of Glasgow, and to ask that you will be good enough to place the sum of £52,000 to the credit of the Agent-General in London, to meet the accounts when rendered, to be paid from the vote for the purchase of stores.

Delivery of the engines is to commence at Glasgow in July next, and five per month after.

Approved.—W.McM., 30/10/90.

Cablegram addressed to Chief Commissioner from Mr. Thow, received Sydney, 22 November.

UNLESS additional wheels used, not advisable; 1,600 gallons maximum possible Dubs' tank; and involves £30 extra each for additions; freight worth doing; advise acceptance; instruct.

The Secretary for Railways to The Under Secretary for Finance and Trade.

24 November, 1890.

I HAVE the honor, by direction of the Commissioners, to ask that you will be good enough to arrange for the transmission of the following cablegram to the Agent-General:—

"Advise Thow tank engines 1,600 gallons; agree capacity and price. When in America inquire specially performance eight-wheeled coupled consolidation engines";

"And further, place the sum of £600 to the credit of the Agent-General in London, to meet the extra cost to be paid from the votes for the purchase of stores."

TWELVE 10-WHEELED PASSENGER ENGINES (BALDWIN), 1890.

(CAPITAL ACCOUNT.)

In consequence of the period of time that would elapse before delivery could be given of engines ordered from England, the Commissioners, after consultation with their Officers, found it absolutely necessary that immediate steps should be taken to secure engine power to prevent the traffic in the wool season of 1890–1891 from being seriously hampered. Information being to hand that in the United States, where the conditions in many respects resembled the conditions on our lines, a new departure in engines had been tried with most satisfactory results, the Commissioners decided to instruct Mr. D. H. Neale (Mechanical Engineer), Messrs. Loughrey and Stanger (Out-door Locomotive Superintendents), and Howe (Workshops Manager), to report in the matter of the merits of the ten-wheeled American express engines and eight-wheel consolidation goods engines. They reported on the 1st September, and recommended the advisability of purchasing not less than twelve powerful American passenger engines, provided the builders could guarantee early delivery.

In the report they stated "that the Rogers engine for the Chesapeake and Ohio Railway, and the Baldwin engine for the Baltimore and Ohio (described in the *Railroad Journal* and *Railroad Gazette* respectively), would both appear suitable and sufficiently powerful for our requirements, viz., hauling a train of four express carriages, fully loaded, and two 28-ton sleeping-cars, up 1—40 at 25 miles per hour, and capable of attaining an average speed (including stoppages) of 32 miles per hour, between (say) Goulburn and Junee, where there are constant undulating gradients of 1—40.

These engines would be especially useful between Penrith and Bathurst, and between Picton and Junee, and might also be used on the Northern line, on the long inclines between Tamworth and Armidale. They would save a great deal of assisting mileage, and twelve such engines would virtually do the work of over twenty of the best of our present passenger engines."

On the 2nd September, 1890, a letter was addressed to Messrs. Towns & Co., of Sydney, asking them to quote a price for the Baldwin engine, subject to certain modifications. A reply was received on the 8th September, naming 15,000 dollars per engine f.o.b. steamer (exclusive of extras amounting to 2,265 dollars).

On the 9th the firm was informed that the Commissioners were disposed to consider the Baldwin Co.'s offer favourably, but attention was drawn to the fact that in letter of the 2nd it was asked that the engines might be modified, which would reduce the cost somewhat. It was also intimated that early delivery was of extreme importance, and that this order, if given, would be a trial one, based on the understanding that the engines will perform the heavy work needed on our very heavy grades.

On 16th September, Messrs. Towns & Co. replied that the price would be 13,500 dollars f.o.b. New York.

In letter of 22nd they were informed that the Commissioners accepted the tender of the Baldwin Co., at 15,000 dollars per engine, delivered on wharf, Sydney, in April, 1891 (exclusive of extras for copper fire-box stays, screw reversing-gear and brass tubes.)

The Secretary for Railways to The Under Secretary for Finance and Trade.

9 October, 1890.

I HAVE the honor, by the direction of the Commissioners, to inform you that an order has been given to the Baldwin Locomotive Works, of Philadelphia, U.S., for twelve 10-wheeled express engines and tenders, similar to those supplied to the Baltimore and Ohio Railway, under a guarantee to haul a passenger train of seven cars up a grade of 116 feet per mile, and 17 miles long, at a speed of 25 miles per hour; and to ask that you will be good enough to arrange for the transmission of the enclosed letter to the Agent-General, and, further, to place the sum of £31,237 10s. (being 85 per cent. of total cost) to his credit in London to meet the accounts when rendered.

The balance, 15 per cent., is to be paid to the Sydney Agents, Messrs. Towns & Co., on the certificate of the Locomotive Engineer that the engines have satisfactorily run a trial trip and 1,000 miles in steam.

The cost of the order, £36,726, is to be paid from the vote for the purchase of stores.

Approved.—W. M'M., 17/10/90.

TWENTY AMERICAN GOODS ENGINES (1890).

(CAPITAL ACCOUNT.)

WITH further reference to the Commissioners instructions for a report on the merits of American engines, on the 20th December, 1893, Messrs. D. H. Neale, Loughrey, and Stanger submitted a joint report on the subject of providing more powerful engines for goods and live stock traffic over the heavy portions of the line, and were of opinion that there is much to be gained in that direction. With heavy gradients on single lines, engines that will take heavy loads at a fair speed, thus reducing the number of trains passing over the line and shortening the time occupied between stations, is an important consideration. They cited as an instance that to move 100 trucks of cattle from Dubbo to Penrith seven trains are now run, the speed of which (including all stoppages) averages 13¾ miles an hour. Engines are required that will take 33 per cent. greater load, and have a margin of power for increasing the speed to 17 miles an hour.

Moreover, as there would shortly be on the lines engines capable of hauling forty wagons of cattle from Bourke to Dubbo, assisted possibly for the last 9 miles, to be able to divide such trains into two at Dubbo will greatly facilitate the work. With our existing engines a train of forty trucks of cattle would have to be formed into three trains at Dubbo.

The same advantages, though possibly to a lesser extent, are also to be gained on the Southern and Northern systems.

The

The engine of the Baldwin No. 5,292 type, was, with certain modifications, considered the most suitable, and the report stated that twelve of these engines would be required to meet the Western live stock traffic alone between Dubbo and Penrith.

On the 22nd December the Commissioners directed that twelve engines of No. 5,292 type be ordered, all details possible to be made interchangeable with the express passenger engines ordered; wheel to be 51 inches in diameter, pressure to be 160 lb. Brakes to be arranged that only two men be required. Early delivery most important.

The order was given to the Baldwin Co. through Messrs. Towns & Co. the same day and acknowledged on the following.

In a letter dated 29th December, 1890, Messrs. Towns & Co. intimated that they had received the following cablegram from the Baldwin Co.:—

"Order entered; shipment May. Can construct twenty to twenty-five within same time; this would permit best arrangements possible for shipping. We would advise trial compound system on two or more; 750 dollars each extra."

The Commissioners directed, on 29th December, the following cable to be sent:—

"Increase the order to twenty. Compound two; care to be taken not to exceed outside measurements already given. Inform Thow."

The cable was sent through Towns & Co., and confirmed by letter on 8th January, 1891.

The Secretary for Railways to The Under Secretary for Finance and Trade.

Sir, 21 January, 1891.

I have the honor, by direction of the Commissioners, to inform you that an order for twenty goods engines (to be shipped in May next) has been given to the Baldwin Locomotive Co., of Philadelphia, U.S., and to ask that you will be good enough to arrange for the transmission of the enclosed letter to the Agent-General, and further to place the sum of £65,508 to his credit in London to meet the accounts when rendered.

The cost is 17,750 dollars per engine, two of which are to be compounded at an extra cost of 750 dollars each, making the total cost 356,500 dollars, equal to £72,786.

The conditions of payment are—90 per cent. on presentation to the Agent-General of bills of lading and policy of insurance; and the balance to the local agents, Messrs. Towns & Co., on the Locomotive Engineer's certificate that the engines have satisfactorily run a trial trip and 1,000 miles in steam. To be paid from the vote for the purchase of stores.

Appd.—W.McM., 4/2/91.

APPENDICES B & C.

Mr. Thomas Ferguson's Report on Boilermaking at Eveleigh.

To His Honor Judge Owen, President, Royal Commission,—

Sir, Balmain, 15 July, 1892.

I have the honor to report that, in compliance with the request of the "Royal Commission appointed to inquire into the charges made by Mr. Schey, M.L.A., against the Chief Railway Commissioner, and the general administration of the railway department," on the 12th instant, in company with Mr. Allen, Secretary to the Commission, I visited and inspected the railway boiler-shops, at Eveleigh, with the object of considering the capability of the shops and tools for building new boilers as well as keeping in repair boilers now running and laid up, and have no hesitation in stating that, in my opinion, the shops are quite too small for the construction of boilers while they are being utilized for repairs as well; the shops and tools are small enough to carry out the repairs necessary to maintain the old boilers in efficient working order. The tools in the shops at present, with the addition of several of more modern design and better adapted to the work would do for repairs, but as regards building new boilers in the present shop there are neither room nor tools to do so; for this purpose a shop double the size would be required and a complete set of new tools of the latest design in order to carry out the work with economy and despatch.

I have, &c.,
THOMAS FERGUSON,
Foreman Boilermaker, Mort's Dock.

Mr. Thomas Irons' Report on the Eveleigh Workshops.

To His Honor Judge Owen, President, Royal Commission on Railways,—

Sir, Granville, 19 July, 1892.

I have the honor to report that, in accordance with instructions, I have inspected the Eveleigh Locomotive Workshops, in company with Mr. Allen, the Secretary, as to their capabilities to manufacture new locomotives, while maintaining the existing stock in efficient order.

I am of opinion that the works are deficient in accommodation and machinery for this purpose, from the following causes:—

The Engineer's Machine Shop, which is equipped with some of the most modern and special machines necessary for the manufacture and repairs of railway machinery, would require the erection of the three planing machines, and one slotter, not now in service, together with additional drilling machines and screw cutting lathes to meet the demands of new work.

The Erecting Shop is deficient in accommodation; the thirty-six pits are only sufficient for locomotives undergoing repairs. The building termed the paint shop would require overhead lifting gear fitted to it before being useful as an erecting shop for new work.

The

The Boilershop is deficient in accommodation for the building of tenders or tanks, and requires some special tools for this work. This department has some of the best special machines in the colony for boilerwork, but more are required to meet the demands of new work, or the engineers would be delayed by the inability of this branch to keep pace with them.

The Blacksmiths is deficient in its number of fires, but the iron and brass foundries, with the patternshop, should easily meet the demands new work require from them.

I am further of opinion that it would prove costly to manufacture new locomotives with the same machinery engaged on the repairs of various classes of locomotives and pumping plants in workshops designed for repairs, without special consideration for the economical production of new work.

Yours, &c.,
THOMAS IRONS,
Works Manager, Clyde Engineering Works, Granville.

APPENDIX D.

Condition of Locomotive Boilers in the G.N. Section of the N.S.W. Railways.

Minute of The Locomotive Engineer, Mr. Thos. Midelton, dated 1st April, 1889.

To the Secretary,—

I issued special instructions in July last about the inspection and washing out of boilers, and said instructions were duly noted by all officers. Mr. Downe went to Newcastle about 21st of August, 1888, and I gave him special instructions about the condition of the boilers on the Northern line. He reported to me on the 27/8/88—when I was asking for the loan of six engines during the colliers' strike to assist me with the extra coal traffic to Victoria—that 4 engines were internally examined in 1888.

7	Engines were	internally	examined	in 1882
6	,,	,,	,,	1881
5	,,	,,	,,	1880
4	,,	,,	,,	1879
5	,,	,,	,,	1877

So that there were 31 boilers which had not been internally examined for periods ranging from 5 to 11 years. Mr. Downe took steps to do all he could, and out of the six engines he lent me, *four* of them have been internally examined here, and the other two are working at reduced pressure.

I sent a special boiler inspector to Newcastle some time ago, and his reports were most surprising to me, and before he could do all that I could wish he died. I have, since that event, sent another Inspector, and he has discovered still more surprising facts.

There is complete evidence of neglect, or error, or both, and it would seem that all the engines north of Singleton are in a dirty state, and their boilers badly filled in the fire-boxes with incrustation of a hard kind; specimen of such herewith.

I have a boiler, No. 234, now in the Eveleigh shop, which is out of a comparatively new engine, and which is badly pitted in the barrel, and there was much damage done to the roof of fire-box by some unfair means. The washing out of these northern boilers has been most carelessly done, and I shall at once send the boiler inspector to see each engine and report to me upon its condition.

If the boilers are as I believe them to be the tubes will have to be taken out and roof bars of fire-box removed in all engines which are badly clogged, as aforesaid; this will necessitate the ordering of nine new engines, and to tide over the difficulty some of the engines repaired here will have to be sent to Newcastle, and others sent here for repairs, &c.

I strongly recommend that the order for new locomotives, now being executed in England, be extended to 25 instead of 10, especially as it seems that the Atlas Co. will not undertake the work of beginning their contract for 25.

The water used north of Singleton is said to be bad, and the condition of the boilers would seem to prove that to be the case.

I may say that all these facts are new to me, but I always have had an impression that the condition of locomotive matters on the northern line were not as bright as they appeared to others.

The following Memorial shows the condition of the Engines on the Northern Line, 1889:—

To W. Thow, Esq., Locomotive Engineer,—

Sir, Singleton, 31 July, 1889.

We, the undersigned enginemen and firemen stationed at Singleton, beg most respectfully to bring under your notice the very unsatisfactory manner in which we, at the present time, are called upon to perform our duties.

The depôt is terribly short of engine power, and as a consequence the engines that are here are rapidly drifting into a very bad state for the want of opportunity to effect even ordinary running-shed repairs. The engine power is so scanty in proportion to the train service that trains frequently have to wait at this depôt because there is no engine available to haul them until one arrives from some other journey and is hurriedly prepared to take up the running of the waiting train, and as a result of such emergency working, proper attention to the engine in the way of cleaning, examination, and washing out is impossible, and the fag upon the men working them is proportionately increased, especially as no particular men can be attached to their own particular engine.

But we have often, at only a few minutes' notice, to step on to a strange engine and leave with a train.

We have already brought these matters under the notice of our Inspector, and cannot disguise from ourselves the absolute truth of his statements in reply—that without more engines he cannot effect any improvement.

And

And in view of the coming wool season, and probable large increase of traffic by the through connection with Sydney, we trust that you will give these matters your thoughtful consideration.

We have, &c.,

Drivers.		Firemen.	
Wm. W. Long	Wm. Paget	J. Stewart	Jas. Brand
A. Beamont	Wm. Mathieson	G. Weale	Geo. Harper
G. Hinde	Hy. Cousins	C. Hewston	D. E. James
W. Bremmell	Wm. Nield	C. Hannell	A. Marshall
J. Farnham	G. O'Brien	F. Parsons	E. Clark
D. Donneen	W. Pratt	A. Bruce	H. McNulty
H. Wallace	C. Matthews	M. C. Eltis	G. Brothers.
H. Playford	J. P. Stewart		
G. J. Brown	Thos. King.		
H. Blundell			

I understand this to mean that each driver should have an engine to himself.—G. NEWTON, 12/8/89.

The Locomotive Engineer.

Forwarded to the Secretary for the information of the Commissioners.

This letter from enginemen points out the distressed condition of the Department on the north for want of engine power. It is not often that enginemen take a step of this kind, and it emphasises as strongly as anything I have seen the absolute need that is for additional locomotives. Since the opening of the Hawkesbury bridge the northern engines have had more attention than those of the south—seventeen of them have been brought to Sydney for repair, and twenty-three have been sent to take their places. It is perfectly true, as pointed out by the writers of this letter, that there is not engine power to deal with the probable increase of traffic due to the coming wool and wheat seasons.—W.T., 17/8/89.

The Secretary.

APPENDIX E.

Railways.—Report of William Thow, M.I.M.E., on condition of Rolling Stock in New South Wales.

[*Ordered by the Legislative Assembly to be printed, 30th July*, 1889.]

[*Papers laid upon the Table of the Legislative Assembly in accordance with a promise made by the Colonial Treasurer in answer to Question No.* 10, *30th July*, 1889.]

Memo. by the Railway Commissioners.

Office of the Railway Commissioners of New South Wales, Sydney, 30 July, 1889.

THE Railway Commissioners, on finding that the Rolling stock and locomotives were in a very unsatisfactory condition, and that special steps would have to be taken to bring everything up to a proper standard, and also with the view of economical maintenance in the future, that standard plans for stock of all descriptions would have to be adopted, deemed it advisable to obtain an early and full report on the subject generally, and for this purpose Mr. Thow's services were obtained.

Parliament now having called for this Report the Railway Commissioners send it forward, but consider it desirable to state that some of the recommendations made in the paper have not yet been considered by them.

The Locomotive Engineer, South Australia, to The Railway Commissioners, Sydney.

Gentlemen, Athenæum Club, Sydney, 20 March, 1889.

On receipt of your memorandum of instructions, dated 30th January last, I commenced the investigation of the questions therein enumerated, and now beg to submit the following report:—

A preliminary inspection of the Eveleigh workshops and the rolling stock at that time undergoing repair in them was at first made in order that a general idea of the matters to be considered might be obtained, and afterwards I proceeded to examine in detail the performances of your engines when engaged in daily duty over those portions of your railways which are most difficult to work. For this purpose I rode on the footplates of engines, both goods and passenger, from Sydney to the Hawkesbury, Katoomba, Bathurst, Newcastle, Goulburn, Harden, and back to Sydney, on different occasions when they were engaged in hauling the ordinary traffic trains.

I saw the engines working under their ordinary conditions, without any of those preparations or efforts to effect maximum results, which frequently destroy the practical and comparative value of special tests, consequently the conclusions at which I have arrived, based, as they are, on work which your engines are doing daily, would not be materially altered by a long acquaintance with the questions involved. I was not so fortunate, during my inspections, as to see the effect of bad weather on the hauling power of the engines, on the steepest grades, but of course that disturbing cause has been taken into account.

When at Newcastle I paid special attention to the requirements of the coal traffic in the various yards, and consider there is need for powerful engines to conduct it.

Condition of Rolling Stock.

During my inspections I examined the state of your rolling stock. I found it to be very far from good, or in an efficient state of repair. The waggon stock is particularly bad. The state of the carriages is not good, and many of the locomotives are very greatly in need of repair. This condition of things is due, in a great measure, to the insufficient accommodation and want of machinery which the department suffered from prior to the removal of the workshops from Redfern to Eveleigh. Locomotives

Locomotives.

As a basis on which to rest the whole question of suitable engines for your circumstances, I asked for and obtained, through your office, the limit of static load per axle for locomotives when working fast trains. The opinion of Mr. Cowdery, Engineer for Existing Lines, is as follows:—

> "The static load of 14 tons per axle on a well-balanced locomotive is safe. It would, however, be better to reduce this, so as to keep down cost of maintenance of track, which increases considerably with high speed on account of the dynamic effects of the engines, especially at the rail joints, which are on our roads rather weak. If a greater load per axle is required the existing bar fish-plates should be replaced by angle fish-plates, which would increase the strength of track considerably, and also tend to decrease cost of maintenance."

Thus 14 tons per axle is the starting point for the question, and it seems to me as great a load as your present track should be called upon to sustain. At some future time the permanent-way will be, I expect, strengthened, and able to carry safely heavier loads per axle. This important expectation I have allowed to guide me in coming to a decision as to the types of engines to be recommended.

Your present permanent-way is not, I regret to say, in perfect order; the joints are unusually numerous and not strong, and the rails are in many places out of form. As a consequence the engines ride very roughly over portions of the road, especially when running at high speeds, by which their wear and tear is unduly increased. Engines out of order necessarily react on the road, and the maintenance of both engines and road becomes more costly than it would be if the permanent-way was placed in efficient condition. As previously stated my inspections have been made during dry weather, but I can readily understand the accuracy of statements made to me in effect that the condition of the road becomes worse in places during the winter months than even now, and that then engines working over it consequently suffer more.

Taking into consideration the heavy character of the work to be done by your engines, the frequency and sharpness—8 chains—of the curves on your lines, the comparatively high speeds at which the quickest of your trains must occasionally run, the limit of load per axle as above expressed, and the prospect of your having an improved permanent-way at no very distant day, I have arrived at the general conclusion that your lines and traffic require six-wheels coupled engines for goods trains, and that for express passenger trains it is not advisable to employ engines with more than four-coupled wheels.

At the present time it is manifest that the four-wheels coupled engines in your service have got as much work to do as they are fit for, and yet the prospect of increasing express traffic must not be lost sight of. The expected strengthening of the permanent-way will permit, when it takes place, enlarged four-wheels coupled engines to be used. In the meantime it is possible to obtain engines of greater power than those at present in use, and up to the limit which the accepted load of 14 tons per axle imposes.

I am led to this general conclusion mainly on the ground of cost of working. It may seem a platitude to assert that engines with only two wheels coupled work with much less friction than those which have four coupled to the cylinders, or that those with four have much greater freedom in action than others which have six or eight wheels coupled, but I find a great disposition in your service to employ engines with six and eight wheels coupled for duties which can be much more economically executed by simpler machines. The internal friction of locomotives at work rapidly increases with the number of wheels coupled. This is the case even on straight lines; but on curved roads, like many of those in this Colony, the proportion of power thus wasted is greatly increased. Recognising this fact, it is usual for engineers, when obliged by circumstances, to adopt locomotives with numerous coupled wheels to make every effort to minimise the length of the "rigid" or coupled wheel-base; but here I find it is thought a matter of small importance to couple six wheels together in a rigid base of 15 feet to work over 8-chain curves in great numbers. So important is the shortness of "rigid" wheel-base generally considered where curved lines have to be worked that expedients such as flangeless tyres are adopted, and in other cases the coupled wheels are crowded together under the boiler-barrel to the sacrifice of steadiness rather than prolong the wheel-base when rigid.

I am aware it may be contended in support of an opposite view that there are engines on your lines which have six wheels coupled in conjunction with a 15-foot rigid wheel base, and that such engines exhibit no undue wear of tyre-flange, although they are working round the 8-chain curves on the mountain section; but if that be a fact, it does not, in my opinion, prove the non-existence of severe friction and waste of power in such machines; it merely shows that the friction and strains induced find other outlets than through the tyre-flanges. That the friction exists, and that it is measurable by the reduced useful work done per pound of fuel consumed by such engines, and by the cost of their repairs, as compared with such costs and useful duty of other engines, which have shorter wheel-bases, cannot be doubted. The Locomotive Department does not possess amongst its useful appliances a steam indicator, nor have any diagrams been taken from the cylinders of its engines to show the power exerted in them, as contrasted with the useful effect on the trains hauled. Had such data been at hand, or time at my disposal to secure it, the greater waste of power in the form of friction and loss, per pound of fuel consumed, would be demonstrated by the diagrams for the long wheel-base engines, when working up grade and round sharp curves.

The aim of successful locomotive working, anywhere, must be to haul 100 tons over 1 mile at the least possible cost, therefore the minimisation of internal friction in engines is a very important matter. It means economy of fuel and less expenditure for repairs, and these increments of daily saving, multiplied by the year's operations in so large a concern as yours, represent so important a sum as to deserve attention even here, although coal is cheap.

The question of speed has also a direct influence on this matter, hence it is more necessary to limit the number of coupled wheels in engines for quick passenger traffic than in those for slower speeds or goods traffic.

While on this subject of economy in working, I will mention another disposition in the practice of your Locomotive Department, which I am not able to endorse, viz., the employment of steel fire-box plates, and steel or iron tubes. The experience which I have had of such materials during the last six and a half years, which were supplied in sixteen engines by a first-class American firm, has proved absolutely their great inferiority for economic purposes as compared with copper plates and brass tubes in the construction

construction of locomotive boilers. And it has been as thoroughly proved that the substitution of copper plates and brass tubes in the same boilers has made them very much better steam producers, thereby increasing the practical power of the engines, enabling them to do more work. I strongly recommend the abandonment of steel for such purposes.

Types of Locomotives.

Having shown the basis of the recommendations to be made, I will now refer to the various types of engines in your service.

As to what constitutes a type may be matter for expression of opinion. If each difference in main dimensions amongst rolling stock creates a type, then you have forty-two types of locomotives on your system, but for every practical purpose the classification shown on the published Table No. 3, dated January 6th, 1888, and signed "W. Scott," is useful. By it the locomotive stock is divided into twenty-eight distinct types, and each placed under a distinguishing class number, with their leading dimensions, particulars, and descriptions added.

It will be convenient to refer to that table in connection with this portion of my report.

(*a*) I recommend that the following Classes be abandoned without delay, broken up or sold:—1^{N}, 5, 6^{N}, 10, 13, 20^{N}, and 28^{N}, on account of their age, their unsuitability, or the smallness of the numbers in the classes they represent. There are fifteen engines in all.

(*b*) That the following classes be not repeated, and that as little money be spent in repairing them as possible; that they be allowed to wear themselves out, along with any stores belonging to them in stock, of a special character, then abandoned, altered, or sold, as opportunity arises;—14, 23, 29, 36, 60, 67, 105, 127, 131, 285, 294, and 304 Classes, numbering eighty-seven engines in all.

(*c*) In addition to the above, it is suggested that the following Classes also be not repeated, but that they be altered into more useful engines, in a manner to be described below, viz., Classes 17, 48, 79, 351, and 373, of which there are one hundred and thirty-two engines in all.

(*d*) Thus there remain Classes 93, 158, 205, and 265, or one hundred and ninety-five engines, which I consider may be continued as adopted types, if found necessary, or repeated, either in their present proportions or slightly modified, so as to meet, in the best way, the features of your lines and growing traffic. The modifications suggested will be described.

Before proceeding to detail the alterations of the existing engines referred to above in clauses *c* and *d*, which appear to me advisable, I beg to mention that in almost all your engines there is, in my opinion, a serious deficiency of heating surface with which to work economically in the matter of fuel consumption. In proof of this opinion I find that your engines are working with very contracted blast orifices; in some cases they are extremely small, showing that their boilers require to be forced. I have therefore to recommend, that in the renewal of boilers for engines belonging to the classes mentioned in above clause *c* and *d*, or in the designs for any new engines, efforts be made to give greater heating surfaces in proportion to their tractive forces. This can be done in most cases by using tubes 1¾ inches instead of 2 inches external diameter, and by pitching them correspondingly close. The boiler barrels, generally speaking, are sufficiently large to do so. The same effort should be made in cases where the renewal of both tube-plates is contemplated. I am convinced considerable economy will result therefrom. It seems convenient for you to purchase coal which is not of the best quality, hence, much more liberal heating surfaces are required for boilers using it than necessary when they are fed with the best steam coal only. It should be borne in mind, that because an engine gets sufficient steam to move along, and does not stick on the track for want of it, that is no proof that the engine has, economically speaking, sufficient heating surface. An engine may burn twice over her economic allowance.

The alterations which I have to suggest for the engines mentioned in clause *C* are as follows:—

That the 34 engines in Classes 17 and 48, or as many of them as may be thought necessary—17 Class being the best to operate on—be converted into tank engines for the Newcastle coal traffic. That they may be supplied, with side tanks to hold 1,520 gallons or more, in conjunction with a combined coal-bunker and tank of convenient size behind the fire-box. That the main frames be extended backwards to carry this tank and coal-bunker, and to admit of a four-wheeled swing-link bogie, pinned under the driver's footplate. That the main frames be also extended forwards to admit a two-wheeled swing-link pony truck (American type) in front of the cylinders. This arrangement will give the engines all the requisite adhesive weight to balance the effort of their cylinders, as well as guidance, great steadiness on the road, and flexibility on your sharpest curves. When new boilers are given to them, the heating surface for 17 Class should be (say) 1,400 square feet in a strongly built boiler to work at a pressure of 140 lb. per square inch; and for 48 Class the heating surface should be (say) 1,500 square feet in a less strongly built boiler, to work at a pressure of 120 lb. per square inch.

The alterations which I recommend for the suburban tank engines of 351 Class is to remove their existing cylinders, which are 15 inches in diameter, and substitute for them cylinders of 16 inches diameter. The existing heating surface, although small, will sustain this alteration. These engines are not well proportioned, but the change proposed will make them much more suitable for their work than they are at present.

With regard to the engines of 373 Class, known as the "Vulcan"—a type which has been more or less criticised—

I recommend that their cylinders, which are 19 inches in diameter, be removed, and cylinders of 18 inches diameter substituted. An anxiety to provide sufficient power for your growing traffic has over cylindered these engines. The heating surface of their boilers and the weight available for adhesion are nearly correct for cylinders of 18 inches diameter by 26 inches stroke. I anticipate that the alteration proposed—if it is carefully carried out—will make much more useful machines of them than they are at present. In designing the new cylinders great care should be exercised to give the exhaust passages ample area and easy direction. The existing exhaust passages are cramped and crooked, and must throttle, to a very considerable extent, the escape of the exhaust steam. The construction of the slide valves and valve spindles is not good. I recommend the adoption of the ordinary design of valve buckle, with arrangement of steam chest to permit of easy removal.

More efficient means of firmly bracing the main frames together, in the neighbourhood of the cylinders, should be devised, so as to resist effectually the bending effort of the cylinders. The springs under the engines are approximately 30 per cent. too strong, and should be proportioned to the loads imposed on them.

The faulty construction of these engines illustrates very fairly the unfortunate consequences which purchasers must expect to suffer by placing their orders in the hands of builders who are not the best and most experienced, unless complete drawings and specifications are supplied from which they cannot depart.

With regard to the engines mentioned in clause *d*, I recommend as follows:—

Class 93, of which there are seventy-two in your service, is one of the best-designed and proportioned engines in it. The only alteration I have to suggest affects the heating surface. When new boilers are required for these engines, or if any new engines of the same type are ordered, it will improve the adhesive weight of the engine—which is scarcely sufficient—if the boilers are made heavier and suitable for a working pressure of 140 lb. to the square inch, and if the heating surface is increased to (say) 1,430 square feet. This surface can be obtained by using (say) 200 tubes 1⅞ inches outside diameter, without enlarging the diameter of the existing boiler barrel.

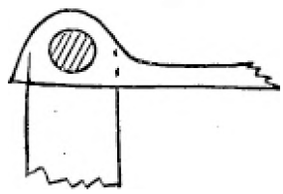
Class 158, of which there are six in the service, is, I think, your best suburban engine. Its cylinders, wheels, and boiler are in fair proportion, but the weight on the coupled wheels is excessive, and has been complained of as too severe on the permanent-way.

This defect could be cured by extending the main frames backwards, so as to carry a combined tank and coal bunker, and permit the addition of a single swing-link pony truck (American type) behind the coupled wheels. I do not urge this alteration as an absolute necessity, but merely as the best remedy for the complaints above alluded to.

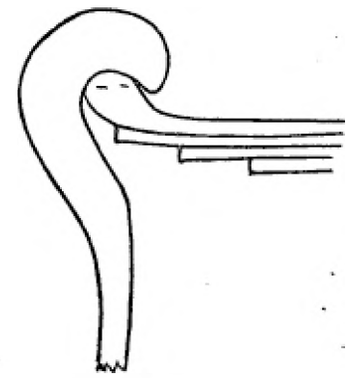
Class 205.—There are seventy engines in it, known as the English Mogul Goods. They are employed largely on the Mountain Section, and generally where heavy work is done. They are very good, well-built engines, but I consider them deficient in heating surface. They would work much more economically with enlarged boilers, and by the additional weight thus imposed on their coupled wheels, their present tendency to slip in wet weather would be advantageously reduced. When new boilers are required for these engines, the heating surface should be increased, if possible, to 1,450 or more square feet, with 140 lb. per square inch as a working pressure. The weight for adhesion should be increased from the present 36 tons to 39 or 40 tons. It is complained of these engines that their valves have too much lead, but that defect, where it exists, is easily and inexpensively remedied by reducing the angular advance of the eccentrics.

It is also said that the coupled springs cant over. This defect can also be remedied at a very moderate cost, by substituting for the present top plate ends, and links (which are arranged as shown at A—with pins through the links and plate) solid ends and claw-links, to embrace the whole width of the top plate (*see* B). The leverage given by the wide claw will prevent canting.

A



B



Should it be decided to obtain more of these engines, I suggest that the pony truck in the new ones be made with a much shorter radial arm, and of the swing-link pattern. For your ordinary heavy goods traffic I doubt if any better engine, when altered as above indicated, can be obtained.

Class 255 contains forty-seven engines. All have inside cylinders and four coupled wheels, which are 6 ft. 1 in. diameter. Forty-one of these engines have cylinders 18 in. × 26 in., and the remaining six, which are the oldest, have cylinders 17 in. × 26 in. The last seventeen engines of this type supplied have Joy's patent valve motion, and these are, I think, the most useful of the class. Thus there are, strictly speaking, three types in this class, and made by different firms.

I hold the opinion that coupled wheels so large as these (73 inches) are not advisable for your lines, and will therefore recommend for your express traffic a similar engine with smaller wheels, larger boiler, and consequently increased power.

I have now to deal with that part of my instructions which requires me to report upon the types of engines to be adopted in the future for the following services, viz.:—

1st. Express passenger.
2nd. Heavy mail and express stock trains.
3rd. Tank, suburban engine.
4th. Ordinary goods engine.
5th. Heavy coal and shunting engine.

This part of the inquiry has been, according to instructions given, considered in conjunction with Mr. Middleton and Mr. Neale. I am not able to endorse the views held by the former gentleman as to the best engines, taking your circumstances fully into account, for any of these services. And, in consequence of Mr. Neale having arrived so very recently in the Colony, he has not had sufficient time to make

make himself acquainted with the requirements of the service, or the duties to be performed by such engines. Although glad to discuss the points involved, and have the benefit of Messrs. Midelton and Neale's views thereon, I am only able to place before you the following recommendations as results personally arrived at, after a patient and critical study of the whole question.

First.—With regard to an express engine. As previously stated, a four-wheeled-coupled engine is, in my opinion, better suited for the speeds and conditions of your service than a six-wheels-coupled machine. And having regard to the limitation of load per axle by your engineer, viz., 14 tons, the weight for adhesion in engines with four coupled wheels become 28 tons. The question to be dealt with therefore is, the best means under your circumstances of utilising that amount of adhesive weight.

As already stated, you have in the Joy's motion express engines of 255 Class excellent machines, and I think it wise to so modify them as to secure duplication of their parts as far as possible, and at the same time take full advantage of the limit of weight per axle.

The sooner a stronger permanent-way allows the introduction of machines of greater weight and power the easier it will be to conduct satisfactorily a growing traffic, but in the meantime the power of the Joy's motion engines can be increased in any repetition of the design, by reducing the diameter of the coupled wheels to 5 ft. 6½ in., and by enlarging the boiler so as to contain at least 1,300 square feet of heating surface. The additional wheight obtainable from an enlarged boiler is required to increase the total adhesive weight of the engine from 25¼ tons to 27½ or 28 tons.

This proposed engine would have a power about 10 per cent. in excess of your present express locomotive. It would climb the grades with greater ease, and run down them with sufficient freedom. But the great advantage to be obtained is that this new engine would duplicate with existing engines of 255 Class so far as concerns cylinders, pistons, valve motion, connecting and coupling rods, axles, axle-boxes, bogie, brake-gearing, main framing, and many other important and unimportant details. Even the tyres for the coupled wheels should be made duplicates of those used for the Vulcan engines, Class 373. Thus I do not suggest a new type for express passenger work at present.

Second.—For the heavy mail and fast stock service I recommend a new engine, built on lines very similar to those of 205 Class. This engine to have cylinders 19 inches diameter by 26 inches stroke, with six coupled wheels 4 feet 6 inches diameter, and arranged in a rigid wheel-base of 11 or 11½ feet. The front end to be carried on a single-wheeled swing-link pony truck (American type). A large strong boiler will be required for this engine, in order that it may work with economy. It should be pressed to 140 lb. per square inch working pressure, and have a heating surface of about 1,550 square feet—*more, if convenient.* The total load arranged for adhesion should be at least 40 tons. These engines would exert the same power, practically, as your present goods engines of 205 Class; but they would be more lively, and freer to run at speeds required for heavy mail and stock trains, in consequence of their enlarged wheels. Many of the details used in 205 Class can be employed in these new engines, if makers are so instructed.

Third.—Respecting a suburban tank engine. Your suburban traffic has become sufficiently heavy to require either more powerful engines to deal with it, or the alternative of shorter and more frequent trains. If the latter method of meeting the case is possible, I recommend that your present engine—Class 158—be repeated, with the addition of a swing-link single pony truck behind, in order to remove the objection felt by the permanent-way branch to the loads per coupled axle imposed by this engine on the track. The strengthening of the track would of course make the pony truck less requisite; but I think in any case for engines which run in both directions a flexible guiding wheel is an excellent provision. On the other hand, if it is not possible, with the limited number of lines between Sydney and Homebush, to run shorter trains, then a more powerful and active suburban engine is a necessity. This can be provided in two ways, according to the increased power required. A four-wheels-coupled engine similar in design to 158 Class, and having about 13 per cent. more power, can be arranged within the limit of load per axle. It would have cylinders 17 inches diameter. The wheels, tyres, axles, axle-boxes, and minor details to be duplicates of 158 Class, but the front bogie should, if convenient, be made of the swing-link type, and a single pony truck placed under the coal-bunker. The boiler of this engine should have 1,100 square feet of heating surface, and the load resting on the rails from the coupled wheels should be about 27½ tons. If 13 per cent. of increase in power is not sufficient to meet future requirements then engines having six wheels coupled must be adopted, so as to keep within the limit of load per axle, and good tank engines with larger cylinders can be readily arranged. In that case I recommend inside cylinders 18 in. x 24 in., with six coupled wheels 4 feet 6 inches in diameter. These wheels to be arranged under the boiler barrel in a rigid base not more than 11½ feet long. A single swing-link pony truck to be arranged in front of the cylinders, and a four-wheeled swing-link bogie behind the fire-box. This machine will exert 40 per cent. more power than your present suburban engines of 158 Class, it will be more lively in action with heavy loads, and easy on the road. The boiler should contain about 1,350 square feet of heating surface, and the adhesive weight from the coupled wheels should be 33 tons. The tank capacity may be 1,200 or 1,500 gallons, with a corresponding coal space. The grate area should be 17½ or 18 square feet.

Fourth.—For ordinary goods service I recommend repetition of 205 Class, but modified (so as better to meet your circumstances), as described on page 3, viz.:—Enlarged boiler, a swing link American pony truck instead of the present truck, and slight alterations in the spring links and position of eccentrics.

Fifth.—For heavy coal and shunting purposes I have already recommended (see page 3) the conversion of Classes 17 and 48, in order to remove them from the list of comparatively useless into that of more useful engines. If, however, it is not convenient to effect this change, and new engines be preferred, then I recommend that engines which shall duplicate, in all essentials, with your existing 93 Class be obtained, but arranged as side tank engines with bogies at ends, in a manner similar to that described for 17 and 48 Classes on page 3, and also for the new

suburban

suburban tank engine recommended above. As before stated, the engines of Class 93 have done, and are doing, excellent service, and to repeat them in this modified form of tank engines, will, I feel assured, give satisfaction. Their boilers should contain 1,430 square feet of heating surface, and the incline of the cylinders, which is at present 1 in 9½, should be increased to 1 in 8½, to permit of removing the front leading axle 12 inches or so nearer to the driving axle, thus shortening the rigid wheel-base to 10 ft. three in. or thereabouts, but chiefly in order to get sufficient weight on the wheels of the front pony.

Generally.

In arranging the single-wheeled pony trucks recommended, special care should be taken to adjust their radial arms in length, so that in moving round curves of 8 chains radius, the flange of the pony wheel will run against the inner rail of the curve, and travel parallel with it, not in an angular direction to it.

Tenders.—I recommend that they be made no bigger than the distance of your suitable water supplies necessitate, so that the force of the engines which should be devoted to hauling paying loads is not absorbed in dragging greater quantities of water after them than absolutely required. And further, that the tenders be carried on three axles, two of which may be arranged, if necessary, in a bogie behind. This makes a very good arrangement, and gives all the flexibility to tenders which your sharpest curves can require.

This review of your existing locomotives, and my recommendations for future types may be thus summarised :—

A—That 15 engines be broken up or sold at once.
B—That 87 engines be allowed to wear themselves out or sold.
C—That 132 engines be altered into more useful machines, but not repeated,
D—That 195 engines contained in Classes 93, 158, 205, and 255, be adopted as standard machines, and slightly modified as opportunity occurs.
E—That the future express engine be 255 Class, modified.
F—That the future mail and express stock engine be a new type similar to Class 205.
G—That the future tank suburban engine be either a new and more powerful type, or 158 Class, modified.
H—That the future ordinary goods engine be 205 Class, modified.
J—That the future heavy coal and shunting engine be either the existing 17 and 48 Classes, converted into tank engines, or 93 Class repeated as a tank engine.

Carriages—ordinary.

Exclusive of the state, dining, sleeping carriages, and composite brake vans, there are 580 ordinary passenger vehicles in the service, and they consist of twenty-two different types, thus divided :—

Second class,	7 types	... ...	290 vehicles.
First „	9 „	... ...	157 „
Composite,	6 „	... ...	133 „

The different types of each division are as follows :—

Second Class.

A—43 old open, 3rd class, converted.
B—156 ordinary short 4-wheeled.
C—7 six-wheeled radial.
D—37 American 8-wheeled Bogie.
E—17 original Redfern „
F—27 improved „ „
G—3 Cleminson altered 8-wheeled Bogie.

First Class.

H—30 ordinary short 4-wheeled.
J—6 Redfern „ „
K—6 eight-wheeled radial.
L—15 six-wheeled „
M—4 saloon 8-wheeled Bogie.
N—37 American 8-wheeled Bogie.
O—31 original Redfern 8-wheeled Bogie.
P—25 improved „ „
Q—3 Cleminson altered „

Composites.

R—46 ordinary short 4-wheeled.
S—18 six-wheeled radial.
T—8 Ashbury 12-wheeled Bogie.
U—25 American 8 „ „
V—12 original Redfern wheeled Bogie.
W—24 improved „ „

Respecting the above stock, I recommend that the 43 old open converted "thirds," classified A, be condemned at once as quite unfit for passenger use, removed out of service, broken up, or sold.

That the 163 "seconds," classified B, C, the 55 "firsts," classified H, K, L, M, and the 64 "composites" classified R and S, be also condemned, on account of their ages, costliness of maintenance, the extreme shortness of their compartments, lowness of roofs, and general discomfort. That they be removed out of service, broken up or otherwise disposed of, so soon as new vehicles of improved types can be substituted. It is thus proposed to remove, as early as convenient, 325 vehicles from the service.

The remaining carriages are 84 "seconds," classified D, E, F, G; 102 "firsts," classified J, N, O, P, Q; and 69 "composites," classified T, U, V, and W, or a total in all of 255 vehicles. These carriages are best of the stock now under consideration, and the only portion of it worth spending money upon for maintenance. Even some of them afford extremely poor accommodation.

I am moreover of opinion that none of the types herein recommended for maintenance should be repeated, and suggest that your future carriage stock be built from designs differing widely from the existing types, so as to give reasonable accommodation and comfort to travellers.

I am conscious that the above recommendations necessarily involve a very large expenditure, but I think it is quite time that the line of action which the Carriage Branch is to follow in the future be chosen and undeviatingly worked to, so that the much more costly practice of patching up time after time comparatively worthless stock—which can never give satisfaction—may be discontinued.

Mail Vans.

The stock of mail or post office vans consists of 24 vehicles, and although plain and simple in their fittings, they appear to me to be sufficiently suitable to be repeated if necessary.

Passenger Brakes.

There are 166 passenger brake-vans in the service, and, with few exceptions, they are built as composites for second-class passenger accommodation. These vehicles constitute six distinct types, as follows:—

(*a*) 2 eight-wheeled bogie, mail and brake.
(*b*) 30 do do second and brake.
(*c*) 93 six-wheeled rigid, do
(*d*) 17 new four-wheeled rigid, do
(*e*) 12 old do do do
(*f*) 12 eight-wheeled radial.

The two combined mail and brake vans classified (*a*) are good useful vans for the Melbourne express and mail traffic. The 30 long and 110 short composite second-class and brake, classified (*b*), (*c*), (*d*), are suitable for the mountain and suburban work. These five types, or any of them, may, in my opinion, be repeated when it becomes necessary to increase this section of the stock. The remaining types, classified (*e*) and (*f*), should be abandoned as early as convenient. The twelve old four-wheeled vans especially are not worth further expense to maintain.

Sleeping-cars.

There are seventeen sleeping-cars, and they form two classes. Nos. 8 and 9 differ from the others. They were imported from America five years ago, and are of the class known in the States as drawing-room cars. They are carried on six-wheeled bogies instead of four, are more commodious than those of the ordinary type, but their weight is correspondingly greater. They accommodate twenty passengers, and weigh per passenger, when empty, nearly 26½ cwt. The other fifteen cars carry the same number, and, although not so convenient, they weigh per passenger about 18 cwt., a difference of about 47 per cent. of dead weight per fare. This matter is so important, where heavy inclines are worked, as to deserve keen attention when designing future cars. The original sleepers imported from America ten and twelve years ago are still in much better order than the others subsequently constructed in the Colony to the same design. This result is important, and is greatly due to the inferiority and unseasoned condition of the timber used in the colonial cars as compared with the American vehicles.

Miscellaneous Stock.

There are 275 miscellaneous vehicles classed amongst the passenger stock, viz.:—

152 horse-boxes,
73 carriage-trucks,
7 prison-vans,
31 workmen's vans, and
12 hearses.

These vehicles are of the usual design, some of them in need of repair, but fairly well built and suitable for repitition (so far as the bodies are concerned) when more of them are required, but they should have iron or steel under-frames.

Remark.—The State carriages, of which there are two, and one dining-car, are vehicles for special and not for public service; for that reason I do not think they come within the limits of my inquiry at this stage.

Merchandise Stock.

There are 8,940 vehicles for merchandise traffic in this service.

Neglecting variations of minor importance (although very numerous) in their dimensions and styles of construction, and arranging them in accordance with the main features by which they are recognised in the service, I find there are twenty-three distinct types.

The bulk of the waggon stock is already classified under the distinguishing letters A, B, C, D, E, F, G, H, and I. Each letter represents a type differing widely in style and purpose from the others, but these and the other types, which constitute the whole stock, contain many varieties not described or noticed in the books of the Department. It would be a very protracted task to ascertain the extent and nature of such variations, and I do not think it essential to this inquiry, beyond pointing out the importance of uniformity, since each variation imposes a tax on the economic working of the whole.

The different types are as follows:—

A—236 shallow waggons, 6" curb.
B—232 deep do 30" sides.
C—404 covered vans, various.
D—5,505 medium and deep waggons.
E—370 swing bolster timber trucks.
F—11 long Cleminson waggons, shallow.
G—354 8-wheeled bogie waggons.
H—231 dump cars.
I—93 "Brown's" waggons.
J—300 ballast waggons, Cowdery coupling.
K—60 travelling water-tanks, various.
L—46 powder-vans, various.
M—461 sheep-vans, ordinary.
N—2 do special bogie,
O—418 cattle-vans, ordinary.
P—1 do special bogie.
Q—48 dead-meat vans, various.
R—15 combination trucks.
S—7 accident vans.
T—2 10-ton accident cranes.
U—1 travelling gas-supply van.
V—1 do reservoir.
W—172 goods brake-vans.

The

The condition of the merchandise stock on your lines, with the exception of the special vehicles classified s, r, y, v, and w, is, for the greater part, almost as bad as it is possible for rolling stock to be in, and I am not able to recommend you to continue the repetition of the present designs in any case.

This unsatisfactory result has been mainly brought about by using timbers insufficiently seasoned or affected by dry rot, in these vehicles, and also to some extent through the want of paint after manufacture. The camber or hogging of the under-frames is a very common feature, and in some instances most marked, reaching as much as 3¼ inches in short 15-foot waggons, a consequence of the above defects.

The cause for unseasoned timber in these vehicles is probably due to the following:—First, the Department itself has never kept any stock of timber seasoned and ready for use; and secondly, orders for new vehicles in the past have been given spasmodically, and to the lowest tenders, without consideration as to whether they were possessed of a sufficient stock of seasoned timber to carry out the work properly. These remarks apply with equal force to the timbers of some of your carriages.

To avoid repetiton of these results in the future, I recommend the employment of iron or steel, instead of timber, in the under-frames of all your passenger and merchandise stock, and also the adding of a sufficient quantity of suitable timber to the materials kept in store, in order that it may season; and to avoid perpetuation of the almost endless varieties now existing amongst the carriages and waggons on your lines, I suggest that new designs should be made for vehicles of the future, and rigidly followed, as standard types.

I enclose herewith three tracings showing an 8-ton open waggon, a carriage under-frame, and a carriage bogie, built of iron bars, and adopted as standards for the 5′ 3″ gauge of the South Australian Railways. They give satisfaction, and I think the arrangements observed to secure lightness and strength worth attention.

The following is my valuation of your existing engines, carriages, waggons, and other vehicles, for passenger and goods traffic on the railways:—

429	Locomotives	£736,750
1,065	Passenger vehicles	385,780
8,940	Merchandise do	700,150
	Total	£1,822,680*

Although the matters dealt with in the above report are presented in a condensed form I believe that features of moment have not been overlooked in arriving at the opinions expressed. Upon so wide a question further time might be occupied by a more exhaustive investigation of details than I have been able to undertake within the period at disposal, but I feel assured extended inquiry would lead practically to the same conclusions.

Workshops.

I examined the machinery in the workshops at Sydney, Newcastle, Bathurst, Penrith and Goulburn. I do not consider it in excess of your requirements, although, so far as that for metal working is concerned, it is quite sufficient for many years to come. There is, however, a deficiency of woodworking machinery, and a few additions, not many, may be required to that section.

I recommend a reduction in the number of machines which exist at present in the steam sheds at Penrith, Bathurst, and Goulburn; that they be transferred to Eveleigh where they can be put to more constant and profitable use, and that the heavy repairs to engines be discontinued at such stations. This will result in economy.

The workshops at Newcastle are very far from convenient. They are numerous, small, disjointed buildings, difficult to work without an undue expenditure of engine and boiler power.

The Eveleigh shops, in the main, are suitable, although it is to be regretted that plans were not adopted to avoid the introduction of internal traversers with their deep inconvenient pits; especially in the carriage and waggon works. Such expedients are only justified where areas available for shops are limited, or so shaped as to render their employment desirable. Overhead cranes without traversers and without the sacrifice of the valuable shop-room which they necessitate, answer every purpose where they are properly arranged, so as to permit of engines and carriages being lifted bodily, both ends at once, instead of, as at Eveleigh, only one end at a time.

Other departures from modern practice and best arrangements, in the Eveleigh works, might be mentioned, but as they cannot be remedied now, it is sufficient to point out that they entail some delay and expense in the execution of work not felt in well-arranged establishments.

Timber-drying Sheds.

I have considered this question, and recommend that an open shed (say) 200 feet long by 65 feet wide, be erected where shown on the attached plan, viz., between the carriage-shops and the store-sheds at Eveleigh. If so placed it can be conveniently approached either by road or rail. It has been suggested for this purpose to utilise the existing retaining wall which is built at *a a* on plan, below the public street, but for timber sheds solid walls are unsuitable, they prevent the free circulation of air, and so interfere with the seasoning of the timber, and, beside this objection, there will be less risk of accidental fire if the shed is placed at the distance suggested from the public street.

Axle-boxes.

Samples of the numerous and various patterns of carriage and waggon axle-boxes have been examined. I do not consider any of them good enough for oil-boxes on your stock. They are poor in design for the most part; but the principal cause of so much oil being wasted is want of efficient fitting between the pieces of the boxes. The joint between the top and bottom parts of an oil-box should be a machine fit; here they are rough surfaces, as they came from the moulding-shop.

I enclose a tracing of a carriage and waggon axle-box which I have found to give excellent results in South Australia. It is a little expensive to manufacture as compared with those in use here, but it very soon pays for its cost by economy in consumption of oil and maintenance.

Brown's

* The valuation as per the Report of the Commissioner for Railways for 1887 is £3,250,421.

Brown's Waggon.

I am of opinion that the plan which is illustrated by the altered underframe, No. 39, Class I, exhibited in the new paint shop at Eveleigh for strengthening these vehicles so as to permit the attachment of side buffers and the ordinary system of draw-gear will be found efficient as an alteration.

The cost of such work, for materials and labour, will probably amount to £20 or £22 per vehicle, if so much of the existing draw-bars is utilised as may be possible.

Very little aid is obtainable in this case from machine labour, hence its costliness.

Cowdery Coupling.

I have examined many waggons fitted with this apparatus, and conclude it is not an appliance of sufficient merit to warrant adoption on your railways. As a means of coupling vehicles together it is less reliable and much more expensive to make and to maintain than the ordinary hook and chain, and, as a means for the prevention of accidents to employés, it is too uncertain and imperfect in its action to secure that end.

I find it has been removed from about 130 waggons of the original 400 to which it was applied, and consigned as useless to the scrap heap. I concur in the opinion which led to this action, namely, that expediency and safe working demand its entire removal at an early date from the remainder of the vehicles to which it is attached.

Tram Cars.

My recommendation on this subject were forwarded to you on the 2nd instant.

I have the honor to be,
Gentlemen,
Your most obedient servant,
WILLIAM THOW, M.I.M.E.,
Locomotive Engineer, South Australian Railways.

APPENDIX F.

Railways.—(Report of Mr. R. Price-Williams, C.E., on the construction of Rolling-stock and the Permanent-way.)

[*Ordered by the Legislative Assembly to be printed*, 31 *July*, 1889.]

[*Laid upon the Table of the Assembly, in accordance with the Colonial Treasurer's promise on* 30*th July*, 1889.]

Memo. by The Railway Commissioners.

Office of the Railway Commissioners of New South Wales, Sydney, 31 July, 1889.

The Railway Commissioners having found, from Mr. Thow's Report on Rolling-stock, that the conclusions they had arrived at as to the condition of the property were fully confirmed, and as the amount of money involved was so great, when they learnt that so eminent an authority on rolling-stock and permanent-way as Mr. R. Price-Williams, M. Inst. C.E., and late Member of the Council M.E., was in the colonies, decided to obtain his services to investigate the subject further, feeling that Parliament would probably require the strongest evidence to justify so large a money vote being granted as would be necessary to place our railways on a proper footing.

It may be mentioned that when the Home Government contemplated the purchase of the Irish railways, and appointed a Royal Commission to report on the same, that the Commission engaged, as chief engineer, Mr. R. Price-Williams to value for them the rolling-stock, permanent-way, and works of the whole of the systems.

Mr. R. Price-Williams is also the author of a paper on the Permanent-way of Railways, for which he was awarded, by the Council of the Institution of Civil Engineers, the premier Telford Medal and Premium. Also, a paper on the Maintenance and Renewal of Rolling-stock, for which he was awarded, by the same Institution, the Gold Watt Medal and Telford Premium. Both these works are now recognised as standard authorities on these subjects.

E. M. G. EDDY,
Chief Commissioner.
W. M. FEHON,
Commissioner.
CHARLES OLIVER,
Commissioner.

The Chairman, Railway Commissioners, to R. Price-Williams, Esq., C.E.

My dear Sir, Department of Railways, Sydney, 30 July, 1889.

It is intended by the Minister to lay on the Table of the House a copy of your report to the Commissioners upon the Railway property, and as you will not be so universally known in this country as you are at Home, I should feel obliged if you will favour me with a copy of the letter from Sir James N. Douglass, F.R.S., &c., which you referred to when we were speaking together recently.

Faithfully yours,
E. M. G. EDDY.

R. Price-Williams, Esq., C.E., to The Chairman, Railway Commissioners.

My dear Sir, Union Club, Sydney, 30 July, 1889.

I am much obliged to you for your letter of this date, and for your suggestion that I should furnish you with a copy of the letter of introduction my friend Sir James Douglass recently gave me to His Excellency Sir Robert Hamilton, the Governor of Tasmania, which I have the pleasure to enclose.

I should state that Sir James Douglass, F.R.S., is the Engineer to the Trinity House, and a leading member of the Council of the Institution of Civil Engineers.

Yours faithfully,
R. PRICE WILLIAMS.

[*Enclosure.*]

[*Enclosure.*]

My dear Sir Robert, Trinity House, London, 20 March, 1889.

I beg to introduce to you my old friend and schoolfellow, R. Price-Williams, M. Inst., C.E., &c., who is on a visit to Tasmania in connection with the railways of the country.

Mr. Price-Williams is probably the greatest living authority on railways in all the branches of construction, rolling-stock, and maintenance; therefore, you will, I am sure, be glad to make his acquaintance, and more especially when I assure you that no member of the Institution of Civil Engineers is more highly esteemed by his professional brethren.

With kind regards, I am, &c.,

JAS. N. DOUGLAS.

Sir R. Geo. C. Hamilton, K.C.B., &c.

Report by R. Price Williams, Esq., C.E., to The Railway Commissioners.

Sydney, 29 July, 1889.

To the Commissioners for Railways of New South Wales, Sydney,—

Gentlemen,

I have devoted the last seven weeks to a careful examination of the rolling stock, permanent way, and works of the New South Wales Railways, but I should have liked, before reporting to you upon the subject, to have extended my investigations, and to have worked out in greater detail the results I have arrived at, but I am so impressed with the exceeding gravity of the present condition of matters that I have decided to lose no time in furnishing you with this Report.

I should at once state that I find the locomotive, carriage, and waggon stock generally in a deplorable condition.

Locomotive Stock.

Of the 429 engines at present working the traffic—for the most part constructed by leading locomotive builders—five have been on the line for the long periods of 33 and 32 years; twenty-nine for periods varying from 22 to 26 years, the mean life of the thirty-four engines being over 25 years; thirty-four others have been at work for periods between 15 and 20 years, nineteen (or more than half of them) being between 18 and 19 years old.

Further, there are 100 engines (or nearly a fourth of the old stock) whose ages vary from 10 to 14 years; altogether, as will be seen from the following statement, there are at present 168 engines (or considerably more than one-third of the entire stock) whose mean age is exactly 15½ years, while the age of fifty-six others verges upon 10 years—the life-span, so far as regards the period of renewals, of a modern locomotive; the average age of the entire stock being 9½ years.

TABLE A.—Statement of Age of Locomotives.

Mean Age.	Date.	Age in years and Number.				Number.	Total.	Percentage on entire stock.
		Age.	No.	Age.	No.			
26·06...	1856 and 1857	33	2	32	3	5		
	1863 „ 1864	26	3	25	5	8		
	1865 „ 1866	24	11	23	3	14		
	1867	22	7	.....	.....	7		
						34	34	7·93
17·09...	1870 and 1871	19	10	18	9	19		
	1872 „ 1873	17	1	16	2	3		
	1874	15	12	.....	.....	12		
						34	34	7·93
11·71...	1875 and 1876	14	18	3	1	19		
	1877 „ 1878	12	39	11	18	57		
	1879	10	24	.....	.....	24		
						100	100	23·31
15·50							168	39·17
6·80...	1880 and 1881	9	35	8	21	56		
	1882 „ 1883	7	35	6	26	61		
	1884	5	49	.....	.....	49		
						166	166	38·69
3·25...	1885 and 1886	4	55	3	19	74		
	1887	2	21	.....	.....	21		
						95	95	22·14
9·42	Total number of Engines on 31 May, 1889						429	100·00

In order to ascertain the amount of work done by these engines, which, perhaps, is the best test of the life value of the stock, a statement of the train mileage run by each engine has, at my request, been obtained from the published reports, a summary of which accompanies this paper. (Table No. 4.) From a reference to it it will be seen that engine No. 391, which has been thirty-three years at work, has since 1862* run upwards of 609,000 miles, while engine No. 26, put on the line in 1866—ten years later—has very nearly reached the same great mileage. There are at present six locomotives whose mileage varies from 512,000 to 560,000 miles. Altogether the number of engines which have run between 400,000 and 500,000 miles is twenty-seven. The

* No record has been kept of the mileages run by each engine prior to 1862.

The mileage of fifty-one engines ranges between 306,000 and 398,000 miles—twenty-two having been put on the line so late as 1877, 1878, and 1879, the mileage of one of them (No. 416) having averaged as much as 32,000 miles annually—while fifty-eight engines have already attained a mileage exceeding 200,000. Altogether 135 engines have run over 250,000 miles.

TABLE B.—Summary of table No. 4, Appendix.

Per centage of entire stock.	Number.	Mileages run since 1862 by Engines now in use.			
		1 engine		609,141 miles.	
		6 engines		From 511,706 to 561,153 miles.	
31·47	135	27	"	" 411,931 to 498,655	"
		51	"	" 300,095 to 398,194	"
		50	"	" 250,285 to 299,422	"
13·52	58	58	"	" 200,844 to 248,591	"
17·95	77	77	"	" 151,004 to 199,611	"
37·06	159	159	"	Under 150,000 miles.	
100·00	429	429 engines.			

In order to fully realise the significance of these figures, it is necessary to remember that, in the case of a well-maintained locomotive stock, 200,000 train miles* is considered, in England, to be the limit which an engine should be allowed to run before all the principal parts subject to wear and tear have been entirely replaced, such for instance as the tubes, crank, axles, tyres, boiler, axle-boxes, &c., &c. In fact in many cases it is found preferable to construct an entirely new engine, taking credit for the scrap value of the old one, which, if not broken up, is employed for shunting or other minor duties.

* *Vide* Molesworth, "Life of Rolling Stock."

I find that only sixteen engines have been renewed since 1855. The first renewal occurred in 1872, when the total stock was 67 engines; in 1877, four engines were renewed, the stock having in the meantime more than doubled. In the following year two more engines were renewed, the total number of engines in that year (1879) being 177. If, in this period of ten years, the stock has been properly maintained, nearly the whole of these 177 engines, many of which at that time were upwards of fourteen years old, and had been—as the mileage statement shows—so severely worked, ought by this time to have been renewed. Table No. 1, Appendix.

All, in fact, that has been done in addition to these few renewals, has been the replacement of 46 new boilers† and some crank axles. Most of the engines I had the opportunity of examining, have evidently undergone nothing but ordinary repairs, with occasional replacements of minor parts, which become worn out in the course of a few years.

From a reference to the tabular statement which I have prepared from the printed reports, and from details as regards labour and materials, furnished me from the books at Eveleigh, it will be seen that in 1878 the cost of the materials required for the maintenance and renewals of the engines was then only about one-half that of the labour; since then the amount expended on materials has been very largely diminished, the cost of the materials in 1887 being only about one-eighth of that of the labour. Table No. 2, Appendix.

During the last ten years the total expenditure on maintenance and renewal of engines up to the end of 1887 has been as follows:—

Wages...	£526,711
Material	174,929
	£701,640

The labour on the average being just three times the cost of the materials. The proportion of these two important items on well-maintained English railways being about equal, or with a very small excess occasionally in the case of labour. In the colonies the cost of labour is very much greater, but after making full allowance for this it is quite clear that very little has been done in the way of renewals.

The average price paid for new engines by the Government during the last ten years was £2,710 per engine. The £701,640 expended during that period in the maintenance and renewals of engines would, therefore, have sufficed to purchase 259 new engines of the most modern and approved type. It, however, should be borne in mind that the £701,640 includes the necessary charges for ordinary maintenance, and also that the price paid for both labour and materials, as already stated, is considerably greater on the New South Wales railways than in the case of English railways. See Table No. 3, Appendix.

The number of new engines added to the stock of the New South Wales Railways during the last 10 years has been 272,* while the additional mileage opened during that period has been 1,347 miles, giving exactly a fifth of an engine (0·20) per mile, or a little less than the proportion which has obtained during the last ten years over the entire system; it is evident, therefore, that these new engines only represent the necessary equipment required for the mileage of new railway opened during this period. * Table No. 3, Appendix.

From a reference to the before-mentioned Table 2 in the Appendix, it will be seen that the annual cost of the maintenance and renewals of the engines during the last ten years has only averaged £246 per engine, the cost during the year 1887 amounting to but £228 per engine,† the expenditure on materials being relatively very small— † See Table No. 2.

1887.	£	s.	d.
Wages	203	2	0
Materials	25	7	0
	£228	9	0

It is clear from this that the amount spent on renewals during that time has been totally inadequate, and also that the 272‡ new engines added to the stock during the same period have been almost entirely relied upon to do the work of the worn-out and over-worked engines which should have been renewed. ‡ Table No. 3 appended.

The

† NOTE.—Nearly all the engines which have had new boilers are old and worn out, and, with the exception of three, of types not intended to be renewed.

The period for the renewal of the boiler and fire-box (the cost of which, with the fittings, amounts to about one-third of the entire engine), practically determines that of the engine itself, the train mileage usually allowed being 200,000 miles, the same as that usually allowed for the renewal of the engine, exclusive of the side frames and other portions not subject to much wear, as already stated.

In the Australian Colonies, where the price of labour and materials is much greater, 250,000 train miles is usually allowed. Taking, therefore, this mileage as applicable in the case of the renewal of the engine itself, it will be seen from a reference to table B that there are at present 135 engines, or nearly one-third (31·47 per cent.) of the entire locomotive stock, which have already exceeded this mileage, and these, with the exception of a few renewed and reboilered, require immediate renewal. There are 58 other engines, or over 13 per cent. of the stock, which have run between 200,000 and 250,000 miles, and these, with the few exceptions already alluded to, will require almost immediate renewal.

Further, there are 77 engines, or about 18 per cent. (17·95), of the stock which have run between 150,000 and 200,000 miles, and these, where no boiler replacements have been made, will require to be renewed very shortly.

The 135 worn-out engines referred to fortunately include most of those enumerated in Table A, as having been at work for periods varying from 33 to 10 years, and of the various types it will be inadvisable to renew.

Table No. 1, appended.

Deducting the sixteen engines renewed since 1877,* and three others of the standard types furnished with new boilers since 1881, and included amongst those which have run over 250,000 miles, the number of engines at present requiring renewal would, according to the age test, be 149, and by the mileage test, 116, as shown in the following table:—

TABLE C.

	Age test.		Per-centage.	Mileage test.		Per-centage
	No.	Total.		No.	Total.	
Engines to be entirely renewed—						
Of ages varying from 33 to over 10 years, and mileages exceeding 250,000	168			135		
Deduct 16 engines renewed since 1877, and 3 engines of the standard types reboilered since 1881	19			19		
	149	149	34·73	116	116	27·04
Serviceable engines, standard type—						
Nos. 93, 158, 205, and 255 types	195			195		
Deduct 14 engines having run from 441,458 to over 300,000 miles, and 6 of the 15 engines from 250,285 to 298,531 miles—included in engines which have run to be renewed	20			20		
Total serviceable	175	175	40·79	175	175	40·79
Other engines	105	*105	24·48	138	‡138	32·17
Total stock in May, 1889	429	429	100·00	429	429	100·00
*Serviceable—Not to be renewed	.....	86	.....	.....	†93	.....
" renewed since 1877	.....	19	.....	.....	19	.....
Standard types to be renewed, included in the 168 and 135 engines above-mentioned	.....	20	.....	.....	20	.....
	.....	105	.....	.....	138	.....

Engines of standard type No. 93 (heavy Mail and Express Stock Trains).

See Table No. 6, appended.

Of the 72 6-wheel coupled inside cylinder engines of this type there are 29 whose mileage ranges from 441,000 to over 250,000 miles (six nearly 25 years old, and seven between 18 and 19 years old). These should be at once renewed, credit being allowed for the value of the old ones, such of them as are considered worth repairing being utilised as surplus or spare stock, ready for any special service, the number of spare engines of all classes at present being only four.

Engines of standard type No. 205 (Ordinary Goods Engines).

†Table No. 6.

Of the 70 6-wheel coupled engines, with inside cylinders of this type,† there are at present 13 which have run from 190,000 to 204,000 miles. These, however, were only added to the stock in 1882, and, I think, when they have run 250,000 miles they will need only to have their boilers renewed with other minor replacements and repairs.

Engines of standard type No. 255 (Express Engines).

Of the 47 4-wheeled coupled engines, with inside cylinders, of this type, four added to the stock in November, 1882, and January, 1883, have already slightly exceeded 200,000 miles, and these, when they have run 250,000 miles, should be dealt with as in the case of the 13 engines of the last-mentioned type.

Engines of standard type No. 158 (Suburban Tank Engines).

‡ Table No. 6.

Of this type—a 4-wheel coupled engine with inside cylinders—used for the suburban traffic, there are only six in number, which were added to the stock in 1880.‡ Three of them have respectively run 262,000, 225,000, and 206,000 miles. The usual period for the renewal of the boiler in the first case has been exceeded, while in the case of the other two, the mileage limit has been nearly reached.

Adopting

Adopting the mileage run by each engine as the test of the present condition of the locomotive stock, it is evident that before the stock can be put into anything approaching a proper condition for working the traffic, at least 116 new engines of the standard types must be added to the present stock. In urging this to be done as speedily as possible the main consideration I have in view is of course the avoidance of the very serious risks involved in working the traffic with the stock in its present condition. Apart from this, however, so timely and necessary an addition to the working stock (which at present is scarcely adequate for the requirements of the traffic‡), would largely conduce to greater economy and efficiency in working the traffic. For instance, with new engines, constructed by the best locomotive builders, embodying all the most recent improvements and with the principal working parts interchangeable, the locomotive working expenses would at once be considerably and permanently reduced, and what is of equal importance, the traffic, more especially on the steep gradient lines, will be worked, as in fact it ought to be now, with engines of greater power and efficiency, so as to meet the rapidly increasing requirements of the traffic.

‡Comparative equipment per mile of the New South Wales and Irish railways (the latter both in receipts and train miles per mile being very similar) is as follows:—

	N.S.W. Railways. No.	Irish Railways. No.
Engines	0·20	0·25
Carriages	0·49	0·59
Waggons	3·99	5·12

Type of Engines not to be renewed.

There remains to be dealt with the 234 serviceable engines of a great variety of types, in number 24, but in reality 32, inasmuch as engines classed under a given type differ in many respects in the size of the wheels, diameter and stroke of cylinders, wheel-base, couplings, &c. It will be seen from the following tabular statement that, in addition to this most objectionable feature of difference of type, the whole of them (with the exception of types 351, 373, 285, 294, and two engines of type No. 127, added to the stock since 1884, and 48 in number) are of great age and have run very great mileages, in one case exceeding 600,000 miles, and in a great number of cases from 250,030 to 500,000 miles, all of them, with scarcely an exception, having run over 250,000 miles, without having had their boilers, fire-boxes, and other principal parts renewed. The lives of these engines are already gone:—

TABLE D.—(Details, Table 6 Appendix.)

Type of Engine.	Description.	Number in each class.	Date when added to the stock.	Mileage run.—1=1,000.
1N	Four-wheel coupled—inside cylinder	3	Nov., 1857	537, 547, and 473.
5	,, ,,	2	,, 1856	609 and 310.
6N	,, outside cylinder	2	March, 1863	432 and 422.
10	,, inside cylinder	1	June, 1870	239.
13	,, outside cylinder	2	July, 1863 Sept., 1864	422 and 295.
14	Pair of driving-wheels—inside cylinder	3	Nov., 1856 Jan., 1866 Dec., 1863	488, 465, and 437.
17	Six-wheel coupled—inside cylinder	23	1866, 1867, 1870, 1871, 1873, 1879	No. 2 over 500. 12 between 400 and 500. 7 ,, 300 and 400. 2 over 200.
20N	,, tank—inside cylinder	1	June, 1872	2 over 327.
23	Four-wheel coupled—outside cylinder	13	1865, 1866, 1867, 1870.	2 = 554 and 511. 8 412 to 498. 3 = 304, 376, 382.
23N	Six-wheel coupled—inside cylinder	4	1874 and 1875	3 = 312, 317, 326. 1 = 289.
29	,, tank—inside cylinder	4	1864	3 = 314, 350, 352, and 390.
36	Four-wheel coupled—inside cylinder	8	1870, 1871, 1875, and 1877.	5 from 314 to 386. 3 = 231, 224, and 270.
48	Six-wheel coupled—inside cylinder	11	1874 and 1875	3 = 305, 328, 329. 8 from 273 to 296.
60	,, ,,	6	1874 and 1875	301, 304, 314, 234, 291, and 299.
67	,, tank—inside cylinder	8	1875	7 from 211 to 266. 1 from 190.
79	Four-wheel coupled—outside cylinder	69	1877, 1878, 1879 1880, 1881, 1882	9 from 306 to 358. 15 ,, 254 to 296. 20 ,, 203 to 241. 19 ,, 154 to 198. 6 ,, 135 to 148.
105	,, ,,	2	October, 1877, April, 1879.	172 and 153.
127	Six-wheel coupled tank—inside cylinder	6	1874, 1879, 1884	172, 157, 153, 148, 73, & 70.
131	Eight-wheel coupled tank—outside cylinder	11	1879	7 over 200. 3 between 150 and 200. 1 over 140.
285	Six-wheel coupled tank—inside cylinder	6	1884	2 = 152, 145. 4 = 69 to 92.
294	Six-wheel coupled—outside cylinder	10	1885	3 = 100, 100 105. 8 = 81 to 96.
304	,, ,,	10	1885	6 = from 101 to 107. 4 = from 85 to 99.
351	Four-wheel coupled tank—inside cylinder	18	1885 and 1886	From 25 to 79.
373	Four-wheel coupled—outside cylinder	12	1887	From 30 to 64.
Total...24 types.		Total ...	234 engines.	

As

As regards types Nos. 285, 294, and 304, six-wheel coupled engines, and Nos. 351 and 373 four-wheel coupled engines, they are comparatively new; but I am sorry to see they have, in many cases, been very much overworked, the annual run in many cases exceeding 30,000 miles per engine. These engines, although not the best suited for the traffic, are thoroughly good engines, for the most part, made by Messrs. Beyer, Peacock, & Co., and capable of doing a large amount of work for years to come, if properly maintained and not overworked.

It only remains for me to add, in connection with this matter of the locomotive stock, that the heaviest static load allowed on each axle is at present 14 tons; but when the permanent-way is put into a proper condition it will admit of a considerable increase in the static axle load, thereby enabling much heavier and stronger engines, of the standard type, to be constructed, and which are at present so much needed properly and economically to work the traffic on the steep graded lines.

Carriage and Waggon Stock.

Carriage.

The number of carriages of all descriptions in stock at the beginning of 1889 was 1,084. Of these 170 were, as the accompanying statement shows, of ages varying from 34 to 25 years, the mean age being 28½ years; 25 of ages varying from 20 to 25 years, and averaging 7¾ years; the age of 127 others varies from 15 to 19 years, while the age of 103 carriages averages nearly 11 years (10·80 years (which is about the mean age of the entire stock, viz., 10·76 years.

Table E.—Age and number of carriage stock, 1889:—

Date when added to Stock.	Ages in years.	Mean age—Years.	Number.	Total number	Number requiring renewal, and serviceable stock.	Percentage.
1855	34		30			
1856	33		3			
1857	32		23			
1858	31	28·32	13			
1861	28		69			
1862	27		24			
1863	26		6			
1864	25		2			
			170	170		
1865	24		1			
1867	22		4			
1868	21	21·00	13			
1869	20		7			
			25	25		
1870	19		26			
1871	18		25			
1872	17	17·06	26			
1873	16		30			
1874	15		20			
			127	127		
				322	322	29·70
1875	14		8			
1876	13		3			
1877	12	10·80	10			
1878	11		22			
1879	10		60			
			103	103		
1880	9		41			
1881	8		43			
1882	7		34			
1883	6		131			
1884	5		98			
1885	4	4·62	84			
1886	3		100			
1887	2		56			
1888	1		70			
1889	0·33		2			
			659	659	.....	.....
				762	762	70·30
		10·76		1,084	1,084	100·00

* Table No. 3.

The number of carriages added to the stock during the last nine years (1878 to 1887)* has been 648, giving 0·48 of a vehicle for the 1,347½ miles of railway opened in that period, somewhat less than the average equipment per mile during the last ten years.* It is quite clear, therefore, that this additional stock has, as in the case of the locomotive stock, been mainly relied upon to work the traffic and to save the cost of the renewals, which ought to have been done out of revenue during that period.

The

The annual cost of the maintenance and renewals of carriages on the New South Wales Railways during the last ten years has averaged £36 12s. per vehicle. Of this sum, however, very nearly two-thirds was spent in labour, clearly showing that, beyond the twenty-seven carriages renewed since 1879,† nothing whatever has been done to the stock beyond ordinary repairs. I may add that these facts, coupled with the wretched state of the carriages I have examined, prove conclusively that the carriage stock generally is at present in a very bad condition.

† Table No. 1, Appendix.

Having regard to the extreme importance of continuing to work the traffic in a safe and efficient manner, I would strongly advise that at least 322 new carriages should, as soon as possible, be added to the stock.

Waggons.

From a reference to the following Table F, it will be seen that of the 8,934 waggons of a great variety of types in stock at the beginning of this year, 5,372 new ones; or just two-thirds* of the entire stock, have been added during the last ten years, corresponding very nearly with the number necessary for the equipment of the 1,347½ miles of railway opened for traffic during that period, viz., four waggons per mile.†

* 60·13 per cent.

† Added waggons $\frac{5,372}{\text{Do mileage } 1,347·5} = \frac{\text{No.}}{3·99}$

Of the 3,413 waggons of the old stock in use in 1878 only 382,‡ or less than 10 per cent. of the stock at that time, have been renewed out of revenue.

‡ See Table No. 3 appended.

The age of 1,379 waggons, or just one-sixth of the present stock, varies from 34 to 15 years, the mean age being 18¾ years.

Table F.—Age and Number of Waggon Stock, February, 1889.

Date when added to Stock.	Age, in years.	Mean age, years.	Number.	Total Number.	Number requiring Renewals, and number Serviceable.	Per cent.
1855	34	28·62	47			
1857	32		46			
1858	31		16			
1859	30		8			
1861	28		57			
1862	27		85			
1863	26		4			
1864	25		48			
			311	311		
1865	24	21·37	52			
1866	23		13			
1867	22		38			
1868	21		129			
1869	20		98			
			330	330		
1870	19	17·60	186			
1871	18		202			
1872	17		188			
1873	16		91			
1874	15		71			
Totals requiring renewals	.....	.....	738	738		
				1,379	1,379	15·83
1875	14	11·60	75			
1876	13		476			
1877	12		645			
1878	11		634			
1879	10		444			
Serviceable	.....	.....	2,274	2,274	2,274	25·40
1880	·9	6·28	531			
1881	8		410			
1882	7		598			
1883	6		937			
1884	5		724			
1885	4		971			
1886	·3		423			
1887	2		551			
1888	1		135			
1889	0·17		1			
Serviceable	.....	.....	5,281	5,281	5,281	59·11
Total mean age	.....	.....	.....	8,934	8,934	100·00

The age of 2,274 waggons, or just one-fourth of the stock, averages nearly twelve years, while the remaining 5,281 waggons, only added to the stock during the last nine years, and whose average age is about 5½ years, are already in a bad state of repair, many of the frames being "hog-backed," while the axle-boxes of early all the waggons I have examined—of a great variety of patterns—are in a very bad and neglected state. Altogether, the whole of the waggon stock is in as bad a condition as it is possible to conceive.

The

The cost of the repairs and renewals of waggons during the last ten years has averaged only £4 9s. per waggon, which is about the average cost on the principal English railways. Having regard to the much higher cost of labour and materials in the Colony, it is quite evident that the amount spent upon the maintenance and renewal of these waggons has been totally insufficient. The large proportion which the cost of the labour bears to the materials quite bears out this view.† As I have already pointed out in the case of the locomotive and carriage stock the 5,372 new waggons added to the stock out of capital to equip the new railways opened during the last ten years have been made to do the work of those waggons which ought to have been renewed during that period.

†Waggons, Repairs, and Renewals, 1887:—

Wages	£33,618·5
Materials	11,529·3
	£45,147·8

I consider that the 1,379 waggons of ages, varying from thirty-four to fifteen years, should be replaced as soon as possible with new ones of the most approved type. The 2,274 waggons, whose average age is twelve years, I fear are scarcely worth renewal, and the cost of putting these, as well as the 5,281 waggons added to the stock during the last nine years, will necessitate a very heavy expenditure before they can be put into a good serviceable condition.

The outlay necessary to restore the present locomotive, carriage and waggon stock to a proper and normal state of efficiency, so as to ensure for the future its being thoroughly maintained and renewed out of revenue, I estimate as follows:—

Estimate.

Number.	Description of Stock.	Amount required.	Total Amount required.
	LOCOMOTIVES.	£	£
116	New locomotives of the standard types, to replace present worn-out stock, from 33 to 10 years old, at £2,565	297,540	
175	Engine of the standard types, Nos. 93, 158, 205, and 255, to be rendered thoroughly efficient.	149,625	
138	Engines of types not to be renewed, to be put into serviceable condition	63,480	
429		£510,645	510,645
	CARRIAGES.		
322	New carriages of standard types, to replace present worn-out stock from 34 to 15 years old at £800.	257,600	
103	Carriages of an average age of 11 years to be put into a serviceable condition	41,800	
659	Carriages of an average age of 5 (4·62) years to be put into a thorough state of repair.	87,647	
1,084		387,047	387,047
	NEW WAGGONS.		
1,379	New waggons of standard types, to replace present worn-out stock from 34 to 15 years old, at £135.	186,165	
2,274	Waggons requiring heavy repairs, from 14 to 10 years old, to be rendered serviceable	152,358	
5,281	Waggons of an average age of 5½ years to be put into a thorough state of repair	121,463	
8,934		£459,986	459,986
			£1,357,678

In the above estimate I have taken, in the case of the new locomotive, carriage, and waggon stock, the average prices paid by the Government during the last ten years,* making full allowance for the scrap value of the materials, and also the life values still attaching to the serviceable engines and vehicles, not to to be renewed.

* See Table 1. Appendix.

I am surprised, however, to find that neither the Locomotive or Permanent-way Departments are credited in the accounts with the scrap values of the material. This is contrary to the usual practice of railway companies, as it is manifestly improper that the revenue should be augmented by the proceeds of the sale of materials which ought rightly to be credited to the cost of the new materials replaced out of revenue.

In conclusion, I should say that the annuity required to pay off the £1,357,678 in periods of ten, fifteen, or twenty years respectively, and with interest of 3½ per cent. would be as follows:—

In 10 years	£115,734 per annum.
In 15 years	£70,361 ,,
In 20 years	£48,009 ,,

The outlay of an amount such as this, judiciously applied, would, I consider, prove to be true economy, inasmuch as not only would it ensure the rolling stock being rapidly restored to a thoroughly sound and efficient condition for working the constantly increasing traffic of the Government railways, but it would enable large and immediate economies to be effected in the amounts hitherto spent in the mere maintenance of the rolling-stock, amounts which, if the stock had been properly renewed from time to time—instead of being allowed to be overworked as it has been—would have more than sufficed to have both maintained and renewed the stock, so that at the present moment it would have been in a thoroughly sound and efficient condition.

I have, &c.,

R. PRICE-WILLIAMS.

TABLE No. 1.—ROLLING STOCK ON N.S.W. GOVERNMENT RAILWAYS.

TOTAL STOCK.—Average price paid.—Vehicles renewed or replaced out of revenue.

Year	Total Stock.			Average price paid.			*Renewals out of Revenue.		
	Locomotives.	Passenger Vehicles.	Goods Stock.	Locomotives.	Passenger Vehicles.	Goods Stock.	Locomotives.	Passenger Vehicles.	Goods Stock.
				£	£	£			
1855	4	37	55	3,075	385	93	Nil.	Nil.	Nil.
1856	8	61	91	2,994	289	93	,,	,,	,,
1857	11	61	106	3,055	289	97	,,	,,	,,
1858	12	76	128	2,926	356	150	,,	,,	,,
1859	13	76	136	2,926	356	111	,,	,,	,,
1860	13	76	151	2,926	356	165	,,	,,	,,
1861	16	152	257	2,885	325	144	,,	,,	,,
1862	16	176	319	2,885	428	179	,,	,,	,,
1863	19	176	319	3,032	428	179	,,	,,	,,
1864	25	177	345	1,678	605	108	,,	,,	,,
1865	36	180	411	3,056	254	134	,,	,,	,,
1866	40	180	429	2,889	254	136	,,	,,	,,
1867	47	185	467	3,010	424	162	,,	,,	,,
1868	47	198	613	3,010	828	120	,,	,,	,,
1869	47	204	720	3,010	1,055	114	,,	,,	,,
1870	57	232	909	3,273	257	125	,,	,,	,,
1871	66	259	1,121	3,475	362	138	,,	,,	,,
1872	67	290	1,312	1,750	403	150	,,	1	28
1873	69	316	1,405	3,600	418	168	,,	2	6
1874	81	336	1,513	4,235	462	138	,,	2	11
1875	100	344	1,610	3,771	760	122	,,	2	16
1876	101	344	2,217	4,397	760	125	1	1	8
1877	138	352	2,806	3,078	676	130	4	Nil.	4
1878	154	378	3,413	2,800	757	126	Nil.	,,	14
1879	177	444	3,866	2,631	708	127	2	1	34
1880	215	490	4,443	2,835	812	130	Nil.	1	33
1881	233	530	4,849	2,472	1,005	133	,,	Nil.	6
1882	268	564	5,445	2,856	956	126	,,	,,	Nil.
1883	296	695	6,386	2,914	653	141	,,	,,	10
1884	336	776	6,936	2,762	1,187	174	6	6	115
1885	390	852	7,972	2,846	759	170	Nil.	Nil.	20
1886	406	940	8,364	2,827	822	143	3	2	31
1887	426	1,007	8,798	2,600	682	146	Nil.	1	75
Half year ending June 30, 1888	426	1,038	8,832	2,710	1,045	148	,,	8	28
							16	27	442

* The figures in these columns show only vehicles that have been built to replace others worn out or destroyed, and vehicles rebuilt in the workshops of the Department.

TABLE

TABLE No. 2.—N.S.W. GOVERNMENT

Year.	Salaries and General Expenses.			Running Expenses.																
				Wages.			Coal.			Water.			Oil, Tallow, &c.			Total Running.				
	——	Per train mile.	Per engine.	——	Per train mile.	Per engine.	——	Per train mile.	Per engine.	——	Per train mile.	Per engine.	——	Per train mile.	Per engine.	——	Per train mile.	Per engine.		
1878.	£	d	£	£	d	£	£	d	£	£	d	£	£	d	£	£	d	£		
Southern Lines...	13,151·8	...	...	51,214·3	...	...	23,242·9	...	...	4,752·2	...	...	13,484·7	...	...	92,694·1	...	...		
Northern Lines...	3,656·5	...	...	14,417·5	...	...	8,603·3	...	...	1,314·5	...	...	2,759·9	...	...	27,095·2	...	...		
	16,808·3	1·50	109·10	65,631·8	5·90	426·10	31,846·2	2·80	206·70	6,066·7	0·50	39·30	16,244·6	1·40	105·40	119,789·3	10·80	777·53		
1879.																				
Southern Lines...	25,961·8	...	...	60,343·9	...	...	25,302·5	...	...	5,521·2	...	...	13,874·0	...	...	105,041·6	...	...		
Northern Lines...	5,606·0	...	...	16,796·0	...	...	8,227·7	...	...	1,138·5	...	...	2,855·5	...	...	29,017·7	...	...		
	30,667·8	2·50	173·20	77,139·9	6·30	435·80	33,530·2	2·70	189·40	6,659·7	0·50	37·60	16,729·5	1·30	94·50	134,059·3	10·90	757·30		
1880.																				
Southern Lines...	21,378·7	...	...	66,902·3	...	...	27,540·7	...	...	7,038·0	...	...	12,291·9	...	...	113,771·9	...	...		
Northern Lines...	5,134·7	1·96	...	17,612·6	6·24	...	8,260·4	...	...	1,199·2	...	...	2,389·4	...	...	29,461·7	...	...		
	26,513·4	2·2	123·32	84,514·9	6·24	393·10	35,810·1	2·65	160·56	8,227·2	0·61	38·26	14,681·3	1·09	68·28	143,233·6	10·61	666·19		
1881.																				
Southern Lines...	22,744·0	...	...	79,073·6	...	...	31,928·3	...	...	7,453·7	...	...	16,724·6	...	...	135,180·3	...	...		
Northern Lines...	5,536·0	...	...	20,460·7	...	...	8,373·1	...	...	1,135·5	...	...	2,835·7	...	...	29,827·0	...	...		
	28,280·0	1·73	121·37	99,563·3	6·09	427·31	37,301·4	2·28	160·09	8,588·2	0·52	36·83	19,560·3	1·20	83·91	165,007·3	10·09	708·19		
1882.																				
Southern Lines...	30,452·6	...	...	98,807·7	...	...	50,979·9	...	...	13,877·9	...	...	18,428·5	...	...	182,094·0	...	...		
Northern Lines...	7,582·3	...	...	23,738·0	...	...	9,201·6	...	...	1,903·0	...	...	3,718·7	...	...	37,561·4	...	...		
	38,034·9	1·88	141·92	121,545·7	6·01	453·54	60,181·5	2·98	224·56	15,780·9	0·78	58·84	22,147·2	1·10	82·64	219,655·4	10·8	...		
1883.																				
Southern Lines...	33,117·9	...	...	124,379·6	...	...	63,430·4	...	...	12,877·0	...	...	23,417·5	...	...	224,104·5	...	...		
Northern Lines...	8,970·5	...	...	27,139·2	...	...	13,972·0	...	...	2,285·3	...	...	4,693·4	...	...	48,095·0	...	...		
	42,088·4	1·70	142·10	151,518·8	6·12	511·89	77,402·4	3·13	261·55	15,162·3	0·61	51·22	28,115·9	1·14	95·00	272,199·5	11·00	919·60		
1884.																				
Southern Lines...	38,884·2	...	...	141,099·8	...	...	53,368·0	...	...	14,940·2	...	...	24,961·9	...	...	234,369·9	...	...		
Northern Lines...	10,165·8	...	...	31,029·0	...	...	15,615·9	...	...	2,483·4	...	...	4,922·2	...	...	54,050·6	...	...		
	49,050·0	1·84	145·98	172,128·8	6 45	512 29	68,983·9	2·59	205·3	17,423·6	0·65	51·85	29,884·1	1·12	88·04	288,420·5	10·81	858·40		
1885.																				
Southern Lines...	47,824·9	...	...	156,060·4	...	...	33,585·3	...	...	13,041·0	...	...	24,264·0	...	...	227,250·7	...	...		
Northern Lines...	11,503·9	...	...	33,162·5	...	...	15,521·3	...	...	1,938·3	...	...	4,754·5	...	...	55,376·6	...	...		
	59,328·8	2·14	152·12	188,222·9	6·80	482·61	49,406·6	1·79	126·68	14,979·3	0·54	38·41	29,018·5	1·03	80·60	282,627·3	10·22	724·69		
1886.																				
Southern Lines...	51,574·5	...	...	160,197·2	...	...	34,852·4	...	...	16,103·7	...	...	23,957·1	...	...	235,110·4	...	...		
Northern Lines...	12,503·6	...	...	33,336·4	...	...	14,462·4	...	...	2,933·9	...	...	4,181·6	...	...	54,914·3	...	...		
	64,078·1	2·37	158·83	193,533·6	7·17	476·67	49,314·8	1·83	121·46	19,037·6	0·71	46·89	28,138·7	1·04	69·31	290,024·7	10·74	714·36		
1887.																				
Southern Lines...	51,880·6	...	...	162,220·8	...	...	35,238·3	...	...	12,680·1	...	...	17,996·6	...	...	228,135·8	...	...		
Northern Lines...	12,387·5	...	...	33,753·2	...	...	13,912·9	...	...	1,989·5	...	...	3,727·5	...	...	53,383·1	...	...		
	64,268·1	2·38	150·87	195,974·0	7·27	460·03	49,151·2	1·83	115·38	14,669·6	0·54	33·43	21,724·1	0·81	51·00	281,518·9	10·44	660·85		
.....	...	...	.....	...	...	.....	...	...	.....	...	...	.....	...	...	.....	...	...			

RAILWAYS: LOCOMOTIVE EXPENSES.

Repairs and Renewals.									Total Locomotive Expenses.			Year.
Wages.			Material.			Total.						
—	Per train mile.	Per engine.	—	Per train mile.	Per engine.	—	Per train mile.	Per engine.	—	Per train mile.	Per engine.	
£	d	£	£	d	£	£	d	£	£	d	£	1878.
23,241·7	...	.....	7,824·8	...	.....	31,136·5	...	.....	136,982·4	...	.....	Southern Lines.
8,956·4	...	.....	8,799·3	...	.....	17,755·7	...	.....	48,507·4	...	.....	Northern Lines.
32,198·1	2·90	309·0	16,624·1	1·50	108·5	48,892·2	4·40	317·5	185,489·8	16·70	1,204·0	
												1879.
24,855·9	...	.....	12,227·6	...	.....	37,183·5	...	.....	167,286·9	...	.....	Southern Lines.
9,101·1	...	.....	4,809·3	...	.....	13,910·4	...	.....	48,534·2	...	.....	Northern Lines.
33,957·0	2·80	191·8	17,136·9	1·40	96·8	51,093·9	4·20	288·0	215,821·1	17·60	288·6	
												1880.
27,236·7	...	.....	8,325·4	...	.....	35,562·1	...	.....	170,712·7	...	.....	Southern Lines.
8,365·7	...	.....	3,863·2	...	.....	12,228·9	...	.....	46,825·3	...	.....	Northern Lines.
35,602·4	2·64	165·59	12,188·6	0·90	56·68	47,791·0	3·54	222·80	217,538·0	16·12	1,011·81	
												1881.
30,092·0	...	.....	7,528·7	...	.....	37,620·7	...	.....	195,545·0	...	.....	Southern Lines.
8,684·1	...	.....	3,895·0	...	.....	12,579·1	...	.....	47,942·1	...	.....	Northern Lines.
38,776·1	2·37	166·42	11,423·7	0·70	49·3	50,199·8	3·07	215·45	243,487·1	14·89	1,045·03	
												1882.
34,026·5	...	.....	8,952·2	...	.....	42,978·7	...	.....	255,525·3	...	.....	Southern Lines.
8,848·5	...	.....	4,021·3	...	†.....	12,869·8	...	.....	58,013·5	...	.....	Northern Lines.
42,875·0	2·12	159·98	12,973·5	0·64	48·41	55,848·5	2·76	208·33	313,538·8	15·51	1,169·93	
												1883.
43,114·9	...	.....	10,859·9	...	.....	53,974·8	...	.....	311,197·1	...	.....	Southern Lines.
9,504·8	...	.....	3,177·8	...	.....	12,682·6	...	.....	69,748·2	...	.....	Northern Lines.
52,619·1	2·13	177·77	14,037·7	0·57	47·43	66,657·4	2·69	225·18	380,945·3	15·40	1,286·98	
												1884.
48,457·1	...	.....	26,212·2	...	.....	74,669·4	...	.....	347,923·5	...	.....	Southern Lines.
10,975·3	...	.....	4,536·8	...	.....	15,514·1	...	.....	79,730·5	...	.....	Northern Lines.
59,432·4	2·23	176·88	30,751·0	1·15	91·52	90,183·5	3·38	268·70	427,654·0	16·03	1,272·77	
												1885.
58,903·6	...	.....	16,468·2	...	.....	75,371·8	...	.....	350,447·4	...	.....	Southern Lines.
8,441·1	...	.....	6,381·2	...	.....	14,822·3	...	.....	81,702·8	...	.....	Northern Line.
67,344·7	2·43	172·68	22,849·4	0·83	58·59	90,194·1	3·26	231·27	432,150·2	15·62	1,108·09	
												1886.
65,998·0	...	.....	13,814·4	...	.....	79,812,4	...	.....	366,497·3	...	.....	Southern Lines.
11,325·4	...	.....	12,021·1	...	.....	23,346,5	...	.....	90,764·4	...	.....	Northern Lines.
77,323·4	2·86	190·45	25,835·5	0·96	63·64	103,158·9	3·82	254·09	457,261·7	16·94	1,126·26	
												1887.
75,185·2	...	.....	7,410·6	...	.....	82,595·8	...	230·6	362,612·3	...	.....	Southern Lines.
11,396·9	...	.....	3,628·1	...	.....	15,025·0	...	195·1	80,795·6	...	.....	Northern Lines.
86,582·1	3·21	203·25	11,038·7	0·41	25·91	97·620·9	3·62	229·16	443,407·9	16·44	1,040·88	
526,710·9	...	.....	174,929·1	...	.....	701,640·2	...	.....	.....	...	.....	

TABLE No. 3.—N.S.W. GOVERNMENT RAILWAYS: CARRIAGE AND

Year.	Miles.		Train Miles.		Train miles.	No. of engines.		No. of train miles per engine.	Engines per mile.	Carriages.		
	Open.	Increase.	—	Increase.	Per mile.	—	Increase.			No.	Increase.	No. per mile.
1878.												
Southern Lines ...	.....	.....	2,095,820	.....	.....	118	.....	17,761	.....	262	.....	.....
Northern Lines ...	.....	.....	559,366	.....	.....	36	.....	15,538	.....	116	.....	.....
	688½	.....	2,655,186	.....	3,852	154	.....	17,241	0·22	378	.....	0·55
1879.												
Southern Lines ...	.....	.....	2,281,229	195,408	.....	138	20	16,603	.....	305	43	.....
Northern Lines ...	.....	.....	641,225	81,859	.....	39	3	16,442	.....	139	24	.....
	734½	46	2,932,453	277,267	3,994	177	23	16,567	0·24	444	66	0·60
1880.												
Southern Lines ...	.....	.....	2,571,545	280,317	.....	164	26	15,680	.....	344	39	.....
Northern Lines ...	.....	.....	667,927½	26,702½	.....	51	12	13,097	.....	146	7	.....
	849½	115	3,239,472½	307,019½	3,813	215	38	15,067	0·25	490	46	0·58
1881.												
Southern Lines ...	.....	.....	3,185,437	613,892	.....	182	18	17,502	.....	376	32	.....
Northern Lines ...	.....	.....	730,492	70,565	.....	51	.....	14,480	.....	154	6	.....
	995½	146	3,925,929	684,456½	3,942	233	18	16,841	0·234	530	40	0·53
1882.												
Southern Lines ...	.....	.....	3,914,626	729,189	.....	213	31	18,379	.....	403	27	.....
Northern Lines ...	.....	.....	936,501	198,009	.....	55	4	17,027	.....	161	7	.....
	1,268½	273	4,851,127	927,198	3,825	268	35	18,064	0·21	564	34	0·44
1883.												
Southern Lines ...	.....	.....	4,787,142	872,516	.....	228	15	20,996	.....	500	97	.....
Northern Lines ...	.....	.....	1,150,119	213,618	.....	68	13	16,913	.....	195	34	.....
	1,320½	52	5,937,261	1,086,134	4,496	296	28	20,058	0·224	695	131	0·60
1884.												
Southern Lines ...	.....	.....	5,130,174	343,032	.....	268	40	19,142	.....	557	57	.....
Northern Lines ...	.....	.....	1,272,867	122,748	.....	68	.....	18,718	.....	219	24	.....
	1,618½	298	6,403,041	465,780	3,956	336	40	19,057	0·208	776	81	0·48
1885.												
Southern Lines ...	.....	.....	5,326,599	196,424	.....	313	45	17,012	.....	617	60	.....
Northern Lines ...	.....	.....	1,311,801	38,934	.....	77	9	17,036	.....	239	20	.....
	1,732½	114	6,631,399	235,358	3,832	390	54	17,021	0·225	856	80	0·49
1886.												
Southern Lines ...	.....	.....	5,238,078	− 88,520	.....	329	16	15,925	.....	682	65	.....
Northern Lines ...	.....	.....	1,241,187	− 70,614	.....	77	.....	16,119	.....	258	19	.....
	1,889½	157	6,479,265	− 159,134	3,429	406	16	15,959	0·215	940	84	0·50
1887.												
Southern Lines ...	.....	.....	5,239,638	+ 1,560	.....	349	20	15,010	.....	741	59	.....
Northern Lines ...	.....	.....	1,232,469	− 8,718	.....	77	.....	16,006	.....	285	27	.....
	2,036	146½	6,472,107	7,158	3,179	426	20	15,193	0·20	1,026	86	0·50
1887..... Total	2,036	.....	6,472,107	+2,983,213	.....	426	.....	.....	.....	1,026	.....	.....
1878..... Total	—688½	.....	− 2,655,186	− 166,292	.....	159	.....	.....	.....	378	.....	.....
Increase	1,347½	1,347½	3,816,921	3,816,921	+2,633	272	272	*14,033	*0·20	648	648	*0·48

* Number on increase mileage.

WAGGON STOCK, AND EXPENSES, AND TRAIN MILEAGE, &c.

Waggons.			Carriages.				Waggons.				Year.
No.	Increase.	No. per mile.	Wages.	Material.	Total.	Cost per carriage.	Wages.	Material.	Total.	Cost per waggon.	
			£	£	£		£	£	£		1878.
2,617	.....	.....	6,490·6	3,069·3	9,559·9	.....	7,278·9	3,132·4	10,411·3	.....	Southern Lines.
796	.....	.....	3,076·8	2,696·5	5,773·3	.....	2,566·5	1,276·6	3,843·1	.....	Northern Lines.
3,413	.....	4·96	9,567·4	5,765·8	15,333·2	40·5	9,845·4	4,409·0	14,254·4	4·2	
											1879.
2,951	334	.....	6,750·9	4,262·2	11,013·1	.....	5,754·7	4,584·1	10,338·8	.....	Southern Lines.
915	119	.....	2,645·6	515·3	3,160·9	.....	2,845·1	1,559·8	4,404·9	.....	Northern Lines.
3,866	453	5·26	9,396·5	4,777·5	14,174·0	31·9	8,599·8	6,143·9	14,743·7	3·8	
											1880.
3,439	488	.....	7,212·0	3,231·3	10 443·3	.....	6,703·3	4,327·6	11,030·9	.....	Southern Lines.
1,004	89	.....	2,957·8	1,221·8	4,179·6	.....	2,653·7	1,290·9	3,944·6	.....	Northern Lines.
4,443	577	5·23	10,169·8	4,453·1	14,622·9	29·8	9,357·0	5,618·5	14,975·5	3·3	
											1881.
3,757	318	.....	8,204·3	3,466·9	11,671·2	.....	9,535·9	5,198·7	14,734·6	.....	Southern Lines.
1,092	88	.....	2,925·2	1,884·0	4,809·2	.....	3,272·2	1,457·3	4,729·5	.....	Northern Lines.
4,849	406	4·87	11,129·5	5·350·9	16,480·4	31·1	12,808·1	6,650·0	19,464·1	4·0	
											1882.
4,194	437	.....	9,333·2	4,691·4	14,024·6	.....	9,945·2	6,239·7	16,184·9	.....	Southern Lines.
1,251	159	.....	3,388·1	1,619·3	5,007·4	.....	3,337·0	2,096·9	5,433·9	.....	Northern Lines.
5,445	596	4·21	12,721·3	6,310·7	19,032·0	33·7	13,282·2	8,336·6	21,618·8	3·9	
											1883.
4,822	628	.....	10,686·7	5,959·4	16,646·1	.....	10,761·9	9,232·9	19,994·8	...	Southern Lines.
1,564	313	.....	3,983·0	2,105·8	6,088·8	.....	3,940·5	2,176·3	6,116·8	...	Northern Lines.
6,386	941	4·83	14,669·7	8,065·2	22,734·9	92·8	14,702·4	11,409·2	26,111·6	4·1	
											1884.
5,275	453	.....	14,293·7	8,896·2	23,189·9	.....	16,288·3	18,562·9	34,851·2	...	Southern Lines.
1,663	99	.....	4,600·3	1,912·5	6,512·8	.....	3,981·4	1,970·8	5,952·2	...	Northern Lines.
6,938	552	4·28	18,994·0	10,808·7	29,702·7	35·3	20,269·7	20,533·7	40,803·4	5·9	
											1885.
6,104	829	.....	18,689·3	11,581·7	30,251·0	.....	17,676·1	12,161·9	29,858·0	...	Southern Lines.
1,864	201	.....	4,290·9	2,281·2	6,572·1	.....	4,151·1	2,451·6	6,602·7	...	Northern Lines.
7,968	1,030	4·60	22,960·2	13·862·9	36,823·1	43·0	21,827·2	14,633·5	36,460·7	4·6	
											1886.
6,391	287	.....	22,695·0	9,614·3	32,309·3	.....	22,379·9	16,470·9	38 850·8	...	Southern Lines.
1,973	109	.....	5,664·5	2,063·6	7,728·2	.....	5,876 2	2,327·8	8,204·0	...	Northern Lines.
8,365	396	4·43	28,359·5	11,677·9	40,037·5	42·6	28,256·1	18,793·7	47,054·8	5·6	
											1887.
6,664	273	.....	27,327·6	4,469·2	31,796·8	.....	28,914·6	9,836·3	38,750·9	...	Southern Lines.
2,121	148	.....	4,870·1	1,822·6	6,692·7	.....	4,703·9	1,693·0	6,396·9	...	Northern Lines.
8,785	421	4·31	32,197·7	6,291·8	38,489·5	37·5	33,618·5	11,529·3	45,147·8	5·1	
8,785	.....	.....	170,065·6	77,364·5	247,430·2	.....	172,566·4	108,086·4	280,634·8	...	1887.
3,413	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	1879.
5,372	5,372	*3·999	.....	.....	.....	.....	.....	.....	.....	...	Increase.

TABLE No. 4.

RETURN showing the total mileages of each engine from 1st January, 1862, to 31st May, 1889.

No.	Date put on Line.	Number of miles run. Over.
	Over 600,000.	
391	March, 1856	609,141
	500,000 to 600,000.	
26	October, 1866	554,872
27	November, 1867	511,706
388	March, 1857	537,061
390	,,	547,338
396	July, 1865	561,153
398	,,	512,450
Total, 6 engines.		
	400,000 to 500,000.	
14	November, 1865	437,375
15	January, 1865	488,005
16	December, 1866	465,433
17	May, 1866	473,188
18	September, 1866	459,389
19	,,	472,637
20	January, 1867	483,660
21	,,	412,768
22	,,	468,431
23	February, 1867	404,987
24	April, 1867	419,137
25	March, 1867	498,655
26	December, 1870	412,794
35	,,	441,458
40	,,	411,931
41	January, 1871	418,363
46	March, 1871	421,093
389	,, 1867	473,406
392	,, 1863	438,760
393	,, 1863	422,222
395	September, 1864	422,611
397	July, 1865	494,845
399	September, 1865	450,916
400	,, 1865	447,841
401	,, 1865	471,043
402	May, 1871	467,857
403	,,	463,298
Total, 27 engines.		

(Mileages, 300,000 to 400,000.)

No.	Date put on Line.	Number of miles run.	No.	Date put on Line.	Number of miles run.	No.	Date put on Line.	Number of miles run.
47	March, 1871	398,194	414	August, 1877	345,572	89	June, 1877	316,501
406	November, 1873	393,097	45	February, 1871	343,564	76	April, 1877	314,881
394	June, 1864	390,037	79	May, 1877	333,472	63	December, 1874	314,623
416	October, 1877	387,9 7	418	October, 1877	331,580	29	March, 1864	314,135
39	December, 1870	386,580	415	October, 1877	331,473	430	September, 1877	312,999
33	November, 1870	382,273	83	June, 1877	331,884	94	August, 1877	312,663
44	December, 1870	376,847	50	December, 1874	329,947	407	July, 1874	312,306
32	November, 1870	376,243	415	September, 1877	328,970	90	June, 1877	311,305
43	March, 1870	364,785	58	August, 1875	328,804	5	November, 1856	310,626
36	September, 1870	364,131	109	July, 1877	328,734	101	November, 1877	309,428
39	February, 1871	363,683	404	June, 1878	327,280	421	February, 1879	306,285
413	August, 1877	359,426	410	June, 1875	326,002	54	May, 1874	305,739
42	March, 1871	354,773	417	October, 1877	321,921	23	April, 1867	304,978
31	August, 1864	352,133	412	August, 1877	320,475	60	October, 1875	304,039
405	November, 1873	350,723	93	August, 1877	317,963	64	December, 1874	301,938
30	August, 1864	350,010	408	August, 1875	317,753	101	November, 1877	300,222
37	November, 1870	346,342	411	July, 1877	317,401	109	August, 1878	300,095

Total, 51 engines.

(Mileages, 250,000 to 300,000.)

No.	Date put on Line.	Number of miles run.	No.	Date put on Line.	Number of miles run.	No.	Date put on Line.	Number of miles run.
62	December, 1874	299,422	111	August, 1878	284,554	70	July, 1875	266,740
107	August, 1878	298,561	87	June, 1877	284,168	115	December, 1878	262,972
85	June, 1877	296,706	56	August, 1874	282,931	71	July, 1875	262,701
55	May, 1874	296,202	119	September, 1878	282,360	160	August, 1880	261,981
422	February, 1879	295,526	57	July, 1875	282,146	164	September, 1880	261,120
99	February, 1877	295,200	97	July, 1877	281,592	62	April, 1880	260,734
13	January, 1868	295,176	102	November, 1877	280,945	431	December, 1880	259,638
84	June, 1877	294,856	428	February, 1879	278,965	435	February, 1881	255,524
98	July, 1877	294,625	59	August, 1875	277,057	429	June, 1880	254,095
65	January, 1875	291,510	122	September, 1877	276,499	118	September, 1878	254,779
95	August, 1877	290,557	86	June, 1877	274,492	134	September, 1879	254,129
48	December, 1874	290,445	96	August, 1877	273,996	106	August, 1878	253,953
409	June, 1875	287,917	53	February, 1874	273,625	435	February, 1880	253,931
116	December, 1878	288,240	80	May, 18 77	273,122	112	December, 1878	253,570
49	December, 1874	288,032	427	May, 1880	272,841	113	December, 1878	251,443
81	May, 1877	287,603	75	August, 1876	270,801	110	August, 1878	250,295
51	December, 1874	286,039	120	September, 1878	269,049			

Total, 15 engines.

(Mileages, 200,000 to 250,000.)

No.	Date put on the Line.	Number of miles run.	No.	Date put on the Line.	Number of miles run.	No.	Date put on the Line.	Number of miles run.
181	April, 1879	248,591	124	January, 1879	232,723	4	April, 1880	213,954
137	September, 1879	245,462	152	April, 1880	232,496	150	April, 1880	213,204
69	March, 1875	244,671	142	December, 1879	228,306	68	March, 1875	212,509
424	February, 1880	243,709	162	September, 1880	225,813	121	September, 1878	211,871
117	December, 1878	241,906	433	January, 1881	224,970	133	September, 1879	211,634
73	July, 1875	241,369	77	September, 1877	224,675	67	March, 1875	211,361
426	February, 1880	241,068	91	September, 1877	222,131	139	August, 1879	210,188
123	September, 1878	241,004	430	August, 1880	222,075	432	December, 1880	209,648
146	March, 1880	240,026	78	December, 1877	221,943	72	July, 1875	208,513
114	December, 1878	239,981	173	November, 1881	221,822	103	July, 1879	208,382
10	June, 1870	239,682	92	September, 1877	221,532	260	January, 1883	206,884
108	August, 1878	239,071	259	January, 1883	220,314	163	July, 1880	205,690
144	March, 1880	238,012	126	January, 1879	219,563	145	March, 1880	205,259
151	April, 1880	237,767	1	April, 1880	219,342	185	October, 1881	204,319
138	September, 1879	237,435	149	March, 1880	218,688	207	January, 1882	204,264
257	December, 1883	235,805	169	April, 1881	218,029	157	May, 1880	203,361
3	April, 1880	235,193	148	March, 1880	217,290	205	January, 1882	203,103
61	November, 1874	234,412	132	April, 1879	216,229	52	July, 1879	200,844
428	June, 1880	233,413	88	June, 1877	214,772			
2	April, 1880	232,838	119	November, 1881	214,713			

Total, 58 engines

(Mileages, 150,000 to 200,000.)

No.	Date put on the Line.	Number of miles run.	No.	Date put on the Line.	Number of miles run.	No.	Date put on the Line.	Number of miles run.
206	January, 1882	199,611	210	February, 1882	186,340	277	March, 1884	170,040
219	May, 1882	199,201	161	September, 1880	186,175	195	March, 1883	168,736
214	March, 1882	198,798	434	January, 1881	186,168	166	April, 1881	167,439
186	October, 1881	198,642	221	May, 1882	185,209	196	March, 1883	167,138
143	April, 1880	198,623	154	May, 1880	184,333	187	October, 1881	165,984
168	March, 1881	197,715	212	February, 1882	184,213	223	September, 1883	165,321
211	March, 1882	197,534	155	May, 1880	184,203	262	October, 1883	165,469
216	April, 1882	197,037	153	April, 1880	184,143	175	January, 1882	163,815
213	March, 1882	195,421	220	May, 1882	183,671	156	May, 1880	163,494
215	April, 1882	195,332	189	November, 1881	183,537	172	November, 1881	162,943
208	January, 1882	195,012	218	April, 1882	182,199	194	July, 1882	162,407
209	February, 1882	194,848	184	October, 1881	182,121	274	December, 1883	160,937
125	January, 1879	194,320	199	April, 1884	180,280	140	September, 1879	159,599
171	November, 1881	192,790	147	March, 1880	180,122	237	September, 1883	159,451
191	April, 1882	192,783	165	April, 1881	180,100	127	April, 1879	157,390
265	November, 1882	191,783	192	May, 1882	178,351	272	December, 1883	156,758
170	April, 1881	191,720	135	August, 1879	178,245	279	April, 1884	156,582
169	August, 1880	191,589	183	October, 1881	177,218	267	January, 1884	155,875
74	August, 1875	190,437	174	November, 1881	176,011	180	October, 1882	154,804
224	May, 1882	190,278	141	September, 1879	173,803	225	September, 1883	154,562
222	May, 1882	190,134	158	September, 1880	173,279	128	April, 1879	153,348
167	April, 1881	189,908	291	February, 1883	172,906	288	May, 1884	152,692
258	January, 1883	188,989	130	April, 1879	172,784	105	October, 1887	152,393
217	April, 1882	188,377	129	April, 1879	172,727	280	April, 1884	152,359
188	October, 1881	187,707	193	July, 1882	172,258	197	March, 1883	151,004
223	May, 1882	186,351	256	December, 1882	170,187			

Total, 77 engines.

(Mileages under 150,000.)

No.	Date put on the Line.	Number of miles run.	No.	Date put on the Line.	Number of miles run.	No.	Date put on the Line.	Number of miles run.
182	December, 1882	149,606	178	March, 1882	142,231	246	July, 1884	131,107
271	January, 1884	149,165	266	January, 1884	142,050	270	January, 1884	127,401
66	February, 1874	148,814	136	September, 1879	141,493	265	January, 1884	125,965
275	March, 1884	148,314	179	September, 1882	141,368	243	July, 1883	125,639
234	October, 1883	147,836	235	November, 1883	141,234	261	October, 1883	124,342
269	January, 1884	147,134	198	March, 1883	140,633	240	May, 1884	124,142
273	January, 1884	147,059	268	October, 1883	138,907	201	April, 1884	123,315
232	October, 1883	146,272	236	November, 1883	137,318	336	October, 1885	123,213
237	December, 1883	146,876	284	April, 1884	137,218	343	October, 1885	121,748
242	May, 1884	146,801	233	October, 1883	136,871	203	September, 1884	120,399
231	October, 1883	146,611	264	October, 1883	136,413	244	July, 1884	120,248
176	March, 1882	146,461	230	September, 1883	136,391	341	November, 1885	119,711
181	December, 1882	146,353	177	February, 1882	135,676	330	August, 1885	117,823
285	April, 1884	145,764	282	April, 1884	133,496	342	November, 1885	117,095
328	September, 1883	144,979	252	August, 1884	133,289	239	May, 1884	116,518
238	December, 1883	144,036	249	August, 1884	132,569	204	September, 1884	116,391
281	April, 1884	143,466	276	March, 1884	131,932	335	October, 1885	115,986
226	September, 1883	142,745	278	March, 1884	131,692	344	December, 1885	115,129

(Mileages under 150,000)—*continued.*

No.	Date put on the Line.	Number of miles run.	No.	Date put on the Line.	Number of miles run.	No.	Date put on the Line.	Number of miles run.
248	July, 1884	114 083	268	January, 1884	101,645	287	May, 1884	68,837
314	June, 1885	114,036	317	June, 1885	101,136	348	February, 1886	67,67[illegible]
247	July, 1884	113,761	236	February, 1885	100,837	349	March, 1886	66,267
241	May, 1884	113,716	293	February, 1885	100,537	365	April, 1887	65,125
308	April, 1885	113,487	372	January, 1886	100,295	374	June, 1887	64,764
332	August, 1845	113,278	325	October, 1885	100,243	375	June, 1887	64,489
200	April, 1884	113,275	318	July, 1885	100,085	356	December, 1885	62,864
251	August, 1884	112,860	307	March, 1885	99,318	376	June, 1887	58,599
331	August, 1885	111,990	297	February, 1885	99,047	380	July, 1887	57,684
333	August, 1885	111,778	326	October, 1885	96,828	377	July 1887	57,686
329	September, 1885	111,711	294	March, 1885	96,598	357	February, 1886	54,200
328	October, 1885	111,574	340	February, 1886	95,765	382	August, 1887	53,661
283	April, 1884	110,749	313	March, 1885	95,475	354	November, 1885	53,144
253	August, 1884	110,692	370	February, 1886	93,992	359	March, 1886	52,719
316	June, 1885	110,647	371	February, 1886	93,752	378	July, 1887	52,628
254	August, 1884	109,479	369	February, 1886	93,221	381	August, 1887	52,481
319	July, 1885	108,492	286	April, 1884	92,906	379	July, 1887	50,743
306	August, 1885	108,450	304	July, 1885	91,698	362	March, 1886	50,414
312	July, 1885	107,758	323	September, 1885	91,958	355	December, 1885	48,568
250	August, 1884	106,965	322	September, 1885	90,827	360	February, 1886	48,333
262	September, 1884	106,792	301	March, 1885	89,778	384	September, 1887	47,091
338	January, 1886	106,724	337	October, 1885	88,092	373	May, 1887	47,159
350	February, 1886	106,712	311	March, 1885	85,037	366	June, 1886	45,632
346	January, 1886	106,549	302	February, 1885	82,675	347	March, 1886	43,984
245	July, 1884	106,002	300	March, 1885	89,306	351	December, 1885	43,173
310	April, 1885	105,883	289	May, 1884	82,306	365	May, 1886	41,338
327	October, 1885	105,642	303	February, 1884	81,599	361	January, 1886	40,358
295	March, 1885	105,600	296	April, 1884	81,515	383	September, 1887	39,785
321	July, 1885	105,387	324	October, 1885	80,073	386	November, 1887	37,036
345	February, 1886	104,746	353	November, 1885	79,820	364	April, 1886	36,250
334	October, 1885	104,434	339	February, 1886	79,168	358	March, 1886	35,955
315	June, 1885	102,671	352	November, 1885	78,568	368	June, 1886	32,703
320	July, 1885	102,531	292	July, 1884	73,118	363	April, 1886	28,998
309	September, 1885	102,333	290	May, 1884	71,153	367	June, 1886	25,687
305	July, 1885	101,758	293	July, 1884	70,459	387	November, 1888	17,229

Total, 159 engines.

SUMMARY OF TABLE NO. 4.

No. of Engines.	Mileages run.
1	over 600,000
6	500,000 to 600,000
27	400,000 „ 500,000
51	300,000 „ 400,000
50	250,000 „ 300,000
58	200,000 „ 250,000
77	150,000 „ 200,000
159	under 150,000
Total 429	

TABLE NO. 5.—STANDARD TYPES of Engines—Miles run from 1st January, 1862, to 31st May, 1889.

Date when put on line.	Number.	Number of miles run.	Date when put on line.	Number.	Number of miles run.	Date when put on line.	Number.	Number of miles run.
Class No. 205—Six-wheeled coupled engines for heavy mail and express stock and ordinary goods trains.			Sept., 1883	227	159,451	Aug., 1884	253	110,692
			„ 1883	228	144,979	„ 1884	254	109,479
			„ 1883	229	165,821	June, 1885	314	114,036
			„ 1883	230	136,391	„ 1885	315	102,671
Jan., 1882	205	203,103	Oct., 1883	231N	146,611	„ 1885	316	110,647
„ 1882	206	199,611	„ 1883	232N	146,972	„ 1885	317	101,136
„ 1882	207	204,264	„ 1883	233N	136,871	July, 1885	318	100,085
„ 1882	208	195,012	„ 1884	234N	147,836	„ 1885	319	108,492
„ 1882	209	194,848	Nov., 1883	235N	141,234	„ 1885	320	102,531
„ 1882	210	186,340	„ 1883	236N	137,318	„ 1885	321	105,387
„ 1882	211	197,534	Dec., 1883	237N	146,876	Sept., 1885	322	90,827
„ 1882	212	184,213	„ 1883	238N	144,036	„ 1885	323	91,958
„ 1882	213	195,421	May, 1884	239	116,318	Oct., 1885	324	80,073
„ 1882	214	198,798	„ 1884	240	124,142	„ 1885	325	100,248
„ 1882	215	195,392	„ 1884	241	113,716	„ 1885	326	96,823
„ 1882	216	197,037	„ 1884	242	146,801	„ 1885	327	105,642
„ 1882	217	188,327	July, 1884	243	125,639	„ 1885	328	111,574
„ 1882	218	182,199	„ 1884	244	120,248	Sept., 1885	329N	111,711
„ 1882	219	199,201	„ 1884	245	106,002	Aug., 1885	330N	117,823
„ 1882	220	183,671	„ 1884	246	131,107	„ 1885	331N	111,990
„ 1882	221N	185,209	„ 1884	247	113,751	„ 1885	332N	113,278
„ 1882	222N	190,134	„ 1884	248	114,083	„ 1885	333N	11,177
„ 1882	223N	186,351	Aug., 1884	249	132,569			
„ 1882	224N	190,278	„ 1884	250	106,965			
Sept., 1883	225	154,562	„ 1884	251	112,869			
„ 1883	226	142,745	„ 1884	252	133,289			

Total, 70 engines.

TABLE No. 5.—*continued.*

Date when put on.	Number.	Number of miles run.
SUBURBAN TRAFFIC.		
Class No. 158—Four-wheel coupled tank engine, inside cylinders.		
Sept., 1880	158	173,379
Aug., 1880	159	191,589
,, 1880	160	261,981
Sept., 1880	161	186,175
,, 1880	162	225,813
July, 1880	163	205,690
Total, 6 engines.		
Class 253—Four-wheel coupled Bogie engines, inside cylinders.		
Nov., 1882	255	191,783
Dec., 1882	256	172,187
,, 1882	257	235,805
Jan., 1883	258	183,989
,, 1883	259	220,314
,, 1883	260	206,884
Oct., 1883	261N	124,343
,, 1883	262N	165,469
,, 1883	263N	138,907
,, 1883	264N	136,413
Jan., 1884	265	175,965
,, 1884	266	142,052
,, 1884	267	155,875
,, 1884	268	101,645
,, 1884	269	147,134
,, 1884	270	127,401
,, 1884	171	149,165
Dec., 1883	272	156,758
Jan., 1884	273	147,059
Dec., 1883	274	160,937
Mar., 1884	275	148,314
,, 1884	276	151,932
,, 1884	277	170,040
,, 1884	278	131,692
April, 1884	279	155,883
,, 1884	280	152,359
,, 1884	281	143,466
,, 1884	282	133,496
,, 1884	283	110,749
,, 1884	284	137,218
Oct., 1885	334N	104,434
,, 1885	336N	115,986
Oct., 1885	336N	123,213
,, 1885	337N	88,092
Jan., 1886	238	106,724
Feb., 1886	239	79,168
,, 1886	340	95,765
Nov., 1885	341	119,711
,, 1885	342	117,095
Oct., 1885	343	121,749
Dec., 1885	344	115,129
Feb., 1886	345	107,746
Jan., 1886	346	106,540
Mar., 1886	347	43,984
Feb., 1886	348	67,677
Mar., 1886	349	66 264
Feb., 1886	350	106,712
Total, 47 engines.		
Class 93—Six-wheel coupled goods engines, inside cylinders.		
Nov., 1881	189	183,587
,, 1881	190	210,713
April, 1882	191	192,783
May, 1882	192	178,351
July, 1882	193	172 258
,, 1882	194	162,407
Mar., 1883	195	168,736
,, 1883	196	167,138
,, 1883	197	151,004
,, 1883	198	140,633
April, 1884	199	180,230
,, 1884	200	113,275
,, 1884	201	123,315
Sept., 1884	202	106,792
,, 1884	203	130,399
,, 1884	204	116,391
Feb., 1883	291N	172,996
Feb., 1886	369	93,221
,, 1886	370	98,992
,, 1886	371	93,752
Jan., 1886	372	100,295
April, 1887	385*	65,125
Nov., 1887	386*	37,036
Nov., 1883	187*	17,229
April, 1880	1	219,342
,, 1880	2	232,838
,, 1880	3	235,193
,, 1880	4	213,954
Oct., 1877	31N 415	321,473
,, 1877	32N 416	387,997
,, 1877	33N 417	321,921
,, 1887	34N 418	331,580
Sept., 1887	35N 419	328,970
,, 1887	36N 420	312,999
Dec., 1870	40	411,931
Jan., 1871	41	418,363
Mar., 1871	42	354,773
,, 1871	43	364,785
Dec., 1870	44	376,847
Feb., 1871	45	343,564
Mar., 1871	46	421,093
Aug., 1877	93	317,963
,, 1877	94	312,663
,, 1877	95	290,557
,, 1877	96	273,996
July, 1877	97	281,592
,, 1877	98	294,625
,, 1877	99	295,200
,, 1877	100	327,734
Nov., 1887	101	309,428
,, 1887	102	280,945
,, 1887	104	300,222
Aug., 1878	106	253,958
,, 1878	107	298,581
,, 1878	108	239,071
,, 1878	109	300,095
,, 1878	110	250,285
,, 1878	111	284,554
Dec., 1878	112	253,570
,, 1878	113	251,443
,, 1878	114	239,961
,, 1878	115	262,972
,, 1878	116	289,248
,, 1878	117	241,904
Dec., 1879	142	228,306
Sept., 1880	164	261,120
Oct., 1881	183	177,218
,, 1881	184	182,121
,, 1881	185	204,319
,, 1881	186	198,642
,, 1881	187	165,984
,, 1881	188	187,717
Total ... 72		

*Bought from Contractors.

TABLE No. 6.—Types of Engines.

Not to be renewed, dates when added to the stock, and the mileages run by each engine, from 1st January, 1862, to 31st May, 1889.

Date when put on.	Number.	Number of miles run.
Type No. 17—Six-wheel coupled, inside cylinders.		
	Old Nos.	
June, 1865	11N 396	561,153
,, 1865	12N 397	494,845
,, 1865	13N 398	512,450
May, 1871	18N 402	467,857
,, 1871	19N 403	463,298
Nov., 1873	21N 405	350,723
,, 1873	22N 406	393,097
May, 1866	17	473,188
Sept., 1866	18	459,389
,, 1866	19	472,647
Jan., 1867	20	493,660
,, 1867	21	412,768
,, 1867	22	468,431
Dec., 1870	40	411,931
Jan., 1871	41	418,363
Mar., 1871	42	354,773
,, 1871	43	364,785
Dec., 1870	44	376,847
Feb., 1871	45	343,564
Mar., 1871	46	421,093
,, 1871	47	398,194
July, 1879	52	200,844
,, 1879	103	208,382
Total, 23 engines.		
Type No. 23—Four-wheel coupled, outside cylinders.		
	Old Nos.	
Sept., 1865	14N 399	450,916
,, 1865	15N 400	447,641
,, 1865	16N 401	471,043
April, 1867	23	304,978
Feb., 1867	24	404,997
April, 1867	25	419,137
Oct., 1866	26	554,872
Nov., 1866	27	511,706
Mar., 1867	28	493,655
Nov., 1870	32	376,248
,, 1870	33	382,273
Dec., 1870	34	412,794
,, 1870	35	441,458
Total, 13 engines.		
Type No. 23N—Six-wheel coupled, inside cylinders.		
July, 1874	23N 407	312,306
Aug., 1874	24N 408	317,753
June, 1875	25N 409	289,917
,, 1875	26N 410	326,002
Total, 4 engines.		
Type No. 29—Six-wheel coupled tank, inside cylinders.		
	Old No.	
June, 1864	9N 394	390,037
Mar., 1864	29	314,135
Aug., 1864	30	350,010
,, 1864	31	352,134
Total, 4 engines.		
Type No. 36—Four-wheel coupled, inside cylinders.		
Feb., 1871	39	363,088
Aug., 1875	75	270,801
April, 1877	76	314,881
Sept., 1877	77	224,675
Dec., 1877	78	221,943
Sept., 1870	36	364,181
Nov., 1870	37	346,342
Dec., 1870	38	386,580
Total, 8 engines.		

TABLE No. 6—*continued.*

Date when put on.	Number.	Number of miles run.
Type No. 48—Six-wheel coupled, inside cylinders.		
	Old Nos.	
Dec., 1874	 48	290,445
,, 1874	 49	289,042
,, 1874	 50	329,947
,, 1874	 51	286,039
Feb., 1874	 53	273,625
May, 1874	 54	305,739
,, 1874	 55	296,202
Aug., 1874	 56	282,931
July, 1875	 57	282,146
Aug., 1875	 58	328,804
,, 1875	 59	277,057
Total, 11 engines.		
Type No. 60—Six-wheel coupled, inside cylinders.		
Oct., 1875	 60	304,039
Nov., 1874	 61	234,412
Dec., 1874	 62	299,422
,, 1874	 63	314,623
,, 1874	 64	301,938
Jan., 1875	 65	291,510
Total, 6 engines.		
Type No. 67—Six-wheel coupled, inside cylinders.		
Mar., 1875	 67	211,361
,, 1875	 68	212,509
,, 1875	 69	244,871
July, 1875	 70	256,740
,, 1875	 71	262,701
,, 1875	 72	309,513
,, 1875	 73	241,369
Aug., 1875	 74	190,437
Total, 8 engines.		
Type No. 79—Four-wheel coupled, outside cylinders.		
July, 1877	27S 311	317,401
Aug., 1877	28S 412	320,425
,, 1877	29S 413	368,426
,, 1877	30S 414	345,572
Feb., 1879	37S 421	306,985
,, 1879	38S 422	295,526
,, 1879	39S 423	278,965
Dec., 1880	47S 431	259,638
,, 1880	48S 432	209,648
Jan., 1881	49S 433	224,370
,, 1881	50S 434	196,168
Feb., 1881	51S 435	255,524
May, 1877	 79	333,472
,, 1877	 80	273,122
,, 1877	 81	287,802
April, 1877	 82	260,734
June, 1877	 83	330,889
,, 1877	 84	294,856
,, 1877	 85	296,706
,, 1877	 86	274,492
,, 1877	 87	284,168
,, 1877	 88	214,772
,, 1877	 89	316,501
,, 1877	 90	311,305
Sept., 1877	 91	223,131
,, 1877	 92	221,532
,, 1878	 118	254,779
,, 1878	 119	282,360
,, 1878	 120	289,049
,, 1878	 121	211,871
,, 1868	 122	276,497
,, 1878	 123	241,034
Jan., 1879	 124	232,722
,, 1879	 125	194,320
,, 1879	 126	219,563
April, 1880	 143	194,623
Mar., 1880	 144	238,012
,, 1880	 145	205,259
,, 1880	 146	240,026

Date when put on.	Number.	Number of miles run.
Type No. 79—Four-wheel coupled, outside cylinders—*contd.*		
	Old Nos.	
Mar., 1880	 147	180,123
,, 1880	 148	217,290
,, 1880	 149	218,688
April, 1880	 150	213,204
,, 1880	 151	237,767
,, 1880	 152	232,486
,, 1880	 153	184,143
May, 1880	 154	184,333
,, 1880	 155	184,203
,, 1880	 156	163,494
,, 1880	 157	203,361
April, 1881	 165	180,100
,, 1881	 166	167,439
,, 1881	 167	189,098
Mar., 1881	 168	197,715
April, 1881	 169	218,029
,, 1881	 170	191,720
Nov., 1881	 171	192,790
,, 1881	 172	162,943
,, 1881	 173	221,822
,, 1881	 174	176,011
Jan., 1882	 175	163,813
Mar., 1882	 176	146,461
Feb., 1882	 177	135,676
Mar., 1882	 178	142,231
Sept., 1882	 179	141,368
Oct., 1882	 180	154,804
Dec., 1882	 181	146,353
,, 1882	 182	149,606
Total, 68 engines.		
Type No. 105—Four-wheel coupled, with outside cylinders.		
Oct., 1877	 105	152,393
April, 1879	 130	172,784
Total, 2 engines.		
Type No. 127—Six-wheel coupled, with inside cylinders.		
Feb., 1874	 66	148,814
April, 1879	 127	157,390
,, 1879	 128	153,348
,, 1879	 129	172,727
July, 1884	 292	73,118
,, 1884	 293	70,459
Total, 6 engines.		
Type No. 131—Eight-wheel coupled, with outside cylinders.		
April, 1879	 131	248,591
,, 1779	 132	218,229
Sept., 1879	 133	211,634
,, 1879	 134	254,129
Aug., 1879	 135	178,245
Sept., 1879	 136	141,493
,, 1879	 137	245,466
,, 1879	 138	237,435
Aug., 1879	 139	210,188
Sept., 1879	 140	159,599
,, 1879	 141	173,803
Total, 11 engines.		
Type No. 285—Six-wheel tank engine coupled, with inside cylinders.		
April, 1884	 285	145,764
,, 1884	 286	92,906
May, 1884	 287	68,837
,, 1884	 288	152,602
,, 1884	 289	82,306
,, 1884	 290	71,158
Total, 6 engines.		

Date when put on.	Number.	Number of miles run.
Type No. 294—Six-wheel coupled, with outside cylinders.		
	Old Nos.	
Mar., 1885	 294	96,598
,, 1885	 295	105,600
April, 1885	 296	81,815
Feb., 1885	 297	99,047
,, 1885	 298	100,837
,, 1885	 299	100,537
Mar., 1885	 300	82,615
,, 1885	 301	69,778
Feb., 1885	 302	82,675
,, 1885	 303	81,599
Total, 10 engines.		
Type No. 351—Four-wheel coupled tank engine, with outside cylinders.		
Dec., 1885	 351	43,173
Nov., 1885	 352	78,568
,, 1885	 353	79,320
,, 1885	 354	53,144
Dec., 1885	 355	48,508
,, 1885	 356	62,664
Feb., 1886	 357	54,206
Mar., 1886	 358	35,965
,, 1886	 359	52,719
Feb., 1886	 360	48,333
Jan., 1886	 361	40,358
Mar., 1886	 362	50,414
April, 1886	 363	28,988
,, 1886	 364	36,250
May, 1886	 365	41,338
June, 1886	 366	45,633
,, 1886	 367	25,687
,, 1886	 368	32,703
Total, 18		
Type No. 373—Four-wheel coupled, outside cylinders.		
May, 1887	 373	47,159
June, 1887	 374	64,784
,, 1887	 375	64,489
,, 1887	 376	58,499
July, 1887	 377	57,686
,, 1887	 378	52,628
,, 1887	 379	50,743
,, 1887	 380	57,664
Aug., 1887	 381	52,581
,, 1887	 382	53,661
Sept., 1887	 382	39,785
,, 1887	 384	47,991
Total, 12		
Type No. 304—Six-wheel coupled, outside cylinders.		
July, 1885	 304	91,698
,, 1885	 305	101,758
Aug., 1885	 306	108,450
Mar., 1885	 307	59,319
April, 1885	 308	113,487
Sept., 1885	 309	102,333
April, 1885	 310	105,883
Mar., 1885	 311	85,037
July, 1885	 312	107,758
Mar., 1885	 313	95,475
Total, 10 engines.		
Type No. 1 v—Four-wheel coupled, with inside cylinders.		
Mar., 1857	1S 388	437,061
,, 1857	2S 389	473,406
,, 1857	3S 390	547,338
Total, 3 engines.		

TABLE No. 6—*continued.*

Date when put on.	Number.	Number of miles run.
Type No. 5—Four-wheel coupled, with inside cylinders.		
	Old Nos.	
Mar., 1856	4 N 391	609,141
Nov., 1856	 5	310,626
	Total, 2 engines.	
Type No. 6 N—Four-wheel coupled tank engine, outside cylinders.		
Mar., 1863	6 N 392	438,760
,, 1863	7 N 393	422,232
	Total, 2 engines.	
Type No. 10—Four-wheel coupled, with inside cylinders.		
June, 1872	 10	239,682
	Total, 1 engine.	
Type No. 13—Four-wheel coupled, with inside cylinders.		
Sept., 1864	10 N 395	422,611
Jan., 1868	 13	295,176
	Total, 2 engines.	
Type No. 14—Pair driving wheels, with inside cylinders.		
	Old Nos.	
Nov., 1865	 14	437,375
Jan., 1866	 15	486,005
Dec., 1865	 16	465,433
	Total, 3 engines.	
Type No. 20 N—Six-wheel coupled tank engine, with inside cylinders.		
June, 1872	20 N 401	527,260
	Total, 1 engine.	
Class 351—Suburban tank engine.		
Dec., 1885	 351	43,173
Nov., 1885	 352	78,568
,, 1885	 353	79,320
,, 1885	 354	53,144
Dec., 1885	 355	48,508
,, 1885	 356	62,664
Feb., 1886	 357	54,206
Mar., 1886	 358	35,955
,, 1836	 359	52,717
Feb., 1886	 360	48,333
Class 351—*continued*		
	Old Nos.	
Jan., 1886	 361	40,258
Mar., 1886	 362	50,414
April, 1886	 363	28,998
,, 1886	 364	36,250
May, 1886	 365	41,338
June, 1886	 366	45,633
,, 1886	 367	25,687
,, 1886	 368	32,703
	Total, 18 engines.	
Class 373.—Four-wheel coupled engines, outside cylinders.		
May, 1887	 373	47,159
June, 1887	 374	64,784
,, 1887	 375	64,489
,, 1887	 376	58,599
July, 1887	 377	57,686
,, 1887	 378	52,628
,, 1887	 379	50,743
,, 1887	 380	57,684
Aug., 1887	 381	52,491
,, 1887	 382	53,661
Sept., 1887	 383	39,785
,, 1887	 384	47,991
	Total, 12 engines.	

TABLE No. 7.

STATEMENT of Locomotives which have received New Boilers—Southern and Western Lines.

Locomotive. Type.	No.	Mileage run to 31st May, 1889.	Date commenced running.	Date Boiler renewed.	Life.	Remarks.
					Years.	
17	17*	473,188	May, 1866	June, 1874	8	
				October, 1882	8	
17	18	459,389	Sept., 1866	August, 1885	19	
17	19*	472,637	Sept., 1866	July, 1875	9	
				May, 1885	10	
17	20	483,660	July, 1867	April, 1882	15	
17	21	412,768	January, 1867	July, 1884	17	
17	22	468,431	,, 1867	,, 1884	17	
23	26	554,872	October, 1866	Nov., 1881	15	
23	28	498,655	March, 1867	October, 1882	15	
29	29	314,135	,, 1864	Dec., 1885	21	These engines have only 11 x 17 cylinders.
29	31	352,133	August, 1864	October, 1878	14	
17	41	418,363	January, 1871	August, 1879	8	
17*	43	364,785	March, 1871	January, 1880	9	
17	47	398,194	,, 1871	Dec., 1877	6	
17	52	200,844	July, 1879	,, 1883	4	Replaced an engine destroyed in collision in 1878.
48	53	273,625	February, 1874	February, 1889	15	
60	62	299,422	Dec., 1874	June, 1888	22	
127	66	148,814	February, 1866	March, 1888	22	12 x 17 cylinders, 3 ft. 3 in. wheels.
70	80	273,122	May, 1877	Dec., 1887	10	
93	113	261,443	Dec., 1878	March, 1886	8	
93	115	262,972	,, 1878	June, 1886	8	
131	131†	248,591	April, 1879	Sept., 1884	5	These engines had, originally, steel fire-boxes, and have since been renewed with copper.
131	132	216,229	,, 1879	Nov., 1886	7	
131	133	211,634	Sept., 1879	June, 1886	7	
131	138÷	237,435	,, 1879	January, 1884	5	
205	208	195,012	January, 1882	Sept., 1888	6	
Total,	27			Mean age,	11·5	

* These engines have been re-boilered twice. † NOTE.—These engines were renewed with steel fire-boxes. The other six engines of this class have either received new fire-boxes, or are being fitted with new fire-boxes at present.

TABLE No. 8.

STATEMENT showing Locomotives on the Northern Line which received new boilers up to 1885.

Type.	Nos. of Engines. Old No.	New No.	Mileage run to 31st May, 1885.	Date engine commenced running.	Date boiler renewed.	Life of old boiler.	Remarks.
						Years.	
1N	1N	388	537,061	March, 1857	Nov., 1876	19	
1N	2N	389	473,406	,, 1857	March, 1876	19	
1N	3N	390	547,338	,, 1857	,, 1879	22	
5	4N	391	609,141	,, 1856	Jan., 1877	21	
.....	.....	.....	.....	.....	June, 1880	.....	No. 5N written off; total mileage, 452,709.
6N	6N	392	438,760	March, 1863	Sept., 1877	14	
6N	7N	393	422,222	,, 1863	,, 1879	16	
.....	.....	.....	.....	.....	March, 1879	.....	No. 8N written off; total mileage, 475,155.
20	9N	394	390,037	June, 1864	Feb., 1883	19	
13	10N	395	422,611	Sept., 1864	Nov., 1881	17	
17	11N	396	561,153	June, 1865	July, 1880	15	
17	12N	397	494,845	,, 1865	June, 1878	12	
17	13N	398	512,450	,, 1865	,, 1881	16	
23	14N	399	450,916	Sept., 1865	Dec., 1879	14	
23	16N	401	471,043	,, 1865	Sept., 1878	13	
.....	.....	.....	.....	.....	July, 1881	.....	No. 17N written off; total mileage, 453,810.
17	18N	402	467,857	May, 1871	Sept., 1882	11	
17	21N	405	350,723	Nov., 1873	Aug., 1881	8	
17	22N	406	303,097	,, 1873	Feb., 1878	5	
23N	23N	407	312,306	July, 1874	June, 1883	9	
23N	24N	408	317,753	Aug., 1874	Nov., 1885	11	
23N	26N	410	336,002	June, 1875	March, 1884	9	
Total average,		19			Mean age	14·26	

AGE and MILEAGE of ENGINES which have run over 250,000 miles, and are still running with old boilers.

Type No.	Old No.	Present No.	Mileage run to 31st May, 1885.	Date commenced running.	Age, years.	Present working pressure.	Remarks.
5	.....	5	310,626	Nov., 1856	33	110	
13	.....	13	295,176	Jan., 1883	26	120	
14	.....	14	437,375	Nov., 1865	24	120	New copper fire-box, October, 1883.*
14	.....	15	488,005	Jan., 1866	23	120	,, November, 1879.*
14	.....	16	465,433	Dec., 1866	24	120	,, September, 1880.*
23	.....	23	304,978	April, 1867	22	135	
23	.....	24	464,997	Feb., 1867	22	125	.....*
23	.....	25	419,137	April, 1867	22	125	½ copper box, 1878.*
23	.....	27	511,706	Nov., 1866	23	125	.....*
29	.....	30	350,010	Aug., 1864	25	120	New copper fire-box, March, 1880.*
23	.....	32	376,243	Nov., 1870	19	130	.....*
23	.....	33	382,273	,, 1870	19	130	.....*
23	.....	34	412,794	Dec., 1870	19	130	½ copper box, September, 1878.*
23	.....	35	441,458	,, 1870	19	130	.....*
36	.....	36	364,191	Sept., 1870	19	120	.....*
36	.....	37	346,342	Nov., 1870	19	120	
36	.....	38	383,580	Dec., 1870	19	120	.....*
36	.....	39	362,988	Feb., 1871	18	120	.....*
17	.....	40	411,931	Dec., 1870	19	125	.....*
17	.....	42	364,773	March, 1871	18	125	.....*
17	.....	44	376,847	Dec., 1870	19	125	½ copper box, July, 1883.*
17	.....	45	343,564	Feb., 1871	18	125	½ copper box, October, 1880.
17	.....	46	421,093	March, 1871	18	125	½ copper box, April, 1880.*
48	.....	48	290,445	Dec., 1874	15	120	
48	.....	49	289,032	,, 1874	15	120	
48	.....	50	329,947	,, 1874	15	120	
48	.....	51	286,039	,, 1874	15	120	
48	.....	54	305,739	May, 1874	15	120	
48	.....	55	296,202	,, 1874	15	120	
48	.....	56	282,931	Aug., 1874	15	120	
48	.....	57	282,146	July, 1875	14	120	
48	.....	58	328,804	Aug., 1875	14	120	

Those marked * have run over 250,000 miles.

AGE and MILEAGE of ENGINES, &c.—*continued.*

Type No.	Old No.	Present No.	Mileage run to 31st May, 1889.	Date commenced running.	Age, years.	Present Working Pressure.	Remarks.
48	.....	59	277,057	Aug., 1875	14	120	
60	.....	60	304,039	Oct., 1875	14	120	
60	.....	63	314,623	Dec., 1874	15	120	
60	.....	64	301,936	,, 1874	15	120	
60	.....	65	291,510	Jan., 1875	14	120	
.....	.....	70	266,740	July, 1875	14	120	
.....	.....	71	262,701	,, 1875	14	120	
.....	.....	75	270,901	Aug., 1876	13	120	
.....	.....	76	314,881	April, 1887	12	120	
79	.....	81	287,602	May, 1877	12	130	
79	.....	82	260,734	April, 1877	12	130	½ copper box, December, 1884.
79	.....	83	330,889	June, 1877	12	130	
79	.....	84	294,866	,, 1877	12	130	
79	.....	85	296,706	,, 1877	12	130	
79	.....	86	274,492	,, 1877	12	130	
79	.....	87	284,168	,, 1877	12	130	
79	.....	89	316,501	,, 1877	12	130	
79	.....	90	311,305	,, 1877	12	130	
93	.....	93	317,963	Aug., 1877	12	130	
93	.....	94	312,663	,, 1877	12	130	
93	.....	95	290,537	,, 1877	12	130	
93	.....	96	273,996	,, 1877	12	130	
93	.....	97	281,502	July, 1877	12	130	
93	.....	98	294,025	,, 1877	12	130	
93	.....	99	295,200	,, 1877	12	130	
93	.....	100	328,734	,, 1877	12	130	
93	.....	101	309,423	Nov., 1877	12	130	
93	.....	102	280,945	,, 1877	12	130	
93	.....	104	300,222	,, 1877	12	130	
93	.....	106	253,953	Aug., 1878	11	130	
93	.....	107	298,581	,, 1878	11	130	
93	.....	109	300,095	,, 1878	11	130	
93	.....	110	250,285	,, 1878	11	130	
93	.....	111	284,554	,, 1878	11	130	
93	.....	112	253,570	Dec., 1878	11	130	
93	.....	116	269,248	,, 1878	11	130	
79	.....	118	254,779	Sept., 1878	11	130	
79	.....	119	282,360	,, 1878	11	130	
79	.....	120	269,049	,, 1878	11	130	
79	.....	122	276,499	,, 1878	11	130	
131	.....	134	264,129	,, 1879	10	130	
158	.....	160	261,981	Aug., 1880	9	125	
93	.....	164	261,120	Sep., 1880	9	130	
	15N	400	447,641	,, 1865	24	115	Space between crown and bars incrusted solid.*
	25N	409	289,917	June, 1875	14	120	[seven months.†
79	27N	411	317,401	July, 1877	12	130	Not being examined internally for eleven years
79	28N	412	320,475	Aug., 1877	12	130	Copper tube plate bulged fully ½ in.*
79	29N	413	358,426	,, 1877	12	130	
79	30N	414	345,572	,, 1877	12	130	Copper tube plate bulged ¼ in.
93	31N	415	331,473	Oct., 1877	12	130	Copper bottom fire-hole burnt.
93	32N	416	387,397	,, 1877	12	130	Copper tube plate bulged ¼ in.*
93	33N	417	321,921	,, 1877	12	130	Copper bottom fire-hole burnt.
	34N	418	331,580	,, 1877	12	130	Copper tube plate bulged fully ¼ in.
	35N	419	328,970	Sept., 1877	12	130	Copper tube plate bulged fully ¼ in.
	36N	420	312,999	,, 1877	12	130	,, ,,
79	37N	421	306,885	Feb., 1879	10	120	Examined internally recently.
79	38N	422	295,526	,, 1879	10	130	,, ,, ,,
79	39N	423	278,965	,, 1879	10	130	Copper tube plate bulged ¼ in.§
93	41N	425	253,931	,, 1880	9	130	) Boilers of this class reported in bad state, and
93	43N	427	272,841	May, 1880	9	130	) found to be seriously corroded and pitted.*
93	45N	429	254,995	June, 1880	9	130	Copper tube plate bulged fully ¼ in.
79	47N	431	259,638	Dec., 1880	9	130	,, ,, ,,
79	51N	435	255,524	Feb., 1881	8	130	Copper tube plate bulged ½ in.
Total and average.		95	319,209	.....	14·37	124	

* NOTE.—No less than 21 of the above engines have run over 350,000 miles, and 33 of them have run for 18 years or more.

† Boiler of engine No. 425, of the same class, which has run 241,008 miles, was, when examined internally, found pitted and corroded, one of the plates being grooved nearly through. The copper tube plate was bulged fully ¼ in. ‡ The crown plate of the copper fire-box of this engine cracked while standing under steam, March 7, 1889. § The boiler of this engine had not (February 7, 1889) being examined internally for 11 years. On February 1, 1889, there were 31 boilers in the Northern District, which had not being examined internally for periods varying from 5 to 11 years, as follows:—

5 engines—boilers not examined internally for 11 years.						6 engines—boilers not examined internally for 7 years.			
4	,,	,,	,,	9	,,	7	,,	,,	,,	6	,,
6	,,	,,	,,	8	,,	4	,,	,,	,,	5	,,

Boiler of engine No. 234 from this district, which was put on line, October, 1883, and has only run 147,234 miles, was found to be badly pitted in barre April 1, 1889. ‖ The boiler of 400, though 23 years old, had not being examined internally for 9 years.

[Two plans, No. 2.]

Appendix G.

Re Deficiency of Locomotive Power.

In order to show that the Railways of the Colony have for the last twenty-five years been inefficiently equipped with engines, the following extracts have been taken from the public reports on the Railways prior to the Railway Commissioners taking office:—

Extract from Report on Railways, 1866 to 1871 inclusive, by John Rae, M.A., Commissioner for Railways.

The following Table will show the quantity of rolling stock used on our railways, compared with that used on English and Victorian railways, per train mile run:—

	United Kingdom. Train miles run.	Victoria. Train miles run.	New South Wales. Train miles run.
Locomotives—1 for every	18,026	14,496	20,184
Passenger stock—1 for every	8,402	7,805	8,919
Goods stock—1 for every	660	877	1,288
All vehicles—1 for every	565	698	960

Thus in each of the classes we employ the smallest number of vehicles for the work performed; but instead of taking any credit for this result, I regard it as a proof that we are overworking our stock. We have constant applications from the Traffic Department for additions to the quantity on hand, and with respect to the deficiency of engine power the Locomotive Superintendent thus writes:—"Of the goods and passenger engines suitable for working steep gradients twenty are running every day; and in some cases double shifts of men are put on them, and the same engines are worked day and night, which is a most destructive practice. It will be seen that this leaves only five available at one time for repairs and emergencies. As these engines require to be taken in for ordinary repairs every four months, it is utterly impossible to do what is necessary to them, as before one can be got ready for running there are always two ready to come in for repairs; and it will be impossible much longer to provide sufficient locomotive power for the traffic with our present number of engines.

"There are, moreover, twelve out of the engines suitable for steep gradients, which require new boilers, fire-boxes, tubes, &c. These engines would have lasted much longer without these extensive renewals being required, if they received fair usage; but there not being sufficient engines to work the traffic, it has often been necessary to work them night and day.

"Two thousand miles is considered a fair monthly average for a locomotive; but it will be seen from our mileage returns that many of our engines are constantly running over 3,000, and in some cases over 4,500 miles per month."

All this explains the large demand on the Vote for Working Expenses, for repairs, which could have been avoided if the quantity of the rolling stock on hand had been sufficient for the traffic; and clearly points to the necessity of increasing it as rapidly as possible.

Extract from Report on Railways, 1872–1875, by John Rae, M.A., Commissioner for Railways.

Rolling Stock and Machinery.

The whole of the locomotives and rolling stock have been kept in thorough repair, and the cost as usual, has been charged to Working Expenses. The following is the number of each class on 31st December, 1871, the additions from that date, and the total on 31st December, 1875:—

	31st Dec., 1871.	Since added.	Total 31st Dec., 1875.
Locomotives	66	34	100
Passenger Stock	256	88	344
Goods Stock	1,122	488	1,610
Totals... ...	1,444	610	2,054

But this is quite insufficient for the present and future requirements of the traffic, as will appear from the appended estimate of the engines and rolling stock that will be required during the next five years, from which the following figures are taken:—

	South and West.	North.	Total.
Locomotives	49	25	74
Passenger Stock	168	65	233
Goods Stock	1,590	398	1,988
Totals	1,807	488	2,295

This will involve an expenditure of half a million sterling and more than double our present stock.

Extract from Report on Railways for the year 1876, by John Rae, M.A., Commissioner for Railways.

Rolling Stock and Machinery.

During 1876 little was done to remedy the deficiency in engine-power, rolling-stock, and machinery and nothing whatever to improve the insufficient accommodation at the Redfern Terminus complained of as existing in 1875. The stock of locomotives was increased by only one, which was constructed at our own workshops. The passenger-stock was not increased by a single carriage; but considerable additions were

were made to the goods-stock, partly from the railway workshops, partly from colonial manufacturers, and partly from purchases, at a valuation, from the New Zealand Government, who have substituted the narrow gauge of 3 ft. 6 in. for the English standard gauge of 4 ft. 8½ in., which has been adopted in New South Wales, but in none of the other Australian colonies.

I would strongly impress upon the Government that no time should be lost in adding still further to the quantity of our rolling-stock, in anticipation of the expansion of the traffic on the opening of new extensions, and in making arrangements for improving the accommodation at the locomotive workshops, which is at present utterly insufficient for the ordinary repairs of the stock. The engines are consequently injured by overwork, and the amount of locomotive expenses unduly increased.

Extract from Locomotive Engineer's Report (Mr. R. H. Burnett) accompanying Commissioner's Report on Railways for the year 1878.

Many of the principal matters connected with the locomotive branches have already been dealt with by me in the various reports that I have submitted from time to time. Amongst the principal, the following may be briefly enumerated:—The want of adequate engine-power.

* * * *

The want of adequate engine-power, under which the department has long suffered, has contributed largely to the present backward state of repairs by frequently compelling engines requiring to come into the shops to be continued at work for too long a period, resulting in undue wear and tear, besides causing other well-known inconveniences in working, by which the measures necessary to secure proper care in the running of the engines are rendered impossible.

In the course of 1878 six passenger and twelve goods engines were added to the stock, and since then seven passenger, eleven goods, and three light tank-engines for the Richmond line have been delivered, in addition to the two goods engines ordered to replace those destroyed last year in the accident at Emu Plains, while the various orders now in hand will go still further to meet the difficulty in which the department is placed by inadequate engine-power.

As regard other rolling stock, large contracts, extending over five years, have been entered into with Messrs. Hudson Brothers, Messrs. Moyes and Donald, and Mr. Ritchie, to meet the deficiency in carriages and waggons.

It must, however, be borne in mind that, in addition to the rolling-stock, in the absence of proper means for accommodating and repairing them is not an unmixed advantage, for, while, it enables defective engines and vehicles to be stopped, pending the opportunity for repairing them, it adds proportionately to the already over-crowded state of the workshops and sheds.

Extract from Locomotive Engineer's Report (Mr. R. H. Burnett) accompanying Commissioner's Report on Railways for the year 1879.

The addition of these engines will not, however, meet the demands of the service for engine-power—especially when the extensions, shortly to be completed, are opened—and as the first of the engines ordered from the local firms are not due until the end of 1882, I cannot too strongly urge the advisability of carrying out the recommendations I have already made for providing additional engine-power.

Extract from Locomotive Engineer's Report (Mr. W. Scott) accompanying Commissioner's Report on Railways for the year 1881.

Very great inconvenience was recently caused for want of sufficient locomotives for working the traffic. The coming to hand, in October and November last, of a portion of those engines contracted for in England has to a considerable extent relieved the difficulty; but there will still be a deficiency of locomotives, even after all those now on their way to the Colony have been received. I trust, therefore, that there will be no unnecessary delay in the supply of those engines for which tenders are now being invited in England. An engine from Davy & Co., of the Atlas Works, is now nearly ready for its trial-trip. This is the first engine which will be supplied under the recent contracts with Colonial firms.

Extract from Acting Locomotive Engineer's Report (Mr. Thos. Middleton) accompanying Commissioner's Report on Railways for the year 1882.

Considering the increase of traffic and mileage our stock of engines is still below our requirements, especially as far as goods engines are concerned, and although we shall in a few months be in receipt of some sixty additional engines (thirty goods, twenty-four passenger, and six suburban tank engines for passenger traffic), I strongly recommend that immediate steps be taken to provide more, seeing that our lines will increase in length very much by the approaching completion of the Illawarra, the Cooma, the Newcastle Junction lines, and the extension from Nyngan to Bourke.

Extract from Locomotive Engineer's Report (Mr. W. Scott) accompanying Commissioner's Report on Railways for the year 1883.

Twenty-eight new engines have been added to our stock during the year—four of these were made in the Colony, and our total number of locomotives now amounts to 296. Although there are more goods engines on order, and some arriving, I consider it highly necessary, in view of the increasing traffic, and the opening of new extensions, to order more, otherwise it will be exceedingly difficult to work the prospective traffic, more especially as our facilities for repairing are not increasing nearly so rapidly as I should wish.

Extract

Extract from Locomotive Engineer's Report (Mr. W. Scott) accompanying Commissioner's Report on Railways for the year 1884.

NOTWITHSTANDING these large additions to our locomotive power I realised the fact that with the new extensions and the enormous growth of the traffic we would still be deficient, so that the additional engines ordered will be very acceptable and necessary to meet the demands.

Extract from Locomotive Engineer's Report (Mr. W. Scott) accompanying Commissioner's Report on Railways for the year 1885.

I DESIRE to mention that searching investigations in England show that it is not true economy to overwork locomotive engines, that in fact it can only be done by increased consumption of stores per mile; consequently I felt it my duty to recommend that further additions be made to our hauling power on this ground more particularly to meet requirements of further extensions to be opened at an early date, therefore twelve passenger engines have been ordered from the Vulcan Foundry Company of England, their tender being the lowest. Tenders were invited in the Colonies, and in America and England, for these engines. Besides the foregoing, we have ordered six tank engines from Mr. Vale, of the Auburn Works, near Parramatta.

Extract from Report on Railways for the year 1886, by Chas. A. Goodchap, Commissioner for Railways.

THE Locomotive Engineer renews his statement that more engines are required for the economical working of the traffic. The statistics show that the engines in use on the lines of New South Wales are, with one exception, more heavily worked than are the locomotives of any other country. The average mileage per engine in the various countries is as under:—

Germany	11,870
Austria	12,842
Belgium	13,335
France	16,798
Italy	15,118
Great Britain	18,395
India	19,003
United States	22,587
New South Wales	20,362

During the year 1886 fifty-two of our locomotives ran between 30,000 and 40,000 miles, and three over 40,000.

The necessity for additional locomotives cannot therefore be questioned, and a further supply will have to be obtained as early as possible.

Extract from Locomotive Engineer's Report (Mr. W. Scott) accompanying Report on Railways, for the year 1886.

THE drought having broken up there is every probability of increased traffic on our lines during the present year, and, as in the past, great difficulty was experienced in supplying motive power for the traffic, I would again urge upon the Commissioner the necessity for increasing the number of passenger and goods engines with as little delay as possible.

Extract from Report on Railways, for the year 1887, by Commissioner Chas. A. Goodchap.

IN my report for 1886 I drew attention to the necessity for the supply of additional locomotives for adequately meeting the requirements of the traffic, and supported the statement by a reference to the statistics of locomotive work performed in Great Britain, in the various countries forming the Continent of Europe and in America, which showed that with one exception the locomotives in use on the lines of New South Wales were more heavily worked than the locomotives of any other country. The twenty additional engines supplied during 1887 afforded some relief, but more are required, and it is questionable whether the fifty engines recently ordered from Colonial manufacturers will be supplied in time to meet the demand.

ROLLING STOCK SUPPLIED AND TRAFFIC.

THE following table will show the number of engines added to the rolling stock on capital account for the year 1887 and the four preceding years, together with the traffic increase for each year. In spite of the additions made to the number of locomotives, it will be observed from the extracts given above how insufficient the motive power was found to be. The Return also includes particulars of the engines added to the stock at capital cost since we took office in 1888, and the particulars of traffic. It will be seen therefrom that if the difficulties were great in 1887 and prior to that year, how much greater our difficulties must have been, and looking at the manner in which the traffic has been conducted, how successfully the question was dealt with :—

Year ending—	No. of Engines added to the Stock, and charged to Capital.		Increase of traffic over preceding year.	Total growth of traffic.
December, 1883	28		£232,601	
„ 1884	42		£154,773	
„ 1885	54	160 in 5 years.	£88,131	£509,431
„ 1886	16		Decrease of £14,298	
„ 1887	20		£48,224	
June, 1888	1		£86,830	
„ 1889	Nil	11 in 4 years.	£243,353	
„ 1890	10		£94,509	£916,027
„ 1891	Nil		£341,335	
Expected number, June, 1892 ...	52 = 63 engines in 5 years.		£150,000	

Appendix H.

Locomotive Works in the Colony.—(Correspondence Respecting Establishment of.)

[*Ordered by the Legislative Assembly to be printed*, 1 *May*, 1890.]

No. 1.

The Chief Commissioner of Railways to The Minister for Railways.

Establishment of Locomotive Works in the Colony.

Sir, 14 May, 1889.

The Commissioners are anxious to see locomotive engines manufactured in the Colony; but the experiments which have been tried in the past have been very unsuccessful, and at this moment we are placed in a very awkward position in consequence of the loss of time during the last three years in ordering new engines, so as to endeavour to get fifty built in the Colony, as within the last week one of the firms which had a contract for twenty-five has notified its inability to go on with the work, and we shall experience great difficulty in carrying on the traffic until we can get engines built in England. There is no proper machinery in the Colony for manufacturing engines, and no persons skilled in the work; and we would suggest to the Government the wisdom of advertising in England and the Colonies, simultaneously somewhat as under :—

The Government of New South Wales is anxious to see workshops for the construction of locomotives erected in the Colony, either in the vicinity of Sydney or Newcastle.

The works must be capable of turning out locomotives equal in character to the best English-built engines, and the managing director or manager, who must reside on the spot, must be an engine-builder of known repute. No restrictions will be placed upon the firm in regard to importing any parts of the engines, if such a course is found to be advantageous.

The price to be paid for the engines must be nearly approximate to the cost of the present imported engines when erected and ready for work in the Colony.

The Railway Commissioners will be prepared to place orders for at least seventy-five engines during the next five years with any firm starting works under the conditions above referred to.

The number of locomotives at present in use on the New South Wales Government Railways is 429. It will therefore be seen that ordinary renewals will call for a good number of engines to be built annually.

A considerable sum of money is about to be spent in building new passenger and goods rolling stock. Preference will be given to any firm prepared to begin operations at once.

In the London advertisements :—Communications are invited through the Agent-General, Sir Saul Samuel, 5, Victoria Chambers, Westminster.

In the colonial advertisements :—To the Railway Commissioners.

The Commissioners will be glad if the Government will come to an early decision hereon.

I am, &c.,
E. M. G. EDDY,
Chief Commissioner.

No. 2.

A. Greenwood, Esq., to The Colonial Secretary.

Proposal for the establishment in New South Wales of Works for the entire manufacture of Locomotives, Carriages, and Waggons.

Dear Sir, Albion Works, Leeds, 15 August, 1889.

In view of the rapid development of the railway system in the Australian Colonies, and the consequent growing demand for locomotives and rolling stock, we venture to lay before you the following proposal for the establishment in the Colony of New South Wales of works for the entire manufacture of locomotives, carriages, and waggons, on the system of duplicate parts, adopted by the best managed railways in this country, and equal in every respect to those manufactured by our leading makers.

We

We are prepared to form a private limited company, with a capital of £200,000, of which we propose to subscribe at once £100,000, in ten shares of £10,000 each, so that in fact the company will be a private partnership, and not brought out for stock exchange or speculative purposes.

One of the subscribers is one of the most able and distinguished mechanical railway engineers in this country, who has had great practical experience in designing and building locomotives and rolling stock. He is prepared, if a suitable arrangement can be made with your Government, to give up his present position, and to settle permanently in the Colony and take the management of the company's proposed works.

The works would be established on the latest and most improved principles, with the best and most powerful machine-tools and appliances. Their capacity would be for an annual output of—

50 locomotive engines,
300 passenger carriages, and
1,000 waggons.

It is proposed to establish these works within twelve months of a satisfactory arrangement being arrived at with your Government. To enable us to carry out the above programme, we venture, in the first instance, to approach your Government in the hopes that, not only to secure an ample and reliable source of supply for your own railway system, but to encourage a new and important industry in your Colony, you will give our proposal favourable consideration.

The conditions we would respectfully submit to your consideration, upon which we are prepared to carry out the scheme, are as follows:—

First—That the Government of New South Wales make us a free grant of land, of suitable area for the erection of our works, in direct communication with your railway system, at or near the town of Newcastle, and within reasonable distance of the harbour. We have selected this town from its central position in the Australian railway system, its harbour, and its being the centre of the Australian coal-field.

Second—That the Government of New South Wales give us a monopoly of the supply of locomotives and carriages for a term of ten years, on the condition of our being able to supply all your requirements at prices to be agreed upon, these prices to be based on those paid to first-class English builders, with a reasonable allowance for freight of material and the extra cost of labour in the Colony. In fact, all we ask is that we may stand upon the same footing as first-class English builders.

Third—That the Government of New South Wales agree to take annually a reasonable minimum number of engines, carriages, and waggons from the company.

Fourth—That the company, so long as they supply your requirements, are at liberty to build all descriptions of engines and of railway and tramway plant for other colonies and companies.

We are prepared to give you any references you may require as to our financial ability to carry out this scheme, and we shall be glad to furnish any information to your Agent-General in London, the Colonial Office, or elsewhere. We are prepared to find all the capital ourselves here, but at the same time we have no wish to exclude colonial capital; indeed, we should welcome two or three colonial gentlemen to join our company.

We are further prepared to send out at once, on hearing from you by cable, addressed, "Greenwood, Leeds," a gentleman with full power and authority to discuss and settle the details of a contract with your Government.

Trusting that our proposal may receive favourable consideration at your hands.

We are, dear sir, your most obedient servants,
(For the proposed Colonial Locomotive and Waggon Company),
ARTHUR GREENWOOD,
Chairman of Greenwood and Batley (Limited).

P.S.—The writer is also Chairman of the Colonial Ammunition Co. (Limited), who have recently concluded a contract with the Victorian Government, through their Managing Director, Captain Whitney, for the establishment of a cartridge factory at Melbourne, and your Government has agreed to take cartridges from them. He hopes that the proposed locomotive company may be successfully carried out in your Colony, and that it may take its place prominently in the development of the industries and mineral resources of New South Wales.

The Secretary for Public Works.—H.P., 31/10/89. The Under Secretary for Public Works, B.C., 1/11/89.—C.W., Principal Under Secretary. B.C., Railways.—W.S., 4/11/89. The Under Secretary for Finance and Trade,—Please see report to Minister herein.—H.McL., 7/11/89.

No. 3.

The Railway Commissioners to The Minister for Railways.

Proposal for establishment in New South Wales of Works for the entire manufacture of Locomotives and Rolling Stock.

7 November, 1889.

We have carefully considered this question, and we feel that if works for the construction of locomotives of the character described could be successfully carried on in the Colony it would be a very material advantage to the Department, and would in all probability lead to the establishment, on a substantial basis, of a new industry of a most desirable character.

We could not advise the Government to agree to the proposal to give a monopoly for the supply of locomotives, carriages, and waggons to the proposed Company, but we consider it absolutely necessary that a guarantee of some kind should be given, and would advise an order being given for 100 locomotives to be supplied within a period of three years, if suitable terms could be arranged. As there are already several manufacturers of carriages and waggons in the Colony, the Company should take its chance with those firms in securing orders for that class of stock.

The

The question of a free grant of land which is raised in the letter we feel that the Government will not require our advice upon.

We must without delay place orders for further supplies of locomotives, and it is therefore very necessary that a decision on this question should be arrived at as early as possible, as, unless the new Company be started and able to commence the manufacture of engines within twelve months, we must place orders with the Home makers; and, of course, to place a number of engines under order in this way would of necessity mean the reduction by a similar number of the total of 100 that we recommend should be guaranteed to the proposed Company.

E. M. G. EDDY.
W. M. FEHON.
CHARLES OLIVER.

No. 4.

Cablegram from The Minister for Railways, Sydney, to The Agent-General for New South Wales, London.

19 November, 1889.

GREENWOOD, Leeds, have submitted proposal for locomotive works this Colony. Decided will advertise for tenders here and in London. Particulars by post of 19th November.

No. 5.

Cablegram from The Minister for Railways, Sydney, to Greenwood, Leeds, England.

19 November, 1889.

PROPOSED locomotive works. Public tenders to be invited Colony and England. Particulars sent Agent-General this mail.

No. 6.

The Minister for Railways to Messrs. Greenwood and Batley, Albion Works, Leeds.

Gentlemen, The Treasury, New South Wales, Sydney, 19 November, 1889.

In reply to the proposal, dated the 15th August, addressed to the Honorable Sir Henry Parkes, Colonial Secretary, I have the honor to inform you that the subject of the establishment of locomotive works in the Colony has been under the consideration of my Government, and it has been deemed desirable to call for proposals, both in the colonies and at home, for the establishment of works of the nature described by you, and I have pleasure in enclosing herein, for your information, a copy of the draft advertisement which the Agent-General has been requested to arrange to appear in the English papers.

I have, &c.,
W. McMILLAN,
Minister for Railways.

No. 7.

The Minister for Railways to The Agent-General.

Sir, The Treasury, New South Wales, Sydney, 19 November, 1889.

Referring to my cablegram of this date, I have the honor to inform you that a proposal has been received by the Government from Messrs. Greenwood and Batley (Limited), Albion Works, Leeds, to establish works in the Colony for the manufacture of locomotives and railway rolling stock. The Government is anxious to see first-class locomotive works established in the Colony, and have decided to invite public tenders, both in the Colony and in England, and with that view forward herewith draft advertisement for insertion in the English newspapers which will, in your opinion, be the most suitable.

I shall feel obliged by your sending forward the communications you receive on the subject as early as possible, in order that the Government may consider the same in conjunction with similar proposals which may be received in the Colony.

I have, &c.,
W. McMILLAN,
Minister for Railways.

[*Enclosure.*]

(Advertisement inserted in Colonial papers).

Establishment of Locomotive Works in New South Wales.

THE Government of New South Wales are prepared to receive proposals for the establishment in the Colony of a first-class firm of locomotive builders, for which there exists a good opening—a large number of engines being required both for renewals and additions to the present stock of 431 locomotives.

The works must be fully equipped with the best modern machinery, and be capable of building locomotives equal in every respect to those made by the English makers. It is estimated that a capital of about £125,000 would be required.

The Managing Director or Manager must reside on the spot, and be a locomotive builder of known repute.

The firm may manufacture or repair any class of machinery or rolling stock, and, as regards Government contracts or this class of work, will be on the same footing as other builders in the Colonies.

The firm may, subject to any Customs duties which may be in force, import any parts, materials, or machinery for the manufacture of locomotives, which cannot reasonably be made in the Colony, such articles to be subject to the approval of the Railway Commissioners, and to be set forth in the proposal for establishing the works.

Proposals should be accompanied by satisfactory references as to financial standing, technical ability, and manufacturing experience.

Proposals should state the price per ton of engine and tender empty at which locomotives built in the Colony can be delivered complete in steam. If considered desirable, a sliding scale of prices may be named, based on the variations in the market prices of copper, spelter, best Yorkshire iron and steel boiler plates.

The Railway Commissioners are prepared to give any firm established under the above conditions an order for 100 locomotives, to be supplied within the next three years, provided the price quoted does not materially exceed the price of similar engines built by first-class firms in England and delivered in steam in Sydney.

The first engine must be delivered not later than 1st July, 1891.

Proposals will be received up to the 14th February, 1890.

Communications are invited through the Railway Commissioners, Sydney, New South Wales.

W. M'MILLAN,
Minister for Railways.

NOTE.—Although well advertised in the colonial papers, no local offer was received.

No. 8.

Sir Saul Samuel to The Minister for Railways.

Sir, 5, Westminster Chambers, Westminster, S.W., 14 February, 1890.

Referring to your letter of the 19th November last, No. R. 89-62, on the subject of the establishment in the Colony of a first-class locomotive works, I have the honor to enclose herewith copy of the advertisement which has been extensively circulated in the United Kingdom, inviting proposals for the establishment of the works in question; and I have now to report that only one tender, that of Messieurs D. Drummond, Arthur Greenwood, Henry Hudson, and J. E. Pepper (being "The Australasian Locomotive Engine Works (Limited"), has been received by me. I forward the same herewith, for your information.

Print.

In original tender.

I have, &c.,
SAUL SAMUEL.

The Secretary for Railways.—G.E. The Treasury. B.C., 24/3/90.

(Advertisement inserted in English papers.)

Establishment of Locomotive Works in New South Wales.

THE Government of New South Wales are prepared to receive proposals for the establishment in the Colony of a first-class firm of locomotive builders, for which it is considered there exists a good opening—a large number of engines being required by the Government both for renewals and additions to the present stock of 431 locomotives. The works must be fully equipped with the best modern machinery, and be capable of building locomotives equal in every respect to those made by English makers. It is estimated that a capital of about £125,000 would be required. The Managing Director or Manager must reside on the spot, and be a locomotive builder of known repute. The firm may manufacture or repair any class of machinery or rolling stock, and, as regards Government contracts for this class of work, will be on the same footing as other builders in the Colonies. The firm may, subject to any Customs duties which may be in force, import any parts, materials, or machinery for the manufacture of locomotives which cannot be reasonably made in the Colony, such articles to be subject to the approval of the Railway Commissioners, and to be set forth in the proposal for establishing the works.

Proposals should be accompanied by satisfactory references as to financial standing, technical ability, and manufacturing experience. Proposals should state the price per ton of engine and tender empty at which locomotives built in the Colony can be delivered complete in steam. If considered desirable, a sliding scale of prices may be named, based on the variations in the market prices of copper, spelter, best Yorkshire iron, and steel boiler plates.

The Railway Commissioners are prepared to give any firm established under the above conditions an order for 100 locomotives, to be supplied within the next three years, provided the price quoted does not materially exceed the price of similar engines built by first-class firms in England and delivered in steam in Sydney. The first engine must be delivered not later than 1st July, 1891.

Proposals, accompanied by satisfactory references, should be sent on or before the 14th February, 1890, to the Agent-General for New South Wales, 9, Victoria-street, London, S.W.

SAUL SAMUEL,
Agent-General for New South Wales.

6th January, 1890.

TENDER.

16, Great George-street, London, S.W., 13 February, 1890.

To the Honorable Sir Saul Samuel, K.C.M.G.,
Agent-General of the Colony of New South Wales, London,—

Dear Sir Saul,

We, the undersigned, are prepared to establish a Locomotive Building Factory in New South Wales, in terms of your advertisement of 19th November, 1889, fully equipped with the best modern machinery, and capable of building locomotives equal in every respect to those made by the leading English makers.

The general conditions we would submit for your acceptance are as follows:—

That our company shall be placed on the same footing as other builders in the Colony as regards Government contracts, and be at liberty to manufacture or repair all descriptions of railway or tramway rolling-stock for other Colonies or companies.

That, after the satisfactory completion of the one hundred (100) engines now specified, a further order of one hundred (100) engines be guaranteed on the terms of and in conformity with your advertisement dated 19th November, 1889, namely,—a sliding scale of prices, based on the variations in the market price ruling to-day of copper, spelter, best Yorkshire iron and steel boiler plates, and subject to the fiscal duties existing at the present time. This stipulation we consider reasonable, as the company established by us will be permanently and purely a colonial factory, having no connection with any English or foreign company,—the present number of locomotives offered being, of itself, wholly inadequate to induce a first-class firm of builders to expend their capital and settle in the Colony unless further substantial orders be received to keep their works employed.

We consider, from careful inquiry and practical knowledge, that three types of engines will suffice to meet the whole of the working requirements on your system of railways. Of these, the first or main-line engines which we recommend, are designed for working either passenger or goods trains; each engine to have all its parts interchangeable, or duplicates of each other, and be of the most modern design, and the materials and workmanship equal to the highest class of English manufacture. The second class are designed for local passenger traffic. The third class for shunting and working short-distance goods and mineral traffic, and are of the same quality of material and workmanship as the main-line engines.

These engines are the well-known types built for the North British, the Caledonian, and the London, Brighton, and South Coast Railway Companies. They are specially designed to work over heavy gradients and sharp curves, and are provided with copper fire-boxes, brass tubes, and brass axle-boxes. Their working steam pressure is 170 lb. per square inch.

We

We are prepared to supply your Government with one hundred (100) engines of this type, and deliver them in steam on your line within two years and six months from date of order, for the sum of sixty-five pounds (£65) per ton for main-line tender engines, and seventy pounds (£70) per ton for tank engines; payments to be made within one month of the delivery of each engine in working order.

We may remark that the manufacturing cost of these engines in England at the present time is £60 per ton, while the cost per train mile for working and repairs is considerably less than that of any other engine running in this country.

Future prices to be based on a sliding scale, according to the variations in the market, as may be from time to time arranged, on the basis of our present tender.

That the Government afford every facility for the purchase by the company of suitable land to the extent of ten acres or thereby, belonging to the Government in the immediate vicinity of their railways that we may select for the purposes of the company, and at a reasonable price.

Our Managing Director, who is a well-known locomotive builder and engineer of acknowledged skill and repute, and Member of the Institute of Civil Engineers and of the Institute of Mechanical Engineers, will reside on the spot.

For our financial standing, technical ability, and manufacturing experience, we refer you to—

W. L. Jackson, Esq., M.P., Financial Secretary to the Treasury.
Messrs. William Williams, Brown & Co., Bankers, Leeds.
The Yorkshire Banking Company (Limited), Leeds.
Messrs. Williams, Deacon, Thornton, & Co., Bankers, London.

We annex a statement of the machinery and parts or materials of engines which require to be imported, presuming that none of the articles named therein can at present be made or procured in the Colony.

We are, Sir,
Your obedient servants,
D. DRUMMOND,
Managing Director.
ARTHUR GREENWOOD,
HENRY HUDSON,
J. E. PEPPER.

(The signatories being the partners in the proposed The Australasian Locomotive Engine Works Limited)

STATEMENT of parts and materials of engines to be imported:—

Frame and boiler plates—in the rough.
Copper fire-box plates—in the rough.
Brass, iron, and steel tubes.
Tyres—in the rough.
Crank axles—in the rough.
Cast-steel wheels—in the rough (wrought and cast iron wheels will be made in the Colonies.)
Spring steel.

MACHINERY to be imported:—

3 steam engines.
2 steam boilers.
3 power overhead cranes.
3 wheel lathes.
4 slotting machines.
1 frame slotting machine.
12 drilling machines.
27 lathes.
4 shaping machines.
1 horizontal boring machine.
1 cylinder boring machine.
3 screwing machine.
1 quartering machine.
1 slot drilling machine.
1 saw bench.
1 wood planing machine.
1 hydraulic forging and flanging press.
4 hydraulic riveting machines.
1 bolt and rivet machine.
1 Roots' blower.
5 steam hammers.
15 smiths' hearths.
15 anvils.
4 iron and brass moulding machines.
1 pug mill.
1 cupola.
1 hydraulic engine and accumulator.
1 paint grinding mill.
1 engine adjusting weighing machine.
1 10-ton weighing machine.
1 nut tapping machine (6 spindles).
1 nut making machine.
1 plate planning machine.
1 plate bending machine.
50 bench vices.
2 large forge furnaces.
1 punching and shearing machine.
1 oliver.
3 large grinding machines.
1 American turret lathe.
Complete plant of hydraulic riveting machinery.
Complete set of emery grinding machinery.
Complete equipment of brass and iron moulding machinery.
Complete equipment of machines for spring-making.
Complete equipment of machinery for making wheels and axles.

All the machinery to be specially designed, and with all the most modern improvements.

No. 9.

The Railway Commissioners to The Minister for Railways.

Proposed establishment of Locomotive Works in New South Wales.

Office of the Railway Commissioners of New South Wales,
Sydney, 27 March, 1890.

Sir,

We have carefully considered the enclosed proposal which has been made in response to the advertisements put out by the Agent-General on the subject, and consider that the offer is a most advantageous one—the advance upon the price of the engines made by English manufacturers being small as compared with the very material advantage that would be gained by the Department if the locomotives were

were constructed on the spot, under the supervision of the officers of the Department, and the greatly accelerated delivery as compared with that we are now experiencing in obtaining engines from abroad. There are other and material advantages which will accrue to the Department by the establishment of such works which we need not now enumerate.

Attached hereto is a minute from the Locomotive Engineer, giving the prices at which engines have recently been built for the South Australian Government, delivered free on board in London and in steam in Adelaide, and also Colonial prices for similar engines which were obtained after very keen competition. You will see that the figures of the "Australasian Locomotive Engine Works Company (Limited)" are extremely favourable, looking at them in all ways.

We therefore strongly recommend the acceptance of the offer, and would be glad if the Minister will say if we may proceed with the matter under the powers given to us in clause 47 of the Government Railways Act, 1888.

We have, &c.,
E. M. G. EDDY, Chief Commissioner.
W. M. FEHON, Commissioner.
CHARLES OLIVER, Commissioner.

No. 10.

Memo. to The Railway Commissioners by Mr. Thow, Locomotive Engineer, New South Wales Government Railways, late Locomotive Engineer, South Australian Railways.

Locomotive Works.

CONSIDERING the several attempts made—without success—to establish the manufacture of locomotives in this Colony as evidence of a desire to establish that industry here, I regard the offer of the Australasian Locomotive Engine Works Co. (Limited) as most favourable for that purpose. There cannot be a doubt entertained as to the convenience of having a well-equipped and well-managed locomotive factory in Sydney, assuming, of course, that the work would be executed at a fair advance on English prices. The prices asked by this new Company are most reasonable. For purposes of comparison I give below the cost per ton of 5'3-gauge locomotives of the best types, but of ordinary simple designs, delivered by Messrs. Beyer, Peacock, & Co., and Messrs. Dübs & Co., to the South Australian Railways during the last five years; and in addition I give the prices obtained, after keen competition, by a colonial maker for fifty-two engines, exact duplicates in all respects of the English imported engines alluded to.

I consider the suggestion that a second order should be given for 100 engines, at corresponding or relative prices, a reasonable one, which may be safely entertained, because the probable increase of traffic and extension of lines in two and a half years will render that amount of increase in our locomotive stock desirable.

Suburban tank-engine, packed f.o.b., London	£77	per ton.
The same engine delivered in steam, Adelaide	88	„
The same engine, colonial made, delivered in steam	115·28	„
Express passenger (inside cylinder) tender engine, packed f.o.b., London	60·25	„
The same, delivered in steam, Adelaide	69·9	„
The same, colonial made, and delivered in steam	90·37	„
Heavy slow passenger and goods (outside cylinder) tender engine, packed f.o.b., Glasgow	55·46	„
The same, delivered in steam, Adelaide	63·86	„
The same, colonial made, and delivered in steam	82·9	„

Notwithstanding the seemingly high colonial rates, I do not believe any profit will be made.—25/3/90. W. THOW.

No. 11.

Memo. to the Railway Commissioners by Mr. Neale, Mechanical Engineer.

Proposals—Colonial Locomotive Company.

Mechanical Engineer's Office, 44, Phillip-street, Sydney, 27 March, 1890.

I HAVE carefully examined the figures, &c., in the proposals to build locomotives in the Colony, and consider the terms fair and advantageous to the Colony.

As a locomotive engineer, Mr. Drummond's reputation for ability and energy stands very high, and he has achieved great success in rebuilding the rolling stock and repair shops of two great railways. He believes in using the best materials and workmanship in the first instance, and has proved that this pays in the consequent diminished repairs. Mr. Drummond's well-known determination to always have good work should ensure our colonial-built engines being built up to the mark.

Messrs. Greenwood and Pepper are also well-known men, connected for many years with first-rate firms, engaged respectively in making all kinds of machinery which has been most successful in accomplishing difficult work, and in the manufacture of the best quality of iron made in Great Britain, known as "Best Yorkshire."

The

The suggestion of making only three classes of engines is, I think, a sound one under our circumstances. The same engine that takes a passenger train could then, if necessary, return with a goods without waiting for a passenger train, while the present four-coupled Dübs express (of which we have forty-seven) could work light passenger trains or run on the easier parts of the line where the proposed main-line engines would be unnecessarily powerful. We do, however, undoubtedly badly want more powerful engines for the heavy parts of the line, and, as showing that one class of engine would do for both goods and passenger traffic, I give the following figures for the desirable standard trains on gradients of 1 in 40:—

PASSENGER TRAINS.

	Tons.
2 Sleepers	50
1 Car 1st (lavatory)	23
1 Car compo. (lavatory)	23
1 2nd	23
1 B.V. (lavatory)	21
6 Vehicles (loaded) weighing ...	140
Engine and tender	80
Total	220

GOODS TRAINS.

	Tons.
25 Waggons at 8 tons (loaded) ...	200
1 B. van, bogie	16
Engine and tender	80
	296

The difference in weight, 76 tons, would be offset by the higher speed required with the passenger train.

I estimate that an engine, as proposed by Mr. Drummond, with six-coupled wheels, 170 lb. boiler pressure, and a pony truck in front, would do this work if made with 42 tons adhesion weight, or 14 tons on each driving axle. The total weight of the engine would be about 50 tons, and the tender loaded 30 tons. The weights empty would be about 46 and 14½ tons respectively.

Engines of similar weights and dimensions are coming into favour on the Canadian Pacific, Michigan Central, Erie, Chicago, Burlington, and Quincy, and other lines in the U.S.A. for passenger traffic.

According to the terms of the offer, I estimate the cost of the different proposed classes as follows:—

	Weight loaded, E. only.	Weight, E. and T. empty.	Price per ton.	Cost, each.
	Tons.	Tons.	£	£
Main-line Engine	50	60½	65	3,933
Shunting Tank—Mineral	56	45	70	3,150
Suburban Tank	45	34	70	2,380

These prices, as regards the heavier engines, appear high, but the engines are far heavier and more powerful than any we now have, and would also be more durable.

Our best available engines haul a load of only eighteen trucks up 1—40, which is practically the ruling grade on the most important parts of our main lines. The proposed engine would, I estimate, haul easily twenty-five loaded waggons. This would not only mean an increase of nearly 40 per cent. in the load for 37½ per cent. increase in the first cost of the engine, but would give a greater increase in the earnings without any appreciable increase in the cost of working, as shown by the following figures of the estimated annual earnings and expenses of a main line engine, on the basis of 25,000 train miles per annum.

PRESENT ENGINES.

		£
Earnings—		
Load of 18 waggons = ...		8,750
Expenses—		
Running and repairs ...	£1,100	
Interest on cost of engine, 4 per cent. on £2,850...	114	
Interest on proportion of cost of workshops and machinery	40	
Total expenses		1,254
Net earnings per annum ...		£7,496

PROPOSED ENGINE.

		£
Earnings—		
Load of 25 waggons = ...		12,150
Expenses—		
Running and repairs ...	£1,100	
Interestion cost of engine, 4 per cent. on £3,933	157	
Interest on proportion of cost of workshops and machinery	40	
Total expenses		1,297
Net earnings per annum ...		£10,853

While the extra charge for interest on the first cost of the more powerful engine is £43 per annum, the net earnings are over £3,300 ger annum greater, figures that explain the great benefits obtained elsewhere from the use of more powerful engines, and fully justify the greater cost of the proposed main line engines.

Such engines would have the flexible wheel-base, great tractive power, and consequent profitable earning capacity, which are the strong points of modern American engines, united with the economical consumption of fuel, careful design, and excellent materials and workmanship, which render English locomotives so durable, trustworthy, and economical.

The

The following table shows the cost of the most recent examples of various types of our existing engines, the actual price as paid to the various English makers being compared with the cost on the proposed scale. All American type engines have been excluded, because the extensive use of cast in place of wrought iron increases the weight and diminishes the cost and renders impossible any comparison on a price-per-ton basis. It is believed that the following is a fair comparison :—

Maker.	Class of Engine.	Weight—E. & T. Engine.	Cost—proposed scale.	Actual price paid.	Date price quoted.
		Tons cwt.	£	£	
Dübs	Express passenger	50 0	3,270	2,877	January, 1885.
Beyer	Goods (Mogul)	52 0	3,383	2,867	Latter part 1884.
,,	,, ,,	52 0	3,383	2,860	August, 1889.
,,	Suburban tank (351)	31 17	2,230	2,240	1885.
Vulcan	Shunting tank (285)	28 2	1,967	2,290	Latter part 1883.
	Average		2,847	2,627	
Beyer	Shunting Mineral tank	Weight not accurately known.	.....	2,780	August, 1889.

The proposed scale of prices is thus about 8·3 per cent. above the prices paid hitherto.

The difference in cost must be considered against the great delay in obtaining engines from England. Ten passenger engines were indented for October, 1888, but only five of these engines had arrived up to March, 1890. Thus five engines had been obtained in seventeen months after order, whereas the proposal offers 100 engines within thirty months after order.

Another batch of twenty-five goods engines were indented for in June, 1889, but, though urgently wanted, little progress had been made up to the following February, the English makers being full of orders.

D. H. NEALE,
Mechanical Engineer.

No. 12.

Minute from The Under Secretary for Finance and Trade to The Secretary for Railways.

The Secretary for Railways, with copies enclosed of telegrams which have been passed upon the subject.

G.E., B.C., 28/3/90.

[*Enclosures.*]

Cablegram from The Hon. Wm. McMillan, Sydney, to The Agent-General for New South Wales, London.

28 March, 1890.

Locomotive works. Proposal accepted. Railway Commissioners anxious for plans of suggested engines, &c. Send first mail if possible. Also enter into interim agreement, leaving final and detailed agreement to be made here.

Cablegram from The Agent-General for New South Wales, London, to The Colonial Treasurer, New South Wales.

London, 11 April, 1890.

Locomotive Works. Interim agreement arranged. Plans of locomotives posted to-day.

No. 13.

Price per ton paid for Locomotives made in the Colonies.

	Victoria.	South Australia.	Queensland.	New South Wales. (Proposed Prices.)
Tender engines...	£72 3s. 7d.	£82 18s. to £90 7s. 5d.	£67 to £79 7s. 3d.	£65
Tank engines ...	£91 18s. 9d.	£115 5s. 7d.	None being built.	£70

H.McL., 15/4/90.

Appendix I.

Railways.—Correspondence respecting the Engagement of Mr. E. M. G. Eddy as Chairman of the Board of Railway Commissioners.

Telegram from The Colonial Secretary to The Agent-General.

Sydney, 31 March, 1887.

Bill before Parliament to place railways under independent Board of management. Wish to engage able and experienced man, thoroughly acquainted with best systems of railway management, as Chairman of Board. Make full inquiries, but no agreement to be made till letter on subject has been received in May. Salary, £2,500 ; term, seven years.

HENRY PARKES.

The Colonial Secretary to The Agent-General.

Sir, Colonial Secretary's Office, Sydney, 4 April, 1887.

Appended to this letter is a telegram which I sent to you on the 31st ultimo.

2. The Bill about to be submitted to Parliament creates a Board of Commissioners to manage the railways which are opened to public traffic ; and this Board will have nothing to do with the construction or maintenance of railways. The Chief Commissioner will be the responsible functionary in the work of management,

management, the other two members of the Board having no power of themselves to outvote him, even though they may dissent from his views. We therefore require for this important office not only a man of proved integrity but one of sound capacity for the business of railway management and of good experience. It would be an additional positive qualification if he were known for tact and success in dealing with workmen.

3. It occurs to me that Sir John Fowler may probably be able to suggest some gentleman of authority in connection with the great English railways who can afford you valuable advice in your inquiries. From this side you might take into consultation Mr. Alexander Campbell, as one who has a fresh knowledge of matters here, and in whose business sagacity much confidence may be placed.

4. I am sure I need not impress upon you the importance which I attach to a proper selection being made, as the success of the new system will largely depend upon the character and capacity of the officer at its head.

The salary which Parliament will be asked to approve of will be £2,500 per annum. I will write to you within a few days explaining fully the terms of engagement.

I have, &c.,
HENRY PARKES.

Telegram from The Colonial Secretary to The Acting Agent-General.

[Confidential.] Sydney, 4 May, 1888.

Railway Act just passed, by which a Board of Commissioners appointed to manage Government Railways. Term of office, seven years; only removable by Parliament (see letter 4th April, 1887). Chief Commissioner's salary, £2,500. Wish to engage thoroughly experienced man of energetic character from railway service in England. * * * * * Salary fixed by Act; prospect of increase if services satisfactory. * * * * Inform me before finally engaging. Urgent.

HENRY PARKES.

Note.—The omissions represented by asterisks referred to another gentleman with whom negotiations were opened and terminated without result.

Telegram from The Acting Agent-General to The Colonial Secretary.

London, 8 May, 1888.

Giving attention Railway Commissioner. Taking best advice before recommending.

DANIEL COOPER.

Telegram from The Acting Agent-General to The Colonial Secretary.

London, 31 May, 1888.

Most difficult to find Railway Commissioner; Allport has failed so far to name one; think I may secure Eddy, of Caledonia, at £3,000 per annum. Marindin and Allport say he is nearest your standard. Consult Speight of Victoria in confidence about Eddy, and direct me what to do.

DANIEL COOPER.

Note.—In consequence of the reference to Mr. Speight in preceding telegram, a letter was written to that gentleman, requesting him to state anything that he might know of Mr. Eddy's railway experience, and the following letter was received in reply:—

Mr. R. Speight to The Colonial Secretary.

Victorian Railways.

Dear Sir Henry, Melbourne, 4 June, 1888.

In reply to your note of the 1st, I have no personal knowledge of the gentleman you refer to, but if it is Mr. C. W. Eddy I know he held the position of District Superintendent on the London and North-western Railway when I left home, and I have some recollection of seeing in an English railway paper that he had since taken a superior appointment on the Caledonian Railway.

I have heard him spoken favourably of in his London and North-western position, and the fact of his transfer to the Caledonian Railway is evidence to the same effect.

Yours, &c.,
R. SPEIGHT.

Telegram from The Colonial Secretary to The Acting Agent-General.

Sydney, 5 June, 1888.

Is your Mr. Eddy the Mr. C. W. Eddy, formerly District Superintendent of London and North-Western?

HENRY PARKES.

Telegram from The Acting Agent-General to The Colonial Secretary.

London, 5 June, 1888.

Confidential. Seen E. M. G. Eddy to-day. He was twenty years with London and North-Western. Last eighteen months with Caledonian. Think he is the man you require. Under 45; open, clear countenance; six feet high; nice firm manner. Am sure he is fully qualified. Will not go for less than three thousand to commence with and promise of increase if services satisfactory. Could leave end of September. Strongly urge you appoint him.

DANIEL COOPER.

Telegram

Telegram from The Colonial Secretary to The Acting Agent-General.

Sydney, 6 June, 1888.

ENGAGE Eddy at £3,000. Question of increase must be left open in considering engagement.

HENRY PARKES.

Telegram from The Acting Agent-General to The Colonial Secretary.

London, 8 June, 1888.

EDDY has accepted Chief Commissionership at £3,000 per annum, with increase if services satisfactory to Colonial Government. Can leave September next; Colonial Government to provide free passage for himself, wife, and child. Send copy of Act appointing Commissioner. I will prepare agreement.

DANIEL COOPER.

Telegram from The Colonial Secretary to The Acting Agent-General.

Sydney, 9 June, 1888.

Re Eddy.—In agreement the Colony cannot be committed to further increase of salary—must be left to justice of Government and Parliament. Passage out will be provided. Copy of Act will be sent.

HENRY PARKES.

Telegram from The Acting Agent-General to The Colonial Secretary.

London, 14 June, 1888.

HAVE closed with Eddy; £3,000; increase salary left to justice of Government and Parliament. Sir Richard Moon, Chairman, and Findlay, General Manager, of London and North-western, assure me Eddy is very best man you could have selected in Great Britain.

DANIEL COOPER.

The Acting Agent-General to The Colonial Secretary.

Re Appointment of Chief Commissioner of Railways.

Sir, 5, Westminster Chambers, Westminster, S.W., 31 August, 1888.

51 Vic., c. 35.
A.-G. to Mr. Eddy, 6/6/88. 2014.
A.-G. to Col. Sec. Tele., 8/6/88.
Mr. Eddy to A.-G., 8/6/88. 2065.
A.-G. to Mr. Eddy, 11/6/88. 2065.
Mr. Eddy to A.-G., 14/6/88. 3068.
Mr. Eddy to A.-G., 14/6/88. 3094.
Agreement. Mr. Eddy to A.-G. 29th Aug., 1888.

With reference to the telegrams that have passed between yourself and this Department in regard to the appointment of Chief Commissioner of Railways under the Government Railways Act, 1888, I have the honor to forward herewith copies of correspondence between Mr. Edward Miller Gard Eddy and myself in relation to his appointment, authorised by your telegram to me of the 6th June last, as follows:—

"Engage Eddy at three thousand. Question of increase must be left open in considering engagement."

It was considered preferable that Mr. Eddy should enter into a formal agreement as Chief Commissioner. I therefore instructed Mr. Want, the solicitor, in London, to the Government, to draw up this document for execution by Mr. Eddy and by myself on behalf of the Government of New South Wales. The part executed by Mr. Eddy I forward herewith, together with his letter to me, having particular reference to the understanding as to the future increase of his salary.

You will doubtless remember, in regard to the increase of salary, that your telegram is distinct, that this point must be left open in considering the engagement. While Mr. Eddy consented to this, and also that in the agreement the Government should not be formally pledged to increase his salary, he, nevertheless, accepted the position of Chief Commissioner upon the distinct understanding that, should his services hereafter prove to be satisfactory to the Government, an increase in the salary should be made; and I desire to call your express attention to this, which is specifically referred to in the correspondence enclosed.

I append copy of a letter addressed to me by Mr. Findlay, the General Manager of "The London and North Western Railway," having reference to Mr. Eddy's fitness for the position of Chief Commissioner of Railways of New South Wales.

I have, &c.,

DANIEL COOPER.

P.S.—Mr. Eddy leaves to-day for Sydney in the S.S. "Austral."

[*Enclosures.*]

(2,914.) 5, Westminster Chambers, London, S.W., 6 June, 1888.

My dear Mr. Eddy,

In continuation of my note of last night, in which I informed you that I had telegraphed to the Government in Sydney, strongly recommending your appointment to the Railway Commissionership, at a salary of three thousand pounds (£3,000) per annum to commence with, I am pleased to say, that I have this afternoon received a reply from my Government in the following words:—

"Engage Eddy at three thousand; question of increase must be left open in considering engagement.—HENRY PARKES (Premier)."

I shall be glad to hear from you, at the earliest possible moment, whether you are prepared to accept this appointment, in order that I may again telegraph to Sydney for the information of my Government.

I need only say that, for the reasons I stated to you at our interview yesterday morning, how glad I should be if you can arrange to accept the offer of the New South Wales Government.

Yours very truly,

DANIEL COOPER.

E. M. G. Eddy, Esq., "Myross," Aytoun Road, Pollockshields, Glasgow, N.B.

(2985.)

(2985.) Constitutional Club, Northumberland Avenue,
My dear Sir Daniel, 8 June, 1888.

Referring to your letter of 6th June, and confirming our conversation of this afternoon, I beg to state that I accept the appointment of Chief Commissioner of Railways to the New South Wales Government at a *commencing* salary of £3,000 per annum, it being understood that if the result of my management of the railways is found satisfactory the salary will be increased.

I will arrange with the Caledonian Company to be free at the end of August.

The question of passage money, agreement, &c., I am sure I may leave in your hands.

I am, &c.,
Sir Daniel Cooper, Bart., &c. E. M. G. EDDY.

Telegram from The Agent-General for New South Wales to The Colonial Secretary, Sydney.

8 June, 1888.

EDDY has accepted Chief Commissionership at £3,000 per annum, with increase if services satisfactory to Colonial Government. Can leave in September next. Colonial Government to provide free passages for himself, wife, and child. Send copies of Act appointing Commissioners. I will prepare agreement.

(2985.) Chief Commissionership of Railways.

My dear Mr. Eddy, 5, Westminster Chambers, London, S.W., 11 June, 1888.

With reference to the offer I made you, on the afternoon of the 8th instant, on behalf of the New South Wales Government, of the appointment of "Chief Commissioner of Railways" of the Colony, and to your letter of that evening, confirming our conversation, in which you state that you accept the abovementioned post at a commencing salary of £3,000 per annum, "it being understood that if the result of my management of the railways is found to be satisfactory the salary will be increased", I would point out that it would be impossible for me, under existing circumstances, to insert a clause in your agreement to the foregoing effect; but if you are content to leave any future increase of salary to the justice of the Government and Parliament, I accept your letter at once.

The Colonial Government will provide free passages for yourself, wife, and child to Sydney.

Will you kindly reply to this at once.

Yours, &c.,
E. M. G. Eddy, Esq., &c., &c., &c., DANIEL COOPER.
Constitutional Club, Northumberland Avenue, W.C.

Telegram from E. M. G. Eddy, Esq., to Sir Daniel Cooper.

(3,063.) 14 June, 1888.

LETTER of eleventh only reached me this morning. I agree to proposal regarding the future.

EDDY,
Glasgow.

(3,094). Caledonian Railway, Glasgow, 14 June, 1888.

My dear Sir Daniel,

Confirming my telegram, your letter of the 11th instant only reached me this morning.

I agree "to leave my future increase of salary to the justice of the Government and Parliament," as you propose.

I am glad to learn that the Colonial Government will provide free passage for myself, wife, and daughter to Sydney.

Believe me, &c.,
Sir Daniel Cooper, Bart. E. M. G. EDDY.

E. M. G. Eddy, Esq., to The Agent-General.

Constitutional Club, Northumberland Avenue,
Dear Sir Daniel, 29 August, 1888.

In signing my agreement regarding my appointment to the position of Chief Commissioner of Railways in New South Wales, I have done so subject to the understanding come to between us regarding the future increment of salary, as shown in my letter of the 8th June, and your reply of the 11th of the same month, viz., that although what I originally stipulated for cannot be embodied in the agreement, £3,000 per annum is not to be considered the permanent salary. Any future increase, however, is to be left to the justice of Government and Parliament.

I have, &c.,
E. M. G. EDDY.

G. Findlay, Esq., to The Agent-General.

My dear Sir, House of Lords, 8 June, 1888.

I had intended to have done myself the pleasure of calling on you with Mr. Eddy this afternoon to congratulate you on the selection you have made, in him, as Chief Railway Commissioner for New South Wales. I have known him pretty nearly his whole railway service, which has been principally with the London and North-western Railway Company. I have the highest opinion of his practical knowledge and ability and of his integrity, and I honestly believe no better selection could be made. I write this as I am prevented from accompanying Mr. Eddy to-day; but at some other opportunity I hope to have the pleasure of telling you personally what I have now very shortly written.

Yours, &c.,
GEORGE FINDLAY,
General Manager, L. & N. W. Ry. Cy.

Agreement for the appointment of Mr. E. M. G. Eddy as Chief Commissioner for the Colony of New South Wales.

To all to whom these Presents shall come:

I, JOHN VENN, of the City of London, Notary Public, duly admitted and sworn (and by the Statute 5th and 6th William the 4th, chapter 62, especially empowered in this behalf), do hereby certify that, on the day of the date hereof, before me, personally came and appeared Randolph Charles Want, the declarant, named and described in the declaration hereunto annexed, and by solemn declaration which the said Randolph Charles Want then made before me, he did solemnly and sincerely declare to be true the several matters and things mentioned and contained in the said annexed declaration.

In testimony whereof I have hereunto set my hand and notarial seal, and have caused the agreement marked with the letter "A," mentioned and referred to in and by the said declaration, to be hereunto also annexed. Dated in London, the third day of September, one thousand eight hundred and eighty-eight.

JOHN VENN,
Notary Public.

("A.")

THIS AGREEMENT, made the twenty-ninth day of August, one thousand eight hundred and eighty-eight, between Sir Daniel Cooper, Knight Grand Cross of the Most Distinguished Order of St. Michael and St. George, Acting Agent-General (resident in London) of the Colony of New South Wales, of the one part, and Edward Miller Gard Eddy, of "Myross," Aytoun-road, Pollokshields, North Britain, Esquire, of the other part: Whereas by an Act of the Legislature of the said Colony of New South Wales, entitled "The Government Railways Act, 1888," assented to on the seventeenth day of May, one thousand eight hundred and eighty-eight, it was amongst other things provided that the Governor of the said Colony, by the said Act defined as the Governor, with the advice of the Executive Council of the said Colony, should appoint three persons to be Railway Commissioners for New South Wales, and subject to the provisions in the said Act contained should each hold office for the term of seven years, and that one of such Commissioners should be appointed by the Governor as Chief Commissioner: And whereas in the said Act are contained provisions declaring the rights, duties, obligations, authorities, powers, and responsibilities of the said Commissioners, and also other provisions for the suspension or removal of the said Commissioners, and for the power of reappointment at the expiration of the respective terms of office of the said Commissioners, as by reference to the said Act would more fully appear: And whereas by and with the advice of the Executive Council, the Governor for the time being of the said Colony has appointed the said Edward Miller Gard Eddy to be the Chief Commissioner of Railways under the said Act, and upon the making of the said appointment it was agreed between the parties hereto that the terms and conditions of such appointment which had then been agreed upon should be defined by these presents, and that the same should have effect as if signed by the said Governor of the said Colony upon the said appointment being made as aforesaid: Now these presents witness that it is mutually agreed as follows:—

1. The said Edward Miller Gard Eddy shall be the Chief Commissioner of Railways for the term of *seven years from the first day of September, one thousand eight hundred and eighty-eight*, or from such other day as may be appointed for the commencement of the said Act, not being earlier than the said first day of September, one thousand eight hundred and eighty-eight.
2. The said Edward Miller Gard Eddy shall proceed to Sydney by the Orient Steam Navigation Company's vessel "Austral" on her next outward voyage, or such other vessel of the same class as may be selected by the Agent-General for the time-being of the said Colony, should any matter occur to prevent the departure of the said "Austral" on her now intended voyage.
3. The said Edward Miller Gard Eddy will, upon his arrival in the said Colony, duly and efficiently enter upon and perform the duties of his office, and in all ways abide by, and confirm to, and be in all things subject to, the provisions of the said Act, which shall, for the purpose of this agreement, be deemed to have been incorporated herein.
4. The salary to be paid by the Government of the said Colony to the said Edward Miller Gard Eddy shall be Three thousand pounds per annum, payable at the times and in manner prevailing from time to time in the said Colony for the payment of Government official salaries.
5. The said salary shall commence from the first day of September next, and be payable to the said Edward Miller Gard Eddy during the said term, until the abolition of the said office of Commissioners, under the conditions in the said Act contained, or until any suspension, removal, or vacation of office as by the said Act is provided.
6. The said Government shall pay to the said Orient Steam Navigation Company the cost of first-class passage from London to Sydney for the said Edward Miller Gard Eddy, his wife, and daughter.
7. This agreement is made and signed by the said Sir Daniel Cooper, acting for and on behalf of the Governor of New South Wales, and nothing herein contained shall be construed to create any personal responsibility on the part of the said Sir Daniel Cooper.

As witness the hands of the parties,—

E. M. G. EDDY

Witness—
RANDOLPH C. WANT,
Solicitor, 5, Westminster Chambers, London, S.W.

I, RANDOLPH CHARLES WANT, of number 5, Westminster Chambers, in the city of Westminster, in England, Solicitor, do solemnly and sincerely declare as follows:—

1. I was present on the twenty-ninth day of August, one thousand eight hundred and eighty-eight, and did see Edward Miller Gard Eddy, one of the parties mentioned and described in the agreement hereto annexed, and marked with the letter "A," duly sign the said agreement.

2.

2. The signature "E. M. G. Eddy," set at the foot or end of the said agreement as the name of the person signing the same, is of the proper handwriting of the said Edward Miller Gard Eddy, and the signature "Randolph C. Want," also set at the end of the said agreement as the witness to the signature of the said Edward Miller Gard Eddy is of the proper handwriting of me this declarant.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declarations Act, 1835; and also by virtue of the provisions of an Act of the Governor and Legislative Council of New South Wales, made and passed in the 9th year of the reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of voluntary and extra-judicial Oaths and Affidavits."

RANDOLPH C. WANT.

Declared at my office, No. 8, St. Martin's Place, Trafalgar Square, in the city of Westminster, this third day of September, 1888, before me,—

JOHN VENN, Notary Public.

This is the agreement mentioned and referred to in the Declaration of Randolph Charles Want, made before me this third day of September, 1888,—

JOHN VENN, Notary Public.

The Agent-General to The Colonial Secretary.

Re appointment of Chief Commissioner for Railways.

Sir, 5, Westminster Chambers, Westminster, S.W., 7 September, 1888.

In continuation of my letter to you of last mail, dated 31st ultimo, S. 310-88, respecting the appointment of Mr. E. M. G. Eddy as Chief Commissioner for Railways, in which I forwarded to you one part of the agreement appointing that gentleman, I have now the honor to forward the remaining part, and to ask you to be so good as to give instructions that the part signed by me may be handed to Mr. Eddy upon his arrival in Sydney.

I have, &c.,

DANIEL COOPER.

The Colonial Secretary to The Chief Commissioner for Railways.

Sir, Colonial Secretary's Office, Sydney, 24 October, 1888.

I am directed by the Colonial Secretary to transmit herewith an agreement between Sir Daniel Cooper, as Acting Agent-General on behalf of the Government of this Colony, and yourself in connection with your appointment as Chief Commissioner for Railways.

I have, &c.,

CRITCHETT WALKER,
Principal Under Secretary.

The Colonial Secretary to E. M. G. Eddy, Esq.

Sir, New South Wales, Colonial Secretary's Office, Sydney, 10 July, 1888.

I forward for your information a map showing the railways of this Colony (marked black) non-completed and open to traffic; also the lines of extension projected (marked red). This may be of interest to you in considering the new field of your future labours.

I also forward a volume on the "Wealth and Progress" of the Colony, which will afford you the latest information.

It has been found necessary to amend the new Railway Act in two particulars:—(1) To postpone the date of its coming into force until after your probable arrival, and (2) to increase the salary of the Chairman of the Board of Commissioners to £3,000. The division on the second reading was—Ayes, 37; Noes, 3.

I have, &c.,

HENRY PARKES.

The Colonial Secretary to E. M. G. Eddy, Esq.

Sir, New South Wales, Colonial Secretary's Office, Sydney, 29 June, 1888.

I forward by this mail a copy of the last report on the Railways of this Colony, and also the last report on the Railways of Victoria, and I send with these a copy of the *Sydney Morning Herald*, containing an article on your appointment.

It is right that I should inform you that one newspaper here has in a very marked manner entered into the advocacy of Mr. Goodchap's claims for the Chief Commissionership, but I feel quite justified in assuring you that your appointment to this important office is viewed with general favour.

I have, &c.,

HENRY PARKES.

The Chief Commissioner for Railways to The Hon. Sir Henry Parkes, G.C.M.G.

Dear Sir Henry, Assistant General Manager's Office, Glasgow, August, 1888.

I beg to acknowledge the receipt of your communication, dated 29th June, covering a copy of the last Report on the Railways of New South Wales, and also a corresponding Report on the Railways of Victoria, together with a copy of the *Sydney Morning Herald*.

I also have to thank you for your remarks regarding the newspapers, and I am pleased to learn that my appointment is viewed with general favour.

I leave by the "Austral" on the 31st instant.

I have, &c.,

E. M. G. EDDY.

Appendix J.

[Private and confidential.]

Dear Mr. Eddy, 1, Whitehall, 15 May, 1888.

The Agent-General for New South Wales asked me a few days ago to advise him in the selection of a man for the new post of Chief Commissioner of Railways for that Colony. Salary £2,500, to be raised if services are satisfactory; term of office, seven years, only removable by Parliament—*i.e.*, not by Ministry.

I took the liberty of mentioning your name (together with two others) as men whose services the Colony would be fortunate to obtain if willing to go.

The Agent-General now asks me to write to you on the subject, and to inquire whether you would take the post if offered to you, subject, of course, to the arrangements being satisfactory. If your answer be in the affirmative I fall out of the negotiations, and you will doubtless hear direct from the Agent-General, who, I may say, does not wish to advertise the appointment if he can get a good man without doing so.

Please understand that this letter is to be considered entirely private.

Yours, &c.,

I may say that your name was the first on my list. F. A. MARINDIN.

Dear Major Marindin, Glasgow, 16 May, 1888.

I am obliged for your letter of yesterday's date. Looking at my position in the railway service in this country, I do not think it would be a wise step on my part to go abroad for a salary of £2,500 per annum, could this salary be increased if I agreed to consider the question? Another point in connection with the appointment would be the question of competition; I could not agree to enter into competition for it in any way, and I think you will readily see why it is necessary to make this stipulation when you consider my position here.

Of course, our respective letters will be looked upon as strictly private and confidential.

Faithfully yours,

Major F. A. Marindin, C.M.G., R.E. E. M. G. EDDY.

Dear Mr. Eddy, 22, Sussex Villas, Kensington W., 19 May, 1888.

I did not in the least expect that the New South Wales appointment would tempt you, but I was so sure that you were the best man for the place that I thought it as well to give the Colony the off chance of getting you.

The Agent-General cannot, at present at any rate, go beyond the £2,500, but he is I think quite disposed to ask for authority to offer more if he finds that he cannot get a really good man for the less sum.

I have no doubt that should he obtain authority for a higher salary he would wish to reopen negotiations with you.

There was no question of competition in your case.

I may say that I quite agree with your view, that with your prospects "it is not good enough."

Yours, &c.,

F. A. MARINDIN.

P.S.—The Agent-General will not mention a word to anyone about our correspondence.

Copy of Reply.

Dear Major Marindin, 21 May, 1888.

Yours of the 19th to hand and I pass the subject from my mind. Many thanks to you for the kind feeling shown towards

Yours, &c.,

E. M. G. EDDY.

The above is a written copy of my reply to Major Marindin made at the time of writing the letter. It is a true copy.—E. M. G. EDDY. 13/5/92.

[Private.]

Dear Mr. Eddy, 31 May, 1888.

My excuse for writing to you again in reference to the New South Wales Commissionership will be found in the following extract from a letter I received this morning from Sir Daniel Cooper, Bart., Acting Agent-General for that Colony.

"I will ask you kindly to communicate again with Mr. Eddy to see if he will take the post if offered. If I know his terms I can telegraph to Sydney and ascertain whether they are acceptable. There will be no other name mentioned in competition with Mr. Eddy, and when I recommend him it will be for the Government to take or refuse him before I treat with anyone else. If he is accepted no one can complain. I should, of course, like to see Mr. Eddy if he can come south, and I will let him know when and where he can meet me."

The meaning of all this evidently is that Sir Daniel Cooper is anxious to secure you if he can get you, and is prepared to ask the New South Wales Government to accept you on your own terms—if not too high, of course—and to improve upon the offer they have made originally.

I cannot see any objection to your saying what would tempt you, or replying that you are not inclined to go at all.

I have told Sir Daniel Cooper that I have written to you. Of course, any letter I may write will be kept strictly private.

Yours, &c.,

F. A. MARINDIN.

[Private.]

[Private.]

Dear Major Marindin, Glasgow, 1 June, 1888.

I am obliged for your letter of yesterday's date. In accepting an appointment abroad I shall have to overcome two or three very strong oppositions, on whatever terms I go, and undoubtedly I should be acting foolishly to go unless the salary is a good one. Money, generally speaking, is not, I believe, so valuable in Sydney as here, so that too has to be considered. The position, however, has attractions for me, as I take so much delight in my work, and I can see how, in a country which will owe much to the judicious management and extension of its railways, I could be of great service to the Colony, and also obtain credit for myself.

Without pledging myself absolutely to accept the position, I will go so far as to say I should feel strongly inclined to do so if the salary is increased to £3,500 per annum, with seven years' engagement, any future advance being left open, results being the element to influence the Government regarding it, or £3,000 per annum to begin with, with an agreement for an advance of £1,000 at the end of two years.

* * * * * * * * *

I go to London on Monday for a General Manager's Meeting at the Charing House, Tuesday. Could you dine with me at the Constitutional Club, Northumberland Avenue, 7·30 p.m., Monday. Please wire me.

I am keeping this quite private still.

Yours, &c.,
E. M. G. EDDY.

Appendix K.

The Declaration.

I, ALEXANDER ARCHIBALD TENNANT, of 60, Bay-street, Glebe, Sydney, in the Colony of New South Wales, accountant, do hereby solemnly and sincerely declare, that the manuscript herewith numbered from 1 to 9 inclusive dictated by me, and the statements contained therein are true and correct to the best of my knowledge and belief. And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of her present Majesty, intituled "An Act for the more effectual abolition of oaths and affirmations taken and made in the various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of voluntary and extra judical oaths and affidavits."

ALEX. A. TENNENT.

Subscribed and declared at Sydney, this 4th day of February, 1892, before me,—F. C. Fox, J.P.

Statement made by Alexander Archibald Tennent, Accountant, of 60, Bay-street, Glebe, Sydney, New South Wales:—

1. I was accountant in the employment of David Proudfoot & Co., railway contractors.

2. It was my duty to keep all accounts relating to all contracts and works carried out by the firm for the Railway Department of New South Wales. It was also my duty to pay the men on the various contracts and works. I am perfectly conversant with the practice that prevailed in the mode of payment between the Government and the contractors, and between the contractors and the men employed by them.

Messrs. David Proudfoot & Co., received a contract from the Railway Commissioners for carrying out certain deviations on the Mudgee line of railway. This contract was let privately, no tenders having been advertised or publicly called for—certain railway contractors were privately notified to send in tenders to the department. I am not aware that any firm tendered for this contract except Proudfoot & Co.; but that firm carried out the work. There was a schedule of prices to the tender by which it is usual and customary in all contracts to pay for the work done. In the works done there were many items for which the schedule did not provide. Work of this kind was paid for to the contractors in the form of day labour. The contractors paid the men 6s. and 6s. 6d., and good men 7s. according to their quality, and were paid by the Railway Department for every man so set to work 9s. a day. Gangers were paid by Proudfoot & Co., 9s. and 10s. per day, and were paid in return by the Railway Department 12s. per day. The work was usually measured by the officers of the Department once a month. This measurement was very rough. No attempt was made to determine the quantity of rock removed which was merely guessed, although there was a very large difference in the price for removing rock and softer material. All the time the work was in progress no proper measurement took place. The Government engineer, Mr. Sutter, and the contractors' engineer, Mr. Burt, merely guessed the quantities as they walked along the line, and agreed between themselves as to the quantity to be charged and paid for. Soft material was paid for at 1s. and 9d. per cubic yard, while rock was paid for at the rate of 3s. per cubic yard. For allowing the storekeeper, Loneragan, to erect his store on the works, Proudfoot & Co. received from him the sum of £50, the firm made a charge of 6d. per week to each man for medical attendance, which sum deducted even when the man or men only worked one day in the week. The firm appropriated the whole and paid the doctor a portion, not in any case more that 3d. per man, oftentimes less. The first two payments made by the Government to the contractors on the Mudgee deviations were for day-labour only. The pay-sheets were made out by the Government, allowing 9s. per day per man, and 11s. and 12s. per day for gangers. These men were paid by the contractors 6s. and 6s. 6d., and the gangers 9s. and 10s. per day. There was no measurement of any kind till after the second pay. The amount of these two payments were converted into cubic yards to correspond with the schedule of prices at a date, much after the payments were made. An excuse was given for making out fresh sheets, by Mr. Watson stating that we had lost the original sheets, though at the time I had in my possession duplicates which had been signed by the men at the time of payment.

The contractors in addition to being payed for the work done, were granted permission to use the railways free for carrying working men, horses, plant, and material. This if charged for, as in other contracts, would have made a very large item. As many as 1,200 men have been despatched from Sydney in two months from the beginning of the contract, in this way, many of them were quite unfit for the work, and never made any attempt to start, other made the trip a holiday at the expense of the Government. It was not necessary to send horses and drays to the Mudgee line from Sydney, as plenty could have been procured in the district where the work lay.

The contractors took over a large quantity of plant, barrows, picks, planks, bars, shovels, and general contractors plant, the prices being fixed by the Government engineer. They were second hand, and were not paid for seven months afterwards. This item was over £1,200. The contractors also borrowed a large quantity of plant from the Commissioners, for which they paid nothing. The two rock-

breakers

breakers included trollies, tricycles, trucks, &c. The contractors had also the use of the telegraph and telephone free of charge. The specification did not provide for any of these privileges or concessions. The contractors were also paid for putting in sidings which were exclusively for their own convenience in getting ballast, &c., and were also paid for opening up quarries (day-work), and were then paid for the ballast at the schedule rate—the payment for opening up and laying down sidings were concessions that had no right to be paid for.

Reballasting and relaying the Western and Northern Lines:—Public tenders were called for this work, about twenty firms tendering. Proudfoot & Co. were not the lowest, nor was McSweeney on the other lengths; their tenders were accepted after being amended at a conference with the Commissioners. Other tenders were not allowed this privelege. The works included in this contract were carried on principally by day, work which was transferred into so many lineal feet and yards to enable it to be in conformity with the schedule of prices. Persons not knowing this fact would not be able to detect the same from the existing vouchers, which of course represent that so many cubic yards of material have been shifted, and so many lineal feet of road lifted and relaid. Payments by day-wage become necessary in this case in consequence of the Commissioners not being in a position to carry out their portion of the contract, which provided that the Department should supply to the contractors all material to be used, such as sleepers, rails, chairs, bolts, and fishplates, points and crossings and interlocking gear. No ballast had at the date of starting works been provided for, although several contracts had been let where this became a first essential. In consequence, many miles of line that had been lifted and relaid were unballasted, to the danger of the travelling public and had to be done over again, the rails being bent in consequence, the contractor was obliged to fork the old ballast, for which he received extra payment. About four months after the date of the contract a new arrangement or agreement was made with the Commissioners, and the old contract in part abandoned. The new agreement provided that the contractors were to supply four million tons of ballast in place at per yard. To comply with this the contractors procured from America eight stone breakers, which were at the termination of the contract—five years—to be taken over by the Commissioners. These crushers were taken to the various quarries free of charge, the quarries having been previously opened by the contractors at the expense of the Commissioners, the work having been paid for by day-labour. This work included opening up quarries and opening sidings thereto. The contractors, under the new agreement, were to ballast 10 miles of line per week, but this was not carried out, as the Commissioners were again unable to supply trucks to carry the ballast or to supply the other material necessary for the work. Large gangs of men—sixty to eighty in a gang—were only employed half-time, as by the contractors under their contract at schedule rates, as when material supplied by Commissioners was worked up, these men were put on at day-wages to fill up time. The payments to contractors, about four months after the new agreement, amounted to from £10,000 to £13,000 per month for each section, north and western lines, while the wage paid by the contractors for these same periods amounted to from £4,000 to £7,000 per month. The difference between the items given shows the actual profits by the contractors for the periods mentioned—namely, one month. But from this must be deducted the cost of plant that might have been procured during the month and the cost of staff at the Head Office. Shovels were supplied to men at 5s. each; these cost the contractors 2s. 6d. Picks were supplied free by the contractors.

There was an estimate made of the net profits on this work for twelve months by the contractors' engineer and accountant, which showed £66,000. This was made out from the results of several months' previous work. As an instance of the enormous profits on these works, at Wallace Creek, Maitland, work of excavation supposed to be about 80,000 cubic yards, were sublet at 9d. per cubic yard, while the contractors received 1s. 9d. per cubic yard. On this contract the contractor was paid for all delays occasioned by late trains, &c., the time being calculated at day-wages, which was again transferred into cubic yards, &c., though no work was done. This kind of transaction represents large sums of money—many thousands of pounds.

At the Encampment, Easter time, 1891, sleepers were laid along the Western line, between Dubbo and Blackheath. These were adzed, ready for laying; they were also bored. All these sleepers, without the slightest warning to the contractor, were retrucked and taken to the southern line duplication—Angus and Monie's contract—to enable that line to be completed or made safe for opening to Campbelltown, to serve for the Easter encampment. In consequence of this hasty removal of sleepers, and without warning, Proudfoot & Co.'s men were knocked off, and a claim was made by the Crown of £3,000 or £4,000 against the Commissioners. The gangs so knocked off were subsequently, after a great row had taken place, put repacking and relifting load at day-work, as usual. This was done to keep the men together and to stop the outcry. One big gang was despatched to Bourke by order of Mr. Watson, engineer, to lift and relay the line there, but they had to return without having done any work, there being no material on the ground. The men had all free passes to Bourke and back. The contractors made a large claim for compensation for this matter. For fencing the line where required the contractors had a schedule price. The Commissioners had to supply fencing material, which was dumped down in heaps anywhere along the line, in many instances away from where it was to be used. The contractors were paid for shifting the fencing material to its proper position.

The work on the Dyke at Newcastle of relaying and new sidings was carried out by Proudfoot & Co., this work being most expensive, as the plans were altered from time to time. When work had been completed, or nearly so, orders were received and a new plan substituted, which altered all the features of the work, and which necessitated redoing the work. This occurred more than once, so that the last plan adopted bore no similarity to the original plan which was also carried out. This work was a complete muddle, and cost three times more than if one plan had been adhered to. I do not know why there was necessity to change the plans. More than 600 men were employed on the dyke at once; the foreman received £6 per week. This was all done by day-wages. The foreman's wages were made up by extra gangers being put down in the pay-sheets. All pay-sheets were on this work also turned into cubic yards, excavation and other items, so that it could be made out to appear that payments to contractor were made at the schedule rates. Should the works executed by the firm of Proudfoot & Co. and to above be measured on the recognised principle of cross-sections the amount of work represented in the vouchers would not be found to have been carried out, the difference representing many thousands.

ALEXANDER ARCH. TENNANT.

Signed at Sydney, this 1st day of February, 1892, before me,—
F. G. Fox, J.P.

Appendix L.

List of principal Works carried out by Messrs. Proudfoot & Co. for the Railway Commissioners.

Contract.	Supervising Engineer.	Contracts.	Supervising Engineer.
Relaying and reballasting, Northern Division.	E. M. Halligan.	Mudgee line deviations	A. F. Watson; J. B. Sutton, assistant.
Western Division	A. F. Watson; J. B. Sutton, assistant.	Improving grades on the Western Line, near Minore.	A. F. Watson; J. B. Sutton, assistant.
Central Division, part of	C. E. Nicholas.	Improving grades on the Western Line, near Mumbil.	A. F. Watson; J. B. Sutton, assistant.
Raising bank, East to West Maitland.	E. M. Halligan; J. B. Sutton, Assistant.	Improvement of grades on the Northern Line, near Singleton.	E. M. Halligan; J. B. Sutton, Assistant.
Deviation of Western Railway at Lapstone Hill.	D. W. Witherby.		

List of principal Works carried out by Messrs. Angus & Co. for the Railway Commissioners.

Duplication of line—Granville to Picton; Hurstville to Waterfall; Teralba to Adamstown; Strathfield to Ryde.	G. F. Mann; A. Randall; J. Fraser.	Repairing slips, Mudgee Line	J. B. Sutton.
		Excavation, filling, laying roads, &c., for carriage-shed, Eveleigh.	G. F. Mann.
		Excavation, filling, laying roads, &c., Homebush carriage-shed.	G. F. Mann.
Duplication of line, Ryde to Hornsby.	G. F. Mann.	Laying in roads, carriage and engine sheds, Hurstville.	D. C. Simpson.
Deviation of line at Bell	A. F. Watson; J. B. Sutton.	Culvert under railway near Flemington.	D. C. Simpson; G. F. Mann.
Alteration to curves, Western Line	J. B. Sutton.	Construction of tramway, Bowral Quarry.	D. C. Simpson.
Lifting and reballisting Northern Line, between Ryde and Hornsby.	D. C. Simpson.	Platform and waiting-shed, Tuggerah Lakes.	E. M. Halligan.
Repairs to line damaged by floods at Bourke.	A. F. Watson; J. B. Sutton, assistant.		

List of principal Works carried out by Mr. J. McSweeney for the Railway Commissioners.

Relaying and reballasting, Southern Division.	D. C. Simpson; J. Fraser.	Widening farm produce market, Darling Harbour.	R. Kendall.
Central Division, part of	C. E. Nicholas; J. B. Sutton, assistant.	Widening the suburban railway, between Redfern and Illawarra Junction.	G. F. Mann.
Extension of farm produce market, and drainage of same, Darling Harbour.	R. Kendall.	Subway and additional platform, Parramatta.	C. E. Nicholas.
Taking down farm produce depôt, Darling Harbour.	R. Kendall.	Deviation of the Western Railway between Blaxland and Karabar.	D. W. Witherby.
		Hay-shed, Redfern	W. Shellshear.

List of principal Works carried out by Messrs. Gilliver and Tate for the Railway Commissioners.

Duplication of line, Long Cove Creek to Croydon.	W. Shellshear; G. F. Mann.	Duplication of line, Strathfield to Flemington.	G. F. Mann.

Appendix M.

NEW SOUTH WALES RAILWAYS—PERMANENT-WAY DEPARTMENT.

STATEMENT of Relaying and Reballasting and widening Contracts to 30th April, 1892.

1892.	Total value of work done. £ s. d.	Schedule work. £ s. d.	Day-labour. £ s. d.
Mr. McSweeney:—			
Relaying and reballasting	15,202 8 4	14,978 18 3	283 10 1
Widening Redfern to Macdonaldtown	3,333 6 8	3,333 6 8	.....
Messrs. Angus & Co.:—			
Widening Liverpool to Campbelltown	11,711 6 3	11,711 6 3	.....
Campbelltown to Picton	39,837 2 0	39,811 18 0	25 4 0
Ryde to Hornsby	9,592 15 1	9,476 2 2	116 12 11
Mr. M'Master:—Widening Macdonaldtown to Long Cove Creek	14,407 11 2	14,407 11 2	.....
Gilliver and Tate:—			
Widening Long Cove Creek to Croydon	11,758 9 5	11,512 0 0	246 9 5
Strathfield to Flemington	1,680 6 0	1,658 8 4	21 17 8
Mr. Abern:—			
Widening Croydon to Strathfield	21,497 14 10	20,870 3 4	627 11 0
Sorting sidings, Clyde	2,399 15 5	2,399 15 5	.....
Mr. Proudfoot:—Relaying and reballasting	7,053 7 11	6,984 15 10	68 12 1
Total for 1892	138,534 3 1	137,144 5 5	1,389 17 8
Grand Total £	1,220,186 19 11	1,129,962 1 0	*90,224 18 11

R. BOURKE,
Permanent-way Accountant, 10/6/92.

* A large portion of the day-labour was in connection with the reballasting and widening of the suburban line, which could not, owing to the continuous traffic interruptions, be done at measurement prices. The total cost of day-work on the suburban line was £28,946 1s. 7d.

New

NEW SOUTH WALES GOVERNMENT RAILWAYS—PERMANENT-WAY DEPARTMENT.

STATEMENT of Relaying and Reballasting and Widening Contracts to 30th April, 1892.

	Total value of work done.	Schedule work.	Day-labour.
1891.	£ s. d.	£ s. d.	£ s. d.
Mr. McSweeney :—			
Relaying and reballasting	153,205 3 3	118,032 16 8	35,172 6 7
Widening Redfern to Macdonaldtown	22,167 19 8	29,167 19 8	.....
Messrs. Angus & Co. :—			
Widening Teralba to Adamstown	20,410 0 1	19,910 15 7	499 4 6
Strathfield to Ryde	9,584 14 9	9,288 9 10	296 4 11
Granville to Liverpool	43,920 3 0	42,968 17 8	951 5 4
Liverpool to Campbelltown	85,933 12 8	85,052 18 3	880 13 5
Campbelltown to Picton	65,054 0 10	63,801 2 5	1,252 18 5
Hurstville to George's River	778 7 6	740 19 0	37 8 6
George's River to Sutherland	7,987 7 1	7,649 18 2	337 8 11
Sutherland to Waterfall	8,324 16 10	7,967 4 5	357 12 5
Ryde to Hornsby	38,300 4 1	38,187 15 11	112 8 2
Reballasting Ryde to 25 miles	2,868 8 5	257 1 3	2,611 7 2
Mr. Proudfoot, relaying and reballasting	158,581 3 6	140,715 17 10	17,965 5 8
Mr. Ewart, widening Mittagong to Bowral tunnel	11,839 9 3	11,839 9 3	.....
Mr. McMaster, widening Macdonaldtown to Long Cove Creek	61,006 8 5	60,889 14 6	116 13 11
Gilliver and Tate, widening :—			
Long Cove Creek to Croydon	46,426 2 1	46,079 7 11	346 14 2
Strathfield to Flemington	19,796 10 10	19,381 13 11	414 17 11
Mr. Ahearn, widening :—			
Croydon to Strathfield	41,534 10 10	41,167 0 4	367 10 6
Sorting Siding, Clyde	28,955 0 0	28,879 13 4	105 6 8
Total for 1891	833,704 3 1	771,987 15 11	61,716 7 2

A large portion of the day-labour was in connection with the reballasting, widening, &c., of the suburban line, which could not, owing to the continuous traffic interruptions, be done at measurement prices.

NEW SOUTH WALES GOVERNMENT RAILWAYS—PERMANENT-WAY DEPARTMENT.

STATEMENT of Relaying and Reballasting and Widening Contracts, to 30th April, 1892.

	Total value of work done.	Schedule work.	Day-labour.
1890.	£ s. d.	£ s. d.	£ s. d.
Mr. McSweeney:—			
Relaying and reballasting	12,255 12 0	2,801 14 9	9,455 17 3
Widening Redfern to Macdonaldtown	29,600 13 0	29,600 13 0	.....
Messrs. Angus & Co. :—			
Widening Teralba to Adamstown	28,292 17 1	27,613 3 7	679 13 6
" Strathfield to Ryde	11,503 3 10	11,148 12 10	354 11 0
" Granville to Liverpool	39,049 19 7	38,204 4 4	845 15 3
" Liverpool to Campbelltown	13,117 4 10	12,998 18 8	118 6 2
" Campbelltown to Picton	27,272 7 5	26,940 3 2	332 4 3
" Hurstville to George's River	9,411 15 0	8,959 3 0	452 12 0
" George's River to Sutherland	13,768 0 0	13,180 16 9	582 3 3
" Sutherland to Waterfall	25,683 7 8	24,582 16 5	1,100 11 3
Reballasting Ryde to 25 miles	8,244 16 0	.....	8,244 16 0
Mr. Proudfoot, relaying and reballasting	17,618 8 1	12,816 2 2	4,802 5 11
Mr. McMaster, widening Macdonaldtown to Long Cove Creek	2,678 13 9	2,674 11 6	4 2 3
Gilliver and Tate, widening Strathfield to Flemington	6,717 3 10	6,580 13 10	136 10 0
John Ahearn, sorting sidings, Clyde	2,787 11 8	2,778 5 8	9 6 0
Total for 1890	247,848 13 9	220,829 19 8	27,118 14 1

A large portion of the day-labour was in connection with the reballasting, &c., of the suburban line, which could not, owing to the continuous traffic interruptions, be done at measurement prices.

Appendix N.

Report of Mr. C. B. Simpson, Memb. Inst. C.E.

To His Honor Mr. Justice Owen, President of the Royal Commission to inquire into certain matters concerning the Railways.

Sir,

Having been deputed by you to investigate the measurements and payments made by the officers of the Railway Department in connection with certain works, respecting which it has been alleged that improper returns have caused loss to the country, I have now the honor to submit the following report:—

The works respecting which I have, by your direction, made searching inquiry are: The Mudgee Railway Deviation, the Maitland Embankment, and the Bullock Island Sidings.

I have inspected these works, and have made such measurements as are necessary to verify or correct the plans and cross-sections from which the measurements have generally been taken, and have examined the plans, certificates, reports, vouchers for day-labour, and other documents which relate to the works in question; and submit for your information the following detailed analyses of the certificates on which the contractors have been paid.

Mudgee

Mudgee Line Deviations.

Statement A, appended to this Report, is a copy of the final certificate for these works, except that the order of the items has been altered so as to group in two classes the work that has been paid for by contract schedule rate, and those that have been paid for by day-labour rates. As regards the first group of items which have been paid for by contract schedule rate, the books and papers show that careful measurements were taken, by which the contractors have been paid, and that in no case has the cost of day-labour been converted for the purposes of payment into equivalent measurement, but the final certificate correctly and clearly shows all work for which the contractors have been paid on the basis of day-labour.

As regards the second group, for which day-labour payments have been made, they comprise items of work for which no schedule rate has been arranged, or for which the payments by schedule rate would have been so complicated by outside circumstances that claims for extra work would probably have resulted, and the Railway Commissioners or their superintending officers have, in my opinion, exercised a wise discretion in meeting this difficulty at once by paying for day-labour, to which, of course, an allowance for contractors' profit has been added. Apart from this necessity, analysis of these day-labour payments shows that, generally speaking, they were also an economical basis of payment for the works executed.

I will now add for your information an analysis of the details of the final certificate, the items of which are transposed as before stated. [*See Statement A.*]

Items 1 *and* 2.—Refer to excavations from cuttings, &c., divided into the proportionate payments for rock or mixed material and earth. As regards the total quantities of these two items they could only be properly measured from cross-sections, taken before the work was executed, as the side lying and irregular nature of the ground line between the batters, which has been destroyed by excavations, render accurate measurements on the ground impossible. I have, however, verified on the ground the work shown on the cross-sections, and have carefully taken out the quantities from the sectional areas shown on them, and find that the number of cubic yards of excavations returned in the final certificate, and for which the contractor has been paid, is practically correct, the only differences between the measurements made by the officers of the Railway Department and by me, being such small ones as must always occur between two independent measurements. I have also examined the calculations of this excavation from cuttings, &c., made by Mr. Sutton, the Superintending Officer of the Railway Department, and compared the results with the returns made in the certificate, and I find that careful measurements were made for all returns; although probably only such notes were made on the ground as were necessary to determine what measurements should afterwards be taken from the cross-sections.

As regards the large proportion of rock excavation allowed in these cuttings, this was liberally assessed by Mr. Foxlee, then deputy engineer, at 64 per cent., and was so returned in the resident engineer's certificate. This assessment was, in my opinion, liberal, but, under the circumstances, judicious. The documents show that the contractor claimed that all excavations from cuttings should be paid for at rock price, viz., 3s. on the ground, that in his letter of October 8th, 1890, he stipulated that he should be paid this price for "mixed material," and also that he had, at greater expense to himself, carried out this urgent work very expeditiously. Mr. Angus, then Engineer-in-Chief for Existing Lines, ultimately divided the difference, and allowed the contractor about 81 per cent. at rock price.

I do not consider that the contractor could have legally upheld his contention, as in his letter he defined the meaning of "mixed material" to be rock and conglomerate. The payment of 3s. per cubic yard for "mixed material," this being the price for rock in the ordinary relaying schedule, was no doubt a concession to the contractor, and the allowance of 81 per cent., was, in my opinion, a further concession, but considering that the slips on this line were blocking the traffic, and causing danger to the travelling public, and that it was vitally essential that the work of deviation should be expeditiously carried out, and also that the contractor for relaying, having his plant on the ground, was the most suitable person to carry out this work, I am of opinion that the Railway Commissioners exercised the wisest judgment in granting such concessions as would induce this contractor to undertake and expedite it. And also that considering the definition of mixed material was vague, and that the contractor had very expeditiously carried out this work, the further concession in the proportion of "mixed materials" was a prudent settlement of this question.

Item 3.—Bottom ballast, at 5s. 2d. per cubic yard, is paid for at the various schedule rates, viz., 3s. per cubic yard for rock excavation, 1s. 8d. per cubic yard for breaking, and 1s. 6d. per cubic yard for spreading and levelling; and the quantity was determined by truck measurement, as provided for in the relaying specification.

Item 4.—Bottom ballast for raising formation, 4s. 8d. per cubic yard, includes schedule rate for rock excavation, 3s. per cubic yard, and breaking to required size, 1s. 8d. per cubic yard. Quantity determined by truck measurement.

Item 5.—Top ballast at 5s. 9d. per cubic yard. A special rate of 5s. 3d. per cubic yard was arranged by the Railway Commissioners, but on representation of extra expense being made by the contractors, an increased price of 5s. 9d. per cubic yard was allowed. Quantity determined by truck measurement.

Item 6.—Spreading, levelling, and packing top ballast paid for at schedule rate.

Item 7.—Laying points and crossings.
Item 8.—Fixing point-box.
Item 9.—Plate-laying and adzing sleepers.
Item 10.—Drilling holes in rails.
Item 11.—Cutting rails.
Item 12.—Lifting and packing road.

} Paid for at schedule rate from actual measurement.

Items 13 to 18.—Extension of culverts and box-drains.—There are no schedule rates which apply to this work, but there are contract rates for day-labour of masons, carpenters, &c., and considering the necessary removal of old wing walls, &c., which would have complicated any payment by special rate, and that these works have been economically carried out at a total cost of about £500, the desirability of this mode of payment is clearly proved.

Items 19 to 20.—Loading sleepers.—Paid for by day-labour, because their scattered positions and the extra labour of selection of the 8-foot sleepers required, rendered any schedule rate inapplicable.

Items 21 and 22.—Rail-pressing.—The rails used had been previously lent to contractors, and required straightening, for which there was no schedule rate, and day-labour was properly paid.

Items 23 and 24, slewing, pulling road, and raising formation.—This general item, paid for by day labour, comprises the following works, many of which are not indicated by the description in the certificate, but are clearly shown by the day-labour time sheets:—

(*a*) Connecting, slewing, and pulling old road	£297	0	9
(*b*) Stacking and trollying material	161	14	9
(*c*) Lifting and packing new deviations	374	6	6
(*d*) Miscellaneous repairs	144	0	9
(*e*) Loading and unloading rails	9	0	0
(*f*) Fettling road after opening	407	19	3
(*g*) Collecting and forking ballast	76	10	9
Total	£1,470	12	9

(*a*) Slewing, pulling, and connecting old roads.—This item refers to pulling over into the new position, and connecting to the new roads, those portions of the deviated line which could be so shifted without actual relaying. The total length of line so treated was about 2,000 lineal yards, at a price of nearly 3s. per lineal yard. The schedule rates did not apply to this work, and had the road been taken out and relaid, the cost incurred at the various schedule rates, for taking up old road, relaying, lifting, and packing, would have amounted to 3s. 5d. per lineal yard.

(*b*) Stacking and trollying material.—The Resident Engineer states that this work was paid by day-labor, to avoid the necessity of a departmental ballast train, and, considering the long detour caused by the grip in many places separating the original and deviated lines, this explanation appears reasonable.

(*c*) Lifting and packing new deviations.—This item appears to include a second lift, in maintaining a running top over the whole length of new line, and also sundry works in raising the levels to improve grades and waterways, and could hardly have been paid for by schedule rates.

(*d*) Miscellaneous repairs.—Not provided for by schedule rates.

(*e*) Loading and unloading rails.—The schedule rate applies only to new material at the side of the line, whereas it is stated that this work includes unfastening and conveyance from the old line.

(*f*) Fettling road after opening.—Paid by day-labour, as there is no schedule rate.

(*g*) Collecting and forking ballast.—Paid by day-labour, as there is no schedule rate.

Items 25, 26, and 27, loading ballast at Rylstone.—The Resident Engineer states that this ballast had to be barrowed to the line, there being no siding to the depot. Under these circumstances the schedule rate for loading and unloading ballast would not apply, and day-labour has been properly paid for.

It will be seen by reference to Statement A that the total amount paid for the works in connection with these deviations is £22,691 1s. 5d., of which £20,338 16s. 4d. has been paid for by schedule rates and £2,352 5s. 1d.—about 10 per cent. of the total cost—by day-work, and considering the necessity before stated, that the contractor for the ordinary relaying should carry out the work, and the difficulty of providing by schedule rate for all the requirements of so different a work, I think that proportion of day-work is moderate. I have inquired very carefully into all the items of the certificate and details of the measurements, and am able to certify the measurements generally have been carefully taken, and correctly represent the work done, that no day-work has been converted into measurement for payment, and that all such day-work is clearly specified in the certificates; and also that every proper check appears to have been kept to ensure the accuracy of the time-sheets. The rates of wages charged are also those specified in the schedule, and only fairly represent the ordinary rates paid to the men, with the usual contractor's profit added.

Raising Embankment, East to West Maitland.

Statement B, appended to this report, is an abstract from the certificate of May 31st, 1892, containing all the items relating to this work, but rearranged and divided into two groups, severally comprising the items certified for by schedule rate, and those for which day-labour has been allowed. Here also I have made such measurements as enable me to report to you with confidence respecting the accuracy of the departmental returns, and I give hereunder an analysis of the departmental certificate as rearranged by me.

Items 1 and 2, excavation of rock and earth taken to this embankment.—The sources from which the material of this embankment was derived were so various and difficult of measurement that the superintending officer has very properly measured the bank, and not the cuttings from which it was made, making such allowance for ultimate shrinkage as is necessary for fair measurement. I have checked these measurements both by independent measurement on the ground and by remeasurement of the cross-sections, and find them to be correct. The subdivision into rock (item 1), and earth (item 2), it was impossible for me to check, but the resident engineer states that the quantity of rock was determined by waggon measurement, and the appearance of the sides of the bank justify the conclusion that 25 per cent. of the material is of rock, as shown in the certificate. These items are paid for at schedule rate.

Item 3.—Ballast-loading, unloading, and spreading measured by truck load, and paid for at schedule rate.

Items 4 to 9.—These items are certified for at schedule rate. The measurements have been carefully checked by me on the ground, and found to be practically correct.

Items 10 and 11.—Rails cut and holes drilled in rails.—Certified for at schedule rate.

Item 12.—Extending brick culverts.—Certified for at the several schedule rates for excavation and brickwork.

Item 13.

Item 13.—Material in retaining wall.—Certified for at schedule rates for rock excavation, and loading and unloading.

Items 14 and 15.—Bridges at Wallis Creek, and at 18¼ miles.—Certified for by actual measurements of concrete, timber, ironwork, &c., at schedule rates.

Item 16.—Filling in Wallis Creek.—Certified for by measurements from cross-sections, taken before and after the execution of the work.

Item 17.—Fencing, resumed land.—Certified lineal measurement from actual measurement; checked by me, and found to be practically correct.

Item 18.—Lochinvar Siding.—Certified for at schedule rate.

Item 19.—Grassing.—Represents cutting down nut grass under embankment. There is no schedule rate for this work, and day-labour has been allowed.

Item 20.—Pulling over road, and making up level crossings.—Day-labour allowed as no other schedule rate applies.

Items 21 *to* 23.—Retaining wall, East Maitland.—Day-labour allowed as there is no schedule rate for rubble masonry. This work has been economically executed.

Item 24.—Wallis Creek Bridge.—Extra work in shifting and loading timber for which day-labour has been allowed.

Items 25 *and* 26.—Flood repairs at Wallis Creek.—Day-labour properly allowed, as the contractor was clearly not responsible for the damage done.

Item 27.—Rail pressing.—Not included in contract price for laying road. Day-labour allowed.

The Maitland embankment works are not yet completed, and the certificate issued only represents a progress payment of this work. The check measurements, made by me, have invariably shown that the quantities are not overstated. The cost of day-work, £408 2s. 3d., is only about 3 per cent. on the total cost of work executed, £13,442 6s. 3d.; and proper care appears to have been taken to check the accuracy of the time-sheets.

Bullock Island Sidings.

THE character of this work is such that a perfect checking of many of the quantities which have been arrived at by truck measurement is absolutely impossible, and of others so difficult that, considering the limited time at my disposal for this report, I have not attempted them. Those works, however, which can be readily checked I have measured, and found to be practically correct, and I consider that these, and my measurements on the Mudgee Deviations and the Maitland Embankment, which can be more easily arrived at, are sufficient to establish the general character of the measurements impugned.

The site of these sidings was, I am informed, rough, lumpy ground, which it was impossible to measure. A general levelling of this ground was first necessary, and such work could only be paid for, either by a rate per square yard or square chain for forming, or by day-work, and the latter payment has been adopted, and the work so returned in the certificate, and it has, apparently, been economically done. A further general excavation was afterwards necessary to reduce the ground to the proper level for the sidings, and to form channels to receive the ballast and permanent-way. This work has been measured by truck load. The ballasting and laying has then been done, the former measured by truck load, and by plan measurements, and the latter by tape measurement. I append a statement of the items of the general certificate which relates to this work, grouped and rearranged, that they may be more clearly intelligible, and marked Statement C, of which the following is an analysis :—

Item 1.—Excavation for sidings, measured by truck load, and certified for at schedule rate.

Item 2.—Loading and unloading permanent-way.—Certified for by lineal measurement at schedule rate. The excess of length over that of laying ordinary road and points and crossings is explained by the delivery of permanent-way material which has not yet been laid.

Item 3.—Plate-laying and adzing sleepers.—Certified for by lineal measurement at schedule rate Quantity checked and found practically correct.

Item 4.—Lifting and packing road.—Certified for by lineal measurement at schedule rate.

Items 5 *and* 6.—Laying points and crossings, &c.—Certified for by lineal measurement. Quantities checked and found practically correct.

Item 7.—Loading and unloading ballast.—Certified for at schedule rate. Quantities in many cases approximate for progress payment.

Items 8 *to* 10.—Certified for at schedule rate.

Item 11.—Bridge under slag heap siding.—Certified for by measurement at special rates.

Items 12 *to* 16.—Levelling site of station ground—lumpy ground where measurement was impossible.—Certified for by day-labour. The area of ground levelled is about 60,000 square yards, the cost of which was £1,966 9s., or about 8d. per square yard, which is a reasonable cost for heavy forming.

Item 17.—Removing and trollying material.—Day-labour allowed, to avoid the necessity of a departmental ballast-train, ordinarily used to assist in loading or unloading at schedule rate.

Items 18 *and* 19.—Weighbridge.—Day-labour allowed, as there is no schedule rate for brickwork.

Items 20 *and* 21.—Additional sidings; fixing point-levers.—Day-labour allowed, as no schedule rate applies.

Items 22 *and* 23.—Retaining-wall at boat-dock.—Paid by day-labour, as there is no schedule rate for rubble masonry.

Items 24 *and* 25.—Deviation and removal of sidings.—More economically paid for by day-labour than by the various schedule rates for removing, relaying, and lifting.

Items 26 *and* 27.—Loading and unloading miscellaneous material.—This item includes removal of material sold, material belonging to Construction Department, and sleepers required for the duplication works at Granville, which could only be paid for by day-labour.

Item 28.—Rail-pressing.—Straightening rails not included in contract price for laying. Day-work properly allowed.

In

In the foregoing analyses I have attempted to detail the main facts which have appeared in the inquiry undertaken by your direction, and on which I have based the following conclusions respecting the allegations contained in the sworn declarations made by Mr. A. A. Tennent :—

(1.) The contractor has been paid day-work where no other schedule rate applied, and this is the usual practice under similar circumstances.

(2.) The contractor has been paid 9s. per day for labourers, 10s. for earth-work gangers, and 12s. for plate-layers gangers, which represents the wages he paid to those men, and his legitimate profit and cost of plant of tools. It is usual to allow a railway contractor 20 per cent. on day-work, 10 per cent. for plant and superintendence, and 10 per cent. for his fair profit. If this deduction be made from the wages quoted, there will remain 7s. 2d. per day for labourers, 8s. per day for earth-work gangers, and 9s. 7d. per day for plate-layers gangers, which, in my opinion, represents a low average rate for wages in this Colony.

(3.) There is no evidence that the monthly measurements were rough, but proper accuracy appears generally to have been observed.

(4.) That the proportion of rock in this cutting was not measured, because it is impossible to measure rock in mixed material. The usual practice is an assessment of the proportion by agreement between the engineers representing the two sides of the contract.

(5.) That there is no ground whatever for the statements that no proper measurements were taken during the progress of the work, and that Mr. Suttor and Mr. Burt merely guessed the quantities in walking over the line, and that the first two certificates were framed on day-labour turned into equivalent cubic measurement. It is quite possible that Mr. Suttor and Mr. Burt only noted on the ground the lengths of cutting excavated, but I have carefully examined Mr. Suttor's measurement books, wherein the details of his calculations are shown and are duly dated and signed, and they conclusively show that the measurements were carefully and accurately made for all returns.

(6.) The statement that the contractor for the Maitland embankment work was paid for all delays of trains by cubic yards of extra measurement, is so vague that its truth or falsehood is difficult to prove. All check measurements made by me on this work show that there is no surplus for any such allowance, and that therefore the truth of this statement, in any degree, is highly improbable. As the statement does not specify in what kind of material this alleged addition to cubic measurement occurred, I am unable positively to determine whether any such allowance was made, without a remeasurement of every item of cubic measurement, which is now impossible; but that no large allowance was made on this account (many thousands are alleged in Tennent's declaration) is clearly proved by the check measurements made.

(7.) That there is no evidence that any sidings for the exclusive use of the contractor in obtaining ballast, have been paid for by the department. The only siding used for ballasting, for which the Department appears to have paid, is that at Lochinvar, which is also a permanent station siding. It is not at all clear, however, that the department should not pay for such sidings. If they were used for obtaining bottom ballast, which is paid for at the several schedule rates of rock excavation, breaking ballast, and loading and unloading, these rates only cover the execution of this work on the line of railway, and not from distant quarries. If, on the other hand, sidings, for getting ballast for supplying which the contractors had a special rate, had been paid for by the department, such a concession would have been improper, unless specially arranged for in the contract. No such payment, however, appears to have been made on the works to which my inquiry has been directed.

(8.) That there appears to be no foundation for the statement that the quantities at the Dyke at Newcastle (Bullock Island Sidings) were arrived at by day-labour, converted into cubic or lineal measurements. Many items of cubic measurements are only approximate, and are really progress and not final measurements. And in some, the full quantity is evidently not returned, but the evidence before me indicates that the contractors have not been overpaid on this work as alleged, but that they have, in some items, not yet received a full measurement for work done. These measurements will, no doubt, be carefully re-examined before final settlement.

(9.) With respect to the alterations of the sidings arrangement plan on Bullock Island the only such alterations that appear to have been made are as follows :—

(1.) The deviation of 125 lineal yards of the Hatton Colliery sidings.

(2.) The deviations of about 650 lineal yards of the ballasting sidings.

(3.) The removal and alteration of two or three cross-over roads.

(4.) The alteration of the points and crossings of three sidings leading into the wharf siding.

(5.) The abandonment of several additional sidings.

1 and 2 were necessitated by the difficulty of procuring certain necessary land; 3 and 4 were required for more convenient working of the sidings; and 5, by the temporary abandonment of work not immediately necessary. I estimate that these alterations have cost about £200, and are only such as might fairly be anticipated in the construction of such works. The statement, therefore, that these works have been trebled in cost by alteration of plans is recklessly untrue.

(10.) The final allegation, "that if these works be measured by cross-sections, the work represented in the vouchers would not be found to have been carried out," has already been replied to under the separate headings of the works inquired into. The quantities on the Mudgee deviations and the Maitland embankment works *have* been determined by cross-sections wherever such measurements were possible and creditable; care and accuracy have been shown in the returns made. The Bullock Island works could not have been measured in this way, and there is certainly no evidence that the contractors have been over-paid on this work.

Generally, the facts elicited in my inquiry prove, in my opinion, that the charges made in Tennent's declaration are as reckless in their character as they are in degree. They bear the impress of emanating from a person unqualified by technical knowledge, or by information, for such criticism. Their truth is in no way borne out by the facts, and those of them that are specific and distinct are entirely disproved.

I have, &c.,
B. C. SIMPSON.

113, Phillip-street, 5th July, 1892.

STATEMENT A.

STATEMENT A.

MUDGEE RAILWAY DEVIATION.

Copy of final certificate, with order of items rearranged.

Item No.	Description of Work.	Quantity.	Rate.	Amount.	Total.
				£ s. d.	
1	Excavation—mixed material	26,667 c.y.	3/–	14,500 1 0	
2	„ earth	22,121 „	1/9	1,935 11 9	
3	Bottom ballast—getting, loading, unloading, &c.	4,633 „	6/2	1,428 10 2	
4	„ for raising formation	693 „	4/8	161 14 0	
5	Top ballast	4,594 „	5/9	1,320 16 4	
6	„ spreading, levelling, and packing	4,594 „	1/6	344 11 0	
7	Laying points and crossings	31½ „	5/–	7 17 6	
8	Fixing point-boxes complete	1 No.	5/–	0 5 0	
9	Laying ordinary road and adzing sleepers	3,885 c.y.	1/5	275 3 9	
10	Drilling holes in rails	2,000 No.	–/8	66 13 4	
11	Cutting rails	125 „	1/–	6 5 0	
12	Lifting and packing road	3,885 c.y.	1/6	291 7 6	
	Total paid for at schedule rates	...	...	... £	20,333 16 4
13	Extension of culverts and box-drains—gangers	7 days.	10/–	3 10 0	
14	„ „ masons	88½ „	13/–	57 7 3	
15	„ „ carpenters	251½ „	11/3	141 6 6	
16	„ „ labourers	663½ „	9/–	298 13 9	
17	„ „ boys	31 „	4/6	7 13 0	
18	„ „ man, horse, and dray	4½ „	13/–	3 1 9	
19	Loading sleepers—platelayer gangers	2½ „	12/–	1 7 0	
20	„ „ labourers	45½ „	9/–	20 9 6	
21	Rail pressing „ gangers	58½ „	12/–	35 5 0	
22	„ „ labourers	211 „	9/–	94 13 0	
23	Slewing, pulling road, and raising formation—gangers	200½ „	12/–	120 6 0	
24	„ „ labourers	3,000½ „	9/–	1,350 6 9	
25	Loading ballast at Rylstone—gangers	18½ „	10/–	9 2 6	
26	„ „ labourers	456 „	9/–	205 4 0	
27	„ „ boys	16½ „	4/6	3 13 1	
	Total paid for by day-labour rates	...	...	... £	2,352 5 1
	Total amount of final certificate	...	...	... £	22,691 1 6

B. C. SIMPSON, M. Inst. C.E.

STATEMENT B.

RAISING EMBANKMENT—EAST TO WEST MAITLAND.

Copy of Certificate of 31st May, 1892, with items rearranged.

Item No.	Description of Work.	Quantity.	Rate.	Amount.	Total.
				£ s. d.	£ s. d.
1	Excavation, rock	12,205 c.y.	3/–	1,830 15 0	
2	„ earth	37,710 „	1/9	3,299 12 6	
3	Ballast—loading, unloading, and spreading	4,464 „	1/6	334 16 0	
4	Relaying Permanent-way	2,845 l.y.	1/5	201 10 5	
5	Loading and unloading material for Permanent-way	2,845 „	–/6	71 2 6	
6	Laying points and crossings	58 „	5/–	14 10 0	
7	Removing old material	60 „	–/6	1 10 0	
8	Fixing iron guard rails	6 „	5/–	1 10 0	
9	Lifting and packing roads	3,104 „	1/6	230 11 0	
10	Rails cut	12 No.	1/–	0 12 0	
11	Holes drilled in rails	41 „	–/8	1 7 4	
12	Extending brick culverts	2 „	...	243 5 0	
13	Material in retaining-wall at East Maitland	...	...	63 1 0	
14	Wallis Creek bridge	...	...	1,088 4 10	
15	Bridge at 18¼ miles	...	...	330 14 0	
16	Filling in Wallis Creek	...	...	4,487 11 9	
17	Fencing resumed ground	1,922 l.y.	...	208 6 2	
18	Lochinvar Siding	102 „	1/5	7 4 6	
	Total paid for at Schedule rates	...	...	... £	13,034 4 0
19	Grassing (destroying nut grass)—labourers	4 days	9/–	1 16 0	
20	Pulling road and making up level crossings—labourers	16¾ „	9/–	7 10 9	
21	Retaining-wall, East Maitland—masons	57 „	13/–	37 1 0	
22	„ labourers	324½ „	9/–	146 0 6	
23	„ gangers	17½ „	10/–	8 12 6	
24	Wallis Creek bridge—labourers	9 „	9/–	4 1 0	
25	Flood repairs at Wallis Creek—gangers	60 „	10/–	30 0 0	
26	„ labourers	346 „	9/–	155 4 0	
27	Rail-pressing—labourers	38½ „	9/–	17 6 6	
	Total paid for by day-labour rate	...	...	... £	408 2 3
	Total amount of certificate of May 31, 1892	...	...	... £	13,442 6 3

B. C. SIMPSON, M. Inst. C.E.

STATEMENT C.

BULLOCK ISLAND SIDINGS.

Abstract from Certificate—Items grouped and rearranged.

Item No.	Description of Work.	Quantity.	Rate.	Amount. £ s. d.	Total. £ s. d.
1	Excavation for sidings	35,532 c.y.	1/9	3,109 1 0	
2	Loading and unloading permanent-way material	12,787 l.y.	-/6	319 3 6	
3	Plate-laying and adzing sleepers	10,872 "	1/5	770 2 0	
4	Lifting and packing old roads and new siding	8,644 "	1/6	648 6 0	
5	Laying points and crossings	1,060 "	5/-	265 0 0	
6	" diamond and single slip	44 "	8/6	18 14 0	
7	Loading and unloading ballast	14,632 c.y.	1/6	1,096 13 0	
8	Rails cut	381 No.	1/-	19 1 0	
9	Holes drilled in rails	459 "	-/8	15 6 0	
10	Fixing point-boxes complete	15 "	5/-	3 15 0	
11	Bridge under slag-heap siding	.....	...	369 3 4	
	Total paid for at Schedule rates	.....	...	.....	6,624 4 10
12	Levelling site of station ground, &c.—gangers	145 days	10/-	72 10 0	
13	" " labourers	2,419 "	9/-	1,088 11 0	
14	" " horse, cart, and man	40 "	13/-	26 0 0	
15	" " plate-layer gangers	78 "	12/-	46 16 0	
16	" " plate-layer labourers	1,628 "	9/-	732 12 0	
17	Removing and trollying material—laborers	409 "	9/-	184 1 0	
18	Weighbridge—bricklayers	22 "	13/-	14 6 0	
19	" labourers	22 "	9/-	9 18 0	
20	Additional sidings—carpenters	14 "	11/3	7 17 6	
21	" labourers	56 "	9/-	25 4 0	
22	Retaining-wall at boat-dock—masons	41 "	13/-	26 13 0	
23	" " labourers	23 "	9/-	10 7 0	
24	Deviation and removal of sidings—gangers	2 "	12/-	1 4 0	
25	" " labourers	43 "	9/-	19 7 0	
26	Loading and unloading miscellaneous material—gangers	1 "	12/-	0 12 0	
27	" " labourers	137½ "	9/-	61 17 6	
28	Rail-pressing—plate-layer labourers	327 "	9/-	147 3 0	
	Total paid for by day-labour rates	.....	...	..... £	2,474 19 0
	Total amount of abstract from certificate	.....	...	..... £	9,099 3 10

B. C. SIMPSON, M. Inst. C.E.

FURTHER APPENDICES.

THE following Appendices, in their numerical order, were put in as exhibits during the inquiry, and are referred to in the Minutes of Evidence.

Appendix No. 1.

Railways—(Correspondence respecting the Charges made by Mr. Schey, M.P., against the Chief Commissioner for Railways.)

[*Ordered by the Legislative Assembly to be printed*, 31 *March*, 1892.]

The Chief Commissioner for Railways to The Colonial Treasurer.

Office of the Railway Commissioners of New South Wales,
Sydney, 11 March, 1892.

Sir,

I have to direct the attention of the Honorable the Minister to the speech of one of the Members for Redfern, Mr. Schey, on the morning of the 10th instant, in which he charges me with being appointed in the interest of a "ring" in England, for the purpose of securing orders for locomotives without competition, and that my appointment was made, not for the welfare of the country, but to suit private persons. The words in *Hansard* are:—

"I need not refer here to the occult reasons which led to the appointment of the Chief Commissioner. I shall take another opportunity of dealing with those reasons—reasons which were not for the welfare of the country, reasons which suited private persons, and not the State, to appoint the Chief Commissioner. . . . . As the best proof that all this huge expenditure was not required, lies in the fact that the Commissioners themselves admit that they have carried more traffic than has ever passed over the railways before, and that has been done without the locomotives which were expressly ordered. That shows that there was no necessity, on the ground of alleged urgency, for ordering £500,000 worth of locomotives in England without any tenders being called for them. Those orders were given to specially-selected firms, which have always been favoured in the past by the Government of this Colony. The ring of which I have already spoken, and who are mainly responsible for the Chief Commissioner's appointment, made sure that these locomotives would be ordered from them, and they got the order through the Chief Commissioner without tenders being called for in the usual way."

If these statements have one iota of truth in them I am unfit to hold the high office I have the honor to fill, and as the same statements have been made by the same Member under the privilege of Parliament on previous occasions, I feel justified in asking the Government to appoint a Judge to investigate the evidence Mr. Schey can produce to justify such grave charges, and also to examine all the papers relating to my appointment.

The

The charge is of so grave a nature that I shall be glad if the Government will not lose a day in acceding to my request. The reckless assertions regarding the personal administration of the Railways by the Commissioners are as unjustifiable as the statements in regard to my personal honor will be proved in this instance, and the value of the whole can be judged by the result of this inquiry.

I have, &c.,
E. M. G. EDDY,
Chief Commissioner.

The Cabinet does not think, as at present advised, that an inquiry of the kind asked for should be made, but Mr. Eddy may make a full statement in reply to Mr. Schey's charges, and which, if desired, may be placed upon the Table of the House. If, after that, Mr. Schey reasserts his charges, and is not satisfied with the reply of the Commissioners, it will then be time to consider the propriety of holding such an inquiry as that requested.—G.R.D., 10/3/92.

The Colonial Treasurer to The Chief Commissioner for Railways.

Dear Sir, The Treasury, New South Wales, Sydney, 14 March, 1892.

I have the honor to acknowledge receipt of your letter of the 11th instant, inviting my attention to a speech by one of the Members for Redfern (Mr. Schey), on the 10th idem, in the Legislative Assembly, on the subject of your appointment to the position of Chief Commissioner for Railways, and the placing of certain orders for the supply of locomotives.

In reply, I have to intimate that the above matters have been engaging the attention of the Government, together with your request for an official inquiry, with the result that the Cabinet, as at present advised, does not think that an inquiry of the kind asked for should be made. But you may make a full statement, in reply to Mr. Schey's charges, which, if desired, will be placed upon the Table of the House. If, after that, Mr. Schey reasserts his charges, and is not satisfied with your reply, it will then be time to consider the propriety of holding such an investigation as that suggested.

Believe me, &c.,
JOHN SEE.

The Chief Commissioner for Railways to The Colonial Treasurer.

Dear Sir, Office of the Railway Commissioners of N.S.W., Sydney, 14 March, 1892.

I have the honor to acknowledge the receipt of your letter of even date, herewith, in reply to my application for the appointment of a Judge to examine the grave charge made and reiterated in Parliament against my personal honor by the Member for Redfern, Mr. Schey, and regret to learn "that the Cabinet, as at present advised, does not think that an inquiry of the kind asked for should be made," adding that "I may make a full statement in reply to Mr. Schey's charges, which, if desired, would be placed on the Table of the House,—if after that Mr. Schey reasserts his charges, and is not satisfied with my reply, the Cabinet will then consider the propriety of holding an investigation."

I trust that it is not seriously suggested that I should—through the medium of Parliament—enter into a personal controversy with Mr. Schey on the subject of the unfounded charges he has made. Such a proposal would leave me no alternative but to decline it. I would, therefore, respectfully beg a reconsideration of the request made in my letter of the 11th instant.

Believe me, &c.,
E. M. G. EDDY,
Chief Commissioner.

W. F. Schey, Esq., to The Colonial Treasurer.

Sir, Legislative Assembly of New South Wales, 17 March, 1892.

I do myself the honor to ask your attention to the following representations, which I desire to have placed before the Cabinet prior to any decision being arrived at as to the form of inquiry which shall be appointed to inquire into the charges made by myself against the administration of the Railway Department, during the late debate on the Railway estimates.

I see from the public Press that Mr. Eddy has written to you, asking for inquiry, by a Judge, into one point only of my speech. Now, in the first place, I beg to point out that the portion selected by Mr. Eddy did not form one of my charges, properly so-called. The matter of the "ring" of which I spoke was only mentioned incidentally, and I expressly said that I did not intend to go into that matter at that time.

On the other hand, I did make several specific charges, which are perfectly tangible and easily dealt with; and I very respectfully submit that it is much more necessary and pertinent to inquire into definite charges made against the administration while Mr. Eddy has been in office than it is to inquire whether any persons or "ring" had any hand in recommending him for his present appointment.

I beg, therefore, most respectfully, to insist that if an inquiry is to take place, all my charges must be properly and fully investigated, and not any one portion. And I may especially point out that Mr. Eddy should certainly not be the person to make a selection, if any were required to be made.

In the second place, I very respectfully urge my grave objection to the proposal to appoint one person. No one person can possibly be a satisfactory "board" to both parties concerned; and whichever way the decision might go, one or the other of the parties, and probably both, would feel more or less aggrieved, and grave doubts would very likely be thrown on the fairness of the report, and even perhaps on the method adopted in conducting the inquiry itself.

Now, as to the proposal that the person to be selected should be a Judge, probably of the Supreme Court. Here again I must point out my decided objection to any such person being appointed; and my objection here is threefold.

First. That a Judge, as a matter of necessity, has a legal mind, and that from training and practice he has constantly in his mind the legal restraints and limitations of the Courts; and thus the inquiry would be largely governed by what are termed the laws of evidence. This would be disastrous to the inquiry proposed to be held, and would prevent many facts which are essential to the matter in question, from being brought to light. When I say, that on one occasion, I being

then

then a party to a case in the Supreme Court of this Colony, heard a certain man, in the witness-box, and on his oath, swear to a lie; and a thing which I knew to be a lie, and could prove by documentary evidence then and there so to be; and yet, by this same law of evidence I was not even permitted to contradict him, it will be at once seen that such a limitation would directly defeat the ends of justice in the case now under notice.

Secondly. All the Judges move in society, in which Mr. Eddy also moves, and to which I do not belong, and with which I have nothing in common. It is, therefore, highly probable that every one of them have, from time to time, had friendly relations with the very gentleman who now expresses his anxiety for the appointment of one of them. They have, perhaps, even enjoyed his hospitality, and he theirs; or they may be members or frequenters of the same club. Judges, no matter how high-minded they may be, are, after all, but human, and are naturally, even if unconsciously, biassed in favour of their order, and, as a consequence, against the socially lower order to which I myself belong.

Thirdly. Judges are necessarily, from their training and occupation, more or less bureaucrates, as indeed, are all high civil servants, to a greater or less extent. I do not impute this as a fault, but as a matter which is beyond their control, and is the result of a system, and is world-wide. Mr. Eddy, of course, belongs to the same category, and just as we know that Judges, however, honorable, will sometimes stand by a brother Judge, so it is but human nature, that brother officials of high grade should do a similar thing, and that, perhaps, without any idea of doing any positive injustice. This is all the more likely to occur when the other individual is one who is so personally distasteful to the whole bureaucratic class, as I am myself conscious of being.

I must, therefore, very respectfully but very firmly press my request that the proposed inquiry shall be made by a Select Committee of the Legislative Assembly. For two Sessions I have tried to procure an inquiry by direct motion; and during the present Session, I may remind you, that on a direct motion of mine for an alteration of the Railways Act I made most of the charges, which I have since (mainly at your own request) made more systematic and definite. On that occasion, now many months ago, the present Premier made an amendment to my proposition, by which he moved that these very same charges should be referred to a Select Committee for inquiry. The then Premier, Sir Henry Parkes, declined to receive either my motion or Mr. Dibbs' amendment, except as a vote of censure on the Government; but, as a result, he brought in a Bill to remove the contract powers given to the Commissioners under the Railways Act of 1888. This Bill passed the Assembly by 85 to 5, on an occasion when I was unable to be present, and therefore had nothing whatever to say about the matter. That clearly, to my mind, expressed the opinion of the Assembly on that section of my charges, which, I beg to point out, was not then, nor has at any subsequent time, been even denied. Indeed I might ask your attention to the fact that, with the single exception of the one point which he has selected for attack, Mr. Eddy has not denied the accuracy of any of the charges made by me, nor, with the same single exception, has he asked for any inquiry into the correctness of the matters therein alleged. This, to my mind, is in itself very significant.

Returning to the subject of the Select Committee, I beg, with very great respect, to point out that, apart from Mr. Dibbs' own motion, to give me this—the very form of inquiry, that I am anxious for, and which I have struggled so hard to bring about—there is ample precedent for such a mode of procedure. I beg to remind you of the charges made about the supply of dump-cars, &c., to the railways some years ago. Mr. Sydney Smith made his charges, procured a Select Committee and sat as Chairman thereof. Again, when Mr. Melville brought up the matter of the Hornsby and Holt-Sutherland Estates, he obtained a Select Committee, and also sat as Chairman thereof. A large number of other cases can be cited, in each of which a similar thing has been done; but the above two occurred first to my mind. Indeed, such has been the customary method of dealing with any charges of the character referred to, and any other course has been the exception as against the general rule. I beg to point out that months ago I tried to form a Select Committee to inquire into these matters, and that I took an absolutely fair course in doing so. I wrote to Messrs. W. McMillan, Bruce Smith, J. Inglis, J. Abbott, Carruthers, Dowel, Tonkin, and Danahey, or else personally approached them, as members who were specially favourable to the Commissioners' administration, asking them to sit on such a Committee. I could not be fairer. I am now quite content that the Commissioners should, by any process which Parliament will permit, or the Minister contrive, absolutely select any five members of the Assembly whom they may choose, provided that I may nominate the other five; a course which, I beg to point out, is exactly in accord with the Arbitration, &c., Bill now before the Assembly in charge of the Hon. the Attorney-General. Nothing surely could be fairer to Mr. Eddy than this, especially as I cannot disguise from myself the fact that a large number of the members of the Assembly have already considerable personal dislike to myself. Such a Committee might be appointed, with power to sit during the recess, and to take evidence wherever deemed avisable; and would be at once the readiest, fairest, cheapest, and most effectual way of settling the whole matter.

I would also very respectfully stipulate that I must be allowed access to any and every departmental document and State paper, and that such, and any returns required by me, shall be furnished at my request.

I would also suggest that the inquiry be held as in open court, and be accessible to both the public and the Press, as I can see no necessity to cloak anything which may be said or done thereat.

It has been repeatedly stated that I have persistently assailed Mr. Eddy ever since his arrival in the Colony, having a predisposition against him. Nothing could be further from the truth. I was one of those who assisted to pass the present Railway Act, and also insisted on the necessity of bringing an administrator from England or America, when even some of the present Government were averse to such a course being pursued. Immediately on Mr. Eddy's arrival I was one of the first to go and meet and greet him, introduced by the late Hon. John Sutherland. I proffered him every information and assistance in my power, which offices were graciously received, and for some considerable time I was on very friendly terms with Mr. Eddy, and for a long time gave his administration every opportunity of indulgence, never even critising, much less attacking, anything that was done. When I found, as I subsequently did, that I could no longer pursue such a friendly course, it was a matter of sincere and intense regret to me; and nothing but an overwhelming sense of public duty has compelled me to take a course so personally distasteful to myself, and imposing on me so great an amount of labour and research.

I have nothing whatever to gain by bringing these matters forward; on the contrary, had I considered my own personal interest and advantage I should have resolutely shut my eyes and ears to anything of the kind.

I would willingly have obtained an inquiry without making my charges so definite and conspicuous, and repeatedly tried to do so, both by direct motion in Parliament and by interviewing Ministers, and placing matters before them. When I did so I was told, "make your charges in Parliament, and make them definite and specific," and no other course being open to me I had to do as I did on the debate on the estimates.

I now very respectfully urge my request that the Government will consent to the appointment of a Select Committee, and if the Cabinet, whom I suppose will deal with the matter in the course of a few days, will not consent to do that, then they will at least consent to allow the matter to further stand over for a few more days, so that I may have an opportunity of moving the adjournment of the House to discuss the form which the inquiry should take.

I write you this letter in view of what I have seen in the Press, and also of the answer given by the Honorable the Attorney-General to a question of Mr. Want in the Assembly last evening.

Requesting that you will so far favour me as to place this letter before the Cabinet when they come to deal with the matter, and begging leave to assure you of my most profound respect and high consideration.

I have, &c.,
WM. F. SCHEY.

The Chief Commissioner for Railways to The Colonial Treasurer.

Office of the Railway Commissioners of New South Wales,
Sydney, 19 March, 1892.

Sir,

I have the honor to invite your attention to my letters of the 11th and 14th instant regarding the charges made against me in Parliament on the morning of the 10th instant, by the Member for Redfern, Mr. Schey. I would point out that the charges are of so grave a character, looking at the position I hold in the service of the State, that it is most desirable, in the interests of the country as well as myself, that no further time should be lost in enabling me to show to the world the absolute falseness of any evidence Mr. Schey can bring forward in support of his utterances. The statements have been telegraphed through the Press to all parts, and until their falseness is exposed in the most emphatic manner my reputation and the credit of the Colony must suffer, seeing that the Railway Commissioners control three-fourths of the public debt of the Colony.

The importance of the matter urges me to beg for its immediate consideration.

I have, &c.,
E. M. G. EDDY,
Chief Commissioner.

Treasury Minute,

The Treasury, New South Wales, Sydney, 23 March, 1892.

Subject:—The charges made by Mr. W. F. Schey, M.P., in connection with the appointment of Mr. Eddy to the position of Chief Commissioner for Railways, and his administration of the Railway Department.

I HAVE considered with all care, the several letters of Mr. Eddy, Chief Commissioner of Railways, dated 11th, 14th, and 19th instant, and that of Mr. Schey, M.P., dated 17th instant.

The matter is, without doubt, one of serious importance. Ministers, on my first reporting Mr. Eddy's request for a Judicial inquiry, were of opinion that the necessity for an inquiry had not yet been demonstrated; they thought that a full statement from the Chief Commissioner of his answers to the charges made by Mr. Schey would probably show them to be misapprehensions, and that unless there were, after such answer, a re-assertion by that Honorable Member of his statements, it might be taken that the Chief Commissioner had sufficiently vindicated himself.

In the meantime, however, the situation has been altered. The Commissioner has repeated his request, and in such terms (see his letter of 19th instant) as to show that he considers the charges to be of so grave a character as to be calculated, unless refuted, to impair seriously the confidence of the public in the Railway Service, and through it to injure the public credit. On the other hand, Mr. Schey (see his letter of 17th instant) also asserts his anxiety for an inquiry; but asks that its range should include not only the charges detailed in Mr. Eddy's letter of 11th instant, but the various charges which he contends he has made specifically against the administration of the railways. The statements which Mr. Schey calls incidental are those which seem to impeach the conditions under which Mr. Eddy was appointed, and the integrity of his administration. Mr. Schey contends for a Select Committee of the Legislative Assembly, Mr. Eddy asks for an inquiry by a Judge.

It thus appears that the subjects of inquiry proposed and the tribunals suggested are widely different.

Under these altered circumstances I recommend an inquiry; but I do not think that the investigation should be confined to the matters mentioned by the Chief Commissioner. These should be included; but, in order that it be satisfactory, all those parts of Mr. Schey's charges which either express or imply any reflection on the honesty of his administration ought to be included. On the other hand, it is not desirable that the scope of inquiry should be extended to all of Mr. Schey's assertions. Such a process might be interminable, and lead to repeated loss of time and expense. The appointment of a Commission to inquire into the matter of the Baldwin engines, shows that in special instances the Government will not resist investigation into matters of administration; but the case to justify any inquiry beyond the ordinary departmental sources of information, must be exceptional in its character, and I think on the whole that the present case is exceptional, as affecting seriously in his own appreciation of its importance, the question of the purity of the administration of a very important officer.

As to the mode of inquiry, I feel sure that the best guide to an intelligent public opinion will be by the selection of an impartial tribunal, wholly unconnected with politics, with the railway administration, or with the Civil Service, and I therefore recommend that it be conducted by a Royal Commission of one or three persons, and that the sole or the presiding Commissioner, as the case may be, should be a person accustomed to the eliciting and impartial weighing of facts.

I therefore recommend that the Cabinet appoint such a Commission to inquire into the matters mentioned in the Chief Commissioner's letter, and to such other charges made by Mr. Schey as, in the opinion of the Attorney-General, amount to a challenge of the purity of the administration of his office by Mr. Eddy.

JOHN SEE.

Cabinet approves Royal Commission to inquire.—EDMUND BARTON, 23/3/92.

Cabinet desires appointment of Royal Commission of *three* persons to inquire on the lines indicated in Minute of Minister for Railways. Mr. Justice Owen, Chief Judge in Equity; Mr. John Young; and Mr. Alexander Kethel, to be asked to act. The Attorney-General to inquire and report as to willingness of these gentlemen to accept.—EDMUND BARTON, 26/3/92.

Attorney-General reported that the three gentlemen named as Commissioners are willing to act, and was asked to draft Commission accordingly. Inquiry to be held with open doors. Liberty to Mr. Eddy and Mr. Schey to cross-examine witnesses. Cabinet will not reimburse either of them for law costs before the Commission.—EDMUND BARTON, 29/3/92.

W. F. Schey, Esq., M.P., to The Attorney-General.

Sir, Legislative Assembly of New South Wales, Sydney, 29 March, 1892.

I do myself the honor to ask your attention to the following representations, and to ask you to place the same before the Cabinet, prior to the completion of the proposed appointment of a Royal Commission to inquire into certain charges made by myself in my place in Parliament against the railway administration.

I fully appreciate the acquiescence of the Government and yourself in certain stipulations made by me in regard to the proposed inquiry, although I must still insist that the liberty granted to Mr. Eddy and his colleagues to appear by counsel is so grave an injustice, and puts me, *ab initio*, at so great a disadvantage, or, as an alternative, to so great an expense that I could not be expected to incur, that I would be, on this ground alone, amply justified in refusing to have anything further to do with the matter. Indeed, in this direction I am placed in a much worse position than any ordinary person laying an ordinary information against any other. In such a case the Crown immediately takes action, an arrest or other process takes place, and when the matter goes into court, a solicitor or barrister, instructed by the Crown, appears to prosecute, and the person who laid the information is merely a Crown witness, without expense of any kind, and who, indeed, is paid for his attendance at Court. Should the case be sent for trial, and a bill be filed, the Crown Solicitor and Crown Prosecutor do all the legal work and get up the case with all the resources of the Government; and the person who laid the information is again paid for his time, and is at no expense or risk, except he commit provable perjury. In this inquiry proposed to be held, all this is entirely reversed, and I am called upon, by my own unaided effort, to carry out what is virtually a prosecution, entirely at my own cost, and with no assistance of any kind to make my case, which is properly one for the Crown itself, or, from my point of view, for Parliament.

Then, again, as if such were not already too great a prejudice for me to meet, I find, after consulting various legal authorities, that the Government, however good their intentions, cannot afford me protection from vexatious and ruinous proceedings from the moment I step from under my Parliamentary privilege, which is alone sufficient to protect me in the position which I have taken up.

I am advised that the Act 44 Vic. No. 1, which you quoted on Thursday night last when I moved the adjournment of the House on the matter, only confers the same protection on witnesses before a Royal Commission as they would have in the Supreme Court or Criminal Courts, and also subjects them to the same liabilities. I am further advised that, with the very best intentions and desires, the Government cannot give any further protection than that contained in the clause quoted; and further, that the Royal Commission itself cannot give any more, if it be appointed.

How inadequate such a provision is for the purposes of such an inquiry as is now under review, will at once appear from two matters at present current in the daily press. In one, Earl Russell was taken into court, against his will, by his countess, and in the course of cross-examination, had unwillingly dragged from him the fact that he had seduced a certain young woman. That young woman is at present suing the Earl for slander, and can force him into the court. It is not pertinent to inquire whether she can succeed, whether this is a blackmailing action, &c., &c. The one fact is clear, she can drag him into court, and thus put him to great expense. In another case, which you, in your position of Attorney-General, are no doubt intimately acquainted with, two young men who were compelled to give evidence in our own Supreme Court, in a case of slander or libel, were afterwards prosecuted for perjury, convicted and imprisoned.

The press now informs me that the conviction has proved to be bad, and that one man has been released, and that the other is to be similarly treated during the current week. These cases go to show that both criminal and civil proceedings might be instituted against me so soon as I gave up my shield of privilege. As in any such proceedings, however vexatious or futile, I should be compelled to enter appearances, and most probably pleas, and to provide for my defence, I could be entirely ruined by such processes, even though never set down for trial. Messrs. Proudfoot & Co., who have already issued a writ against me for £10,000, have already published in the public press their intention of proceeding against me criminally immediately I say a word outside my parliamentary privilege.

Taking all these things into grave consideration, and not being prepared to make myself a target for enterprising attorneys, or the large number of both open and secret enemies, whose machinations I have the very greatest reason to fear, and remembering that any assurance of protection or indemnity by the Government must be *ultra vires*, and therefore of no effect, I must again urge that my privilege be maintained inviolate by one of the only two methods which appear effectual. Either let the proper and traditional inquiry by a Select Committee of the House be made, or let a short Act be passed, giving me full security which I cannot otherwise obtain.

This

This latter course has, I am informed, been already commended to your attention. No less an authority than Mr. George Reid has informed me that this is the only way in which I can be absolutely secured, and I understand that Mr. J. Want, Q.C., has informed my colleague, Mr. M'Gowen, to the same effect. Under either of these two courses I am perfectly willing to go fully into all the matters alleged by me; but, if neither will be granted, and I am asked to take the tremendous handicap proposed upon me, then I utterly and irrevocably decline to proceed one inch beyond the cover of my parliamentary privilege.

It has been said, and may be repeated, that I am drawing back. I am doing nothing of the kind. I have continually pressed for inquiry, and do so still, but not at the risk of imprisonment or ruin to myself, and starvation to my wife and little children.

I have but done my duty as a representative of the people, to the best of my ability and understanding, and now, if I am to be intimidated and exposed both to prosecution and persecution, I wash my hands of the whole matter. I have done my duty, and now leave it to the Government and the Parliament to do theirs.

Having said so much of my own personal safety, I now take the altogether higher ground, that the present action of the Government is an inroad on the privileges of Parliament. These Royal Commissions are a mere modern invention, as compared with the older form of inquiry of Parliament by a committee of its own body. If so great difficulty and danger can fall on a representative at the hands of a Government, who profess, at least, no hostility towards him, what representative could possibly summon up courage enough to do so terrible a duty in face of a Government who might desire his annihilation. It would appear to me that everything would, under such circumstances, lead a Member of Parliament to shirk his duty to the people. As for me, I am determined that the time-honored privilege of Parliament always so jealously guarded, and so constantly extended by the House of Commons, shall not be breached by me; nor shall any precedent set by me ever lead a Member, less strong, perhaps, than myself, into making innovation and inroad on the system of Parliamentary Government.

The circumstances must be my sufficient excuse for writing thus at length. I now ask the Government to protect me fully by a short Act, which may be easily passed in both Houses in two nights, and thus before the close of the Session, or to note my unalterable determination in the matter.

So much, at least, I am within my right in asking, and I sincerely hope that it will be accorded.

Asking your acceptance of the assurance of my high consideration.

I am, &c.,
WM. F. SCHEY.

Appendix No. 2.

Correspondence between Mr. Schey and The Hon. E. Barton, Attorney-General.

The Hon. Edmund Barton, Q.C., M.L.A., Attorney-General, &c., &c., &c.,—

Sir, Legislative Assembly of New South Wales, Sydney, 6 April, 1892.

Re the Royal Commission to inquire into charges made against the railway administration by Mr. Schey.

I do myself the honor to ask your attention as follows:—

1. I would remind you of my two previous letters on this matter, one addressed to the Hon. John See, M.L.A., Minister for Railways, &c., and the other to yourself, to neither of which I have received any answer up to date.

2. You have twice definitely promised, during the progress of debates on the matter in the Legislative Assembly, that I should have a full indemnity from the Government against all costs, charges, or damages that might be incurred by me as a consequence of any action or any evidence of mine before the Royal Commission. I now beg to ask you to have the instrument conferring such indemnity prepared without delay, and to submit a draft thereof for my perusal. I also trust you will include in the terms thereof that should any action be taken against me in consequence of any such evidence or action as aforesaid; the Crown Solicitor will be instructed to defend the action and employ counsel at the charge of the Government, and that I shall be held free from all damages, costs, or expenses, howsoever arising.

3. To give evidence before the Commission will be a very serious matter to any person in the service of the Railway Department, and I fear very much that unless something is added to the protection given by law, very little evidence indeed will be obtained from such source. I beg very respectfully to suggest therefore that every such witness receive, under the hand of the President of the Commission, an indemnity and promise that he shall continue in his office while of good behaviour, any evidence given before the Commission notwithstanding.

I beg to lay the utmost stress on this as urgently necessary, if the very object of the inquiry is not to be defeated.

4. I very respectfully ask that the Government will issue to me an order enabling me to search for documents required, now in the custody of the Railway Department, and to go through papers, &c., for the purpose of finding what I require, and that further I may be permitted to make extracts from and take copies of such documents, as I deem necessary. And I ask that a time and place may be fixed when such documents and papers may be placed at my disposal, and that I may have liberty to take a witness with me to inspect.

5. I must again protest against the position which it seems to me is being forced upon me in this matter. To my mind, I am being virtually made defendant in an action for slander, to be tried before this Commission, that I am virtually placed on my trial, and that the Commission will have power to render a verdict, which, although not entailing a monetary penalty, might be quite as far reaching and punitive in its effect, and this, surely, is not what ought to be the result. Now, it appears to me that privelege of Parliament is, and is intended to be, a bar to action in all courts. Then, given a hostile Government, and following that a hostile Commission, a Member of Parliament might be virtually tried in this way and punished, and thus the whole essence and intention of parliamentary privilege might be altogether got behind and done away with.

6.

6. I notice from the copies of the correspondence on this matter which have already been laid on the Table of the House, that there is some idea of confining the inquiry to a portion only of the matters alleged. I must once more very respectfully, but very firmly insist that all the allegations made should be inquired into, and that none should be passed over.

Asking the favour of a full reply at early date, and with renewed assurances of my high consideration.

I have, &c.,
WM. F. SCHEY.

The Hon. Edmund Barton, Q.C., M.L.A., Attorney-General, &c., &c., &c.

Sir, "Kosmos," 257, Abercrombie-street, Redfern, 23 April, 1892.

Re the Royal Commission to inquire into charges made against the railway administration by Mr. Schey.

I do myself the honor to inform you that I have not yet received any reply to my letter of 6th inst., and as I see by the press this evening, that the Commission has been issued, I beg to remind you of the same, as also the two letters therein referred to, and to urge an early compliance with the requests therein contained.

Asking the favour of your kind attention and early reply,

I have, &c.,
WM. F. SCHEY.

(H. 92-48.)

Hon. E. Barton, Q.C., M.L.A., Attorney-General, &c.

Sir, 257, Abercrombie-street, Redfern, 30 April, 1892.

Re the Royal Commission to inquire into charges made against the railway administration by Mr. Schey.

I do myself the honor to again address you on this matter. I have again to remind you that I have not yet received any reply to my letters (*a*), of 17th March last, addressed to the Hon. Jno. See, M.L.A., Minister for Railways, &c.; nor (*b*), (*c*), and (*d*), of dates, 29th March, 6th April, and 23rd April, all addressed to yourself.

On 22nd instant, I had an interview with the Colonial Secretary, Hon. G. R. Dibbs, M.L.A., who informed me, *inter alia*, that the whole matter had been committed to your hands, and that all promises made to me in Parliament and otherwise in regard thereto, would be kept.

On the 25th instant, I received from the Principal Under Secretary, a draft copy of the Commission, and I certainly expected then at once to receive a draft also of the indemnity promised to me by the Government repeatedly, while Parliament was sitting. As I did not receive same, nor any answer of any kind to my letters above noted, I called at your office (Attorney-General's) on the morning of Tuesday, 26th instant, and was informed by your secretary, Mr. Stephen, that you had an appointment there at 12·30 p.m. I called again at 12·45 p.m., when Mr. Stephen informed me that you had not been in, and he then hardly expected you, as there was to be an Executive meeting at 2·30 p.m. I then requested him to ask you to be kind enough to make an appointment with me, which I would keep at any time you might please to name. He promised to do so and inform me of the time fixed; but from that time to this, I have heard nothing whatever of the matter.

I have perused the draft copy of the Commission sent to me, and I now beg to inform you, that noting that some person has taken upon himself to formulate a series of charges which are embodied in the Commission, I now raise a preliminary objection to such a course of action, as no person whatever, excepting myself, can have any right to formulate charges which I am asked to prove.

Again urging an early compliance with the several promises made to me, and the requests contained in my letter of 6th instant; and once more asking the favour of your kind attention and early reply.

I have, &c.,
WM. F. SCHEY.

Telegram from the Attorney-General to Wm. F. Schey, Esq., M.P.

Grafton.

WITH reference to your letters, subject of Royal Commission on your charges, I much regret delay which pressure of other urgent matters has occasioned. I have written letter replying, which you will receive by post.

E. BARTON,
Attorney-General.

The Attorney-General to W. F. Schey, Esq., M.P.

Sir, Grafton, 3 May, 1892.

I much regret that the great pressure of business has prevented me from replying earlier to your letters, the latest of which is dated on the 23rd April ultimo, on the subject of the Royal Commission, of which a copy has been duly forwarded to you, issued to authorise an inquiry into certain charges made by you in relation to the honor and integrity of the Chief Commissioner for Railways, and the honesty and purity of his administration of his office. I would, however, courteously point out that the most important of the points raised in your letters scarcely necessitated formal replies, inasmuch as they are practically identical with questions raised by you and answered with sufficient fulness by me during debates in the Legislative Assembly more than a month ago. As the Government stated through me, during those debates, the statute law protects you against civil suits consequent upon any evidence or action of yours before the Royal Commission. Further, I did then promise you that the Government would pay any damages, costs, or expenses incurred by you in any such suit or proceeding. No Government could honorably assent to your added demand for an instrument further evidencing or emphasizing this promise, for that demand clearly implies that you distrust their good faith, and compliance with it would be an admission that the distinct undertaking of Government in debate is not trustworthy. I do not see my way to comply with your suggestion that any possible process against you—which there should be no reason to apprehend—should be defended by the Crown Solicitor on your behalf. The undertaking already given would be ample protection to you, even if the law did not already, as it does, afford you an impregnable defence.

You

You further suggest that every person employed in the Railway Department, giving evidence before the Royal Commission, should receive "under the hand of the President of the Commission an indemnity and promise that he shall continue in his office while of good behaviour, any evidence given before the Commission notwithstanding." This suggestion is impracticable, nor does it come within the province of the President of the Commission of Inquiry to give or enforce any such indemnity. Furthermore, the Government have no right for a moment to assume that the Railway Commissioners would conceive an act of such gross misconduct as the dismissal of any of their employees in revenge for evidence honestly given, but damaging to their administration.

You next ask for an order from the Government enabling you "to search for documents required, now in the custody of the Railway Department, and to go through papers, &c., for the purpose of finding out what you require," and that you "may have leave to make extracts from and take copies of such documents as you deem necessary." I much doubt whether the Government has power to grant you such an order. But it is unnecessary to discuss that question. The Commissioners' Evidence Act, to which it has been so often necessary to invite your attention, contains abundant provision on the subject. You have only to show to the Royal Commission that papers material to the questions under inquiry are in the custody of the Commissioners or their employees, or of other persons, and an order will be made for the production of such papers, and for the summoning of any person who can give material evidence on the subject to which they relate; and further, on the production of such papers, you will not be prevented from making extracts or copies for use during the inquiry.

You protest against the position which, as it seems to you, is being "forced" upon you. I have carefully read and reread your remarks on this subject, which appear to be a reassertion of views expressed by you in the Debates. I confess myself unable to follow in these views, or to imagine any tangible reason for the apprehensions with which you appear to regard the institution and possible results of an impartial inquiry by highly qualified and trusted men. Nor can I see how any evidence given or action taken by you during that inquiry can lead to consequences punitive or in any way injurious either pecuniarily or in respect of your reputation. That this position is dangerous, and that the Government have "forced" you into it seem to me to be suggestions which reflection must show to be unfounded.

Finally, you insist that "all the allegations" which you have made "should be inquired into, and that none should be passed over." The copy of the Commission forwarded to you has fully informed you of the scope of the inquiry. I venture to say that while the Commission maintains consistently the position which the Government have taken up in this matter, you will find that it contains quite enough to test the entire character of your charges.

I have, &c.,
EDMUND BARTON.

Appendix No. 3.

Indemnity given by Mr. Eddy to Mr. Schey.

I AM prepared to give my undertaking to this Commission, and to Mr. Schey that I will not bring any civil action at law or in equity against him for anything he may say before this Commission whether such statement be made on oath or as advocate or counsel on his own behalf, and I now give such undertaking accordingly.

E. M. G. EDDY.

I also further undertake that I will not institute any criminal proceedings for libel.

E. M. G. EDDY.
9/5/92.

Appendix No. 4.

Chief Mechanical Engineer to Secretary to the Railway Commissioners.

Locomotive Power.

Sir, 9 April, 1892.

The shortness of hauling power on these lines has been a continual subject for complaint throughout their history. So great had the difficulty become towards the end of Mr. Commissioner Goodchap's administration that, to relieve the tension, the Government of the day ordered fifty engines to be made in the Colony consisting of two types—twenty-five in each—but, unfortunately, none of them were supplied, and, in consequence, the pressure and distress grew greater with the rapidly increasing train and engine mileage.

The policy of running engines until they will run no longer safely is a reckless and mischievous one, entailing wasteful expenditure and inviting accident, and our records show with the greatest of clearness that until now we have been working these lines more or less under such conditions.

The engine mileage for the year ending June, 1888, was 8⅞ millions; now it has reached the rate of 13⅞ millions per annum, or an increase of 56½ per cent. over the work performed 3½ years ago.

As above stated, prior to 1888, the urgency for additional locomotives was repeatedly shown, and it is manifest that such an immense increase in the mileage in itself must have caused great distress and difficulty before the requirements of the traffic were met. This is also evidenced by the fact that numerous requisitions from the Traffic Department for engines had to be cancelled, and the business refused, because the Locomotive Branch could not supply the necessary power.

During the past eighteen months 600 written refusals from the Sydney, Newcastle, Goulburn, Picton, Harden, and Junee Depôts alone prove this fact, and it is very certain that Penrith, Bathurst, Murrurundi, and the minor districts refused a proportionate number of requisitions for engines of which no written records have been kept. But beyond the written evidence verbal refusals have been frequent, when the two branches consulted and adjusted train arrangements, so as to meet the capacity of the Locomotive Department before business could be accepted. Moreover, it has very often occurred that engines which have been worked down and considered no longer fit for traffic, when sent to the workshops for thorough overhaul, they have been taken out again without repairs, and put on the road to run trains that could not be cancelled.

The

The excessive amount of work done by our locomotives is shown by the average and by the individual performances of engines per month, as compared with the work required from engines running on well-equipped lines in Great Britain. In the beginning of 1890, our engines averaged 2,300 miles per month, whereas during the last months of 1891 the average work performed per engine was 2,770, or an increase of 20½ per cent. within two years, and latterly our best-employed engines have been called upon to run, in many cases, from 4,500 to 7,000 miles each per month. On British railways, 2,000 miles per engine per month is considered full duty.

From facts such as these, it is manifest that additional new engines were absolutely necessary so as to conduct the business of these railways.

W. THOW,
Chief Mechanical Engineer.

Chief Mechanical Engineer to Secretary to the Railway Commissioners.

Sir,

I forward herewith copies of some reports and extracts from correspondence addressed to me since 1890, showing the distress caused through the insufficiency of locomotives on these lines necessary to work traffic satisfactorily, and to maintain the engines in reliable condition.

W.T.

(A.)

Difficulties experienced in working the traffic on Southern and South Coast Lines during the past year.

September, 1891.

The principal difficulty has been caused by the deficiency of locomotives. From this cause it has been impossible to give proper attention to the engines in the matters of repairs, cleaning, and washing out of boilers, as they could not be spared from traffic for these purposes. In evidence of this fact, I may mention that the average miles run per engine allotted to each district has been unusually high; in many cases it has been over 3,000 miles per month. Some engines have run excessive mileage. One case may be mentioned, that of No. 89, in the Sydney district, which ran 6,102 miles during the month of May, 1891.

The scarcity of engines has caused a great deal of overtime and Sunday work for mechanics, also frequently long hours for drivers and firemen, and inconvenience to traffic through having to wait for engines to come in before outgoing trains could be run; and many special trains had to be cancelled for want of engine-power.

Chief Mechanical Engineer. E. A. LOUGHRY.

(B.)

Eveleigh, 14 December, 1891.

Herewith a return of engines that ran over 4,000 miles during the month of October last, which I think will indicate that we were heavily taxed for power during that month.

The Chief Mechanical Engineer. E. A. LOUGHRY.

Exceptional mileage run by engines during the month of October, 1891.

No. of Engine.	Total miles run.	No. of Engine.	Total miles run.	No. of Engine.	Total miles run.
267	4,001	256	4,161	375	4,428
371	4,005	330	4,166	193	4,493
316	4,009	440	4,175	205	4,559
228	4,028	496	4,177	248	4,567
394	4,063	433	4,204	380	4,597
435	4,064	230	4,212	489	4,651
262	4,066	212	4,219	281	4,675
257	4,072	342	4,227	85	4,749
255	4,085	278	4,253	445	4,778
338	4,097	284	4,254	88	4,809
234	4,102	147	4,273	240	4,823
117	4,117	179	4,279	318	4,852
245	4,120	226	4,366	443	4,921
369	4,122	158	4,374	89	5,196
385	4,141	148	4,375	261	5,239
76X	4,154	414	4,423	305	7,002

(C.)

Difficulties experienced in working the Traffic since August, 1890, owing to the want of Engine-power.

I have to report as follows:—During September, October, November, and December, 1890, we were refusing traffic orders daily, being unable to supply the necessary power. During the month of October, at Sydney alone, forty-three engines were refused to traffic. In a like manner, at out-districts, orders for engines were being daily refused, and a number of engines that had previously been stopped for general repairs were again pressed into traffic, in order to temporarily cope with the difficulty. This state of affairs continued throughout the year of 1891, and not until the end of January of this year did we begin to feel a relief in this respect. In the meantime, numbers of applications had reached me from Steam Shed Inspectors calling attention to the shortness of power in their respective districts, and asking for additional engines, which I was not in a position to supply. Also, a number of complaints were received from the Traffic Branch calling attention to the fact that traffic was blocked at various depôts owing to the want of engine-power to work it forward; and it was not an unusual thing to receive applications from nearly every Locomotive depôt on the lines for additional power on or about the same time, and which could

could not be supplied. Working under these difficulties, we were obliged to work our engines almost continuously, not allowing the engines to remain sufficiently long in the sheds to receive proper attention in the way of washing out the boilers and repairs. This, I need scarcely point out, has materially added to the number of engine failures that have occurred on the lines during the past eighteen months, and it has also added to the overtime worked by the Running and Mechanical Staff, as repairs had oftentimes to be effected through the night, the engines not being available during working hours, and drivers and firemen were kept waiting at the shed for engines to come in before outgoing trains could be supplied.

The average miles run per working engine from August, 1890, to January, 1892, have been 2,685, which is an unusually high average. In some cases, the individual engine mileage has been much higher. For instance, engine No. 805 ran, during the six months ending 31st January, 1892, a total of 37,002 miles, or an average of 6,167 miles per month.

I attach herewith particulars of trains that have not run, or been delayed through want of engine-power, dates, &c.

I would point out that our records are very incomplete in respect to this matter, otherwise a much longer list could be supplied.

E. A. LOUGHRY,
Chief Mechanical Engineer. 24/3/92.

NEW SOUTH WALES GOVERNMENT RAILWAYS—LOCOMOTIVE DEPARTMENT.

RETURN showing the number of cases where Engines could not be furnished to Traffic Department, in consequence of being short of them, in consequence of which the trains were delayed or cancelled.

District.	1890.					1891.												1892.		Total No. of cases.	Remarks.
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apl.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.		
Sydney ...	...	15	43	9	16	7	36	12	13	29	17	9	2	21	31	26	25	10	13	334	
Picton ...	...	...	...	...	...	...	...	2	14	9	nil.	4	1	nil.	nil.	nil.	nil.	1	nil.	31	
Goulburn...	...	...	...	8	4	3	...	...	...	...	...	...	...	1	...	5	nil.	5	4	30	
Harden ...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	2	4	...	16	...	32	
Junee ...	...	...	...	21	...	9	14	1	2	...	...	1	...	...	...	...	1	2	...	45	Complete record not kept.
Penrith ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No record kept.
Bathurst...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Nyngan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Newcastle..	33	...	5	13	19	17	7	...	4	9	2	1	12	...	...	...	...	...	...	122	Complete record not kept.
Murrumbi..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No record kept.
Armidale...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total ...	33	15	48	51	39	30	57	15	33	47	19	15	15	32	33	35	26	34	17	594	

26/3/92.

(D.)

Difficulties experienced in working the Wool Traffic in 1890.

As showing the difficulties under which the Locomotive Branch has laboured during the past wool season, I have to submit the following for the information of the Commissioners:—

The average mileage per engine for the months of November and December, 1890, was 2,765 and 2,744 respectively, being an increase over the corresponding months of the previous year, 379 miles per engine for November, and 339 miles per engine for December.

Some instances of exceptionally heavy mileage by the small wheel goods engines occurred in these two months as follows:—

	Harden District.		Penrith District.			Wellington District.				Newcastle District.		
	Engine No.		Engine No.			Engine No.				Engine No.		
	93.	111.	135.	137.	188.	95.	185.	196.	335.	195.	422.	186.
Mileage...	3,995	4,002	4,085	3,991	4,336	3,997	4,071	4,317	4,104	4,092	3,959	3,939

The engines have suffered a very severe strain; it was often impossible to wash out the boilers when required, or to swoop tubes, and delays on the road were the consequence of this neglected duty. In the same manner necessary running repairs had to be neglected, though not to the extent of letting the proportion of failures to the miles run increase. But although a heavy increase of failures on the road was guarded against, the condition of the engines was materially deteriorated, the majority of the engines at the end of the year being what may be termed "run down."

The

The cost of repairs was increased tremendously, caused principally through overtime. No matter at what hour an engine came in repairs had to be effected, if outside the ordinary working hours either by men on night work working only six hours a day, or by men receiving the high rates of overtime. This, however, was unavoidable.

The conditions as above described make the difficulty of supplying power for the current month even greater than during the height of the heavy traffic. It was and is a usual thing for men to come on duty at their appointed time, and have to wait for engines to come in from previous trips.

C. H. STANGER,

The Locomotive Engineer. 13/1/91.

(E.)

Shortness of Engine-power in the Bathurst and Penrith Districts.

I HAVE to report that, on my recent visit to the Western Line, I found the Bathurst and Penrith districts in great difficulties for want of engines and men. The difficulty of the working, as I have already reported, is intensified by the large quantities of live stock accepted for one day. To-morrow, 1st prox., 178 trucks are required for the Western Line alone. The last return to hand, for the week ending August 22nd, of the mileage of engines in the Bathurst district shows an average for goods engines of 884 miles, and four goods engines made mileage for the week as follows:—1,083, 1,087, 1,204, 1,221.

I need not point out to you that engines engaged in slow traffic cannot possibly be attended to, and at the same time make such mileage.

I have a complaint from the District Superintendent, Orange, of the large number of failures occurring in the district, which, I regret to say, is too well founded. A complaint was also made to Mr. Colley, of Wellington, that the Bathurst goods engines are giving very much trouble from tubes leaking. Upon my asking Mr. Wilson and the leading boiler-maker at Bathurst for an explanation, it was pointed out that the engines are no sooner in the shed than they are out again and that it is impossible to attend to them. I then arranged that a boiler-maker and helper should be put on night duty from to-night, as they will then be able to catch several of the engines that are washed out at night, and to attend to any engine required, as it appears to be of nightly occurrence for a boiler-maker to have to be sent for to do repairs.

I have endeavoured to get additional engines for Bathurst, but the best that can be done to assist me at present is to exchange two of the worst engines, leaving the number the same. At the very least four additional goods engines are required, and then the average weekly mileage per engine would only be reduced from 884 to 720.

There are two engines standing in the shop under repair; No. 251 has just had an internal boiler examination finished, and been lowered on to its wheels, and if fitters were available might be got out in ten days; the other one, No. 239, has all the tubes out in readiness for an internal examination. It could not be stated when this engine would be out, as with one boilermaker on night work, and two looking after running repairs there would be no boilermakers to work at it.

The amount of overtime made by the Bathurst Mechanical Staff is heavy, and no relief can be obtained by working overtime. On another paper I am asking for authority to employ some men to complete these engines.

Long hours have been worked by the drivers and firemen, both at Bathurst and Penrith, who frequently are sent out again with barely time to rest.

The engines are not properly cleaned, the number of cleaners available in the shed being very small, a great number of them are acting as firemen. I attach papers relating to shortness of men and engines in the Penrith district.

I am not in a position at the present moment to state the additional number of drivers, firemen, and cleaners required, but will do so in a day or so.

C. H. STANGER.

Chief Mechanical Engineer. 31/8/91.

(F.)

Shortness of Engine-power in the Bathurst District.

I SHALL be glad if you can possibly manage to send a 205 class engine to Bathurst to-day. The following will show you the straits to which Bathurst has been put, and it is absolutely necessary to afford relief.

On Friday morning, the 25th instant, engine No. 438 arrived at Bathurst with the down mail with a dirty boiler; instead of stopping it to be washed out in readiness for the up mail at night, men were waiting for it, gave it a slight blow down, and took it to Orange on the pick-up, not getting it back to Bathurst until 4·4 in the evening when it had another blow down and was put on the up mail. Under such circumstances it is not to be wondered at that the mail trains are losing time through loco. every night. I have given Mr. Wilson instructions that he is not to jeopardise the mail working in this manner, but to avoid the cancellation of such an important train as the pick-up, which is the only means of supplying several stations, it is necessary that another engine be sent; if you will work it to Penrith I will arrange with Mr. Park to have it worked on.

If a 205 class engine cannot be sent a 93 class engine will suffice.

C. H. STANGER.

Mr. Close, Eveleigh. 28/9/91.

(G.)

Particulars of a few cases showing the difficulty of working the traffic during the present wool season for want of Engine-power.

THE most serious difficulty was met with on the Western Line towards the end of October, when, at one time, 160 trucks of wool were standing at the far Western stations, which were only cleared off by supreme efforts being made, such as running three special trains on a Sunday, one of which was worked by two sets of mail engines and men, who did this work in addition to their ordinary week's running, and in consequence of one of these drivers having been so used, who would otherwise have been pilot to the up mail that night, it became necessary to ask a driver, who was then off duty through illness, to come to work and assist the mail.

The

The next most serious block occurred last week, when upwards of 440 trucks were reported to have been in the yard at Penrith, waiting engine-power for down transit. Generally speaking it may be stated that the utmost difficulty has been experienced on the Western line in working the traffic during the last three months. Engines could not be stopped from traffic to allow sufficient time for necessary repairs to be effected, and the number of failures consequently was very great.

The mileage of engines has been, in some cases, abnormal; for instance, in the month of October, six goods engines stationed at Bathurst made mileage as follows:—

No. 244	5,087 miles.	No. 253	4,781 miles.
No. 318	4,965 „	No. 327	4,567 „
No. 219	4,882 „	No. 251	4,360 „

This, with 4-feet driving wheels, is very excessive. In fact, so hard pressed was Bathurst that I recollect a case where the enginemen booked on to work the pick-up goods train from Bathurst to Orange and return, had to wait the arrival of the engine of the down mail in order to use it for the day's work to Orange and back, the same engine being required to work the up mail that night. The driver of the mail engine reported it as requiring to be washed out, but this could not be done, and the engine therefore started from Bathurst at night with the up mail in an unfit condition.

At Bathurst during two months 10 engines were refused to traffic, and at Wellington during the same two months 34 engines were similarly refused, notwithstanding the efforts made by the District Locomotive Officers, who, as I have pointed out, have frequently rendered themselves liable to censure for sending engines out in an unfit condition. The greater number refused at Wellington is accounted for by the fact that Wellington is dependent upon receiving its daily supply of engines on down trains from Bathurst before supplying the engines required for up traffic.

Newcastle District has suffered mostly through the want of sufficient passenger engines, and on the 9th November two goods engines without air-brakes had to be used on passenger trains.

On the Northern Line the insufficient number of goods engines has been most severely felt in the Murrurundi District, and sometimes a train has had to wait whilst the engine that had worked it in was sent into the locomotive yard and got ready to continue the journey with other men.

Heavy mileage of goods engines occurred on the Northern Line as follows:—

Newcastle engine	No. 234		4,902
„	„ No. 250		4,272
„	„ No. 207		4,237
Murrurundi	„ No. 324		4,813
Armidale	„ No. 529		4,893

In fact, the locomotive work on the Western Line and Northern Line during the last three months may be best characterised as a system of working from hand to mouth, and only in very exceptional cases has a foreman had an engine in the shed eight hours prior to its going out, except when it has been specially stopped for repairs, or on a Sunday.

C. H. STANGER,
Chief Mechanical Engineer. 8/12/91.

(H.)

Locomotive Out-door Superintendent's Office,
Sir, Eveleigh, Sydney, 5 December, 1891.

In accordance with your memo. of the 4th instant, asking for a report concerning the inability of this department to work the traffic from Penrith during the past week, when upwards of 440 trucks were at one time at Penrith for down transit, I have personally inquired into this matter, visiting Penrith for this purpose. I have also had one of my Travelling Inspectors, Mr. Stuart, taking out the work done by the Penrith engines during the past week. I find that there are 59 engines in the Penrith district, of which 6 are stopped for extensive repairs, leaving 53 available for traffic. To have worked last week's traffic without any block I estimate that, at the very least, 60 running engines were necessary.

As regards the movements of the engines, I am satisfied that the best was done by the Locomotive Foreman that was possible. More service might have been got out of the 53 engines actually available for traffic if it were not for the fact that those engines running to Bathurst had to wait much longer in order to get return loads. These engines could not have been returned light, as there were no other engines that could have been worked into Bathurst in time to bring the loads of live stock that were expected. With more engines taking down traffic this would have been possible.

It was not possible to afford any assistance to the Penrith district last week. The Bathurst engines are more heavily worked than the Penrith. When I applied for engines from Eveleigh I was informed that trains were being cancelled for want of engine-power. The Northern Line has been particularly short of engines. So great is the pressure that engines are now running after important repairs have been booked, but, rather than refuse power, the risk has been taken of allowing these engines to run another trip.

Secretary. C. H. STANGER.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

Memoranda of insufficient supply of Locomotive Power to meet the requirements of the Traffic supplied by the Chief Traffic Manager to the Commissioners.

5th June, 1889.

1. Extract from Officers' Minutes, No. 244:—"Want of engine power.—It was reported that at Newcastle great difficulty was experienced in obtaining engines for goods traffic."

5th September, 1890.

2. Telegram from the District Superintendent, Wellington, to the Chief Traffic Manager:—"In consequence of Loco. not being able to provide engines goods are being seriously delayed in my district. Yesterday, through having no engine, I had to cancel No. 22 up goods train, Bourke to Dubbo, and this morning second division of No. 22 up goods train, Wellington to Bathurst, has been cancelled. Station-master, Bathurst, has forty waggons of coal for South, but cannot move them. Loco., West, are not in position to cope with the heavy stock, and wool traffic now starting."

5th October, 1890

3. Telegram from District Superintendent, Newcastle, to Chief Traffic Manager:—"I have three trains of stock trucks and seventy of wool at Singleton, and cannot get an engine."

30th October, 1890.

4. Telegram from District Superintendent, Junee, to Chief Traffic Manager:—"At present moment three train-loads of goods, coal and perishables, at Harden and Demondrille; no engines available to lift traffic. Have cancelled two trains to-day."

30th October, 1890.

5. Telegram from District Superintendent, Junee, to Chief Traffic Manager, at 12 midnight:—"Locomotive at Harden unable to supply engines for 2·20 p.m. special to Junee, and full train load of coal standing at Demondrille."

4th November, 1890.

6. Telegram from District Superintendent, Junee, to Chief Traffic Manager:—"Had to cancel one train from Harden last night owing to no engine being available."

5th November, 1890.

7. Telephone from Comptroller of Stores to Chief Traffic Manager:—"In spite of all representations we are getting less coal into Eveleigh than ever; following up yesterday's balance report of 570 tons, Eskbank invoiced 204 tons more yesterday, while we received 138 tons only, increasing the balance on road to 636 tons."

Reply from Chief Traffic Manager to Comptroller of Stores:—"Unfortunately I am fully aware of the delay to coal in transit, but it is entirely due to the short supply of engine power available. I saw Messrs. Loughry and Stanger, Locomotive Out-door Superintendents, yesterday, and they informed me that everything possible is being done to meet the demands of the traffic. I will also see the Chief Commissioner to-day."

6th November, 1890.

8. Telegram from District Superintendent, Goulburn, to Chief Traffic Manager:—"Seventy-five (75) trucks of wool and ordinary goods standing at Harden. Locomotive cannot supply engine power to lift traffic. It is imperative that more engines be placed at our disposal in order to cope with traffic."

7th November, 1890.

9. Telegram from District Superintendent, Goulburn, to Chief Traffic Manager:—"Traffic to-day very heavy; engine power at Goulburn and Harden insufficient; sixty-five (65) trucks now at Harden for North; cannot get them away."

8th November, 1890.

10. Telegram from District Superintendent, Junee, to Chief Traffic Manager:—"Several train loads at Harden and Demondrille waiting transit; Locomotive at Harden must provide engine power, as Locomotive at Junee cannot assist."

10th November, 1890.

11. Telegram from District Superintendent, Junee, to Chief Traffic Manager:—"Quantity of coal at Demondrille again this morning; Locomotive still short of engines."

11th November, 1890.

12. Telegram from District Superintendent, Junee, to Chief Traffic Manager:—"Locomotive short of engines for stock traffic to-day."

12th November, 1890.

13. Telegram from District Superintendent, Junee, to Chief Traffic Manager:—"Sixty (60) trucks of sheep will be delayed from two (2) to six (6) hours to-day waiting engine power."

12th November, 1890.

13A. An accumulation of 264 waggons, in addition to the day's traffic, took place between Penrith and Eskbank in consequence of the Locomotive Department being unable to meet the demands of traffic. They could not even supply engines for the ordinary tabled trains.

13th November, 1890.

14. Telegram from the District Superintendent, Junee, to the Chief Traffic Manager:—"Three (3) engines ordered for the conveyance of stock-trucks for south-west, to load to-morrow. Delayed through no engine power being available."

19th November, 1890.

15. Telegram from District Superintendent, Newcastle, to Chief Traffic Manager:—"Forty (40) trucks of wool waiting transit at Muswellbrook. Locomotive unable to supply engine power. Serious complaints from consignees."

20th November, 1890.

16. Telegram from District Superintendent, Goulburn, to Chief Traffic Manager:—"Train of empty trucks blocked at Harden eight (8) hours to-day for want of engine power."

24th November, 1890.

17. Telephone from Chief Traffic Manager to the Chief Mechanical Engineer:—"There is an accumulation of stock and goods empties at Newcastle and West Maitland. Not sufficient engine power available."

26th November, 1890.

18. Telegram from District Superintendent, Goulburn, to Chief Traffic Manager:—"Twenty (20) trucks of wool in transit blocked at Harden for want of engines. Locomotive could not supply last night or this morning."

27th November, 1890.

19. Telegram from Station-master, Eskbank, to the District Superintendent, Penrith:—"Stated that the Locomotive Department could only supply five (5) engines for 28th November, 1890, which necessitated the cancellation of trains."

13th

13th December, 1890.

20. Telephone from the Chief Traffic Manager to Chief Mechanical Engineer:—"Traffic seriously delayed at Singleton owing to want of engine power."

19th December, 1890.

21. Telegram from District Superintendent, Tamworth, to Chief Traffic Manager:—"Twenty-eight loaded trucks on hand for south at Muswellbrook; cannot get engine power; trucks constantly delayed."

2nd January, 1891.

22. The District Superintendent, Junee, reported to the Chief Traffic Manager that No. 61 down goods train was cancelled owing to want of engine power.

15th January, 1891.

23. Telegram from Station-master, Eskbank, to District Superintendent, Penrith:—"I am unable to clear traffic up or down for want of engine power; Locomotive cannot supply."

On receipt of the above telegram the District Superintendent communicated with the Locomotive Foreman, Penrith, who replied that he was unable to do anything in the matter.

16th January, 1891.

24. The Station-master, Eskbank, again telegraphed to the District Superintendent, Penrith, in the following terms:—"We have now seventy-one (71) trucks of yesterday's coal for up, and forty-two (42) waggons for down transit, and no prospect of getting them cleared away; I anticipate a complete block to-night, mines having a full supply of empty trucks to-day, yard will be packed with coal and no engine to clear it away."

25th February, 1891.

25. Telegram from Loco., Sydney, to Out-door Superintendent:—"Cannot supply engine for second division of 10·35 p.m. south coast to-night."

26th February, 1891.

26. Telephone from the Loco., Sydney, to the Out-door Superintendent:—"Unable to supply engine for special goods train for Newcastle to-day."

26th February, 1891.

27. Telephone from Loco., Eveleigh, to Out-door Superintendent:—"Cannot supply engines for second division of No. 3 south coast goods train to-morrow, 27th instant."

26th February, 1891.

28. Telephone from Out-door Superintendent, Sydney, to Loco. Sydney:—"Your telephone message in which you say you cannot supply engine for Second division of No. 55 north goods train, please let me know at what time you will be able to supply engine; very urgent, traffic delayed in consequence." The Loco. Department replied that they could not supply engine in this case.

27th February, 1891.

29. An engine was requisitioned for to run a special goods train from Sydney to Penrith, but could not be supplied, no engines being available.

27th February, 1891.

30. An engine was requisitioned for to run a special from Sydney to Newcastle on the morning of the 28th, but Loco. were not able to provide.

27th February, 1891.

31. An engine was requisitioned for to run a special from Sydney to Finnigan's Siding, for the purpose of lifting a load of rails, but an engine could not be supplied.

27th February, 1891.

32. Telephone from Out-door Superintendent, Sydney, to Loco. Department, Eveleigh: "Please supply two engines for Helensburgh to-night, 27th instant. Both engines urgently required; mines idle for want of empties and engine power to clear loading." Loco. Department could not supply.

28th February, 1891.

33. Two engines were required to run to Bulli for loading on this date, but could not be supplied.

16th March, 1891.

34. Telegram from Out-door Superintendent to Chief Mechanical Engineer:—"Station-master, Picton, reports traffic standing all day for south and no engines available at Picton to lift it."

13th April, 1891.

35. Telegram from Out-door Superintendent, Sydney, to Loco., Eveleigh:—"In consequence of want of engine power to-day, we have traffic seriously delayed at Granville and Strathfield, besides heavy traffic on south coast. Can you not manage to provide engine?" Loco. replied:—"Engine cannot be supplied."

15th April, 1891.

36. Telegram from District Superintendent, Wellington, to Chief Traffic Manager:—"Station-master, Bathurst, advises me that his yard is blocked with down traffic, principally coal, owing to insufficient supply of engine power."

16th April, 1891.

37. A requisition was made by the District Superintendent, Goulburn, to the Locomotive Foreman at Harden for three (3) engines for Blayney and one (1) for Cowra to clear these stations, which were blocked with traffic. The Locomotive Foreman replied:—"Cannot supply engines for any of these trains; none available."

24th

24th April, 1891.

38. Telegram from Out-door Superintendent, Sydney, to Loco., Eveleigh :—"As you cannot supply engine for 3 a.m. special goods train to-morrow, please let me know early at what time you will be able to supply one." Loco. replied; "Cannot supply."

8th May, 1891.

39. Memorandum from Locomotive Foreman to Station-master at Harden :—"I cannot supply an engine for 10·50 p.m. to Cowra to-night; will provide one as soon as possible."

12th May, 1891.

40. Report from the District Superintendent, Tamworth, to the Chief Traffic Manager in regard to goods traffic being delayed for want of engine power :—"Serious delay is occurring in the transit of goods traffic through the inability of the Locomotive Department to supply engines. To-day I am unable to obtain an engine from the Locomotive Inspectors at Murrurundi, Werris Creek, or Armidale for a special train. The Armidale Inspector advises that he cannot supply an engine before the 14th May. I would specially refer you to the advice received from Armidale, which states that an engine will not be available for two (2) days to come. This clearly indicates the bad position in which matters stand."

22nd May, 1891.

41. Report made by the Night-officer, Harden, to the Station-master at that station in regard to delay to traffic :—"I beg to report that Locomotive were unable to supply an engine to run No. 28 up goods train on the 21st May, in consequence of which a number of trucks were delayed until May 22nd, 1891."

4th August, 1891.

42. Telegram from District Superintendent, Penrith, to Chief Traffic Manager :—"Eskbank requires 180 more empties for to-morrow; we have 40 at Penrith, but, owing to inadequate supply of engines, Loco. are unable to lift. One of the ordinary trains had to be cancelled and four extra engines requisitioned for could not be furnished, as Loco. had not the engines available. If something is not done immediately to improve supply, I am afraid complaints will be made, as it is evident the mines will be stopped to-morrow."

6th August, 1891.

43. Telegram from District Superintendent, Newcastle, to Out-door Superintendent :—"At a stand for want of engine power. I am cancelling No. 76, and thus delaying a train of goods for Sydney in order to use her engine to take empty stock waggons to No. 3 district to meet to-morrow's orders."

6th August, 1891."

44. Telegram from District Superintendent, Newcastle, to Out-door Superintendent, at 5·20 p.m.:—"At a stand-still for want of engine power. Am cancelling No. 76, thus delaying a train of goods for Sydney."

6th August, 1891.

45. Telegram from Station-master, Eskbank, to District Superintendent, Penrith :—"I have ninety-seven (97) loaded waggons for up transit at present. Locomotive can only supply engine for two trains."

This would leave three train-loads waiting for engine power.

7th August, 1891.

46. Telegram from Station-master, Eskbank, to District Superintendent, Penrith :—"Forty-one (41) waggons waiting up transit; Locomotive unable to supply engine power."

26th August, 1891.

47. Telegram from Station-master, Eskbank, to District Superintendent, Penrith :—"No. 50 up goods train cancelled; Locomotive unable to supply engines."

27th August, 1891.

48. Telegram from Station-master, Eskbank, to District Superintendent, Penrith :—"After departure of No. 8 up goods train I will have about forty (40) loaded waggons for up transit; Locomotive cannot supply any more engine power."

3rd September, 1891.

49. Station-master, Eskbank, to District Superintendent, Penrith :—"I have thirty-five (35) trucks left for up transit after departure of No. 4 up goods, and thirty-six (36) through waggons for down transit; Locomotive cannot supply any more engines to clear. I had to cancel No. 19 down goods to provide engine for special stock."

22nd September, 1891.

50. Memorandum from Locomotive Foreman, Penrith, to District Superintendent, Penrith :—"Please note that we have no engines to run No. 55 down goods train to-night."

1st October, 1891.

51. Telegram from Station-master, Eskbank, to District Superintendent, Penrith :—"I have fifty-three (53) trucks for down transit and fourteen (14) sheep-vans for Bathurst, in addition to which there are fifty-one (51) waggons for up transit; Locomotive can only provide engines for No. 8 up goods train to Penrith, and two divisions of No. 19 down goods train to Bathurst."

This would leave thirteen (13) waggons waiting up journey and forty-eight (48) waggons for down journey.

15th October, 1891.

52. Telegram from District Superintendent, Penrith, to Out-door Superintendent :—"Traffic waiting for want of engine power to lift at Eskbank. This morning the Station-master at Eskbank wired at 6 a.m.: 'I have 101 for up and 36 for down transit; Locomotive Department unable to supply any engine power to clear.' No. 34 up goods from Wallerawang, and No. 50 goods from Eskbank, both ordinary tabled trains, were cancelled last night owing to want of engines to work them."

16th October, 1891.

53. Telegram from District Superintendent, Penrith, to Out-door Superintendent :—"Traffic waiting for want of engine power at Eskbank; 86 trucks in up, and 47 in down transit, at 7 a.m. to-day."

22nd

22nd October, 1891.

54. Telegram from District Superintendent, Penrith, to Out-door Superintendent:—"Traffic waiting at Bathurst and Eskbank for want of engine power to lift same, there being 34 of goods in up transit at Bathurst; goods trucks in up transit, 63; trucks in down transit, 27, at Eskbank at 7 a.m. to-day; provide immediate engine power."

29th October, 1891.

55. Telegram from District Superintendent, Penrith, to Out-door Superintendent:—"Traffic waiting for want of engine power to clear it at Eskbank, there being now 75 loaded trucks in down and 18 loaded waggons in up transit. Unless more engine power is supplied the result must be a block."

10th November, 1891.

56. Extract from letter addressed by District Superintendent, Penrith, to District Goods Manager:—"On 3rd November the following mines were idle owing to the short supply of waggons: Oaky Park and Hermitage from 10·30 a.m., the Vale and Vale of Clwydd from 11·30 a.m." The shortage on these dates was caused by the Locomotive Department being unable to provide engines.

12th November, 1891.

57. Telegram from Goods Superintendent to Chief Traffic Manager:—"There are 163 trucks of wool standing this morning west of Wellington; Locomotive only able to provide engine power for forty (40). Appearances indicate that it will be Thursday before block in district is cleared."

21st November, 1891.

58. Note from Locomotive Foreman, Harden to Station-master Harden:—"Cannot supply an engine for No. 64 up goods or 5 p.m. special goods to-day."

16th December, 1891.

59. Telegram from Station-master, Granville, to Rolling Stock Superintendent, Sydney:—"Traffic not sent forward yet; unable to do so in consequence of Penrith being unable to run No. 103 down goods to-day for want of engine power. All other trains fully loaded from here. No opportunity of sending traffic forward with present engine power and work other traffic also."

20th December, 1891.

60. Telegram from District Superintendent, Penrith, to Chief Traffic Manager:—"Station-master, Eskbank, wires, 'Supply of empties has been very unsatisfactory to-day; Oaky Park, Vale of Clwydd, and Zig Zag did not start work on account of empties not being here. The Vale, Lithgow Valley, and Hermitage idle from 11·30, same cause. This shortage is solely due to the inadequate supply of engine power at Penrith.' I have no less than 300 empties at Penrith, but am unable to secure engine power to lift. Provide engines as soon as possible."

28th January, 1892.

61. Report from Mr. E. A. Loughry, Out-door Locomotive Superintendent, to Messrs Richardson and Parry, Out-door Traffic Superintendents, further demonstrating the scarcity of engine power notwithstanding the recent introduction of the new Baldwin engines:—"Please see attached list of cases of trains that were delayed in starting through not having engines available to run them to time; also cases wherein engines could not be supplied for certain special trains through want of engine power. I regret this should occur, but I assure you that everything possible is being done to provide engine power."

The following trains were delayed through deficiency of engine power:—

Date.	No. of Train.	From	To	Time delayed.
1892.				h. m.
18 January	50 coal	Wollongong	Eveleigh	4 0
18 "	1 goods	Darling Harbour	Kiama	0 20
19 "	25 "	"	Helensburgh	0 20
20 "	1 "	"	Wollongong	0 55
25 "	43 "	Sydney	South Clifton	2 40
25 "	.....	.....	.....	.....

The following requests for engines were not satisfied:—

Date.	Where ordered for.	At		No. ordered.
1892.		a.m.	p.m.	
18 January	Picton	10·15	.....	1
18 "	Bulli	.....	11·30	1
18 "	Brooklyn	.....	11·30	1
18 "	Picton	9·20	.....	1
19 "	"	10·0	.....	1
19 "	Newcastle	10·0	.....	1
19 "	Bulli	.....	7·25	1
19 "	Newcastle	.....	9·40	
20 "	"	11·0	.....	
21 "	Bulli	11·0	.....	1
21 "	Newcastle	.....	2·0	1

Messrs. Richardson and Parry. E.A.L., 28/1/92.

62. Statement from the Station-master, Dubbo, to the District Superintendent, Orange, detailing particulars of traffic delayed for want of engine power:—

Date.	No. of Engines ordered.	Where ordered for.	Traffic delayed.
1891.			
3 October	1	Trangie and Bathurst	20 loaded trucks.
9 ,,	1	Dubbo	Wool.
12 ,,	1	,,	17 waggons, goods.
13 ,,	2	,,	Loaded trucks.
14 ,,	1	,,	65 loaded.
14 ,,	1	Narramine	8 of wool.
15 ,,	1	Dubbo	17 waggons, wool.
27 ,,	2	,,	80 loaded waggons.
28 ,,	2	,,	103 ,,
28 ,,	1	,,	36 loaded, goods
29 ,,	1	Narramine	49 waggons.
30 ,,	2	Dubbo	94 ,,
31 ,,	3	,,	132 wool (waggons).
3 November	2	,,	84 ,, ,,
4 ,,	2	,,	70 ,, ,,
10 ,,	2	,,	57 ,, ,,
13 ,,	1	,,	47 ,, ,,
14 ,,	1	,,	27 ,, ,,
16 ,,	1	,,	11 ,, ,,
17 ,,	2	,,	60 ,, ,,
18 ,,	2	,,	58 ,, ,,
21 ,,	2	,,	98 ,, ,,
24 ,,	1	,,	43 waggons, up transit.
26 ,,	1	,,	27, up transit.

63. The following return was submitted by the Station-master, Blayney, to the District Superintendent, Orange, in respect to traffic having been delayed for the want of engine power, which the Locomotive Department was not able to supply:—

Date.	No. of Engines ordered.	Where ordered for.	Traffic delayed.	Time detained.
1891.				
4 November	2	Harden	24 waggons, coal.	12 hours.
4 ,,	1	Bathurst	16 ,, wool.	8 ,,
1892.				
January	3	Harden	66 waggons, coal.	21 hours.
10 ,,	2	,,	50 ,, ,,	20 ,,
11 ,,	3	,,	100 ,, ,,	24 ,,
12 ,,	2	,,	70 ,, ,,	18 ,,

64. Comparative statements showing the tonnage of goods, mineral, and live-stock traffic carried during the five months ended February, 1890, 1891, and 1892:—

	Tons.		Tons.		Tons.
October, 1889 ...	334,412	1890 ...	202,050	1891 ...	420,452
November, 1889 ...	301,368	1890 ...	375,839	1891 ...	408,073
December, 1889 ...	278,126	1890 ...	415,453	1891 ...	396,497
January, 1890 ...	291,206	1891 ...	420,242	1892 ...	396,471
February, 1890 ...	257,869	1891 ...	394,092	1892 ...	382,305
Total	1,462,981		1,808,582		2,003,798

ROBT. J. SHERIDAN,
30/3/92.

The Chief Traffic Manager.

Appendix No. 5.

Railways.—Tenders for Engines and Tests for suitable Type of Engine.

[*Ordered by the Legislative Assembly to be printed*, 13 *October*, 1887.]

The Locomotive Engineer to The Commissioner for Railways.

Additional Engines required for new extensions, &c.

In view of the number of additional miles that will be opened for traffic within the next two years, I beg to recommend tenders be invited at once for the number of engines required to work them.

On the Northern Line there are not sufficient goods engines now in stock to meet the traffic in the busy season, and when the line is opened to Tenterfield we shall have very great difficulty in meeting the increased requirements, so that it is absolutely necessary that more locomotives be supplied at the earliest possible moment for that line.

While we have sufficient engine power to meet the traffic on the Southern and Western Lines at the present time, yet when the new extensions are opened (over 300 miles) an increase to our locomotive stock will be indispensable. In

In view of the many advantages accruing from as few types of engines as possible being used, I strongly recommend that the terms of the specification for the two classes now required be strictly adhered to.

The class most suitable for our passenger traffic is that provided for in the specification upon which tenders were last invited, and for which the Vulcan Foundry Company, of England, obtained the contract. The advantages gained by having even the same class made by the same makers are so considerable, and in view of the very low price at which the Vulcan Foundry Company are supplying, induces me to strongly recommend that an order for those now required be given to the same firm.

For the goods traffic I do not think that a more suitable engine than the Mogul class, specification No. 191, can be obtained. We have now had some years' experience of them, and, as regards loads hauled, economy in "running stores," and small cost of repairs and renewals, they have given general satisfaction. I therefore strongly urge that this type of engine be adhered to.

The following are the number of engines required, and the estimated cost:—

	£
Great Northern Railway—	
4 Passenger Engines, @ £2,450 each	9,800
8 Goods „ @ £2,780 each	22,240
Great Southern and Western Lines—	
12 Passenger Engines, @ £2,450 each	29,400
20 Goods „ @ £2,780 each	55,600
Total	£117,040

I intend to submit a separate paper upon the quantity and description of tank-engines, which will be required to meet the increased requirements on our suburban lines.

W. SCOTT, 25/5/86.

I cannot concur in Mr. Scott's recommendation that for the reasons given the order for the sixteen passenger engines required be given to the Vulcan Company without competition.

We have not, I think, received the engines which the Vulcan Company obtained recently the contract for, and therefore cannot know much of the quality of the work; but even if it be all that can be desired, I do not think it right that we should depart from the approved system of inviting tenders.—CH.A.G., 28/5/86.

The system of inviting tenders should not be departed from. It is represented that it is absolutely necessary these engines should be obtained. I therefore approve of tenders being called.—W.J.L., 29/5/86.

Tenders for Forty-four Locomotives.

The Agent-General for New South Wales to The Secretary for Public Works.

Sir, 5, Westminster Chambers, 22 April, 1887.

In accordance with your instructions, as conveyed to me in your letter 86-140, of the 11th January last, and the Honorable the Colonial Secretary's telegrams of the 5th March last and the 4th instant respectively, I have invited tenders from the Continent, America, and the United Kingdom for the forty-four locomotives required by the Government. Tenders were received at this office on the 12th instant, and on the 14th idem I informed the Honorable the Colonial Secretary, by telegram, as follows:—

"*Re* Locomotives.—Four tenders received from United States of America; three from Continent; twenty-two from England. Eleven according to original, and twelve to new conditions. Six informal. English tenders lowest, and very close. Neilson's lowest according to new conditions, but without design—passenger, £2,375; goods, £2,245. After further examination of tenders I will telegraph again."

On the 19th instant I further telegraphed as follows:—

"Tenders locomotives. Large difference between old and new conditions to cover possible rejection risks and deferred payments. Six firms not tendered under new conditions. Consider Government best served (Dübs) £2,165, passenger (Beyer) £2,495—payment in England as hitherto. Believe Beyer would take £100 less."

I have now the honor to forward, for your information, the Inspecting Engineer's letter of the 21st instant, having reference to the analysis of the tenders received, together with schedules of the tenders for each kind of engine.

I have, &c.,
SAUL SAMUEL.

[*Enclosure.*]

Sir, 2, Queen's Square Place, Westminster, S.W., 19 April, 1887.

I have gone very carefully through the details of the tenders, plans, and specifications of the locomotives.

Of the various plans which have been sent in, six firms do not tender on the altered or new conditions, and the difference between the original and new conditions is in some cases large—namely, as much as £460 per engine. This is excessive; about £150 would perhaps represent the money value of the different modes of payment and cost of shed-room. There is the interest on the deferred payment, the commission to the Financial Agent in the Colony, and the exchange in sending home the money, &c. In the instance where the large increase is made, I think the manufacturers have put down the difference to compensate for risk of rejection in the Colony.

The lowest tender under the new conditions is, as previously stated, that of Messrs. Neilson & Co.; but no plan has been sent with the tender, and before any acceptance of this tender it would be absolutely necessary to have plans and details to be approved, so that we may know what they propose, as Messrs. Neilson have not hitherto made engines for the New South Wales Government.

If it be a question of excellence of manufacture, I should recommend that the goods engines be given to Messrs. Dübs and the passenger engines to Beyer and Peacock, who have made similar locomotives for the Colony, and have always given satisfaction in their work.

Also, that the payment be made in England in the usual manner, the price being respectively* £2,265 for the goods engines at Sydney, and £2,495 for the passenger engines at Sydney. The Newcastle delivery is £25 each more.

I am, &c.,
JOHN FOWLER.

The Agent-General, New South Wales Government.

*Price since been reduced by £100.

SCHEDULE

SCHEDULE OF TENDER.

(F 1475.)

28 outside Cylinder Bogie Goods Engine, with Tenders.

Firm.	Original conditions—Pay in England.		Altered conditions—Pay in Colony.		Informal conditions.	Place of delivery.	Designs accompanying tender.
	Price each for 20 Sydney engines.	Price each for 8 Newcastle engines.	Price each for 20 Sydney engines.	Price each for 8 Newcastle engines.	Price each for the 28 engines.		
	£	£	£	£	£		
Dubs & Co.	2,265	2,290	2,725	2,750	.....	20 in steam, Sydney 8 ,, Newcastle.	Engine & tender.
Beyer, Peacock, & Co.	2,345	2,370	2,495	2,520	.....	20 ,, Sydney 8 ,, Newcastle.	,, ,,
Stephenson & Co.	.....	.....	No tender...	No tender...	2,135	F.o.b., London or Liverpool.	,, ,,
Kitson & Co.	.....	.....	2,990	2,990	.....	20 in steam, Sydney 8 ,, Newcastle.	,, ,,
Sharp, Stewart, & Co.	.....	.....	2,368	2,868	.....	20 ,, Sydney 8 ,, Newcastle.	,, ,,
Neilson & Co.	2,228	2,228	2,245	2,245	.....	20 ,, Sydney 8 ,, Newcastle.	No design of engine or tender.
Clyde Locomotive Company	2,375	2,400	2,425	2,450	.....	20 ,, Sydney 8 ,, Newcastle.	Engine; no tender.
Vulcan Foundry Company..	2,336	2,386	No tender...	No tender...	.....	20 ,, Sydney 8 ,, Newcastle.	Engine & tender.
Burnham, Parry, Williams, & Co.	.....	.....	,, ...	,, ...	2,950	Alongside vessel, New York.	,, ,,
Canadian Locomotive Company.	.....	.....	,, ...	,, ...	2,500	F.o.b., New York ...	No design of engine or tender.
Sächsische Company ...	About £2,518 (price given by weight).	About £2,500 (price given by weight).	,, ...	,, ...	.....	20 in steam, Sydney 8 ,, Newcastle.	,, ,,
Société de Construction ...	No tender for these engines.						

SCHEDULE OF TENDER.

(F 1475.)

16 Outside Cylinder Bogie Passenger Engines, with Tenders.

Firm.	Original conditions—Pay in England.		Altered conditions—Pay in Sydney.		Informal conditions.	Place of delivery.	Designs accompanying tender.
	Price each for 12 Sydney engines.	Price each for 4 Newcastle engines.	Price each for 12 Sydney engines.	Price each for 4 Newcastle engines.	Price each for the 16 engines.		
	£	£	£	£	£		
Dubs and Co.	2,425	2,450	2,885	2,910	.....	12 in steam, Sydney 4 ,, Newcastle.	Engine & tender.
Beyer, Peacock, & Co.	2,495	2,520	2,645	2,670	.....	12 ,, Sydney 4 ,, Newcastle.	,, ,,
Stephenson & Co.	.....	.....	No tender...	No tender...	2,350	F.o.b., London or Liverpool.	,, ,,
Kitson & Co.	.....	.....	3,090	3,090	.....	12 in steam, Sydney 4 ,, Newcastle.	,, ,,
Sharp, Stewart, & Co.	.....	.....	2,516	2,516	.....	12 ,, Sydney 4 ,, Newcastle.	,, ,,
Neilson & Co.	2,358	2,358	2,375	2,375	.....	12 ,, Sydney 4 ,, Newcastle.	No design of tender and engine.
Clyde Locomotive Company	2,475	2,500	2,525	2,550	.....	12 ,, Sydney 4 ,, Newcastle.	Engine, no tender
Vulcan Foundry Company..	2,530	2,580	No tender...	No tender...	.....	12 ,, Sydney 4 ,, Newcastle.	Engine & tender.
Burnham, Parry, Williams, & Co.	.....	.....	,, ...	,, ...	2,900	Alongside vessel, New York.	,, ,,
Canadian Locomotive Company.	.....	.....	,, ...	,, ...	2,400	F.o.b., New York ..	No design of engine and tender.
Sächsische Company	About £2,775 (price given by weight).	About £2,851 (price given by weight).	,, ...	,, ...	.....	12 in steam, Sydney 4 ,, Newcastle.	,, ,,
Société de Construction ..	3,150	3,950	,, ...	,, ...	.....	12 ,, Sydney 4 ,, Newcastle.	Engine & tender.

Telegram from London Station to The Colonial Secretary.

LOCOMOTIVES tenderers pressing for answer, please reply.

Refer to Works.—C.W., 10/5/87. Railways.—J.R., B.C., 12/5/87. Submitted for Minister's direction.—D.V., 13/5/87. I think we should cablegram to say: "Cannot finally decide till all the tenders are in hands of the Government."—Cit.A.G., 25/5/87. Approved.—J.S., 26/5/87.

Appendix No. 6.

Government Railways of New South Wales, Secretary's Office, Sydney, 13 May, 1892.

With reference to the inquiry of Mr. Schey, M.P., as to the number of engines ordered between the years 1883 and 1887, I beg to append statement showing the names of firms by whom supplied, and charged to capital account:—

Year.	Name of firm.	No.
1883—	Beyer, Peacock, & Co.	17
	Dübs & Co.	6
	H. Vale	4
	Purchased from contractor ...	1
		28
1884—	H. Vale	6
	Beyer, Peacock, & Co.	16
	Dübs & Co.	18
	Manning, Wardle, & Co.	2
		42
1885—	Beyer, Peacock, & Co.	26
	Dübs & Co.	8
	Baldwin Works	20
		54
1886—	Dübs & Co.	6
	Beyer, Peacock, & Co.	6
	H. Vale	4
		16
1887—	Vulcan Foundry	12
	H. Vale	6
	Beyer, Peacock, & Co.	2
		20
	Total	160

H. McLACHLAN,
Secretary.

Appendix No. 7.

Government Railways of New South Wales, Secretary's Office, Sydney, 13 May, 1892.

With reference to the inquiry of Mr. Schey, M.P., as to the dates of delivery of the first six tank-engines ordered from Messrs. Beyer, Peacock, & Co. in 1889, I have to say they were delivered as under:—1 delivered on the 11th February, 1891; 1 delivered on the 13th February, 1891; 1 delivered on the 3rd March, 1891; 1 delivered on the 6th March, 1891; 1 delivered on the 19th March, 1891; 1 delivered on the 25th March, 1891.

H. McLACHLAN,
Secretary.

Appendix No. 8.

11 May, 1892.

In reply to Mr. Schey's inquiry, I beg to say that the number of locomotives under and waiting repairs at the time of the first complete record I have after the Commissioners took office, viz., in March, 1889, was ninety-two. The number under and waiting repair on the 30th April, 1892, was 124.

H. McLACHLAN, Secretary.

Appendix No. 9.

Summary statement of engines ordered and supplied since 1855.

Makers.	Engines supplied prior to October, 1888.	Engines ordered and supplied since October, 1888.	Total number of engines ordered and supplied.
R. Stephenson and Sons	39	.....	39
Hawthorns	1	.....	1
Fairbairn and Son	6	.....	6
Kitson	1	.....	1
Redfern Railway Works	7	.....	7
Peto, Brassey, and Betts	1	.....	1
Manning, Wardle, & Co.	15	.....	15
Vale and Lacey	10	.....	10
Mort & Co.	14	.....	14
Vale and Sons	24	.....	24
Atlas Engineering Company	8	.....	8
Baldwin Locomotive Works	33	32	65
Vulcan Foundry Company	21	.....	21
Beyer, Peacock, & Co.	195	77	272
Do. (Purchased from Contractors)	.....	3	3
Dubs & Co.	67	55	122
Total	442	167	609

H. CARRUTHERS,
Locomotive Accountant.

STATEMENT showing Engines received to date.

Number.	Makers.	Date supplied.
1	R. Stephenson and Sons	May, 1855.
3	"	Sept. 1855.
1	"	May, 1865.
3	"	July, 1865.
1	"	Sept., 1865.
1	"	Sept., 1866.
3	"	Jan., 1867.
1	"	Dec., 1870.
1	"	Feb., 1871.
2	"	Mar., 1871.
2	"	May, 1871.
1	"	Oct., 1874.
1	"	Nov., 1874.
7	"	Dec., 1874.
1	"	Jan., 1875.
2	"	Feb., 1875.
2	"	May, 1875.
1	"	July, 1875.
3	"	Aug., 1875.
2	"	May, 1879.
39		
1	Hawthorne	Nov., 1856.
2	Fairbairn and Sons	Mar., 1856.
1	"	April, 1856.
3	"	Mar., 1857.
6		
1*	Kitson	June, 1872.
1	Railway Works	Dec., 1858.
1	"	Jan., 1859.
1	"	June, 1870.
1	"	June, 1876.
1	"	April, 1877.
1	"	Sept., 1877.
1	"	Dec., 1877.
7		
1†	Peto, Brassey, and Betts	Jan., 1864.
1	Manning, Wardle, & Co.	Mar., 1861.
1	"	April, 1861.
1	"	May, 1861.
1	"	Jan., 1863.
2	"	Mar., 1863.
1	"	Mar., 1864.
1‡	"	June, 1864.
2	"	Aug., 1864.
1	"	Sept., 1864.
1	"	Mar. 1866.
1‖	"	Feb., 1874.
2	"	June, 1884.
15		
1	Vale and Lassy	Dec., 1870.
1	"	Jan., 1871.
2	"	Mar., 1872.
2	"	Nov., 1873.
3	"	July, 1875.
1	"	Aug., 1876.
10		
1	Mort & Co.	Sept., 1870.
1	"	Nov., 1870.
1	"	Dec., 1870.
1	"	Feb., 1871.
2	"	May, 1871.
1	"	July, 1874.
1	"	Aug., 1874.
2	"	Mar., 1875
2	"	June, 1875.
2	"	July, 1875.
14		
4	Vale and Sons	1882.
4	"	1883.
6	"	1884.
4	"	1886.
6	"	1887.
24		

Number.	Makers.	Date supplied.
8	Atlas Engineering Co.	1882.
1	Baldwin Locomotive Works	Oct., 1877.
3	"	Feb., 1879.
9	"	July, 1879.
10	"	Dec., 1884.
10	"	Jan., 1885.
§ 2	"	July, 1891.
§10	"	Aug., 1891.
§ 1	"	Sept., 1891.
§11	"	Oct., 1891.
§ 8	"	Nov., 1891.
65		
3	Vulcan Foundry Co.	Jan., 1879.
2	"	Feb., 1884.
4	"	April, 1884.
6	"	April, 1887.
2	"	May, 1887.
4	"	June, 1887.
21		
1	Beyer, Peacock, & Co.	Oct., 1865.
1	"	Nov., 1865.
1	"	Dec., 1865.
1	"	Jan., 1866.
1	"	Nov., 1866.
1	"	Feb., 1867.
1	"	Mar., 1867.
2	"	April, 1867.
2	"	Nov., 1870.
2	"	Dec., 1870.
1	"	April, 1877.
3	"	May, 1877.
8	"	June, 1877.
5	"	July, 1877.
7	"	Aug., 1877.
4	"	Sept., 1877.
4	"	Oct., 1877.
3	"	Nov., 1877.
3	"	Aug., 1878.
6	"	Sep., 1878.
6	"	Dec., 1878.
3	"	Jan., 1879.
3	"	Feb., 1879.
1	"	Dec., 1879.
3	"	Feb., 1880.
4	"	April, 1880.
1	"	May, 1880.
1	"	June, 1880.
1	"	July, 1880.
4	"	Aug., 1880.
4	"	Sept., 1880.
6	"	Oct., 1881.
7	"	Nov., 1881.
4	"	Jan., 1882.
3	"	Feb., 1882.
3	"	Mar., 1882.
4	"	April, 1882.
6	"	May, 1882.
1	"	Nov., 1882.
3	"	Jan., 1883.
2	"	Dec., 1882.
1¶	"	Feb., 1883.
6	"	Sept., 1883.
4	"	Oct., 1883.
2	"	Nov., 1883.
2	"	Dec., 1883.
4	"	May, 1884.
6	"	July, 1884.
6	"	Aug., 1884.
4	"	June, 1885.
4	"	July 1885.
4	"	Aug., 1885.
3	"	Sept., 1885.
5	"	Oct., 1885.
3	"	Nov., 1885.
3	"	Dec., 1885.
1	"	Jan., 1886.
3	"	Feb., 1886.
3	"	Mar., 1886.
*1	"	April, 1887.
†1	"	Nov., 1887.
‡2	"	Jan., 1890.
§1	"	April, 1890.

* Purchased from Algar & Co. † Purchased from Peto & Co. ‡ Purchased from Peto & Co. ‖ Purchased from Fawiel & Co.
§ Commenced to run. ¶ Purchased from M'Culgan & Co. ** Purchased from Fishburn & Co. †† Purchased from Hoole & C.
‡‡ 1. Purchased from Cubb & Co.; 1. Purchased from Watkin. §§ Purchased from Walker and Swan.

Number.	Makers.	Dates Supplied.	Number.	Marks.	Dates Supplied.
2	Beyer Peacock, & Co.	Feb., 1891.	4	Dübs, & Co.	Sept., 1883.
4	"	Mar., 1891.	4	"	Feb., 1884.
3	"	July, 1891.	6	"	Mar., 1884.
3	"	Aug., 1891.	8	"	Sept., 1885.
1	"	Sept., 1891.	6	"	Nov., 1885.
5	"	Oct., 1891.	3	"	Dec., 1885.
3	"	Nov., 1891.	4	"	April, 1890.
3	"	Dec., 1891.	3	"	May, 1890.
3	"	Jan., 1892.	3	"	June, 1890.
5	"	Feb., 1892.	5	"	Mar., 1891.
4	"	Mar., 1892.	3	"	April, 1891.
3	"	April, 1892.	7	"	May, 1891.
4	"	May, 1892.	6	"	July, 1891.
			4	"	Aug., 1891.
241*			4	"	Jan., 1891.
			10	"	Mar., 1891.
6	Dübs, & Co.	Jan., 1880.	1	"	April, 1891.
6	"	Feb., 1880.	5	"	May, 1891.
4	"	April, 1880.			
5	"	Nov., 1880.	122		
6	"	Jan., 1881.			
10	"	Dec., 1883.	575†		

† 34 Still under order. * 34 Still to be supplied.

Appendix No. 10.

Summary.

Tender Engines.

Passenger.						Goods.						Total.					
Total No.	Weight.			Price.			Total No.	Weight.			Price.			No.	Average weight.			Average price.		
								1881 to 1887.												
	Tons	cwt.	qr.	£	s.	d.		Tons	cwt.	qr.	£	s.	d.		Tons	cwt.	qr.	£	s.	d.
79	50	9	2	55	10	10	88	49	6	3	55	17	3	167	49	17	2	55	14	2
								1890 to 1892.												
72	64	12	0	55	17	2	45	60	19	3	53	18	0	117	63	4	1	55	2	1
								Tank Engines.												
								1881 to 1887.												
20	29	1	2	75	13	7	.....	.....			.....			20	29	1	2	75	13	7
								1890 to 1892.												
15	44	11	1	67	9	0	32	49	2	0	56	8	7	47	47	13	0	59	18	11

H. CARRUTHERS,
Loco. Accountant.

Appendix No. 11.

Railways—(Indent for Locomotive Boilers).

[*Ordered by the Legislative Assembly to be printed*, 30 *July*, 1889.]

Indent for Locomotive Boilers.

A. Ten locomotive boilers for passenger engines, to maker's No. 2,060.
B. Six locomotive boilers for goods engines, to maker's No. 2,064.
C. Two locomotive boilers for tank suburban engines, to maker's No. 1,910.
D. Twelve locomotive boilers for goods engines, to maker's No. 2,560.
E. Six locomotive boilers for passenger engines, to maker's No. 2,150.
F. Four locomotive boilers for passenger engines, to maker's No. 1,780.

Items A and C to be obtained from Messrs. Beyer, Peacock, & Co. They are to be duplicates of the boilers supplied to engines with the numbers given, except that the heating surface must be increased as much as possible by using tubes 1⅝ inch external diameter, pitched for 1⅞ spaces.

Item B to be obtained from Messrs. Beyer, Peacock, & Co. They are to be duplicate with the boiler in their engine 2,064, except that the distance from the longitudinal centre line to the roof of the fire-box inside may be increased to 9 inches, so as to admit a greater number of tubes. The tubes to be 1⅝ inch external diameter, with not less than ⅞ spaces between them.

Item D is to be obtained from Messrs. Beyer, Peacock, & Co., and to be duplicate with the boiler supplied in their engine 2,560, except the heating surface. This is to be increased as much as possible by using tubes 1⅝ inch outside diameter, pitched for 1⅞ spaces. The roofs of the fire-boxes in these boilers are to be strengthened by cross midfeathers placed about the centre of the box. They are to be 13 inches deep in the middle, and curved to 15 inches deep at the sides where they are riveted to the sides of the box. These midfeathers to be 5½ inches wide outside, and stayed by hollow copper stays, 1 inch bore and $\frac{5}{16}$ inch thick, in a manner similar to the midfeathers supplied by Messrs. Dübs & Co. and Beyer, Peacock, & Co. in boilers furnished by them to the South Australian Government.

Items

Items E and F to be obtained from Messrs. Düba & Co., and to be duplicates with the boilers in their engines Nos. 2,150 and 1,780, except that the heating surface must be increased by using tubes 1⅞ inch external diameter, pitched for 2⅛ spaces. The roof of the fire-box to be strengthened by a cross midfeather of the kind specified for item D.

Generally.—In all the boilers the fire-hole rings are to be circular in form, 14 inches inside diameter of hole. Each ring to be faced in a lathe, and formed with a lip to check closely over the copper plate, which is to be bored out to receive it. The tubes are to be ferruled at the fire-box end only, and the copper stays throughout are to be bored from each end with central holes ⅛-inch diameter. These holes are to approach each other within 1½ inch at the centre of the stay. Each top corner stay in the sides and backs of fire-boxes is to be of iron, not copper.

Appendix No. 12.

Alterations in the Forty Boilers ordered from England.

265 class—186 tubes, originally 209, in new boiler. Fire-box strengthened with midfeather.
79 class—177 tubes, originally 191, new design.
158 class—164 tubes, originally 176, new design.
93 class—166 tubes, originally 193, new design, with 1½ inch deeper fire-box.
205 class—189 tubes, originally 210, new type, with deeper fire-box, strengthened with midfeather.

W. THOW.

Appendix No. 13.

Stock of Boiler Plate, December, 1888, at Newcastle.

	T.	c.	qr.	lb.		
B.B.H.	8	16	0	3	... ...	about 58 plates.
Lewmon	50	13	0	19	... ...	about 210 plates.
Leeds	0	15	1	3	... ...	about 3 plates.

A.R.

New South Wales Government Railways, Office of the Comptroller of Stores,
Eveleigh, 26 May, 1892.

THE stock of boiler plate in December, 1888, in Eveleigh Store was as under :—

	T.	c.	q.	lb.		
B.B.H. plate	91	7	3	5	... ...	about 520 plates.
Lewmon plate	44	9	3	12	... ...	about 186 plates.
Leeds plate	99	16	1	10	... ...	about 276 plates.

This is the nearest information that can be given as to the number of plates, because, even in the rough state lists, a number of the light plates are entered together.

The B.B.H. plates vary in weight from 90 lb. to 5 cwt. 3 qr.

A.R.

Appendix No. 14.

STATEMENT showing the number of sets of plates, &c., available for making new boilers, also the number of plates, &c., required to complete the sets that have been drawn upon.

Drawing Office, 1 August, 1889.

Engines Class No.	No. of new boilers for which complete sets of plates, &c., were obtained by indent, 12/3/86.	Number and sizes of plates that have been used out of those obtained on the 12/3/85, which it may be desirable to replace.	Number of complete sets (minus foundation rings) at present in store.
36	4	One barrel-plate, 13 ft. 9½ in. × 3 ft. 8 in. × ½ in. ; one angle iron ring, 4⅞ in × 3¼ in. × ⅜ in. × 4 ft. 4 in., distance finished.	3
44	3	Two central barrel plates, 13 ft. 9½ in. × 5 ft. 1⅛ in. × ½ in.	1
48	6	Nil.....	6
60	3	Two butt-strips, 14 ft. 6 in. × 7⅛ in. × $\frac{7}{16}$ in.	2
79	8	Three barrel-plates, 12 ft. 6½ in. × 3 ft. 8 in. × ½ in. ; one barrel-plate, 12ft. 6½ in. × 3 ft. 5 in. × ½ in. ; one barrel-plate, 12 ft. 6½ in. × 3 ft. 3 in. × ½ in. ; one smoke box tube-plate, 5 ft. × 5 ft. × ⅝ in. ; two butt-strips, longitudinal, 10 ft. 6 in. × 7¼ in. × $\frac{7}{16}$ in. ; two butt-strips, transverse, 4½ in. × ⅝ in. × 4 ft., diameter finished.	6
93	6	Eleven barrel-plates, 13 ft. ½ in. × 3 ft. 5 in. × ½ in. ; three barrel-plates, 13 ft. ½ in. × 3 ft. 3⅞ in. × ½ in. ; three back-plates, 7 ft. 1 in. × 5 ft. × ½ in. ; three roof-plates, 5 ft. 1 in. × 4 ft. 8 in. × ½ in. ; three throat-plates, 5 ft. 6 in. × 4 ft. 6 in. × $\frac{9}{16}$ in. ; four smoke-box tubes, 5 ft. 6 in. × 5 ft. 2 in. × ⅝ in. ; six butt-strips, longitudinals, 13 ft. 8 in. × 7¼ in. × $\frac{7}{16}$ in. ; nine butt-strips, transverse, 4½ in. by ⅝ in. × 4 ft. 2 in., diameter finished ; sixe angle-iron rings, 4⅝ in. × 3¼ in. × ⅝ in. × 4 ft. 2 in., diameter finished.	2

Appendix No. 15.

STATEMENT showing dates of arrivals of Engines since the Commissioners took Office.

Total No. ordered.	Class of Engines.	Makers.	No.	When arrived.
10	Passenger, tender	Dübs & Co.	5	12 Jan., 1890
			5	22 Mar., ,,
25	Goods engines, tender	,,	5	24 Jan., 1891
			5	25 Feb., ,,
			5	23 Mar., ,,
			5	7 June, ,,
			5	6 July, ,,
6	Goods, tank	Beyer, Peacock, & Co.	2	10 Jan., ,,
			2	28 ,, ,,
			2	16 Feb., ,,
6	Goods, tank	,, ,,	3	7 June, ,,
			3	13 July, ,,
			3	24 Aug., ,,
15	Passenger, tender	,, ,,	3	12 Sept., ,,
			4	16 Oct., ,,
			5	22 Nov., ,,
			4	29 ,, ,,
20	Mineral tank	Dübs & Co.	11	16 Jan., 1892
			5	28 Mar., ,,
50	Passenger express	Beyer, Peacock, & Co.	3	19 Dec., 1891
			3	6 Jan., 1892
			2	17 ,, ,,
			2	10 Feb., ,,
			2	8 April, ,,
			4	2 May, ,,

H. McL., 28/5/92.

Appendix No. 16.

PARTICULARS of forty new Locomotive Boilers received from England.

Received by Store Branch.		Date and No. of Engine fitted to.		
Date.	Number.	Date.	Engine No.	No. and class.
		1890.		
May, 1890	2	21 August	214	205
		9 September	210	205
June, 1890	7	17 September	336	255
		2 October	206	205
		16 October	210	205
		18 October	221	205
		4 December	241	205
		22 December	277	255
		1891.		
		5 January	408	205
July, 1890	5	22 January	337	205
		3 March	216	205
		8 April	318	205
		11 April	171	79
		24 April	206	205
August, 1890	3	28 April	2	93
		19 May	414	79
		20 May	427	93
September, 1890	2	6 June	197	93
		18 June	118	79
October, 1890	3	19 June	163	158
		26 June	117	93
		30 July	115	93
November, 1890	5	30 July	124	79
		30 July	272	255
		24 August	97	93
January, 1891	1	16 September	122	79
February, 1891	4	24 September	338	255
		12 October	320	205
		26 October	263	255
		27 October	232	205
March, 1891	4	7 November	345	255
		10 November	279	255
		4 December	413	79
		1892.		
		9 January	79	79
		9 January	341	255
April, 1891	4	13 February	121	79
		18 February	350	255
		20 February	126	79
		27 February	335	255
Totals	40		39	.....

None of the engines have had their numbers changed. H.McL.

Appendix

Appendix No. 17.

INFORMATION wanted by Mr. Schey :—

1. Dates of order and delivery of forty boilers referred to in Exhibit P (a paper indent) for locomotive boilers, ordered to be printed by the Legislative Assembly on 30th July, 1889.
2. The rotary numbers of the engine classes which correspond to the makers' numbers quoted in the above document.
3. Dates when each of these boilers was put into service, and the rotary number of the engine it has been put into. In the event of the rotary number having been in any case changed, the old as well as the new rotary number by which the engine may be identified.

Answers to the above :—

1. Order sent from Sydney, 26th June, 1889.
2. Engine, 93 class ... ... Makers' No. 2,064
   " 205 " ... ... " 2,560
   " 79 " ... ... " 2,060
   " 255 " ... ... " 2,150
   " 255 " ... ... " 1,780
   " 158 " ... ... " 1,910
3. Return herewith marked "A."

H. McL.

Appendix No. 18.

STATEMENT showing proportion of engines to miles open and train mileage in New South Wales, Victoria, South Australia, Queensland, New Zealand, and Tasmania, to 30th June, 1891.

Colony.	Number of engines.	Miles open.	Proportion of engines per mile open.	Train mileage.	Proportion of engines to 1,000 train miles.	Engine mileage.	Proportion of engines per 1,000 engine miles.
New South Wales	439	2,182	0·200	8,413,421	0·052	12,118,682	0·036
Victoria	455	2,763	0·165	12,249,747	0·037	15,353,527	0·029
South Australia	219	1,666	0·131	3,769,225	0·058	5,065,890	0·043
Queensland	239	2,195	0·109	3,770,977	0·063	4,126,795	0·058
New Zealand	270*	1,842	0·147	2,894,776	0·094	3,818,248	0·071
Tasmania	42†	351	0·119	552,689	0·076	672,389	0·062

* To 31st December, 1890. † To 31st March, 1891.

H. CARRUTHERS.

Appendix No. 19.

Sydney, 11 May, 1892.

IN reply to Mr. Schey's inquiry as to the mileage of lines opened, I beg to say that the number of miles opened for the five years prior to the Commissioners taking office was 798½; and the number of miles opened since the Commissioners have taken office has been 55½. Under construction, 266 miles 15 chains.

H. M'LACHLAN,
Secretary.

STATEMENT showing lines in course of construction, with probable date of opening, &c.

Mileage.	Line.	Contract date for completion.	Probable date of opening.
M. ch.			
81·28	Nyngan, Cobar	30 April, 1892	1 July, 1892.
47·40	Culcairn, Corowa	31 October, 1891	"
2·65·30 (Double line)	North Shore	5 July, 1892	End of year.
22·33	Kiama, Nowra	31 July, 1892 †	"
No. 1 Section, 32·26·15	Molong, Parkes, and Forbes	1 October, 1893	Some time next year.
No. 2, 40·38·0		1 August, 1893	
72·64·15			
No. 1 Section, 16·0·0	Lismore and Tweed	30 September, 1892	End of year.
No. 2, 23·34·0		30 April, 1893	30 April, 1893.
39·34·0			
266·24·45	Total mileage		

Appendix No. 20.

RAILWAYS and Tramways.—Statement of total debits for Printing and Stationery.

Year ending December.	Government Printing.	Other Printing and Stationery.	Total.
	£ s. d.	£ s. d.	£ s. d.
1887*	7,500 0 0	920 6 9	8,420 6 9
1888	10,168 2 0	819 18 4	10,988 0 4
1889	11,832 7 5	1,083 2 10	12,915 10 3
1890	9,999 14 3	1,155 2 6	11,154 16 9
1891	13,682 10 0	1,964 10 1	†15,647 0 1
	53,182 13 8	5,943 0 6	59,125 14 2

* First debit by Government Printer in December, 1887. † Explanation of increase furnished a few days ago.

1/4/92.
Appendix

Appendix No. 21.

Unremunerative Services, 1891—Charged to Vote of £25,000.

Particulars.	1891. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total Amount.	Charged to Vote.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Free passes issued to Members of Legislative Council and Assembly	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	1,625 0 0	19,500 0 0	15,191 12 7
Visitors	243 15 0	341 13 4	366 13 4	395 16 8	183 6 8	113 17 9	193 15 0	150 0 0	150 0 0	126 16 8	128 19 2	112 10 0	2,507 3 7	2,507 3 7
Life pass-holders	141 13 4	141 13 4	141 13 4	141 13 4	141 13 4	141 13 4	141 13 4	141 13 4	128 16 8	125 0 0	125 0 0	125 0 0	1,686 13 4	1,686 13 4
Sleeping berths	138 10 0	139 0 0	162 0 0	180 15 0	175 15 0	171 7 6	204 0 0	141 17 6	169 5 0	159 15 0	142 12 6	136 2 6	1,921 0 0	1,921 0 0
State children	58 19 6	44 11 11	27 18 3	72 14 0	54 18 4	63 9 4	55 11 6	38 18 11	62 9 4	49 16 4	37 11 6	47 0 3	613 19 2	613 19 2
School children	52 15 2	116 7 0	114 4 0	109 2 5	113 15 2	98 16 4	106 12 4	110 14 9	111 17 8	.....	.....	311 12 2	1,245 17 0	1,245 17 0
On requisition of Minister for Railways	2 17 5	4 4 11	193 8 9	3 18 6	16 4 3	1 19 8	6 19 3	1 19 8	2 13 0	.....	.....	.....	234 5 5	234 5 5
Officers of Parliament	116 13 4	116 13 4	225 11 4	108 1 1	18 8 0	125 0 0	33 6 8	33 6 8	68 18 7	81 12 0	67 0 1	106 6 0	1,100 16 1	1,100 16 1
Delegates Rust in Wheat Conference	.....	.....	.....	.....	.....	.....	72 18 4	.....	.....	.....	.....	.....	72 18 4	72 18 4
Mr. Seager	.....	.....	.....	.....	.....	.....	.....	4 1 0	.....	.....	.....	.....	4 1 0	4 1 0
Parliamentary papers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0 4 6	.....	0 4 6	0 4 6
Special trains	100 16 0	.....	65 5 5	290 8 0	7 10 0	.....	7 10 0	.....	.....	.....	.....	.....	471 9 0	471 9 0
Wives of Members of Parliament	116 13 4	62 10 0	100 0 0	64 11 8	66 13 8	44 3 4	25 0 0	52 1 8	.....	93 15 0	50 0 0	83 12 9	759 1 5	
Under secretaries and civil servants	404 3 4	404 3 4	404 3 4	404 3 4	404 3 4	404 3 4	404 3 4	404 3 4	404 3 4	404 3 4	404 3 4	404 3 4	4,850 0 0	
Miscellaneous passes	116 13 4	79 8 4	370 13 1	574 9 2	457 13 4	317 0 0	371 14 1	505 7 4	786 0 5	91 14 7	52 2 6	66 17 8	3,788 13 10	
Delegates Agricultural Shows	2 9 0	3 0 3	8 3 6	11 14 6	.....	.....	.....	10 6 6	9 0 0	2 0 4	.....	.....	.....	
Sailors H.M. warships	190 0 10	21 18 3	7 3 6	19 8 6	21 14 2	23 0 0	34 19 5	30 7 11	18 5 7	11 8 0	8 19 4	79 11 5	467 2 11	
Bathurst City Mission	2 13 9	7 6 5	.....	3 19 9	2 4 2	3 11 6	8 10 3	4 8 6	2 15 6	.....	0 17 9	.....	36 7 7	
Botanical Gardens	.....	14 5 0	.....	4 18 3	1 10 0	5 7 3	6 9 0	9 13 6	9 2 9	3 11 3	.....	1 13 6	56 10 6	
Aborigines	10 7 7	15 2 11	1 12 3	4 8 6	3 7 9	6 0 8	3 6 0	0 9 5	6 15 0	0 3 9	5 0 3	4 3 0	60 17 1	
Benevolent Asylums	0 7 0	0 16 0	0 7 0	0 6 0	0 9 0	0 11 0	0 9 0	0 7 0	0 15 0	0 6 0	0 5 0	0 17 0	5 14 0	
Brookside Convalescent Home	0 11 0	1 13 0	1 2 0	1 2 0	1 2 0	.....	.....	1 2 0	2 15 0	2 4 0	1 13 0	2 4 0	15 8 0	
City Coroner	.....	.....	.....	0 4 0	.....	.....	.....	.....	.....	.....	.....	.....	0 4 0	
Officers Electric Telegraph Department	61 8 11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61 8 11	
	£3,386 7 10	3,139 6 4	3,815 3 8	4,016 14 8	3,295 8 2	3,145 7 0	3,301 17 6	3,265 19 0	3,558 2 10	2,777 6 3	2,649 8 11	3,105 12 7	39,456 14 9	25,000 0 0

THOMAS HALL,
5/2/92.

I understand that unless a vote is taken for these services for 1892 we shall not obtain any credit. We should have a vote for at least £40,000.—T.H.

Appendix No. 22.

Deviations—Mudgee Line.

Sydney, 12 December, 1891.

I have to report that the deviations on the Mudgee line have so far served the purpose for which they were intended. Since the completion of the work I have had these portions of the line carefully watched, and from reports to hand, it is apparent that during the late heavy rains the line would have been blocked in places but for the deviations. From 135 miles 70 chains to 136 miles 15 chains large stones and earth have in places come down, and are impounded in grips left for that purpose. At 136 miles 50 chains and 136 miles 66 chains two large slips are on the move, also at 141 miles 60 chains; but no danger is anticipated, in consequence of being impounded in a similar manner to stones and earth now covering portions of old line at former mileages. At other mileages, 138 miles, 139 miles 20 chains, and 141 miles 20 chains, in the troughs left for falling stones by means of raising formation and slewing of the old road as far over as the nature of the ground would permit, have also had the desired effect. Large stones have come down from top of cuttings, and instead of rolling on to the line as before, are impounded in these troughs. But for the deviations during the late heavy rains, it would have been necessary to have had a large number of men employed to keep the line open, in addition to flagmen at cuttings during the passing of trains. Early last year, previous to the deviations, and in order to keep the line open, we had employed fully sixty men and two ballast trains.

Up to the present date we have passed through a severe season, without the employment of these additional men and ballast trains. The removal of soft material and benching on top of cutting, Capertee Tunnel, 125 miles, has also had the desired effect. Previous to benching on top of cutting, the up-hill side used to spill over on to the line, but now remains on the benching left for its reception.

It must be gratifying to the Commissioners to know that the above works have so far proved equal to their expectations, and in addition to adding to the safety of the line, have reduced considerably the cost of working.

The Secretary. WILLIAM T. FOXLEE.

Appendix No. 23.

Government Railways of New South Wales.

Sir, Secretary's Office, Sydney, 22 June, 1892.

I forward herewith, in compliance with the wish of the Commission further papers with reference to the work carried out by Messrs. Angus & Co., in connection with the re-ballasting of the Ryde to Hornsby Line.

It will be seen that the work was one of emergency, and was let to Messrs. Angus & Co., at the schedule for day-labour, under the duplication contracts, Messrs. Angus & Co. being the lowest tenderers and in a good position to put on work at once.

I may mention that the line was in a worse position than the papers disclose, as it is a rule of the department that in official reports the use of strong terms, such as reporting a line to be in a bad or dangerous condition is avoided as much as possible, the real facts of the case being explained in personal interviews between the Commissioners and their principal officers. The state of the road, however, can be seen by the example of a train leaving the road a few days previous to the work being let. The road had become soft, and the effect of an abnormal rainfall (60 inches falling between January and June), had made the road in such a condition that it was imperatively necessary, in order that the traffic might be conducted safely, that the reballasting should be carried out with the least possible delay.

I have, &c.,

G. C. Allen, Esq. H. McLACHLAN,
Secretary.

Railway Department, Office of Engineer for Existing Lines, Sydney, 11 July, 1890.

Gentlemen,

Referring to my inspection of the Northern Line, between Strathfield and Cowan stations, on the 8th instant, I found it necessary to make the following arrangements for putting the road in better running condition, viz.:—Eighty-eight men commenced yesterday morning lifting and ballasting the road from Ryde to 25 miles, and thirty additional men will start as soon as we can get tools on the ground, which will not be later than Monday next. These thirty men will start getting ballast in the cutting at milcage 15-20, the stone being sufficiently good, and this will save running from Darling Harbour and Eveleigh. In the first instance we will have to run ballast from Eveleigh to make a start. I have arranged with the Traffic Department and Mr. Parry, to further save running and expense, to make Thornleigh a temporary staff station. Mr. Parry is erecting the necessary temporary signals, which will be completed in a few days.

The work proposed to be done is to lift the road completely out of the present formation, and to put under from 8 inches to 1 foot of new sandstone ballast, which will drain all soft places and keep the road in fair condition, until we can use blue metal for top-ballasting and lifting.

I have, &c.,

J. ANGUS.

Mr. Glen to note.—J.D., 23/7/90. Noted.—J.G., 23/7/90. Orders, 500 c., 501 c Approved; separate account to be kept of this work by Engineer and Accountant.—E.M.G.E., 14/7/90. J. Angus, Esq. Mr. Bourke see me.—T.A., 17/7/90. Mr. Angus seen; please note.—R. Bourke, 19/7/90. Mr. Deane. The Chief Accountant.—R.W., 19/7/90. Noted.—J.S.D., 22/7/90. Noted.—Thos. Hall, 24/7/90.

Light engine, No. 291 derailed near Beecroft, 5th July, 1896.

Secretary,— 21 July, 1890.

With reference to my report of the 5th instant. The matter has been jointly inquired into by Messrs. Laughrey, Shellshear, and Corns, and they report that as the engine was running on an ascending grade of 1 in 50, and on a curve of 16 chains radius, at 16 miles 28 chains, the right leading wheel mounted the inner rail of the curve, and the pair of wheels ran on the ballast for a distance of 5 chains.

On

On examination of the road several hours after the occurrence (after the line had been repaired), it was observed that there were some low places in the immediate neighbourhood, which in themselves seemed sufficient to cause oscillation, and the repaired portions of the road were doubtless in a similar condition when the engine passed over them, and this led to its derailment.

The engine was a six-wheeled coupled one of the 93 class, and was replaced on the road at 8·20 a.m. Forty-seven fish-bolts were broken.

I submitted a report on the 9th instant, with regard to the delay to traffic.

D. KIRKCALDIE
(*Per* W.H.C.)

This evidently points to negligence on the part of the ganger in charge of the length, who should be dealt with.—W.M.F., 23/7/90. Please say what you propose.—H.McL., 23/7/90. J. Angus, Esq. Have instructed Mr. Shellshear to severely reprimand ganger, although the nature of the ballast and formations of embankments were faulty—we cannot deal further with the man.—J. Angus, 8/7/90. Seen.—W.M.F., 5/8/90.

From the Chief Traffic Manager to the Secretary.

5 July, 1890.

I beg to report for the information of the Commissioners, that at about 7·30 this morning the leading wheel of engine No. 291, which was running light, left the road on the Sydney side of Beecroft platform. The engine was replaced on the rails again at 8·20 a.m. The 7·40 a.m. passenger, Hornsby to Sydney, was delayed sixty-five minutes.

I will report further on receipt of further particulars.

D. KIRKCALDIE
(*Per* W.H.C.)

Appendix No. 24.

Day-labour, Construction Branch.

Office of the Engineer-in-Chief for Railway Construction,
Sydney, 22 June, 1892.

Sir,

The practice in this Department in the case of day-labour used to be to make special arrangements with the particular contractor as to rates to be charged, a margin being left the contractors over actual wages paid by them. This varied very considerably, but as the day-labour paid for was usually small in amount, it affected very little the total cost of the contract.

On Mr. George Blunt's contract, between Hawkesbury River and Gosford, payment was made at the rate of 10s. per day for labourers, the actual wages to the men varying at that time from 7s. 6d. to 8s. 6d. per day. On some contracts the contractor was paid 1s. per day extra above the actual rate of wages for all classes of labour, and seemed quite satisfied.

In the case of Messrs. Proudfoot and Logan's contract, No. 3 section, Illawarra Line, the rate for labourers was fixed at 9s. 6d., the actual wages being 8s. 6d. Of course, in this case, and wherever rates are fixed, they were intended to cover cost of supply and wear and tear of tools.

When endeavouring to settle up with Messrs. A. and R. Amos for contracts Nos. 1 and 4, Homebush to Waratah, before Mr. Whitton's departure for England, it was proposed to pay them actual wages with 20 per cent. additional. Mr. Whitton, however, preferred to have definite rates fixed, and a series of rates were afterwards agreed upon, which averaged 20 per cent. above current rates of wages.

Mr. Pritchard, on the contract Hornsby to St. Leonards, was paid at the same rates as Messrs. A. and R. Amos. Messrs. Walker and Swan, however, on contract No. 3, Goulburn to Cooma, were, with Mr. Whitton's sanction, paid actual wages, with 20 per cent. added to the bulk.

I have often discussed, during the latter part of Mr. Whitton's term of office in Sydney, the question of the payment of day-labour, and the desirability of adopting some definite practice was acknowledged by him. For some time after he left, as is well known, there was very little construction work going on, but when the specifications for newly authorised railway lines were prepared, I inserted the following clause in the specification:—

> "Should any day-work be ordered the contractor will be reimbursed the actual amount of wages paid by him, with 20 per cent. added, which addition shall cover cost of providing all tools and plant whatsoever, repair and wear and tear of same."

In the last contracts let the percentage has been reduced to 15 instead of 20 per cent., and this appears to be quite sufficient to pay for contractors' trouble and give him a margin of profit.

I have, &c.,

E. M. G. Eddy, Esq. H. DEANE.

Appendix No. 25.

2 June, 1892.

John Coghlan and Thomas Maher offered in July, 1890, to supply 100,000 cubic yards of ballast at 4s. 3d. per yard, 1,000 yards to be supplied weekly.

The contract remained in force until January, 1891, say five months, but the supply during this time was not very satisfactory. Under the contract, 20,000 yards should have been supplied, but only 6,600 yards were sent in, and on the 6th January, 1891, Mr. Edward Maher wrote in to the District Engineer that he was compelled to discontinue the work, owing to Coghlan and Maher failing to supply him with sufficient funds to pay the men's wages or meet current expenses.

The District Engineer wrote in on the 9th January to say work was stopped and men refused to work until money due was paid. He recommended contract be cancelled.

Mr. T. Maher, one of the contractors, wrote on 10th January to the Engineer-in-Chief that he found it impossible to continue working, except at a serious loss, and asked it be cancelled.

On the 14th January, the Commissioners approved of cancellation, and letter was written Coghlan and Maher on the 15th by the engineer notifying cancellation.

On the 15th, Coghlan and Maher wrote asking for fresh arrangements at an advance of 1s. for ordinary metal (9d. for large).

On the 23rd January, Mr. E. Maher wrote saying that £360 was due men as wages, and asking Commissioners to interfere; but Commissioners intimated they could not interfere between contractors and workmen.

H.McL., 9/6/92.

Appendix No. 26.

Government Railways of New South Wales, Secretary's Office, Sydney, 3 January, 1891.

RESOLVED, that any messages required to be sent between the relaying contractors and the officers, on the business of the department, be sent free of charge over the wires of the department in the same way as departmental messages.

E.M.G.E.
W.M.F.
C.O.

For your information.—H. M'LACHLAN, Secretary (*per* G.M.M.), 6/1/91. D. Kirkcaldie, Esq., Chief Traffic Manager.

Appendix No. 27.

(91-1,127.)

Mr. J. B. Suttor, Office of Engineer-in-Chief for Existing Lines, 14 May, 1891.

I have to inform you that the Commissioners have decided to charge a rental of 10s. per week for the use of workmen's vans. This charge is to be made from the first time they were used.

J. ANGUS,
Engineer for Existing Lines.

LIST OF OTHER EXHIBITS.

THE following documents were put in as exhibits during the inquiry, but their publication was not considered necessary by the Commission :—

1. Minute to Locomotive Engineer *re* new work.
2. *Hansard* of 9th March, 1892; 17th April, 1888; and 1st May, 1888.
3. Minute from Mr. Eddy *re* Board of Trade.
4. Cabinet minute *re* Supply of rolling stock, dated 10/5/78.
5. Final certificates in connection with all contracts.
6. Summary sheets of day-labour on all contracts.
7. Contractor's pay-sheets.
8. Comparison of final certificates with contracts.
9. Railway Commissioners Annual Reports for 1890 and 1891.
10. Notices of questions and motions, and orders of the day in Parliament.
11. Parliamentary paper *re* Hawkesbury Railway Bridge.
12. Official return *re* Baldwin Engines.
13. Judge's notes &c., in *re* Rickwood.
14. Return *re* Mudgee Deviations.
15. *Government Gazette* dated 12th December, 1889.
16. Voucher showing payment of passage *re* Mr. Thos. Hall.
17. Engine road tables for western lines.
18. Railway Commissioners' Quarterly Reports.
19. Official Statements of Freights and Tonnage.
20. Memo. *re* Eveleigh Pay-sheet frauds.
21. Minutes *re* Proudfoot's tender for Rix's Creek works.
22. New South Wales Railway and Tramway Review
23. List of all tenderers for all works referred to in the charges.
24. Parliamentary paper *re* Sir John Fowler, dated 15th June, 1887.
25. Parliamentary paper *re* Dismissal of Mr. R. H. Burnett, dated 30th January, 1884.
26. Parliamentary paper *re* Railway and Rolling-stock, dated 4th March 1870.
27. Parliamentary paper on the Construction and progress of the New South Wales Railways, dated 21st April 1873.
28. Parliamentary paper Select Committee's Report on Public Works Department, dated 7th April, 1864.
29. Stock book of the Eveleigh Railway Stores.
30. Maps and plans and field books showing cross sections, &c., &c., of all works.

LIST OF NEWSPAPER EXTRACTS.

LIST and date of extracts from the undermentioned newspapers, put in by Mr. Schey during the inquiry :—

Sydney Morning Herald :—15th October, 1887; 13th February, 1888; 25th February, 1888; 8th March, 1888; 2nd May, 1888; 24th September, 1888; 12th August, 1890; 11th September, 1890; 5th December, 1890; 11th December, 1890; 13th December, 1890; 17th April, 1891; 8th June, 1891; 19th August, 1891; 26th September, 1891; 12th November, 1891.

Sydney Daily Telegraph :—29th April, 1886; 17th May, 1886; 1st March, 1887; 28th April, 1887; 2nd May, 1887; 8th October, 1887; 14th December, 1887; 26th November, 1890; 21st August, 1891; 22nd January, 1892.

Sydney Evening News :—24th March, 1888; 13th April, 1888; 19th April, 1888; 2nd May, 1888; 2nd December, 1890.

Australian Star :—12th January, 1888; 16th August, 1889; 19th November, 1890; 3rd December, 1890; 13th December, 1890; 26th December, 1890.

Sunday Times :—13th April, 1890; 20th April, 1890; 27th April, 1890; 16th November, 1890; 5th July, 1891; 12th July, 1891; 19th July, 1891; 26th July, 1891.

St. Leonards Recorder :—10th August, 1889.

Industries (Engineering) :—2nd January, 1891, and 1st January, 1892.

Sydney : Charles Potter, Government Printer.—1892.

1892-3.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ROYAL COMMISSION ON CHARGES MADE AGAINST THE CHIEF COMMISSIONER OF RAILWAYS.

(CORRESPONDENCE.)

Ordered by the Legislative Assembly to be printed, 21 *February*, 1893.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 8th February, 1893, That there be laid upon the Table of this House,—

"Copies of all correspondence and documents of any kind having relation "to complaints made by Mr. Schey of papers lodged by him as exhibits "with the late Royal Commission on Railways not being returned to him, "under an allegation of their loss."

(Mr. Schey.)

W. F. Schey, Esq., M.P., to The Colonial Secretary.

Sir, Legislative Assembly, Sydney, 4 October, 1892.

During the proceedings of the late Royal Commission on Railways I was required to hand to the Commissioners, as exhibits, a number of documents which I quoted from and referred to. I then asked whether they would be returned to me at the conclusion of the inquiry, and was assured by Mr Justice Owen that all such documents would be restored to me at the end of the investigation. Relying on such promise, I freely handed in the documents used, and have since had a portion of them sent back to me. A number, however, have been retained, and I have made repeated applications to Mr. Allen, the Secretary, for their restitution. I have failed to obtain them, however, and I now ask that you will cause all such documents and papers to be returned to me without further delay.

I have, &c.,

WM. F. SCHEY.

The only papers not returned to Mr. Schey are one or two newspaper extracts, which were mislaid during the inquiry, and Tennent's declaration, which I impounded, but which, under Mr. Justice Owen's instructions, I will return to Mr. Schey.—GEO. V. ALLEN, 12 October, 1892. Mr. Schey informed, 12 October, 1892.

W. F. Schey, Esq., M.P., to The Principal Under Secretary.

Sir, Legislative Assembly, Sydney, 18 October, 1892.

I do myself the honor to inform you that you have been incorrectly informed as to papers claimed by me from the late Royal Commission on Railways. Your memo. of 12th instant states that beside Tennent's declaration "the only papers not returned are one or two newspaper extracts which were mislaid during the inquiry." Now in my H. 92-157, of 3rd September last, I asked Mr. Allen, the Secretary, for the following:—Portion of Votes and Proceedings having reference to Sir John Fowler's fees, removed from front of the Exhibit E.E., a quarter page cut from Exhibit X.X. having reference to the North Shore Bridge, and several sheets of returns furnished to me by the Railway Department, on the order of the Royal Commission, having reference to forty locomotive boilers.

In

[870 copies—Approximate Cost of Printing (labour and material), £1 14s. 6d.]

In my A. 92–38, of 6th September, also addressed to Mr. Allen, I asked again for the boiler papers, also for other similar returns showing dates and prices of supply of engines, list of those supplied by Messrs. Beyer and Peacock, Dübs & Co., &c., &c., also for Tennent's declaration, which I note is now promised to be returned to me in a few days, also an article cut from the *Daily Telegraph*, with two sheets of manuscript returns attached, forming a set of papers having reference to the traffic on certain dates, have not been returned to me.

I beg very respectfully to insist that all these papers be found and returned to me, and that their retention is a grave breach of faith, as I expressly raised the question as to all these documents while the inquiry was proceeding, and was assured by Mr. Justice Owen that the whole of them would be returned to me at the conclusion of the investigation. Asking your kind and prompt attention,

I have, &c.,
WM. F. SCHEY.

Inform the Secretary to the Commission.—C.W., 28/10/92.

The Principal Under Secretary to Mr. G. V. Allen.

Sir, Colonial Secretary's Office, Sydney, 31 October, 1892.

With reference to your communication of the 12th instant, I am directed by the Colonial Secretary to transmit herewith a copy of a letter received from Mr. W. F. Schey, M.P., from which it will be seen that certain papers have not been returned by the late Royal Commission "to inquire into certain charges made against the Chief Commissioner for Railways," and to request that you will be good enough to cause them to be handed to Mr. Schey.

I have, &c.,
CRITCHETT WALKER,
Principal Under Secretary.

The Principal Under Secretary to W. F. Schey, Esq., M.P.

Sir, Colonial Secretary's Office, Sydney, 31 October, 1892.

Referring to your letter of the 18th instant, I am directed by the Colonial Secretary to inform you that Mr. G. V. Allen, Secretary to the late Royal Commission to inquire into certain "charges made against the Chief Commissioner for Railways," has been requested to return to you the papers referred to in your communication.

I have, &c.,
CRITCHETT WALKER,
Principal Under Secretary.

Mr. G. V. Allen to The Principal Under Secretary.

Sir, Belmore, Manly, 8 November, 1892.

I beg to acknowledge the receipt of your favour of the 31st ultimo, enclosing a letter from Mr. W. F. Schey, M.P., complaining of certain papers, which were put in during the inquiry into the administration of Railways, not having been returned to him, and in reply I have to say that I have no knowledge of any papers belonging to Mr. Schey having been withheld. At the termination of the Commission all the papers then in my custody, and they numbered some thousands, were, as far as practicable, returned to their respective owners. Some few unimportant papers, such as old copies of Votes and Proceedings and small newspaper extracts, may have gone astray, but I have no knowledge of such an occurrence. In Mr. Schey's letter to you, dated 12th October, 1892, he includes amongst the missing papers "several sheets of returns furnished to me by the Railway Department, &c.," but Mr. Schey is wrong in assuming that they necessarily became his personal property. The papers were supplied by order of the Royal Commission for the purpose of the inquiry, and were returned to the Railway Commissioners at the end of the inquiry. In conclusion, I beg to say that on several occasions since the conclusion of the inquiry I have verbally acquainted Mr. Schey with these facts, and I am sorry to think that my explanations have not been deemed satisfactory.

I have, &c.,
GEO. V. ALLEN.

Inform accordingly.—C.W., 24/11/92.

The Principal Under Secretary to W. F. Schey, Esq., M.P.

Sir, Colonial Secretary's Office, Sydney, 25 November, 1892.

Referring to your letter of the 18th ultimo, complaining that certain papers put in by you during the proceedings of the Royal Commission on Railways have not been returned, I am directed by the Colonial Secretary to transmit herewith for your information a copy of a communication that has been received from Mr. G. V. Allen, the late Secretary to the Commission, on the subject.

I have, &c.,
CRITCHETT WALKER,
Principal Under Secretary.

Sydney: Charles Potter, Government Printer.—1893.

1892–3.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

LOCOMOTIVES FOR THE COLONY.

(CORRESPONDENCE—MESSRS. NEILSON & CO. AND THE RAILWAY COMMISSIONERS.)

Ordered by the Legislative Assembly to be printed, 16 *March*, 1893.

[*Vide Colonial Treasurer's Reply to Mr. Schey, Question No.* 3, 2 *March*, 1893.]

SCHEDULE.

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No. 1.

The Minister for Railways to The Chief Commissioner for Railways.

My dear Sir, The Treasury, Sydney, 24 November, 1892.

Permit me to call your attention to the enclosed paragraph and an article from the *Newcastle Herald* of a recent date.

Yours, &c.,
JOHN SEE.

No. 2.

The Commissioners for Railways to The Minister for Railways.

Sir, Office of the Railway Commissioners of N.S.W., Sydney, 24 November, 1892.

We have the honor to acknowledge the receipt of your letter enclosing a cutting of a leading article from the *Newcastle Morning Herald* of the 22nd instant, commenting on complaints said to have been made by Messrs. Neilson Brothers in a letter published in the *Engineer*, of London, of the 14th October.

In reply, we beg to state that the whole matter referred to in Messrs. Neilson's letter was fully and elaborately inquired into by the Royal Commission which lately sat on the charges preferred by Mr. W. F. Schey, M.L.A., and forms the subject of the report of that Commission under the heading "Charge 2."

A reference to the report and appendices will show that the whole of the orders were only entered into after very careful consideration, and in the best interests of the Department.

We can only regret that a firm of such high standing as Messrs. Neilson should commit themselves to so garbled and distorted a statement as they would appear to have done from extracts given in the leading article in question.

We quote at random the following:—"In December, 1888, ten engines and tenders were offered for, and Dubs & Co. secured the work. The price was not disclosed. The offer of Messrs. Neilson was £3,000 each."

So far from the price not being disclosed, it was fully shown before the Commission [*See Appendix A*] that Messrs. Dubs & Co.'s price was £2,420 each, or £570 less that Neilsons' which was nearly the highest of the tenders.

Again Messrs. Neilson say:—"In August, 1889, offers were opened for twenty-six engines. The tender of Messrs. Neilson was £2,865, but the work was given to Dubs at the price of £2,916."

The

The evidence shows that Dubbs & Co.'s tender, which was accepted, was for £2,860, which was less than Neilson's.

The reasons for not accepting the other tenders of Messrs. Neilson are fully explained in the evidence taken before the Commission, and are also referred to with approval by the Royal Commission.

If the Government do not consider that the report of the Royal Commission has sufficiently exonerated the Railway Commissioners from the charges brought against their administration in connection with these engines, we would suggest that Messrs. Neilson & Co.'s charges be again admitted to the Chief Judge in Equity, President of the recent Royal Commission, for his further inquiry and report, and failing doing so, we would ask to be relieved in future from the official necessity of continually defending our administration against every scandalous and libellous statement which may be made against us.

We have, &c.,

E. M. G. EDDY, Chief Commissioner.
W. M. FEHON, Commissioner.
CHARLES OLIVER, Commissioner.

No. 3.

Commissioners for Railways to The Minister for Railways.

Office of the Railway Commissioners of New South Wales,
Sydney, 8 December, 1892.

Sir,

In reference to a letter from Messrs. Neilson & Co., published in the *Engineer* of the 14th October last, and read in the Legislative Assembly on the 6th instant by Mr. W. F. Schey, M.L.A., we have the honor to state that, on the letter in the *Engineer* coming under our notice, we directed an investigation to be made by the solicitor to the Department into the statement contained therein, and we now enclose for your information the report made to us by him.

Looking at the fact that Messrs. Neilson's letter has been placed before Parliament, we venture to suggest that it may be desirable, in the public interest, that the report sent herewith may be laid upon the Table of the House.

We have, &c.,

E. M. G. EDDY, Chief Commissioner.
W. M. FEHON, Commissioner.
CHARLES OLIVER, Commissioner.

[*Enclosure.*]

Gentlemen,

2, O'Connell-street, Sydney, 7 December, 1892.

I have the honor to report that, in pursuance of your instructions, I have made a careful investigation into the charges and complaints of Messrs. Neilson & Co. contained in a letter, dated Glasgow, 18th July last, published in the *Engineer*, a London journal, on the 14th October, 1892. The letter, though addressed to the *Sydney Morning Herald*, has not appeared in that newspaper, and, although published in the *Engineer*, that journal in a leading article of the same date does not appear to endorse the views of Messrs. Neilson & Co.

Messrs. Neilson & Co., after an inaccurate introductory reference to the Royal Commission appointed to inquire into the charges preferred by Mr. W. F. Schey, M.L.A., assert :—

1. That they thought they could show that from beginning to end the interests of this Colony had not been looked after in the way most beneficial to the public weal.
2. That fair play has been more conspicuous by its absence than by its presence.

These being the grave and serious charges laid at your door by Messrs. Neilson & Co. in their letter, they support them by a series of statements of which the following are the leading features :—

(*a*) They refer first of all to what they call "The Australian contract fiasco, which caused a great deal of stir in this country (meaning, I presume, Scotland) in 1887;" and they quote with approbation an extract from the *Sydney Morning Herald* of the 14th November, 1887, which deals with what they call "the absurdity of the policy then proposed to be adopted as looked at from a colonial stand-point."

The gravamen of this complaint is that the Government of this Colony in 1887 proposed to pay about 60 per cent. extra for the sake of getting a colonially-made article, and they ask the citizens of Sydney to judge how it was proposed to look after their interests on that occasion.

They then treat of their own grievances from their view of the question, and complain that the Agent-General in London, having in 1887 publicly invited tenders for certain locomotives, for which they were lowest tenderers, these tenders were used merely to furnish local competitors here with a guide as to the price at which the work could be done. That the local builders were shown the prices quoted by the English firms and invited to tender afresh on the strength of them—a course of conduct which, it appears, the *Glasgow Herald* of the 7th of February, 1888, indignantly described as "a shabby colonial trick."

They further complain that no explanation or apology was given to them for the non-acceptance of their tender, and they blame the citizens of this Colony because, as they say, the citizens cannot altogether be disassociated from their Government, and consequently must bear a share of the odium attaching to so questionable a negotiation.

They add that, though the facts may have faded from the recollection of outsiders, the impression of injury on their side has not altogether disappeared.

Later on in their letter they again return to this matter, and state that in April, 1887, the Government of this Colony invited tenders for forty-four passenger and goods engines, in response to which they say that tenders were submitted by British, American, Canadian, Continental, and colonial firms, and that their tenders were found to be lower than those of any other firm.

They now complain that, although at the time they had no special ground of complaint on the score of invidious treatment, yet, when they come to read the evidence before the Schey Commission, they found that their tenders, although the lowest, had not been recommended for acceptance by Sir John Fowler in London, but they omit to state that their tenders were informal, because they were not accompanied with designs of the engine or tender, and therefore were such as could not possibly have been accepted.

They ask to know on what grounds the recommendation was made, and complain that it did not look like fair play.

When Messrs. Neilson tendered they ought to have known that their tenders were wholly irregular and impossible to be accepted, inasmuch as they neither sent designs and plans of what they proposed, nor submitted details for approval; at any rate they could hardly have been ignorant of the grounds in October, 1892, when their letter was published, seeing that the whole of the papers had been printed by order of the Legislative Assembly on the 13th October, 1887, then five years ago, and had been again produced before the Schey Commission, and reprinted as Appendix 5 of that Commission published here on the 3rd of August of this year. The Schey Commission Report ought to have been in the hands of Messrs. Neilson some weeks before they had their letter published in the *Engineer* of the 14th October, 1892.

Messrs. Neilson conclude their complaints on this subject by denying the right of the Government here to invite offers outside a favoured circle unless they are prepared to give at least a certain measure of justice to all alike.

With

With respect to this charge of Messrs. Neilson, it would have been enough for me to say that the Railway Commissioners did not take office until the 22nd October, 1888, long after the events referred to occurred; but I have dealt with it to show how unfair are the charges made by Messrs. Neilson, and how little ground they had—even in this instance—for complaining that in relation thereto the interests of this Colony were not looked after in the way most beneficial to the public weal, or that they themselves were not treated with fair play.

(*b*) The next cause of complaint is in respect of contract No. 3 for ten engines and tenders, offered for in December, 1888, let to Dubs and Co. (Messrs. Neilson say) at a price not disclosed in evidence, their price being £3,000 each.

With respect to this charge, it is sufficient to say that Dubs and Co.'s price was fully disclosed, and was £2,430, as against Neilson's £3,000 for each engine.

(*c*) Then we come to contract No. 4, twenty-five engines and tenders, offered for in August, 1889, let to Dubs and Co. at £2,916, Neilson and Co.'s offer being £2,865 each.

The evidence and exhibits to the Schey Commission show that Dubs & Co. were the lowest tenderers at £2,860, and the contract was let to them as such. The extra £56, making £2,916, was for Inspectors charges and small extras, which Neilson & Co. would have had to be paid for equally with Dubs & Co.

Respecting this contract the Schey Royal Commission report as follows:—"The tender of Dubs & Co. being the lowest was accepted.

(*d.*) Contracts 5, 6, 7.—These were fully investigated by the Schey Royal Commission, who report thereon as follows:—

"Six tank engines.—These being in all essential parts duplicates of engines in the Colony which had been built by Beyer were ordered from that firm. To secure interchangeability of parts it was considered desirable that these engines should be constructed from the original patterns. In 1890 six tank engines the same as those ordered in 1889 were ordered from Beyer. Fifteen double bogie suburban tank engines were ordered from Beyer. These engines were urgently needed, and as the price offered in Sydney by their agent was a reasonable price, tenders were not called for, but in every case where tenders were dispensed with prices were first obtained and approved by the Commissioners before the order was given."

The system thus adopted is approved of by the Royal Commissioners who quote with approbation from the evidence of Mr. Goodchap, the late Commissioner for Railways, as follows:— Rider A.

"I have no hesitation in saying it is a wise course to circumscribe the area of competition in such cases, as those locomotive firms who have made engines for any particular railway, and have patterns and templets, are likely to do the work better and cheaper than any other firm."

"The only qualifying remark to that is the price might be excessive, but so long as the price was reasonable it would be preferable to go to a firm that had previously executed your orders."

(*e.*) Contract No. 8, fifty passenger engines and tenders.—This matter is fully dealt with by the Schey Commission.

Messrs. Neilson's own letter shows that Dubs & Co.'s and not their tender was the lowest.

Dubs & Co.'s tender was not accepted because they could not make sufficiently early delivery.

Messrs. Neilson's design was defective, their offer for delivery too late, and they only offered to supply half the number of engines required, viz., twenty-five instead of fifty.

Upon this subject, in addition to the evidence given before the Schey Commission (see pages 42, questions 1172 and 1173), I have examined Mr. Thow, Chief Mechanical Engineer, whose further evidence is appended hereto, and shows that the engines designed by Messrs. Neilson were not adapted to the peculiarities of our railways; that Messrs. Neilson required thirteen months from the date of order to make the first shipment, whereas Beyer promised to make every effort to ship the first consignment within five months.

Mr. Thow further explains that he disapproved of Messrs. Neilson's design for these engines, because the weight, which had to be limited on each coupled axle, was, in his opinion, not so well distributed as that of Messrs. Beyer.

Mr. Thow points out that it was a very difficult problem to give the necessary power to the engine without exceeding the limit of weight on the rails, and that, if the locomotives when built did not comply with the limit of weight and power, the Department, though not legally compelled to accept them, would yet be probably forced from the necessity of the situation, and the urgency of the service, either to accept them or to put up with the inconvenience of remaining short of engine-power, which was at that time so urgently needed.

(*f*) Contract No. 9, for twenty mineral tank engines.

This matter is fully dealt with by the Schey Commission, and at page 12 of the report, in which it is stated that the design of Messrs. Neilson were not approved, and the tender of Messrs. Dubs & Co. being accordingly then the lowest, was accepted.

This was the only occasion since you took office in which Messrs. Neilson & Co.'s tender, though apparently the lowest, was not accepted. I have therefore carefully examined Mr. Thow on the subject, in addition to the evidence which he gave before the Royal Commission as to his reasons for not recommending Messrs. Neilson's design.

The contract was for twenty tank engines.

Messrs. Neilson's offer was for twenty-five, at £2,500 each, delivered in steam in Sydney, commencing to ship from Glasgow in thirteen months after receipt of order.

Messrs. Dubs & Co. undertook to build twenty tank engines (the actual number wanted) for £2,600 each, delivered in steam in Sydney, the first shipment to be made in nine months after order.

The offer of Dubs & Co. was therefore for the exact number wanted, and to commence delivery four months earlier—a point of the greatest importance at the time.

In addition to this the engine which Neilson tendered to build was quite unsuitable for the sharp curves of your railways, it had six wheels coupled together in rigid base without either end bogie or radial axle.

The tank capacity was only 850 gallons, and the coal space equal to but 1 ton.

Its weight, empty, was about 37 tons, and therefore the cost per ton of empty weight was £67 12s., whilst in Dubs engine the hauling power was greater; it had a single bogie at one end and a radial axle at the other; it carried 1,600 gallons in its tanks, and 3 tons of coal, and was in every way a much more suitable and economical engine for your lines than Neilson's. The cost per ton of it, empty weight, was £51 18s., as against Neilson's, £67 12s., so that Neilson's engine when examined proved a much more expensive one than Dubs, and not suitable for your requirements.

It will thus be seen that since the passing of the Government Railways Act of 1888, Messrs. Neilson have only been apparently lowest tenderers in one case, and then the engine which they offered to supply was wholly unsuitable, and when the price was analysed the cost of the machine was out of all proportion greater than that of the one actually accepted.

Beyond a few misstatements and erroneous quotations, which any one feeling an interest in the matter could correct at once by a reference to the Report and Proceedings of the Schey Commission, Messrs. Neilson state no facts whatever which have not already been fully discussed and disposed of both in and out of Parliament and in the public press. Although they profess to show that the interests of this Colony have not been looked after in the way most beneficial to the public weal, they have signally failed to show anything of the sort when their letter is stripped of its errors and misstatements, and at the same time their charge of absence of fair play falls utterly to the ground.

It is worthy of notice in passing that Messrs. Neilson quite endorse the policy pursued by the Railway Commissioners, approved of by the late Royal Commission, viz., that in inviting tenders for engines it is a desirable thing to limit the competition to certain invited or selected firms.

I enclose a verbatim report notarially verified of my examination of Mr. Thow, and of his evidence in which every paragraph and item in Messrs. Neilson's letter has been completely analysed and disposed of.

I have, &c.,

ROBERT SMITH,

Solicitor to the Railway Commissioners of New South Wales.

The Railway Commissioners of New South Wales, Sydney.

Sydney: Charles Potter, Government Printer.—1893.

[3*d.*]

1892–3.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CONTRACT FOR STEEL RAILS.

(COPY OF TENDER OF MR. ANDREW ARMSTRONG FOR THE MANUFACTURE AND SUPPLY OF 175,000 TONS OF STEEL RAILS.)

Ordered by the Legislative Assembly to be printed, 14 *March*, 1893.

[*Laid upon the Table of this House in answer to Question No.* 10, *of* 13 *December*, 1892.]

Question.

10. CONTRACT FOR STEEL RAILS:—MR. TONKIN *asked* THE SECRETARY FOR PUBLIC WORKS,—
(1.) Is it a fact that a Mr. Andrew Armstrong has submitted a tender to locally manufacture and supply 175,000 tons of steel rails?
(2.) Does Mr. Armstrong represent a local, an English, or any other syndicate or company?
(3.) Has the deposit of £15,000, specified in the published conditions of contract, been duly made?
(4.) Whereabouts in the Colony does Mr. Armstrong propose to locate the necessary works?
(5.) At what price per ton does Mr. Armstrong propose to supply the rails, viz., (*a*) the 60 lb. per yard section and (*b*) the 71½ lb. per yard section?
(6.) What (if any) modifications of the published conditions of contract have been asked for by Mr. Armstrong?
(7.) What evidence has Mr. Armstrong furnished of possessing such a knowledge (practical) of the steel-rail trade as would enable him to satisfactorily carry out so important a contract in a hitherto untried field?

Answer.

Supply of 175,000 tons of Steel Rails, to be manufactured in the Colony of New South Wales.

OFFERS are hereby invited by the Government of New South Wales, and will be received by the Secretary for Public Works in Sydney, and the Agent-General for New South Wales in London, up to 11 o'clock on the 7th December, 1892, from persons willing to contract for the supply of 175,000 tons of steel rails from material to be entirely manufactured and finished in the Colony of New South Wales, out of iron ore raised in the Colony, and other necessary minerals the natural product of, and with coal, coke, or other fuel, smelted, gotten, and raised within the said Colony, upon the terms and conditions which can be seen at the offices of the Minister for Public Works, Sydney (or the Agent-General for New South Wales, London).

WILLIAM JOHN LYNE.

NOTE.—Attention is drawn to the fact that, under the Colonial Act, 55 Victoria No. 16, the duty imposed on pig iron imported into this Colony is fixed at 10*s.* per ton on and after the 1st day of January, 1893.

TERMS and Conditions for the Manufacture and Supply of 175,000 tons of Steel Rails.

THE above rails are to be entirely manufactured and finished in the Colony of New South Wales, out of iron ore raised in the Colony, and other necessary minerals the natural product of, and with coal, coke, or other fuel, smelted, gotten, and raised within, the said Colony. See Tender.

The said rails shall be completed and finished as from time to time directed in accordance in all things with one or other of the respective specifications hereunto attached marked "A" and "B," and the drawings therein referred to, marked respectively "C" and "D," or such other drawings and specifications providing for rails of a different weight, but of similar character, as the Government may from time to time require during the currency of the contract, and under and subject to the general conditions hereunto annexed.

The delivery of the said rails shall commence not later than the month of August, 1894, and shall spread over a period of five years, computed from the day of such first delivery. See Tender.

During

During the first three years of the currency of the contract, commencing from the time aforesaid, the delivery of the said rails shall be at the rate of 25,000 tons per annum, and during the last two years of this agreement the residue of the said rails shall be delivered at the rate of 50,000 tons per annum, in such quantities and at such times as the Minister for Public Works shall determine.

Delivery of the said rails shall be taken on behalf of the Minister at such railway station in the said Colony as shall be nearest or most convenient of access to the place of manufacture.

No delivery of the said rails shall be taken by the Minister until a certificate shall be given by the Engineer-in-Chief for Railway Construction, or such other person as shall be appointed by the Minister to give such certificate (hereinafter called the Engineer), that such rails, or the quantity to be delivered in pursuance of the determination of the Minister, have been manufactured in accordance with the contract and to the satisfaction of the Engineer; and the production of the certificate of the Engineer shall be a condition precedent to the contractors having any cause or right of action, claim, or demand upon the Minister upon or on account or in respect of the quantity of the rails supplied from time to time under the provisions hereof.

See Tender. The prices at which such rails shall be delivered shall be determined in the following manner, subject, however, to such modifications as hereinafter expressed:—At the beginning of each year during which the delivery of the said rails shall take place, or so soon thereafter as may be convenient, the Agent-General for the said Colony, or the Officer representing the Government in London, shall fix and determine, subject to the approval of the Minister, the average price ruling at that time in London or Liverpool, in England aforesaid, for rails of a similar kind and quality shipped in England to be landed on a public wharf in Sydney, and to the price so fixed the Engineer shall add the ordinary cost of freight and insurance, primage, and other usual charges of landing the same in Sydney aforesaid, such insurance to be free of particular average; this shall be taken as the basis upon which payment shall be made by the Minister for the rails delivered during the then current year.

If any of the terms of the contract shall not be carried out to the entire satisfaction of the Engineer, and he shall so certify to the Minister, the latter shall have full power and authority to terminate the contract by giving six months' notice in writing to the contractors; and in the event of this agreement being so terminated, it shall absolutely cease and determine, unless in the meantime the contractors shall conform to the requirements of the Minister in respect of the matters so certified by the Engineer as aforesaid, and shall give notice in writing of their having so conformed. But if, notwithstanding the giving of such notice of having conformed as aforesaid, the Minister shall proceed to cancel and terminate, and shall cancel and determine, the contract, which he is hereby empowered to do, the contractors' rights of suit for damages in respect thereof shall not be thereby defeated in case they shall establish affirmatively that they have sufficiently conformed as aforesaid, and that the cancellation of the contract has been, notwithstanding the premises, unreasonably and capriciously arrived at.

So soon as the amount due to the contractors has been ascertained in the manner prescribed herein, ayment shall be made to the contractors for the quantity of the rails supplied to the order of the Minister, at the rate of 85 per cent. of the ascertained value of the rails upon satisfactory delivery of the same in terms of the contract, and the remaining 15 per cent. of such ascertained value when the quantity ordered for the year as hereinbefore provided shall have been properly and satisfactorily delivered.

All notices required to be served on the contractors under the contract, unless otherwise specially provided, shall be in writing, and may be served on the contractor, or at his last known place of abode in the said Colony, or may be left at the place of manufacture of the said rails.

The Government reserves to itself the right to select from the parties offering the one which, in the opinion of the Minister, is most capable of carrying out the contract.

WILLIAM JOHN LYNE,
Minister for Public Works.

Department of Public Works, Sydney, 14th July, 1892.

General Conditions.

Interpretation clause.

1. The word "Inspector" in these conditions shall mean any person who may from time to time be appointed by the Engineer to supervise the manufacture of the rails, and the word "Engineer" shall mean the Engineer-in-Chief for Railways for the time being, or such other person as shall be appointed by the Minister. The words "Minister for Public Works" and "Minister" shall mean the Secretary for Public Works for the time being. The word "Government" (where used) shall mean the Government of New South Wales promoting this undertaking. Words importing the singular number only shall include the plural number, and words importing the plural number only shall include the singular number.

Dismissal of workmen.

2. The Engineer shall have the power of immediately dismissing any agent or workman employed by the contractors.

Instructions to be obeyed.

3. Should the contractors refuse or neglect to carry out the instructions of the Engineer or the inspector, the Engineer shall have the power of suspending the certificate for payment until such instructions shall have been complied with.

Drawings, specifications, &c.

4. The drawings represent the form and dimensions of the rails. Where any discrepancy exists between the dimensions as indicated by the scale and those marked in figures, the figures are to be considered as correct, and are to be taken in all cases in preference to the measurements by the scale attached; and if there should be any discrepancy between the figures or dimensions, as indicated in the drawings, and the dimensions given in the specification, the directions of the specification shall be adopted; and in all cases of defective description or any ambiguity, the explanation given by the Engineer shall be binding upon the contractors. Also, anything contained in the drawings and not in the specification, or anything contained in the specification and not shown in the drawings, shall be equally binding as if it were contained in both.

Extra

Extra works, omission of works, &c.

5. If at any time whilst the works are in hand it shall be deemed expedient by the Engineer to increase, diminish, or alter the dimensions or weight of any works to be done under this contract, or to vary the materials or form of dimensions of any of the said works, or of any part thereof, he shall have full power to do so, and to order and direct any such increase, diminution, or alteration which shall be executed by the contractor; and no such increase, diminution, or alteration of works shall in any way annul or set aside this contract, or extend the time for the completion thereof, but such additions and alterations shall be measured and allowed and paid for, or such deductions credited to the Minister for Public Works as the case may require, the price being ascertained in the manner provided for in the contract.

Contractor to be represented.

6. The contractor at all times during the progress of the works, when he is not personally superintending them, shall have a responsible agent or overseer stationed on them to receive instructions from the inspector or Engineer, and to represent the contractor for all the purposes of this contract.

Time of completion.

7. The contractor shall complete the whole of the works comprised in the said contract at the times specified therein, and in the event of their non-completion at the specified times, the contractor shall forfeit and pay £500 sterling per week, or for every part of a week, that shall elapse after such specified times until their completion, which sum or sums may be deducted from any money payable to the contractors under this or any other contract for public works.

Delay by Minister for Public Works, &c.

8. If the contractors, from any cause whatever arising out of the acts or defaults of the Minister for Public Works, or any officers or servants in his employment, or from any accident happening to the said works during their progress not arising from the neglect or default of the contractors, or their servants or workmen, shall be delayed or impeded in the execution of their contract, the contractors may, from time to time, within seven days of the happening or occurring of such act, default, or accident, apply in writing, setting forth the cause of such application, to the Engineer, for an extension of time on account of such act, default, or accident, who shall, if he shall think the cause sufficient, but not otherwise, allow by writing under his hand, such an extension of time as he shall in his uncontrolled discretion think adequate, and the penalties, sets-off, and deductions to which under this contract the contractors are liable shall not attach until the expiration of such extension of time, but shall attach, and the contractor shall become liable to the same from the date of the expiration of such extended time or times, and unless the contractor shall make such application within the time and in the manner aforesaid, and unless and until the Engineer shall allow such extension or extensions of time as aforesaid, the contractors shall not by reason of any delay arising from the cause or causes aforesaid, or any of them, be relieved in any way or to any extent of their liability to finish and complete the works within the time in this contract specified, and in default of their so doing to pay and be subject to the penalties, deductions, and sets-off as in these conditions provided, nor shall the Minister for Public Works be deprived in any way or to any extent of his right to deduct or recover penalties or liquidated damages, or to make deductions or sets-off which under the contract he is entitled to make, receive, deduct, set-off, or receive from the contractors for or by reason or on account of any delay in the completion of the work or any portion of the same, nor shall the rights, powers, and authorities by these conditions given to or vested in him be in any way affected.

Copies of drawings, &c.

9. All copies of drawings or specifications required by the contractors for carrying on the works must be made at their expense.

Liability of contractors.

10. The care of maintenance of all material under this contract shall remain with the contractors at their expense until completion and until the Engineer shall, by notice in writing under his hand, inform the Minister for Public Works that the work has been completed to his satisfaction, and until such notice shall have been given the contractors shall be responsible for all accidents from whatever cause arising, and shall make good all damage thereto.

Contractors not to assign work or moneys.

11. The contractors shall not assign over this contract or assign all or any of the moneys payable or to become payable under the contract, or all or any part thereof, or any other benefit whatsoever arising, or which may arise under this contract, to any other person without the consent in writing under the seal of the Minister for Public Works first obtained. The contractors, for each and every breach of this condition, shall pay to the Minister for Public Works the sum of £500 as and for liquidated damages, and the sum or sums payable as such damages may be deducted from any sum or sums due to the contractors under this or any other contract with the Minister for Public Works; and any permission to assign over this contract shall not discharge the contractors from liability to see that the works so assigned are executed and completed in terms of this contract, unless on the assignment thereof the Minister for Public Works expressly declares that the contractors are discharged from further liability.

Truck system not allowed.

12. The workmen, tradesmen, and labourers of every class employed on the works to which these conditions refer, shall be paid their wages in full, in money, current coin of the Colony, at least once in every month, and no ticket or other system of payment by provisions, liquors, or goods, will on any pretence be allowed; nor shall the contractors, or any person or persons employed by them, or in any way connected with them, establish any shop for the supply of provisions, liquors, or goods; nor shall the contractor oblige their workmen to take provisions, liquors, or goods of any kind from any person in particular. The workmen of every class shall be paid on the works if it be possible, or in some building adjoining; and in no case shall they be paid at a public-house or other place where liquors or refreshments are sold.

Power

Power to the Minister for Works to pay workmen's wages.

13. Before the payment of any money to the contractors, the Minister for Public Works may require from them a statutory declaration that the tradesmen and labourers of every kind employed on the works to which these conditions refer have been paid their wages and claims of every kind in full, in money, the current coin of the Colony, and to the latest date at which such wages or claims are due; and the Minister for Public Works may withhold the payment of any money that may be due, or may become due, to the contractors, until such declaration has been made and delivered to him.

Bankruptcy.

14. If the contractors shall become bankrupt, have their estate placed under sequestration, or shall make an assignment of their estate for the benefit of their creditors, it shall be lawful for the Minister for Public Works, without previous notice to the contractors, or to the official or other assignee or assignees of their estate, or to the trustee or trustees under the assignment, to take the works out of the hands of the contractors, and of the assignees or trustees of their estate, and to recontract with any other person or persons to proceed with and complete the same, upon such terms, stipulations, and conditions as shall be deemed expedient; and all the then remaining materials, implements, and plant aforesaid may be used in and applied for the purposes of the works; but, on the final completion of the works, the surplus of such materials, implements, and plant shall cease to belong to the Minister for Public Works, and shall become the property of the said assignees or trustees, without any allowance for or payment by the Minister for Public Works, or on account of any loss or diminution, wear, tear, or injury they may have sustained in the meantime.

Security.

15. Upon the signing of the necessary agreement, the contractors shall deposit with the Agent-General in London, or with the Minister in Sydney, the sum of £15,000, to be held by the Minister for Public Works as security until the Engineer has certified that 1,000 tons of steel rails, according to the said contract, have been completed and delivered to his satisfaction, or until the contract has been cancelled by the Minister for Public Works, in which last-mentioned event the money so deposited will become forfeited. If, however, the contract shall not be declared to be cancelled under the contract, and if the works comprised in this contract are not completed within the time mentioned in the conditions, the weekly penalty which will be payable to the Minister for Public Works may be deducted and taken from the money so deposited. Should the contractors fail to deposit the said sum of £15,000, as hereinbefore provided, or should the contractors fail to execute the contract within fourteen days from the acceptance thereof, the Minister for Public Works will have the option and full power and authority to declare such contract to be annulled.

16. The contractors will be entitled to receive interest on the said sum of £15,000 while it is so held, at the rate of New South Wales Government securities, unless the said deposit shall have been cancelled under the preceding clause.

Progress payments without prejudice, &c.

17. No payment made to the contractors shall prevent the Engineer from at any future time rejecting all unsound materials and improper workmanship, and notwithstanding any approval given or made by the inspector that portions or the whole of the works have been satisfactorily performed, the Engineer may require the contractors to remove or amend at any future time any work that may be found not in accordance with the contract, and the contractors must remove and amend, at their own cost, all such work when so required, and should they refuse or neglect to do so the Engineer shall have power to deduct from any moneys that may be due, or that may become due, to the contractors, the whole amount that has been paid on account of such work.

18. If, in the opinion of the Engineer, further inquiry is necessary or desirable before any certificate is given, he shall have power to withhold such certificate for a period not exceeding one month from the date at which, in the ordinary course, the certificate would have been given.

Payments.

19. Progress payments will be paid on material delivered unless same shall become not payable by reason of anything contained in these conditions, on the Engineer's certificate, as the work proceeds, in the proportion of 85 per cent. of the value of the work returned.

The retention money, thus amounting to 15 per cent., will be retained until the Engineer has certified that the whole of the material required for the year has been satisfactorily completed, manufactured, and delivered, when the said retention money will be paid to the contractors; and it is expressly declared that until a certificate has been given by the Engineer to the Minister for Public Works that the work done by the contractors has been executed and completed to his satisfaction, the contractors shall have no right or cause of action in respect of any work done or materials provided, nor shall the contractors have any right of action or claim to the payments from time to time to be made under this contract, or to the final payment upon the whole of the works being finished.

20. None of the conditions of this contract shall be varied, waived, discharged, or released, either at law or in equity, unless by the express consent of the Minister for Public Works, testified in writing under his seal.

New South Wales Government Railways.

SPECIFICATION A for Flanged Steel Rails (60 lb.).

THE rails must be all 30 feet long.

The section of the rail is shown on the plan attached, marked C, the weight being about 60 lb. per yard. Templates in duplicate must be made by the manufacturers, and must be approved by the Engineer-in-Chief for Railway Construction, or such other person as shall be appointed by the Minister (hereinafter called Engineer), before commencing to roll.

The rails are to have two holes cleanly punched in the web at each end for fishing, the exact positions and sizes of which are shown in the drawing. Any variation therefrom of more than $\frac{1}{8}$ of an inch will subject the rails to rejection, and no deviation from the given lengths exceeding $\frac{1}{2}$ of an inch will be allowed.

No

No holes of any kind, either punched or drilled, are to be made in the flanges of the rails, which will be fastened to the sleepers by screws or spikes having projecting heads, which will clip the flange of the rails.

Each rail is to be marked on the web with the maker's name, year, and month of manufacture, and the initials "N.S.W.G.," and the word "Steel."

The ingots from which the rails are made are to be cast of the best steel for the purpose, made from colonial ores. The proportion of carbon to be used in combination is left to the discretion of the maker; but it must be such as to ensure the rails being tough and capable of enduring the tests hereinafter enumerated without signs of fracture or deterioration. The rails must be of uniform quality, from good sound ingots, reduced in the cogging rolls and finished in the rolls while yet visibly red by daylight.

The manufacturers will not be permitted to sublet any portion of the contract, or to make the rails at any other works than their own without the written consent of the Engineer. Before the contract is proceeded with, a portion of a rail must be sent to the Engineer for approval as to contour, &c.

The rails to be of uniform section throughout; the ends sawn off true and square, free from roughness at the edges. The hot rails must be carefully arranged to cool as straight as possible. Rails that require much cold straightening will not be accepted; all straightening must be done without hammering.

The surface of the rails to be entirely free from defects.

The contract to be executed in every respect to the satisfaction of the Engineer, and the rails to be subjected to his tests and inspection, or that of his inspector, during all periods of manufacture, the expense of such tests and inspection being borne by the contractor, who, when requested, is to furnish labour to assist, and to afford every facility for testing; but, notwithstanding such tests and inspection, any rails may be rejected on delivery, which, in his judgment, are defective in any respect, and if labour should be required for turning over and examining the rails at the place of delivery the contractor is to supply it.

The rails are to be stacked in batches of each day's rolling and kept separate, and the ends painted a distinctive colour, so that they may be readily identified by the inspector appointed by the Engineer, who shall select from these batches certain rails which shall be subjected to the tests hereinafter enumerated.

Each rail of the day and night shift must also bear upon it a distinguishing mark, to be stamped at the end, to show from which cast of metal it was made, so that all rails from any particular cast can be identified.

The tests to be applied are as follows:—

Certain rails from each day's make shall be selected, and they shall have a piece 4 ft. 6 in. cut off them. These portions shall be placed with the head upwards upon iron supports, 3 ft. 6 in. apart in the clear, bedded upon a solid foundation.

Each portion of the rails to be then subjected to two blows from a weight of 1 ton, falling 6 feet each time, and it is to bend under this test not less than 3¾ inches, or more than 4½ inches. The rail must then be submitted to one more blow of 12 feet fall, which it must sustain without fracture. These tests may, however, be altered by the Engineer, and other tests substituted, if he considers it necessary to modify them, to ensure the rails being of the highest quality for strength and toughness.

The rails subjected to tests shall be selected entirely at the discretion of the Engineer or his inspector, and if more than 5 per cent. of the rails so tested fail to bear the tests satisfactorily, the entire batch of rails from which the tests were selected shall be absolutely rejected.

The inspection as regards section, holes for fish-bolts, and general finish of the rails, will be most strict.

The approved rails are to be stamped at the two ends in the presence of the inspector, who will furnish the Engineer with a return of the rails examined, tested, and passed.

The decision of the Engineer as to the quality of materials, tests to which they are to be subjected, workmanship, and general compliance with this specification, shall be without appeal.

New South Wales Government Railways.

SPECIFICATION B for Flanged Steel Rails (71½ lb.).

THE rails must be all 30 feet long.

The section of the rail is shown on the plan attached marked D, the weight being about 71½ lb. per yard. Templates in duplicate must be made by the manufacturers, and must be approved by the Engineer-in-Chief, or such other person as shall be appointed by the Minister (hereinafter called the Engineer), before commencing to roll.

The rails are to have two holes clearly punched in the web of each end for fishing, the exact positions and size of which are shown in the drawing. Any variation therefrom of more than $\frac{1}{16}$ of an inch will subject the rails to rejection, and no deviations from the given lengths exceeding $\frac{3}{8}$ of an inch will be allowed.

No holes of any kind, either punched or drilled, are to be made in the flanges of the rails, which will be fastened to the sleepers by screws or spikes having projecting heads, which will clip the flange of the rails.

Each rail is to be marked on the web with the maker's name, year, and month of manufacture, and the initials "N.S.W.G.," and the word "Steel."

The ingots from which the rails are made are to be cast of the best steel for the purpose made from colonial ores. The proportion of carbon to be used in combination is left to the discretion of the maker; but it must be such as to ensure the rails being tough, and capable of enduring the tests hereafter enumerated without sign of fracture or deterioration. The rails must be of uniform quality, from good sound ingots, reduced in the cogging rolls, and finished in the rolls while yet visibly red by daylight.

The manufacturers will not be permitted to sublet any portion of the contract, or to make the rails at any other works than their own, without the written consent of the Engineer. Before the contract is proceeded with, a portion of a rail must be sent to the Engineer for approval as to contour, &c.

The

The rails to be of uniform section throughout; the ends sawn off true and square, free from roughness at the edges. The hot rails must be carefully arranged to cool as straight as possible. Rails that require much cold straightening will not be accepted; all straightening must be done without hammering.

The surface of the rails to be entirely free from defects.

The contract is to be executed in every respect to the satisfaction of the Engineer, and the rails to be subject to his tests and inspection, or that of his inspector, during all periods of manufacture, the expense of such tests and inspection being borne by the contractor, who, when requested, is to furnish labour to assist, and to afford every facility for testing; but, notwithstanding such tests and inspection, any rails may be rejected on delivery which, in his judgment, are defective in any respect; and if labour should be required for turning over and examining the rails at the place of delivery, the contractor is to supply it.

The rails are to be stacked in batches of each day's rolling, and kept separate, and the ends painted a distinctive colour, so that they may be readily identified by the inspector appointed by the Engineer, who shall select from these batches certain rails, which shall be subjected to the tests hereinafter enumerated.

Each rail of the day and night shift must also bear upon it a distinguishing mark, to be stamped at the end, to show from which cast of metal it was made, so that all rails from any particular cast can be identified.

The tests to be applied are as follows:—

Certain rails from each day's make shall be selected, and they shall have a piece 4 feet 6 inches cut off them. These portions shall be placed with the head upwards upon iron supports 3 feet 6 inches apart in the clear, bedded upon a solid foundation.

Each portion of the rails to be then subjected to two blows from a weight of 1 ton falling 7 feet each time, and it is to bend under this test not less than $3\frac{3}{4}$ inches or more than $4\frac{1}{4}$ inches. The rail must then be submitted to one more blow of 14 feet fall, which it must sustain without fracture. These tests may, however, be altered by the Engineer, and other tests substituted, if he considers it necessary to modify them, to ensure the rails being of the highest quality for strength and toughness.

The rails subjected to tests shall be selected entirely at the discretion of the Engineer or his inspector, and if more than 5 per cent. of the rails so tested fail to bear the tests satisfactorily the entire batch of rails from which the tests were selected shall be absolutely rejected.

The inspection, as regards section, holes for fish-bolts, and general finish of the rails, will be most strict.

The approved rails are to be stamped at the two ends in the presence of the inspector, who will furnish the Engineer with a return of the rails examined, tested, and passed.

The decision of the Engineer, as to the quality of materials, tests to which they are to be subjected, workmanship, and general compliance with this specification, shall be without appeal.

These are the conditions and specifications referred to in my tender herewith.

A. ARMSTRONG.

5, Spring-street, Sydney, 7th December, 1892.

CONTRACT for the manufacture and supply of 175,000 tons of Steel Rails.

SUBJECT to the enclosed special terms and conditions, I hereby undertake to supply to the Government of New South Wales, in terms of the specification herewith, 175,000 tons of steel rails, at a price to be computed at 33 per cent. in advance of the price at which steel rails of similar quality could be delivered on railway trucks at Darling Harbour in terms of the printed conditions of tender herewith.

The minimum price to be paid for the rails to be fixed at £8 per ton.

A. ARMSTRONG.

5, Spring-street, Sydney, 7th December, 1892.

CONTRACT for the manufacture and supply of 175,000 tons of Steel Rails.

SPECIAL CONDITIONS.

1. THE contractor to have the right to use such ores of iron and fluxes as he may consider suitable, whether such ores and fluxes are mined in New South Wales or elsewhere.

2. The contractor to have the right to use for the purpose of smelting and mixing any old rails previously in use in New South Wales.

3. Ores and fluxes used by the contractor during the currency of the contract to be free of import duty, and any ores or fluxes so used being mined on Crown lands to be free from royalty to the Crown.

4. The first delivery of rails not to be made earlier than January, 1895, unless the contractor shall otherwise elect.

A. ARMSTRONG.

5, Spring-street, Sydney, 7th December, 1892.

CONTRACT for the manufacture and supply of 175,000 tons of Steel Rails.

Alternative Tender.

SUBJECT to the enclosed special terms and conditions, and further subject to the Government of New South Wales guaranteeing an issue of debentures as specified below, I hereby guarantee to supply to the said Government of New South Wales 175,000 tons of steel rails, to be manufactured in terms of the printed conditions of contract herewith, at a price to be computed at 25 per cent. in advance of the price at which steel rails of similar quality could be delivered on railway trucks at Darling Harbour in terms of printed conditions of tender.

The minimum price to be paid for the rails to be fixed at £7 5s. per ton.

A. ARMSTRONG.

5, Spring-street, Sydney, 7th December, 1892.

Debenture Issue.

THE Government of New South Wales to guarantee an issue of debentures, bearing interest at the rate of 4 per cent. per annum, with a currency of twenty years, to an amount equal to two-thirds of the capital required in and about the construction of the said works and accessories and the carrying on the business of the said works.

The amount of such debentures not to exceed the sum of £300,000.

The contractor to provide the remainder of the said capital, viz., one-third, in cash.

The contractor to enter into an agreement by which the whole of the net proceeds of the said guaranteed debentures and the capital to be provided by him as above shall be placed to an account as directed by the Colonial Treasurer for the erection and purchase of the necessary plant and the carrying out of the business of the manufacture of the rails as per contract, and of iron and steel as may be hereafter determined.

The said guaranteed debentures to be a first charge on the whole of the said works and plant.

Any net profits derived in any one year from the said works, after providing for depreciation and renewals, to be apportioned as follows :—

1. To the payment of interest upon the guaranteed debentures.
2. To the payment of interest at the rate of 4 per cent. per annum on the capital contributed by the contractor.
3. To a reserve fund to be invested in Government securities for the redemption of the said guaranteed debentures.

The specification of the plant to be employed, the expenditure in purchase thereof, and the erection of the plant and works, to be subject to the approval of officers to be appointed by the Minister for Works.

Arrangements to be made in terms to be approved by the Minister for Works for the supervision of the works by officers of the Department during the currency of the guaranteed debentures.

A. ARMSTRONG.

5, Spring-street, Sydney, 7th December, 1892.

[Two pla s.]

Sydney : Charles Potter, Government Printer.—1893.

[1s.]

60-LB RAILS.

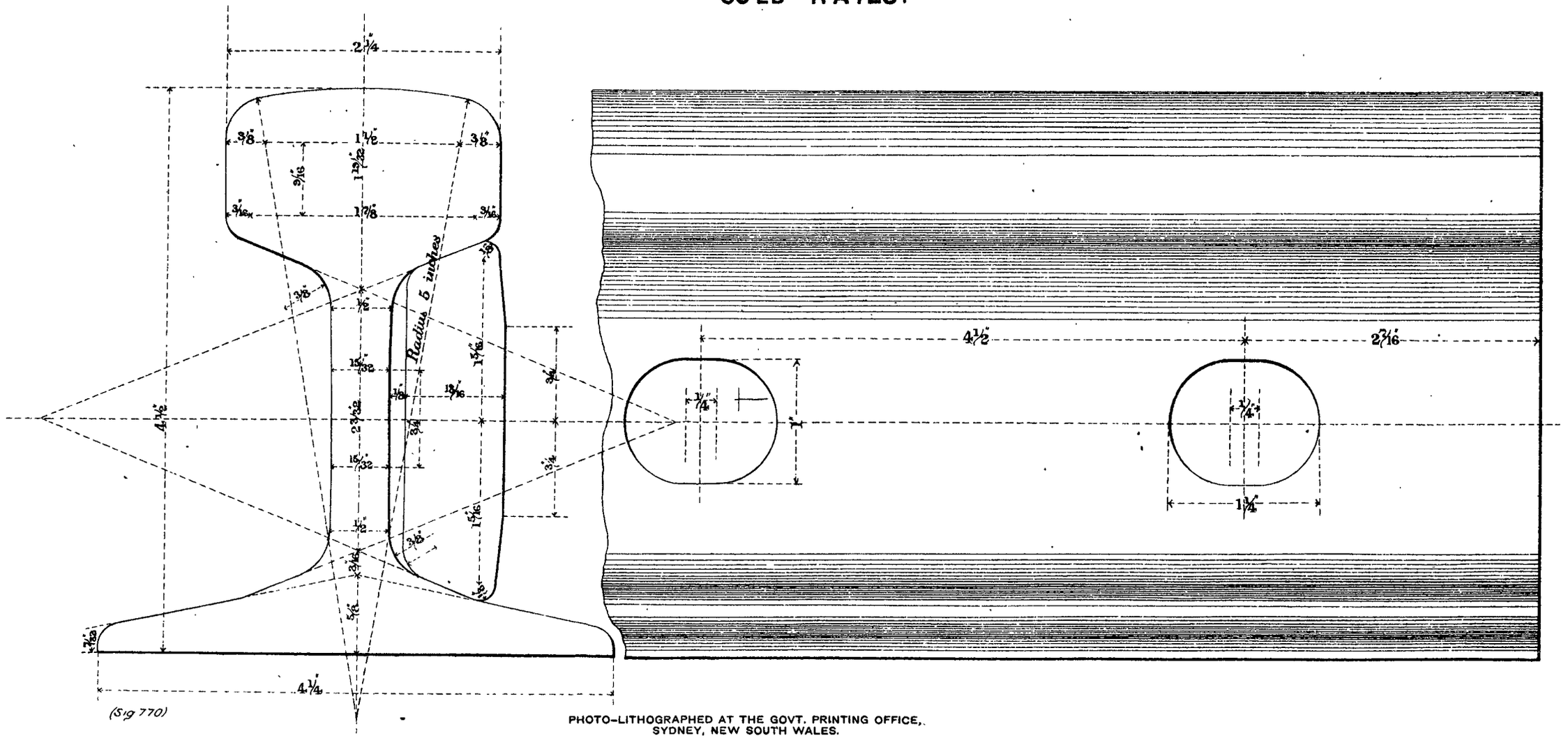

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
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71½-LB RAILS

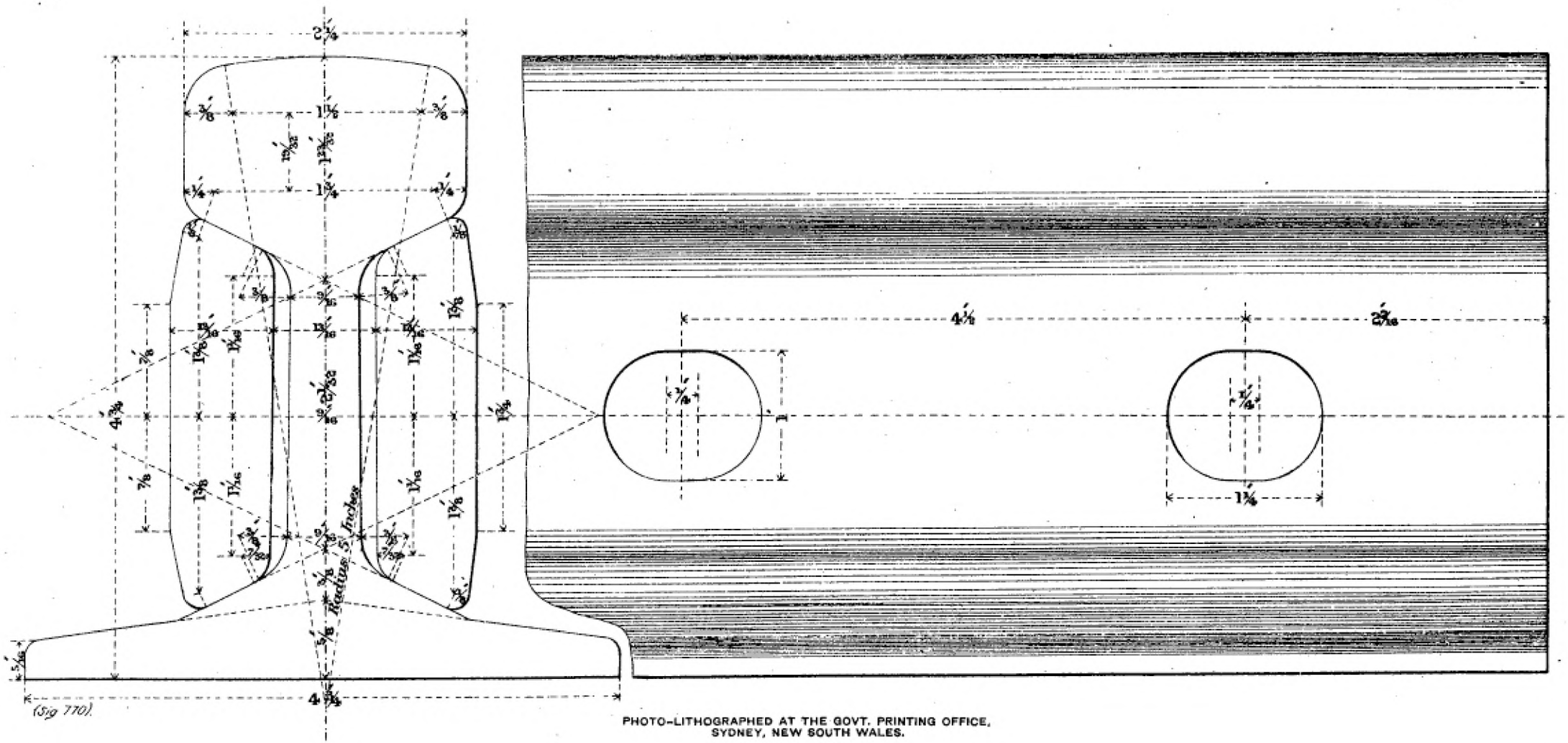

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PROPOSED EXTENSION OF THE RAILWAY SURVEY FROM PARKES VIA TRUNDLE LAGOON TO CONDOBOLIN.

(REPORT BY H. A. GILLIAT, EXAMINER OF PUBLIC WORKS PROPOSALS, ON THE)

Ordered by the Legislative Assembly to be printed, 11 *October*, 1892.

In accordance with my instructions I have the honour to hand you the following report on the proposal to extend the railway survey from Parkes, *via* Trundle Lagoon, to Condobolin:—

Existing Surveys.

1. Three surveys have already been made—
   (*a*) From Parkes, *via* the Bogan Gates, to Condobolin, in about 327 miles from Sydney, or 60 miles from Parkes.
   (*b*) From Forbes to Condobolin, in about 339 miles from Sydney, or 50 miles from Forbes.
   (*c*) A deviation from the latter survey, keeping somewhat nearer the Lachlan River.

Proposed Survey.

2. The proposed survey is to extend from Parkes to Trundle Lagoon, 32 miles by road, and thence to Condobolin, 40 miles by road, keeping to the north of the existing surveys. The air line by this route is about 60 miles, as traversed by road the distance is estimated at 72 miles.

3. The arguments advanced in support of this deviation are "that the present route"—presumably that by the Bogan Gates—"passes through an almost uninhabited part of the district, leaving all the populated portion to the north and north-west; and further, that it passes through leaseholds, station properties, and plains country, which have been almost under water during the past three seasons."

Settlement in the District.

4. Owing to the greater value attached to the river frontage, and the land extending back from it for some 10 miles, consisting chiefly of black soil plains, the resumed areas throughout the district were in most instances taken from the back country, and became, under the Land Act of 1884, immediately available for settlement. Before that date there was little settlement on the river, and almost none away from it. At the present time these resumed areas have been nearly all taken up, and about Trundle no land remains available for settlement, with the exception of the leaseholds of The Troffs, Blowclear West, and Gobondry runs, an area as given by the District Surveyor of some 86,000 acres, none of which, he adds, is suitable for special areas.

5. In fact, within a line drawn from Forbes, following the Lachlan to 20 miles below Condobolin, thence to Dandaloo on the Bogan, then up the Bogan and across to Parkes, and thence to Forbes, nearly the whole of the resumed areas have been taken as a rule in full portions of 2,560 acres, while many settlers with families have taken several portions. About Trundle and Condobolin there are holdings of from 7,000 to 14,000 acres, grazing from 5,000 to 12,000 sheep.

6. It is thus apparent that the bulk of the resumed areas having been back from the river, the heaviest settlement has been in that direction, but the effect that any future opening of the leaseholds will produce is worthy of consideration. Where the land is good it will be alienated in special areas of smaller size, thus causing the settlement to become more concentrated.

7. The improvements on the land are, as a rule, substantial, and indicate the intention of making permanent homes. The great proportion of the settlers appear to have come from Victoria, or the Murray borders. They have been bred as farmers, and usually have the command of some capital.

Demand for Land.

8. The rapid alienation of the resumed areas throughout the district does not seem to have satisfied the demand for land. Special areas have been rapidly taken up when thrown open at prices ranging from 30s. to 40s. per acre, and the District Surveyor states in his evidence, "that if the leaseholds were thrown open, the whole of the Crown lands on Burrawang and Gunningbland, amounting to some 238,000 acres of land of the highest quality, would be taken up in special areas of not more than 640 acres within 18 months."

Employment of the Land.

9. The new class of settlers who came on to the land under the Act of 1884, although most of them farmers, have hitherto done but little in that direction. It is urged that they have not yet had time to do more than fence, ring-bark, and scrub their lands for grazing purposes, and, although many of them cultivate a few acres for their own use, they have not had time to prepare large tracts for farming. With few exceptions grazing is the principal industry, but the smaller holdings being occupied, and their improvement in ring-barking and scrubbing, have largely increased the carrying capacity, and the land back from the river will now carry—it appears from the evidence—year in and year out, one sheep to the 1½ acres.

In the neighbourhood of Trundle a number of settlers are now clearing land for the plough, in anticipation of the opening of the Molong-Parkes line.

Wheat-growing.

10. Amongst all the settlers there is an entire agreement that the soil of the district is well adapted for wheat-growing, and that the climate is suitable for its profitable cultivation. Although many of them have had too short an experience to afford reliable evidence on the latter point, there are some whose long experience gives their evidence great value.

11. With but one exception amongst the farmers, the land back from the river frontage is considered the best for wheat. It is, as a rule, a deep red or chocolate limestone soil, of easy tilth, in this respect differing greatly from the stiff, black soil of the river plains, and can be worked with a much lighter rainfall.

12. Mr. James Dawson, 10 miles below Condobolin, after seventeen years farming in South Australia, and ten years at Albury, considers his present holding of 14,000 acres the best wheat-growing land of the three.

He has grown thirteen crops successively upon it, and the average yield has been 13½ bushels to the acre. In spite of the extreme severity of the droughts from 1880 to 1885, he managed each year to secure some crops, and the very severity of the season enhanced their value. Sound farming, he is convinced, will always pay in his district. With the present values of stock his wheat pays him best at present, but at that distance from a market any considerable increase in production would oversupply the local market, so that settlers, until within reach of a railway, must always put their main dependance on grazing.

13. Mr. J. B. Reymond, of Forbes, has been farming every year since 1866. His smallest crop was 7 bushels per acre, the largest 40 bushels. A fair average during the twenty-six years is not less than 20 bushels per acre; he is satisfied the climate will ensure a sufficiently high average return to pay a man who understands his business.

14. With practical men, understanding farming, there appears no reason to doubt, in face of the above and similar evidence, that the production of wheat can be made profitable in this district within a reasonable distance of carriage—but, as pointed out by Mr. Reymond, "money is made so easily out of grass that many people prefer the smaller returns to the hard work necessary in farming."

Irrigation.

15. Irrigation, by pumping from the Lachlan, has been undertaken in several instances with success, but no consideration appears yet to have been given to the storage and conveyance of water on any considerable scale, although the district is admirably adapted for it.

Consideration of the different Routes.

16. But little interest on the subject appeared to be taken in either Parkes or Forbes, and this may be accounted for by the fact that the railway will shortly be completed to each of these towns; but, as remarked by the Mayor of Parkes, "any decision to take the extension from Forbes would be strongly resisted," and it may be considered certain that with the rivalry existing between the towns, any proposal to make Parkes the offtake would be met with equal antagonism. The one idea at each of these places is to connect by rail Forbes with Young and Parkes with Dubbo.

At Condobolin no attempt was made to collect a return of the statistics of the neighbourhood. Trundle alone took sufficient interest to make a house-to-house return.

17. The survey from Parkes to Condobolin, *via* the Bogan Gates, is the most direct. It passes over an easy undulating country until it approaches the river, where it is alleged it traverses flooded land for a considerable distance. The evidence on this point is conflicting; and, judging from the country, the difficulty does not appear a serious one.

18. The advantages claimed for this route are:—

1. That it is the shortest and most direct.
2. That it passes through some 238,000 acres of Crown lands of the highest quality, comprised in the leaseholds of Burrawong and Gunning-Bland runs, nearly all of which, when withdrawn from lease, would at once be taken up as special areas. While the proposed route by Trundle has only some 86,000 acres of Crown lands left, comprising the leaseholds of the Troffs, Blowclear West, and Gobondry runs—none of which is suitable for special areas. The resumed area having been almost entirely alienated.
3. That it would serve Trundle sufficiently well—that township being fairly central, and the present survey passing within 12 miles of it.
4. That the extension from Forbes must pass through a large area of alienated land.
5. That the land to the south of Trundle being better than that to the north it will pass through the best portion of the district, and when the leaseholds are opened the most densely settled.

19. The surveys from Forbes to Condobolin follow the general direction of the Lachlan River, keeping from 4 to 10 miles back to shorten the distance and avoid the flooded land and billabongs. A considerable area has been alienated to the lessees, and at the date of this inquiry efforts were being made to effect the exchange of a large area of freehold at the back for Crown land on the frontage, with the view of consolidating the estate.

Of

Of the four witnesses presenting themselves for examination at Forbes two were in favour of the route from Parkes, *via* the Bogan Gates, the others advocating the line by the river. The arguments advanced in favour of this route are :—

1. That it will serve the population on the south side of the river as well as on the north.

2. That it passes through better country.

20. Much stress is laid on the fact that the route *via* Trundle will pass through the more closely settled portion of the district, avoiding the flooded land traversed by the other surveys; in point of distance it would probably be about the same as that *via* Forbes.

Summary.

21. The district may be regarded, even with its somewhat limited and irregular rainfall, as well suited for the production of wheat; the experience of practical farmers, extending over periods of from fourteen to twenty-six years, seems to settle this ; and the area of production will probably increase with the advance of the railways. That this increase will be gradual may be inferred. That so little new land is being brought under cultivation in the district, with the prospect of the railway to Parkes and Forbes being ready to transport the next seasons' crop, is probably explained by Mr. J. B. Reymond, who says, "before he extends his farming operations, he will wait and see what effect the railway has on prices." It may be observed that Mr. Reymond speaks both as miller and farmer.

In reviewing the claims of the proposed routes, they appear to be largely in favour of the direct line from Parkes, *via* the Bogan Gates, to Condobolin.

It is the shortest by 12 miles, and will reasonably well serve the area that would be served by either of the other routes.

It passes through some 238,000 acres of rich Crown lands, nearly the whole of which is considered by the District Surveyor as suitable for special areas, and as the land to the north of it declines in quality and that towards the river is either largely alienated, or, owing to its stiff clays, less suitable for tilth, it passes more centrally through the portion of the district that will eventually become the most closely settled.

Merely as a question of an extension to Condobolin, the advantages appear altogether in favour of the route by the Bogan Gates.

With no anticipated extension of the railway system from Forbes, the adoption of this route would leave the objection of a short branch to that town, with its cost of working and small revenue producing power. The possible ultimate extension of the system to Young, or to connect at Narrandera with Jerilderie and the Murray, making Parkes the junction of any western extension, might possibly justify the temporary cost of such a branch.

Conclusion.

22. The general interest of the district, it is considered, will be best served by the route surveyed from Parkes, *via* the Bogan Gates, to Condobolin.

H. A. GILLIAT,
Examiner of Public Works Proposals.

EVIDENCE.

10 December, 1891.

A. H. Farrand, stock and station agent; states that within the area bounded by a line from Forbes to Condobolin, thence to Dandaloo, thence up the Bogan to Parkes, thence back to Forbes, nearly the whole of the resumed areas have been taken up under the Land Act of 1884; as a class, these selectors are all *bona-fide* men, and are the only decent settlers that have ever come to the district; as a rule, all have taken up full portions of 2,560 acres; many brought families, and selected several portions; some 6 or 8 settlers about Trundle are now running from 5,000 to 12,000 sheep each; this new class of settlers throughout the district have been used to farming all their lives; they came from Victoria or the Murray River districts; nearly all have some land under crop; one settler, between here and Marsden, has, during the last eighteen months, planted upwards of 10,000 vines; in his opinion, enough wheat is now grown in the district to supply the local demand; in fact, the difficulty has been due to there having been only one mill in Forbes, the owners of which have kept down the prices of wheat to the discouragement of the farmers; the production of wheat ranges from 12 to 30 bushels per acre; in a fair season the average is 20 bushels; he considers the existing trial survey from Parkes to Condobolin goes within 10 or 12 miles of Trundle; any railway extension towards Condobolin should, in his opinion, go from Parkes, for the reason that the distance from Parkes to Condobolin, and from Forbes to Condobolin, are nearly the same, therefore to reach Condobolin, *via* Forbes, would necessitate 20 miles of extra haulage; also, the trial survey from Forbes to Condobolin has to go a long way back from the river to avoid the billabongs and overflows from the Lachlan; the river frontage, for an average depth of 10 to 12 miles, is far superior to the country back, and consists principally of deep black soil plains, in which water, in an inexhaustible supply, can be obtained by sinking 30 to 35 feet; wheat grows well on these plains; Mr. Chas. Read has a farm on Grawlin Plain, and is one of the most successful farmers in the district; in his opinion, the line as surveyed from Parkes to Condobolin is the most suitable, and will serve the Trundle district well; the railway system that will best serve the whole district is the connection with Young on the south-east and with Dubbo and Werris Creek on the north-east; this would give access to the dry districts of the west, and promote farming to an immense extent; the average rainfall of Forbes is about 22 in.; with systematic farming, he is satisfied the district is an agricultural one; has resided in the district since 1864.

A. H. FARRAND.

Parkes, 7 April, 1892.

Harry Bowditch, journalist, resident about a year, has had practical experience in wheat-growing; has been a resident of Cootamundra and Young; has travelled through this district, and is satisfied that it will yield a good return, and that the soil is more easily worked than either of those districts; to his knowledge, farmers from Cootamundra are selling out and selecting in this neighbourhood; owing to the wetness of the season a large proportion of last year's wheat crop was cut for hay, and this accounts for the small quantity harvested for grain; is aware that land for farming purposes is now being cleared in anticipation of the completion of the line to Parkes; the district has been proved to be capable of producing fruit of excellent quality; it is suitable for the growth of wheat over a large area; the cost of getting wheat to a railway station 54 miles distant would leave little or no margin for profit at the prices which have ruled during the last two years; believes the uncertainty of the maintenance of prices has caused the land to remain uncultivated.

HARRY BOWDITCH.

Edward Skinner, farmer and grazier, has been resident in the district about five years; his property is 5 miles from Parkes, on the Trundle road; owns 2,527 acres, of which 50 are under the plough; the land is well adapted for wheat; has sold his wheat at prices ranging from 3s. 6d. to 5s. per bushel, the latter price was for seed wheat; the average production is about 4 bags to the acre; he has had from 12 to 28 bushels per acre; grazes 2,540 sheep; considers that sufficient wheat is grown in the district to meet the local consumption if it all came into the hands of the local miller; can hardly say from his own knowledge that a large quantity has been sent to Molong; has heard that owing to the low prices growers have carted their wheat there and brought loading back, in preference to selling to the local buyer; has not cultivated more because there is no local market, and it did not pay him to send it to the railway at Molong; does not know what the cost of carriage is to Molong; the settlement in his neighbourhood has largely increased during the last eighteen months; considers any extension westward of the railway should be from Parkes; all the resumed area in his neighbourhood has been taken up; Special Areas in 640-acre blocks were offered twelve months ago, amounting in all to 19,000 acres, at an upset price of 20s., and the whole was selected; about 6,000 acres on Bartley's Creek is now offered at 35s., and the bulk of it has been taken; values his holding at over £3 per acre.

EDWARD SKINNER.

J. A. Rose, Mayor of Parkes, stock and station agent; the extension of the railway, *via* Trundle, as a matter of fact, is of not much interest to the settlers about Parkes, they are careless whether the line follows the present survey, or, indeed, whether it is constructed at all; the only line in which any keen interest is felt is an extension from Forbes to Young, and from Parkes to Dubbo; with regard to an extension to Condobolin, any proposal to take it from Forbes would be met with the greatest hostility; the extension from Parkes would avoid the flooded country on the river frontage, serve a settlement at least ten times greater, and pass through leasehold areas, while by going *via* Forbes the line must pass for fully half the distance, through freehold land; with respect to the settlement that would be served by the proposed extension *via* Trundle there has been within the last four or five years a considerable increase in the neighbourhood of Trundle, and to the north of it, of which he understands statistics have been collected for the Examiner's information; there is a considerable settlement about Burrabarra, extending 30 miles north of Trundle; any settlement beyond that is served by the western line at Narramine, and there is also a large settlement between Trundle and Condobolin, and this, during the next five years, he considers, will be greatly increased; wishes to point out that south of Trundle there is but little settlement on account of the land having been secured by the runholders; settlers have almost entirely confined themselves to grazing, many have not cultivated sufficient to supply even their own wants; but, with the line to Parkes, or any further extension westward, many of the settlers about Trundle will go in for wheat-growing on a considerable scale, but this will not be the case much further to the north or west of that place; around Condobolin he does not think there will ever be much agricultural settlement, owing to the unsuitability of the climate; the rainfall is so uncertain in this district that those settlers growing wheat are in the practice of sowing as soon as sufficient rain falls to enable them to work the ground after March, and this continues into June and as late as August, harvesting takes place about Christmas; has seen adjoining paddocks with wheat crops, one from four to five feet in height, the other under 2 ft., this is owing to the system of farming pursued, until the last two or three years there has been no proper farming in the district; of the wheat grown in the neighbourhood a considerable proportion finds its way to the local flour mill, the rest is purchased by the millers at Molong and Forbes, who invariably give a better price, owing to the endeavour of the local millers to keep the prices down.

J. A. ROSE.

Rev. F. G. Neild, incumbent of the parish of Parkes; resident five years; is aware of the object of this inquiry, and considers that the extension of the railway from Parkes, *via* Trundle, to Condobolin would serve the larger population, this would not be less than one thousand; the bulk of the settlement has taken place within the last six years, in fact all of it, with the exception of one settler; most of the holdings are of the full area of 2,560 acres; the settlers are chiefly graziers, growing small quantities of wheat for their own use; is of opinion that the whole of the resumed area on the Gunningbland and Burrawong runs has been taken up; the months of the greatest rainfall, he considers, are from the middle of February to the middle of April; there is a demand for land for settlement, and when the leaseholds are thrown open, in his opinion, there will be a great rush of settlers; a greater interest will be served by a diversion of the line to Trundle; remembers the inquiry held by the Sectional Committee of the Public Works Committee, in 1890, the sworn evidence was that the population of Trundle was then 157; he is of opinion that the population has increased as above stated; grazing preponderates over wheat-growing owing to the want of a market at present; has heard from the settlers that it was their intention to put in large areas of wheat; nearly all the settlement between Parkes and Condobolin is to the north of the trial survey, to the south there is little or none; is aware that at Burrabarra and Bullock Creek, still farther north, there is a large population that would be served by the line to Trundle.

F. G. NEILD.

A. Pholeros, produce dealer; is a resident of Prkes for fourteen years, and an alderman of the borough; considers that a larger population will be served by a line *via* Trundle, and consequently a better revenue obtained, while at the same time the line would pass through a better class of country; the cost of carriage from Parkes to Molong is about 3s. per bag for wheat, the distance being 54 miles; the goods' rate, per ton, is £2 10s. from Molong to Parkes, with back-loading guarantee it is £2; the months of greatest rainfall are February, March, and April, August is frequently a wet month; a great increase has taken place in farming recently, hay is grown in large quantities, and the price for good wheaten chaff, delivered at the store, is now £3 per ton; owing to the recent good seasons large stocks are held throughout the district; the population of the district is increasing very much, and in his opinion is sufficient to justify the construction of a line to Condobolin; the completion of the railway to Molong will increase the wheat production fourfold; both climate and soil are well adapted to the production of wheat.

E. McGee, miller; is an alderman of the Borough Council, and part owner of the Parkes flour-mill; will furnish the quantity of wheat gristed during the last three years; most of the wheat purchased by his firm comes from the north of Parkes; he is not aware of the average production per acre; it has been low during the last two years, owing to the wet seasons; as the crop has been cut for hay, this has prevented his firm purchasing all the wheat they required; he is not aware of any wheat being exported; his firm has not been able to supply the local demand, chiefly on account of the indifferent crops during the last two years, and the increase of population at Peak Hill, Alicktown, and Trundle; with regular rains, at the proper season, the country is well adapted for wheat-growing; during five years he has been cultivating about 60 acres; the months of heaviest rainfall are August and September; February and March are also wet; working single shifts his mill turns out three tons flour per diem; the trade is not sufficient to keep it in full work; he is not aware that any more land has been put under plough in anticipation of the opening of the railway to Parkes.

By the Mayor: Is it not a fact that every year, except this last, a considerable proportion of the wheat grown in the district has found its way to Forbes or Molong?

Witness: I am not aware of it; the prices paid for wheat were about 5s. for this last crop, 4s. to 4s. 6d. for the year previous, before that about 3s.

E. McGEE.

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10 April, 1892.

G. W. Seaborn, managing Gunningbland station, resident in the district for nine years; since 1885 there has been a very large increase in the population of the district, chiefly composed of selectors under the 1884 Act; nearly all these settlers came from Victoria or the borders, usually with capital; in almost every instance they have taken up full selections of 2,560 acres; is aware of one family that has 10,000 acres amongst them, and of another with nearly 20,000 acres both in the neighbourhood of Trundle; the bulk of the settlement is to the north and north-west of Gunningbland, and more to the north-west than the south of Trundle, but that township is fairly central; the increase of settlement since the passing of the 1884 Act has been much greater in this portion of the district than on the river frontage below Forbes, owing to the bulk of the frontage having been alienated previously; a line from Parkes, *via* Trundle, to Condobolin would pass through a much denser settlement than one from Forbes to Condobolin; there are fewer selectors on the latter than on the former line; the settlers throughout the district confine themselves principally to grazing, although in a great many instances around Trundle preparations are being made with a view to the cultivation of wheat, for which the district is well suited; the extension of the railway to Parkes has stimulated these preparations; hitherto little has been done in wheat-growing, except to supply their own wants; nearly all the resumed areas in this neighbourhood have been taken up; around Parkes there has recently been some 20,000 acres taken up in special areas at 30s.; more would be taken if available; this is in consequence of men who have sold out wishing to select again; there are many selections with 5s. paid up, together with the conditional lease, that could now be purchased at from 15s. to 20s. per acre; these men would probably at once select again; either the direct route from Parkes to Condobolin, or that *via* Trundle, he considers preferable to that from Forbes; the two former avoid the flooded frontage of the Lachlan, and pass through country better adapted for wheat-growing; obtains his flour from the mill at Parkes; this is not always from locally-grown wheat, but flour imported by the miller; the heaviest rainfall is on an average during the summer months, that is, from November to March; puts in a monthly rainfall return from 1884 to date; the best crops are obtained from seed sown at the end of April; the harvesting is in December; 1887, 1890, and 1891 were years of exceptionally heavy rainfall; the carrying capacity in sheep has increased owing to the smaller area occupied where the land is well improved by scrubbing and ring-barking it will carry, year in and year out, a sheep to the 1½ acres, and, by still higher improvements, a sheep to the acre.

G. W. SEABORN.

Trundle, 11 April, 1892.

George Hutton, grazier, owner of The Troffs station, chairman of the Progress Committee, and secretary of the Railway League, resident in the district nine years; is chairman of the Progress Committee puts in the accompanying statistics, which consist of a full return of the freehold and leasehold land, stock, population, and last year's crop within a radius of 20 miles of the township of Trundle in all directions, except towards Parkes, where it extends for 12 miles only; there is now a very considerable population within this radius, nearly the whole of which has grown up during the last five years, since the Land Act of 1884; the principal settlement during that time has been back from the river frontage, which as a matter of fact was to a large extent alienated previously, while of what remains considerable areas are locked up in reserves; considers the following reasons are to be advanced in favour of a line from Parkes to Trundle:—(1) That it will avoid the flooded lands of the river frontage; (2) It will be an easy line to construct, passing through low undulating country, with no large creeks to cross, while the distance would not be materially increased; (3) It would serve a large population to the north and north-west, lying about Barraburra, part of Mungerry, Bullock Creek, and the back of Derrybong; at present the furthest of these settlers are served by the Western line at Narramine; in about 50 or 60 miles; the extension to Parkes will not shorten the distance for them; practically the whole of the resumed areas have been taken up in this neighbourhood; the great proportion of the settlers are from Victoria or the border, men with capital who have come to the district intending to make permanent homes; as a rule they made their livelihood by grazing; the great number have not had time to do more than fence and improve their land, as it takes several years to prepare the land for the plough, but nearly all have cultivated small areas for their own use; the neighbourhood is well adapted for agriculture, and in his opinion the climate is a suitable one; has made a synopsis of the monthly rainfall for the past six years, which shows that good falls of rain occur in May and August; these are not the months of heaviest rainfall, but are those on which the most reliance can be placed; December and February are the wettest; the average rainfall for the last eighteen years is about 19·85.

GEO. HUTTON.

H. A. Croft, farmer and grazier, resident at Trundle for ten years; owns 2,560 acres; has 12 acres under crop; would devote more land to farming if he was near enough to a market; at present the distance is too great; the line to Parkes will promote farming; in the neighbourhood considerable areas are now being cleared in anticipation of it; the distance to Parkes is 32 miles; he was the first selector in the district, and took up the land under the 1861 Act; he came here because he could not get a block upon the river frontage, owing to the working at the improvement clause under that Act; with a residence of ten years in the district and thirteen years' experience of farming between Wagga Wagga and Albury is satisfied that this district is the better for wheat-growing; in 1888, an exceptionally dry year, a crop was taken off new land and hand-threshed, yielded 15 bushels per acre; the following year from the same land 35 bushels were obtained; 22 bushels is a fair average per acre; the best wheat is obtained from crops sown in April or May; the carrying capacity of the land is about a sheep to 1½ acres; has heard the evidence given by Mr. Hutton, and confirms it fully; his representations of the superior character of the district induced many of the present settlers to come here; wishes to add that there are far more settlers to the north of the direct line to Condobolin than to the south of it.

H. A. CROFT.

Christopher Francis, representing Francis Bros., own 15,000 acres; have about 60 acres under plough, and will have about 200 acres in next year; resident about five and a-half years; came here from the Corowa district; considers the district quite as good for wheat as the Murray frontage about Corowa; had a crop in 1888 yielding 15 bushels; for a dry year this he considers a remarkable return; his experience is that wheat does better in a dry climate, provided the rainfall comes at the right season; the soil here is very similar to that in the Rutherglen district, of Victoria, which is noted for its fruit and wine growing; considers the average yield of wheat about 20 bushels per acre.

CHRISTOPHER FRANCIS.

Walter

Walter Berry, farmer and grazier, owns and manages 10,000 acres; 8 acres being under crop; resident five years; is too far from a market at present to justify putting a large area in wheat; was farming at Corowa before coming here; as soon as a market can be reached with profit he will commence farming; both for farming and grazing this district is superior to that around Corowa; the climate is better and cooler, with a higher average rainfall. WALTER BERRY.

Thos. Carey, farmer and grazier; resident for two years; owns 7,000 acres; has no land under plough, owing to the distance from a railway; with the exception of 300 acres the whole property is good wheat land; was farming for seventeen years in the Terricks district, Victoria; considers this is better farming land; the scrub land is of better quality than the box forest about Trundle; his land lies 18 miles north from Trundle; without a railway he will grow no more wheat than he requires for his own use; has put in a few vines; the soil and climate are adapted for fruit. THOS. CAREY.

A. H. Florance, medical practitioner; resident in the district for eight months; in the practice of his duties he has travelled all over the district, and fills the position of hon. sec. to the Progress Committee; considers that any extension west of the railway should go *via* Trundle for the following reasons:—(1.) The soil is well adapted for the growth of cereals, the vine and olive; considers that prairie, lucerne, and canary grasses would flourish; (2.) The line *via* Trundle will avoid all flooded country that must be touched by either of the other routes; from the Bogan Gate for 20 miles towards Condobolin along the line of the direct survey from Parkes in a wet season the country is all flooded, and on the same line for 5 miles back from Condobolin back water from the Lachlan stands from a depth of from 2 ft. to 3 ft.; acted as analyst to the Government experimental farm at Millicent, S.A., and the soil of this neighbourhood compares favourably with land from which 40 bushels per acre was grown; considers the Trundle country equal to the Goulburn Valley or to that about Mt. Gambier, S.A., the two richest districts, in his opinion, in the colonies; sufficient iron-bark is to be found on the Trundle line to provide sleepers, while ballast can be obtained in many places. A. H. FLORANCE.

Geo. Simmons, farmer and grazier, resident 4½ years, represents Simmons Bros., owning 5,160 acres, has 9 acres under plough; is too far from a railway at present to farm profitably; with the extension to Condobolin, would farm 400 to 500 acres; his land is 11 miles due west from Trundle; all the country in his neighbourhood, and to within 10 miles of Condobolin, is taken up in full sections; the majority of the settlers are farmers, and would cultivate if it was possible to do so; was brought up as a farmer, and considers the whole of this district equal to the Berrigan country.
GEO. SIMMONS.

A. Fell, farmer and grazier, resident seven years at Trundle, and in the Forbes district for thirteen years; owns 2,570 acres, 10 acres under plough; the distance from a market prevents his farming; the railway extension to Parkes will induce him to put at least 100 acres under plough; while confirming the evidence of the previous witnesses, he wishes to add that during a wet season the line by Bogan Gate is a very heavy one, while that by Trundle would avoid the flooded land at the Condobolin end; he has carried, on an average, a sheep to the acre since he has been in the district. A. FELL.

Forbes, 14 April, 1892.

Arthur Sharp, District Surveyor of the Forbes Land Board District, resident in the district fifteen years; is aware of the object of this inquiry; in his opinion, the best extension of the railway for the general interests of the district at large is that from Parkes, *via* the Bogan Gate, to Condobolin; 1st, it is the shortest and most direct route; 2nd, with few exceptions, it will pass through Crown lands the whole distance; 3rd, it will serve the settlement about Trundle, the survey passing within 10 miles of that township; 4th, the land to the north of Trundle is inferior to that to the south; 5th, such a line would also serve the leasehold areas of Burrawong and Gunningbland, an area of 238,000 acres of Crown land of the very highest quality; of course, a line by Trundle would serve this area, but the direct line will go through it; the line from Forbes to Condobolin would not be interfered with to any material extent by flood water; at the Cobang Creek the survey passes for about ¾ of a mile through flooded land, and at the Gunningbland Creek for about ½ a mile at the outside; the cause of the greater settlement around Trundle was occasioned by the resumed areas of the large river runs having been taken back from the frontage, which was retained as the leasehold; these resumed areas have been nearly all alienated, so that about Trundle little or no land remains for settlement with the exception of the Troffs, Blowelear West, and Gobondry leaseholds, a total of some 86,000 acres, none of which is suitable for special areas; while the line *via* Bogan Gate passes through some 238,000 acres of first-class land, nearly the whole of which would be opened in special areas of not more than 640 acres; on the south of the Lachlan the same conditions prevail, the resumed areas being all at the back portions of the run; taking the runs on the south of the river from 20 miles below Forbes to Condobolin, viz., Towyal, Warroo, Geeren, Cadow, Moonbi, and Borambil, gives a leasehold area of 136,000 acres, none of which is more than 10 miles from the river; is not aware of any natural fords in the river between Forbes and Condobolin, with the exception of a very inferior one at Monwonga; the demand for land in the district is so great that if the leaseholds were thrown open the whole of the Crown lands on Burrawong and Gunningbland leaseholds would be taken up as special areas, within eighteen months or two years at the outside; during the whole of his residence there has been a certain amount of cultivation carried on in the district; with the exception of 1888, he has no recollection of the crops having totally failed; the average rainfall is ample for wheat-growing; wheat is usualy sown in April; has seen on farms in the neighbourhood of Condobolin splendid crops; farming has been carried on in that neighbourhood during the last six years. ARTHUR SHARP.

W. C. R. Garnsey, stock and station agent, a resident of Forbes for eight years, and has known the district for fifteen; is aware of the object of the inquiry, and considers the extension from Forbes to Condobolin would best serve the interest of the district at large—in the first place it would be easy to construct, and would serve the people on the south of the river as well as those on the north; on the south side there is a large population at present, and when the leaseholds expire a large area of land will be available for settlement; the land on the south is suitable for either pastoral or agricultural purposes; the water supply could be cheaply taken by canal from the Lachlan to Lake Cowal, in a distance of 25 miles, and the whole distance is suitable for agriculture; the line by the frontage would serve in about an equal distance the interests of the settlers about Lake Cowal, Marsden, and those about Trundle; about and along the Lake and the southern frontage of the Lachlan every acre of avaible land has been taken up, and is now held by *bona-fide* settlers under conditional purchase or conditional lease; between Forbes and Condobolin the line would not be materially interfered with by flood water; as an expert is of opinion the value of land 10 miles back from the river on the south side is worth 50 per cent. more that the land 10 miles back on the north side, either as agricultural or pastoral; this is accounted for by the general fall of the country being to the south, and therefore water can be conveyed more cheaply from the river on that bank; in his opinion agriculture, to be successful in this district, will depend on irrigation; there is a large settlement at Bina, on the Humbug Creek, 10 miles back from the Lachlan, and half-way from Forbes to Condobolin, which would also be served by a frontage line; the average rainfall of the district is sufficiently heavy, and usually comes at the proper season for the production of wheat crops, but not for fruit or maize; the latter crop is only successful about one year in four; the settlement referred to in this evidence is *bona fide*, and as a rule the settlers are making permanent homes upon the land; the value of land for 10 miles back from the river on both sides he puts at from £2 to £6 per acre freehold, between Forbes and Condobolin, for 10 miles further back from 20s. to 40s.; the heaviest settlement is now about Trundle, but a larger area would be served by a frontage line, and when the leaseholds are opened the settlement would be 3 to 1; this is accounted for by the resumed areas having been in most cases back from the frontage inducing the present settlement; along the proposed Trundle line, for 40 miles on the south of it, the land is all good, while that to the north is inferior, the frontage line would pass through good land on either side. W. C. R. GARNSEY.

Condobolin, 16 April, 1892.

H. W. Grey-Innes, Mayor of the Borough, is a stock and station agent, resident in Condobolin for nineteen years, puts in a return of the land alienated during the last four years, within land district of Condobolin; considers the line by Trundle the best suited for the interests of Condobolin, as there are no engineering difficulties on the Bogan Gates line, and by the river frontage the line will be interfered with by flood water, that by Bogan Gates would pass through 10 miles of flooded ground in one place, and 6 miles in another; the river line would pass through even more; a further reason is that nearly the whole of the land along the frontage is in the hands of one company, the majority of it is freehold, and

endeavours

endeavours are now being made to secure more by the exchange of freehold land at the back of the run for Crown lands on the frontage; again, the land on the river is better adapted for pastoral purposes, while that at the back is more suited for agriculture; the whole of the resumed area along the proposed line has practically been alienated; as a rule the resumed areas are back from the frontage; on the Condobolin station, 4 miles from the township up the river, the resumed area is on the frontage; about 7,000 acres were offered in special areas within from 4 to 15 miles of the town, at from 30s. to 40s., the whole was taken up, the first land day after it was thrown open; the Condobolin millers purchased in 1891 5,500 bushels of wheat, in 1892 9,130 bushels, 4,000 bushels still remain in the district unsold, this was all grown within a radius of 16 miles of Condobolin, and three-quarters of it along the Trundle line; farming to any extent has only prevailed during the last two or three years, but wheat has been grown for fifteen years; he has cultivated 20 acres; for the last twelve years the worst crop was 15 cwt.; the wet months are February, March, April, May, June, September.

H. W. GREY-INNES.

R. D. Jones, Stock Inspector for the sheep district of Condobolin, resident on the Lachlan for thirty years, in Condobolin for eighteen years, is an Alderman of the Borough Council and a Magistrate of the territory; has prepared a return of the stock running on the Crown leaseholds, conditional purchases, and conditional leases for the year 1891, and a return of the travelling stock; his district extends north-east 28 miles, north 85 miles, south 90 miles, west 70 miles, east 40 miles; is in favour of the line by Trundle; there are no engineering difficulties, and it is beyond the flood waters affecting the other lines; the population along this line is much greater than by the others, and consists chiefly of settlers who have taken up in most cases the maximum areas; at present they combine grazing with farming, but the latter would be the principal industry if means were afforded of reaching a market; the improvements are all of a substantial character, and indicate the intentions of the owners to make permanent homes; the proposed line passes through good red soil well adapted for wheat, on some portions of which sheep cannot be grazed profitably owing to the scrub; since 1875 has known hay crops to be grown continuously, and the average of good has been above that of inferior; wheat has been grown about the township for six or seven years; the climate is suitable, as wheat does not require much rain.

R. D. JONES.

John Bouffler, storekeeper and produce dealer, agent for Wright-Heaton, and an Alderman of the Borough, resident for twelve years; the line from Forbes is not a direct one, and increases the haulage on goods; the present surveys pass through flooded country in the neighbourhood of Condobolin, but cannot say if the line by Bogan Gates is flooded to any extent; has been a practical farmer, with twenty years of experience about Orange in wheat-growing, and prefers this district; wheat can be grown and bagged at 2s. 6d. on the ground; 15 bushels per acre is a fair average crop; the samples grown are equal to any grown about Orange; wheat to his knowledge has been grown in the district for eleven years; with facilities for reaching a market large areas would now be under crop; during these years he has never known a crop to fail completely; on inferior land has known a return as low as 5 bushels to the acre, but that was in 1888; wheat should be sown early at any time, from February to May; is so much impressed with the future of wheat-growing in the district that he is now endeavouring to sell his business with the view of going in for it largely the moment railway communication is available; Nicholas and Reymond, the Forbes millers, are erecting a new flour mill at Condobolin, estimated to cost, with land and machinery, some £8,000; the grain produced in the district is insufficient to supply local wants at present; fifteen miles north-west from here bounds the district from which, as agent for Wright Heaton, he can obtain wool for shipment; beyond that the wool all goes to Trangie, on the western line; the railway to Parkes will alter this, and copper and wool from Mount Hope and Cargellico will come through Condobolin; at least one-third more traffic will come this way on the completion of that line; has planted about 1,000 fruit trees and vines during the last four years, all of which do well without irrigation.

JOHN BOUFFLER.

John Dawson, farmer and grazier, owns 7,680 acres on Derrywong, 16 miles north-east from Condobolin; the proposed line would pass near his property; has 130 acres under cultivation; has been farming in the district for six years; his average crop is 20 bushels per acre; has not had such good results during an experience of forty years; farmed at Albury for twenty years, and in South Australia for sixteen years; this district is equal to any he has seen; the soil is better for wheat on the north side of the river than on the south; the line by Trundle is the best, as it avoids flood water, ballast is plentiful, and ironbark for sleepers can be obtained within a reasonable distance; knows the settlers throughout the district; they are forming permanent homes; at present there is not much farming, owing to the distance from a market.

JOHN DAWSON.

Hezekiah Crouch owns with his family 6,000 acres; ploughs 300 acres for wheat; resident for fourteen years; his land is 22 miles south-west from Condobolin; has been farming here for the last twelve years; from 1880 to 1885, during the drought, his crops were from 5 to 6 bushels per acre; in the good seasons since, from 25 to 30 bushels; has never sold wheat below 3s. 6d. per bushel, from that to 4s. is about the average; before the flour-mill was built here, he was not secure of a market; has taken his wheat to Forbes and brought back the flour; without railway communication the local market will soon be glutted; his experience is the same as Mr. James Dawson's; they came from South Australia together, and from Albury; with the settlement at present in the district, to secure a successful livelihood access to a market must be provided, or they will be obliged to give up their land; with 2,560 acres he does not think a man can rear a family on the income earned from grazing alone; he has tried it himself, and unless combined with farming he is satisfied it cannot be done; off the 300 acres he is planting this year he expects to make as much as he will off 2,560 acres in grass.

HEZEKIAH CROUCH.

James Dawson, farmer and grazier, 10 miles from Condobolin, south of the river, owns with his family 14,000 acres; cultivates usually 200 acres, the bulk of which is harvested for wheat; resident here for fourteen years; was farming in South Australia for seventeen years, in the north-east Agricultural Area, and also at Albury for ten years; considers his present holding the best wheat-growing one of the three; has grown here thirteen crops successively; his average for the thirteen years has been from 13¼ to 13¾ bushels per acre, for which he has received from 12s. per bushel in 1881 (this price was obtained in the drought), the prices range from 3s. to 4s. per bushel; was the first settler to commence wheat-farming in the neighbourhood; prior to 1885-86 there were but few settlers; since then all the land available has been taken with the exception of a few very inferior portions, none that he would recommend anyone to take; the majority of the settlers have come to make permanent homes; the character of the improvements and homesteads, as a rule, are in excess of the requirements of the Act; in spite of the extreme severity of the drought from 1880 to 1885 he managed to secure some crops, and the very severity of the season enabled him to keep up the average of his returns; one other practical farmer, a neighbour of his, secured similar results; sound farming will always pay in this district; the seasons are variable, but can nearly always be depended on during May and September; wheat requires to be sown early, either in April or up to the middle of May; this is the rule, but has known good crops grown that were put in as late as June; the May and September rains suit the wheat crop fairly well; the land back from the frontage is more suitable for wheat on both sides of the river; the frontage is generally a stiff clay, more difficult to work; it may be very good for irrigation; with the present values of stock, his wheat pays him best at present, but with the present distance from a market, any considerable increase in production would more than supply the local demand; settlers must therefore put their main dependence on grazing; with direct access to Sydney, they would all farm largely; the valley of the Lachlan as far west as Hillston, he is satisfied, will become one of the greatest wheat-growing districts of the Colony.

JAMES DAWSON.

Henry Bassett, publican, has a selection on Derrywong, about 12 miles from Condobolin, on the line from Trundle; has been farming during the past five years; last year had 140 acres under plough; the average crop has been about 20 bushels; the higher average he has obtained is due, he thinks, to the superior nature of the land back from the river on the north side; prices obtained range from 3s. to 4s.; his brother and himself have done better off 1,000 acres apiece than men who have taken up full portions and depended on grazing; the profit from his 140 acres he is satisfied is greater than from the wool grown on 2,560 acres in the same district; has been a farmer all his life; came from South Australia to the Albury district; the land here is undoubtedly the best; the line by Trundle traverses land equally good for the whole distance, and avoids all flooded ground.

H. BASSETT.

J. B. Reymond, of Nicolas and Reymond, miller, timber merchant, and farmer; resident for thirty years; farms from 150 acres to 400 acres according to the season and the price of wheat; for instance, with wheat at its present price if rain comes on to enable him to plough he will put in 500 acres; has 600 acres which have been broken up; is only aware of 150 acres of new ground being cleared in this neighbourhood; this is not much with the prospect of the railway being open for next season's crop; before he extends his farming operations he will wait and see what effect the railway has on prices; if farmers can get 3s. per bushel delivered in Forbes a large amount of wheat would be grown; as a rule prices throughout the district have averaged above this, but being the principal buyer it has occurred that more wheat was offered in some seasons than he required; this has tended to keep down the production, there being no other outlet; last year the supply was below the consumption of the district; at present he is paying 4s. 9d. per bushel; money is made so easily out of grass that many people prefer the smaller returns to avoid the hard work necessary in farming; most of the grain is grown within a radius of 25 to 30 miles east of Forbes; some seven or eight years ago a small mill was erected at Condobolin; not proving successful it was put in the market and purchased by him, not so much in view of the milling to be done there, but to make it an entrepôt for his Forbes mill, and to give him command of the market down the river; this mill, having a saw-mill attached about paid working expenses; he worked one miller between the two mills; the production of wheat about Condobolin was about 10,000 bushels last year, and that is the largest crop hitherto; he is satisfied the climate will ensure a sufficiently high average crop to pay a man who understands his business; he has been farming every year since 1866; his lowest crop was 7 bushels per acre, the highest 40; a fair average during the twenty-six years is not less than 20 bushels; he finds his stubbles carry more stock than the grass land; he has 70 acres now carrying seventy horses all fat, while on the grass land there is no feed left, all having been destroyed by the dry weather; last year he drilled 22½ bushels on 44 acres; when threshed this yielded 1,800 bushels; the extension to Condobolin should be from Forbes; the line would then serve both sides of the river; the frontage land produces the heaviest crop, besides being convenient for irrigation; he owns two farms, one of 700 or 800 acres of black soil, and another of 400 acres on the limestone country, back from the river; from the river land, whatever the season, the crops are heavier and the grain plumper than from the limestone; in exceptionally bad seasons, such as 1888, the limestone land will probably be a total failure, while a small crop is always obtained on the river; is satisfied the future of this part of the country will be largely dependent on irrigation; on 25 acres of lucerne last year he ran and fattened 1,400 wethers; on the same land this year he fattened 66 bullocks; the bullocks were sold at the end of last month and topped the market in Sydney at £6; he has now on the same land 1,000 sheep being fattened; the land was irrigated only once this summer; there is a paddock of 30 acres adjoining the lucerne, to which the stock have access, and in the timber of which they camp.

J. B. REYMOND.

DISTANCES BY ROAD.

	Miles.		Miles.
Forbes to Trundle	45	Forbes to Orange	80
,, Condobolin	60	,, Parkes	20
,, Marsden	45	Parkes to Trundle	32
,, Grenfell	40	,, Condobolin, *via* Trundle	72
,, Cowra	60	,, ,, Bogan Gates	65
,, Young	75	Condobolin to Euabalong	45
,, Eugowra	24	Euabalong to Cudgellico	14
,, Molong	74		

RETURN of the Population, Freehold and Leasehold Land, Stock and Crops, within a radius of 20 miles of the township of Trundle, for April, 1892.

Name.	Parish.	Freehold.	Leasehold.	Sheep.	Large Stock.	Population.	Last Year's Crop.
		Acres.	Acres.	No.	No.	No.	Acres.
Anderson J.	Cunningham	640	1,920	2,000	30	6	12
West Thos.	Melrose	640	1,920	2,300	3	1	...
Lewis J.	Bottfield	640	1,920	... ...	5	3	40
Clifton A.	Redcliffe	640	1,920	2,900	37	9	...
Perks E. T.	,,	160	480	.....	3	...	...
Tomkins J. W.	Bengamel	640	1,920	1,000	12	2	½
Dalgleish —	,,	640	604	500	3	...	...
Tomkins J. A.	,,	640	1,920	1,000	8	1	½
M'Aulay	,,	640	1,920	1,000	4	1	1
Rawson Bros.	,,	1,280	3,840	.....	20	4	3
Hornsby L.	Redcliffe	250	750	.....	1	1	...
M'Amery J.	,,	400	1,200	.....	*3	1	5
Berger J.	Trundle	640	1,920	2,400	19	5	20
Stokes J.	Plevna	250	750	220	6	7	3
Calvert P.	Redcliffe	370	1,125	660	14	3	1
Kern M.	Trundle	1,280	3,840	2,000	36	6	32
Goodwin D.	Murga	640	1,920	1,600	8	1	1
Goodwin E.	,,	640	1,920	.....	11	4	13
Gibson F. W.	Plevna	640	1,920	2,000	21	4	5
Gibson J.	Coradgery	640	1,920	.....	3	1	...
Daly P.	Milpose	450	864	500	4	1	½
Berger J.	,,	600	1,920	600	17	7	13
Berry Bros.	Cunningham	7,680	C.P. & C.L.	12,000	44	13	3
Maloney T.	Plevna	420	1,260	1,000	35	1	.....
Maloney H.	Trundee	Sp. lease	10	...	3	8	.....
,, ,,	Cunningham	80	...	...	...	...	12
Francis, Brothers	Bottfield	3,200	9,600	12,000	80	18	60
Leony T.	Fitzroy	640	1,920	...	12	1	.....
Cox W.	,,	500	1,391	...	...	1	.....
Yager W.	Gobondry	640	1,920	3,000	1	1	.....
Vander Mail	Russell	640	1,920	...	...	2	.....
Jones D.	Stanley	640	1,920	...	...	1	.....
Jones E.	,,	640	1,920	3,000	30	4	.....
Kerley T.	,,	640	1,920	4,000	70	3	.....
Kerley P.	,,	640	1,920	4,000	...	2	.....
Dempsey M.	Gobondry	640	1,920	...	20	4	.....
Dempsey A.	Stanley	640	1,920	...	...	2	.....
Dempsey K.	Gobondry	640	1,920	...	...	2	.....
Cannon J.	Stanley	640	1,920	1,000	20	1	25
Cannon W. H.	,,	640	1,920	1,000	20	3	.....
Cannon P.	,,	640	1,920	1,000	20	1	.....
Cannon Jos.	,,	640	1,920	1,000	20	1	.....
Wotton J. T.	,,	100	480	...	...	1	.....
Stokes D.	Gobondry	300	900	...	5	3	.....
Stokes J.	,,	320	960	...	5	2	.....

RETURN of the Population, &c.—*continued.*

Name.	Parish.	Freehold.	Leasehold.	Sheep.	Large Stock.	Population.	Last Year's Crop.
		Acres.	Acres.	No.	No.	No.	Acres.
Wotton I.	Gobondry	640	1,920	900	19	8	.....
Crowley J.	Redcliffe	640	1,920	1,200	30	6	6
Crowley D.	,,	400	1,200	850	9	5	3
Clifton A.	Russell	640	1,920	2,000	26	8	.....
Baxter E.	Bundaburra	200	600	900	17	6	50
Leighton S.	,,	640	1,920	1,800	20	10	150
Durham E.	,,	640	1,920	1,950	14	4	25
Bassett A.	,,	500	500	1,600	15	3	75
Bassett W.	,,	500	500	1,600	15	4	75
Bassett H.	,,	500	500	.....	.....	...	.....
Dawson J.	,,	640	1,920	7,000	40	5	110
Dawson F.	,,	640	1,920	.....	.....	1	.....
Dawson S.	,,	640	1,920	.....	.....	1	.....
Dawson H.	,,	640	1,920	2,500	6	1	.....
Dawson J. T.	,,	640	1,920	2,000	6	1	.....
Williamson J.	Byong	640	1,920	116	26	3	12
Looney J.	Kars	640	1,920	2,600	5	1	.....
O'Brien J., jun.	Byong	640	1,920	2,000	5	1	.....
O'Brien T.	,,	860	1,920	3,000	6	1	.....
O'Brien L.	,,	860	1,920	3,000	10	2	15
O'Brien Pat.	,,	640	1,920	2,000	3	1	.....
O'Brien J., sen.	,,	500	1,500	1,000	6	3	1
O'Brien M.	,,	640	1,920	1,000	4	1	2
O'Brien Mary	,,	640	1,920	500	2	1	½
Quade T.	,,	640	1,920	.....	4	1	.....
Quade I.	,,	640	1,920	1,000	4	1	.....
Anderson I.	Kennedy	2,560	.....	2,200	38	5	14
Wilmott C.	,,	2,560	.....	1,200	22	8	10
West L. S.	Gummybland	1,000	.....	200	32	15	30
West E.	Botsfield	2,560	.....	6,500	75	4	.....
West M.	,,	2,560	.....	.....	.....	3	.....
Todd W.	,,	2,560	.....	2,300	12	5	.....
Croft H. A.	Trundle	1,280	.....	3,865	26	14	7
Croft H. V.	,,	1,280	.....	800	2	1	.....
Rike J.	Gobondry	520	.....	.....	.....	7	.....
Rike A.	Gilinbine	639	1,917	.....	2	1	.....
Franks	,,	420	1,063	.....	2	1	.....
Midway A. T.	Sebastabol	1,280	3,840	3,956	140	10	14
Medcalf A. T.	,,	640	1,920	2,975	4	1	.....
Medcalf C. J.	,,	640	1,920	.....	.....	1	.....
Medcalf W. T.	Murga	576	1,728	.....	.....	1	.....
Collier Geo.	Fitzroy	640	1,920	.....	20	8	.....
Gatenby A.	,,	640	1,920	2,000	2	2	.....
Gatenby G.	Gobundry	640	1,920	.....	2	1	.....
Symmons G.	Sebastopol	640	1,920	2,200	4	1	.....
Symmons L.	,,	640	1,920	2,400	4	1	.....
Fell A.	Trundle	640	1,920	6,000	140	6	10
Herzog F.	,,	640	.....	.....	14	9	6
Foy H. V.	Plevna	2,560	.....	4,600	23	6	20
Drake J.	Trundle	200	600	700	9	1	8
Medcalf A. T.	Sebastopol	1,280	3,840	3,500	135	14	15
Medcalf A. T.	Gillenbeen	1,280	3,840	3,000	5	1	.....
Medcalf W.	Murgah	500	1,500	.....	.....	...	.....
Scully I.	Trundle	366	1,034	.....	8	2	.....
Pilling R. P.	Plevna	260	780	1,000	1	1	.....
Carey I.	Salisbury	640	1,920	1,200	12	1	.....
Carey T.	,,	640	1,920	1,200	12	4	.....
Carey M. F.	Redcliffe	540	1,620	.....	2	...	.....
Crowley D.	,,	500	1,500	1,200	20	5	5½
Crowley J.	,,	640	1,920	1,200	20	6	6
O'Brien P. H.	Ryong	640	1,920	1,000	4	1	.....
Comans D.	Derribong	1,060	4,980	6,500	15	6	.....
Aitken R.	,,	640	1,920	.....	.....	...	70½
Morgan D.	Kars	640	1,920	2,000	10	1	3
Morgan M.	,,	640	1,920	2,000	10	1	.....
Morgan I.	,,	425	1,275	2,000	10	1	.....
Morgan E. D.	,,	640	1,920	2,000	10	6	.....
Morgan M.	,,	640	1,920	2,000	10	...	.....
Aitken P.	,,	640	1,920	.....	.....	1	.....
McCurrie J.	,,	425	1,275	.....	3	4	.....
Cameron A.	Bundaburra	300	600	.....	.....	1	.....
Cameron M.	,,	680	1,920	3,500	9	5	28
Harnell F.	,,	100	300	.....	1	1	.....
Gray-Innes W.	,,	434	724	900	20	5	30
Bouffler J.	Condobolin	350	450	880	15	...	.....
Bouffler J. E.	Bundburra	640	1,920	1,132	20	4	.....
Aitken E. J.	Kars	640	1,920	.....	.....	6	.....
Hutton Bros.	.....	960	.....	.....	.....	14	12
Curr E.	Cuningham	5,320	.....	.....	.....	7	10
Strickland J.	Gobondry	1,280	.....	460	2	1	.....
Jaeger W.	,,	2,560	.....	2,500	2	1	.....
Simmons H.	Murga	640	1,920	1,160	24	9	.....
Simmons W.	,,	640	1,920	1,000	.....	1	.....
		107,619	199,720	193,994	1,772	451	1,000½

RETURN put in by the Mayor of Condobolin.

and enated at the Condobolin Land Office during the years 1888, 1889, 1890, 1891 ·

	Conditional Purchase.	Conditional Lease
1888	44,841 acres.	126,352 acres.
1889	21,142 ,,	62,142 ,,
1890	78,605 ,,	195,723 ,,
1891	55,862 ,,	148,094 ,,
	200,450 ,,	532,311 ,,

1891 ..... Flour sold ..... 185 tons.
1892, to 31st March ..... ,, ... 46 ,,
1891 ..... Wheat bought ..... 5,500 bushels.
1892 ..... ,, ... 9,130 ,,
1,000 bags still held.

Estimate of sheep in district ..... 2,313,512.
Average of wool, at 5 lb. per head ..... 5,104 tons.

H. W. GRAY-INNES,
Mayor.

MUNICIPAL Return.

Number of dwellings in Condobolin ..... 126.
Estimated population ..... 850.

RETURN from the Inspector of Stock of the sheep district of Condobolin, for the year ending 31st December, 1891.

Area of land occupied and stock depastured.

Area in acres	5,636,057.
No. of horses	5,473.
,, cattle	12,979.
,, sheep	2,313,512.
,, pigs	572.

Stock travelling during same period.

Condobolin to Parkes.

Horses ..... 321. Cattle ..... 9,627. Sheep ..... 99,016.

Parkes to Condobolin.

Horses ..... 184. Cattle ..... 300. Sheep ..... 94,542.

R. D. JONES,
Inspector of Stock,
Condobolin.

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RAILWAY—PARKES TO CONDOBOLIN, VIA TRUNDLE.

Rainfall Returns.—Burraburra.

	1884.	1887.	1888.	1889.	1890.	1891.
January	·49	4·87	1·09	·48	·61	6·30
February	·31	4·16	3·69	·72	7·14	1·81
March	·40	7·53	1·72	·19	7·71	·83
April	2·36	2·97	...	5·10	2·44	2·24
May	1·12	·69	1·93	3·80	3·41	2·76
June	3·31	1·56	·16	2·36	2·43	2·85
July	·46	2·	·50	·57	2·39	1·15
August	·95	4·15	·36	3·63	·30	2·80
September	2·58	·60	2·10	·60	3·13	2·66
October	·83	1·24	·52	2·55	·89	1·94
November	...	1·56	·52	3·60	·14	1·53
December	...	5·95	1·15	7·14	·65	1·55
	...	37·28	11·80	30·74	31·24	28·41

Rainfall.—Murrumbogie.

	1883.	1884.	1885.	886		
January	...	·27	4·65	1·12	5·51	1·3
February	2·00	1·04	2·69	·21	3·44	2·52
March	·98	·56	1·90½	...	7·98	1·10
April	·28	1·96	1·64	·80	1·37	·3
May	1·91	1·45	·85	2·13	·83	1·50
June	1·11	2·92	1·60½	·87	1·82	·46
July	·71	·92	·24	1·07	1·85	·82
August	1·29	·50	·53	4·36	3·50	·91
September	·72	2·22	1·41	·66	·59	1·34
October	2·17	1·27	·95	2·26	1·19	·52
November	·87	2·00	·60	5·49	3·32	·20
December	·14	1·27	1·30	5·89	6·81	3·40
	12·16	16·38	18·36	23·97	38·22	14·28

Rainfall Record.—The Troffs, Trundle.

	1886.	1887.	1888.	1889.	1890.	1891.
January	2·00	4·75	2·66	·44	·64	6·98
February	...	4·22	·25	1·00	8·51	·18
March	...	4·17	...	·31	6·35	·64
April	1·00	1·98	...	4·89	2·02	1·54
May	1·95	·78	1·40	3·09	3·63	2·56
June	·42	1·81	·41	1·64	2·17	3·63
July	·56	1·82	·58	·39	1·19	1·62
August	3·99	3·17	·15	2·30	1·46	3·11
September	·79	·52	1·41	·73	2·34	2·05
October	3·11	·66	·66	2·43	1·93	1·62
November	4·10	1·25	·05	3·14	·28	·88
December	5·49	·52	1·59	11·16	·96	1·88
	23·40	25·65	9·16	32·12	31·48	26·69

Rainfall, 1883, about 12 inches
,, 1884, ,, 17 ,,
,, 1885, ,, 18 ,,
} Particulars lost.

The Troffs run was taken up in 1874, and the average rainfall to 1882 was said to be 18 inches.

GEO. HUTTON,
Chairman.

Rainfall Record.—"Belle View," Trundle.

1887, 11·58, for October, November and December only; 1888, 13·6; 1889, 28·; 1890, 29·57; 1891, 27·54.

Rainfall Record.—Gunningbland.

	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
January	·11	4·22	1·34	7·92	1·15	·50	1·34	8·40
February	·37	1·71	·10	2·92	2·59	1·12	7·06	·76
March	·77	1·66	.....	5·11	·23	·14	6·14	·75
April	1·79	1·91	·91	2·04	·45	4·06	1·46	3·18
May	·77	·86	2·37	·96	1·52	3·46	3·62	2·31
June	3·12	1·90	·53	1·80	·79	2·29	2·37	4·29
July	·76	·13	1·65	2·33	1·15	1·00	2·68	3·10
August	·46	·67	3·87	3·02	·23	2·04	1·06	2·64
September	2·17	1·98	·82	·63	2·61	1·54	1·57	3·53
October	·99	·95	2·60	1·48	·52	2·97	1·92	1·92
November	3·64	·76	3·79	1·70	1·71	2·49	·66	1·43
December	1·10	1·26	6·64	7·04	2·52	3·25	1·82	·39
	16·5	17·95	24·82	37·85	15·47	24·86	31·70	32·70

Average for eight years, 25·15.

Rainfall Record.—Parkes.

	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
January	...	...	3·17	1·88	4·08	[1·58	·06	·48	5·62	3·02
February	...	...	2·26	·32	2·24	2·87	1·83	6·14	·93	...
March	...	...	·41	...	4·55	...	·49	6·64	1·80	·21
April	...	...	·87	·99	1·28	·12	3·25	1·16	3·15	...
May	...	...	·84	2·13	·79	1·23	2·87	2·89	4·18	...
June	...	...	1·58	·68	1·80	·62	2·13	2·56	4·00	...
July	...	...	·16	1·04	2·02	1·04	·47	2·52	2·75	...
August	...	...	·40	4·95	2·46	·91	2·68	1·25	2·56	...
September	...	...	2·25	·63	·82	7·40	·91	3·04	3·42	...
October	...	...	1·53	2·89	·87	·50	2·10	2·58	1·89	...
November	...	...	·44	3·46	3·74	1·60	4·18	·41	1·91	...
December	...	...	1·14	3·85	6·35	·70	3·63	·97	·50	...
	13·52	15·40	15·05	22·82	16·26	13·48	24·48	30·62	32·71	...

Average, 20·48.

Rainfall Record.—Condobolin.

Average monthly rainfall from 1st January, 1883, to 31st December, 1891.

January	250/8	May	183/9	September	121/8
February	220/8	June	167/8	October	164/10
March	199/8	July	93/8	November	167/8
April	183/8	August	154/9	December	261/9

Annual average, 21·67/8.

Annual Rainfall at Melrose.

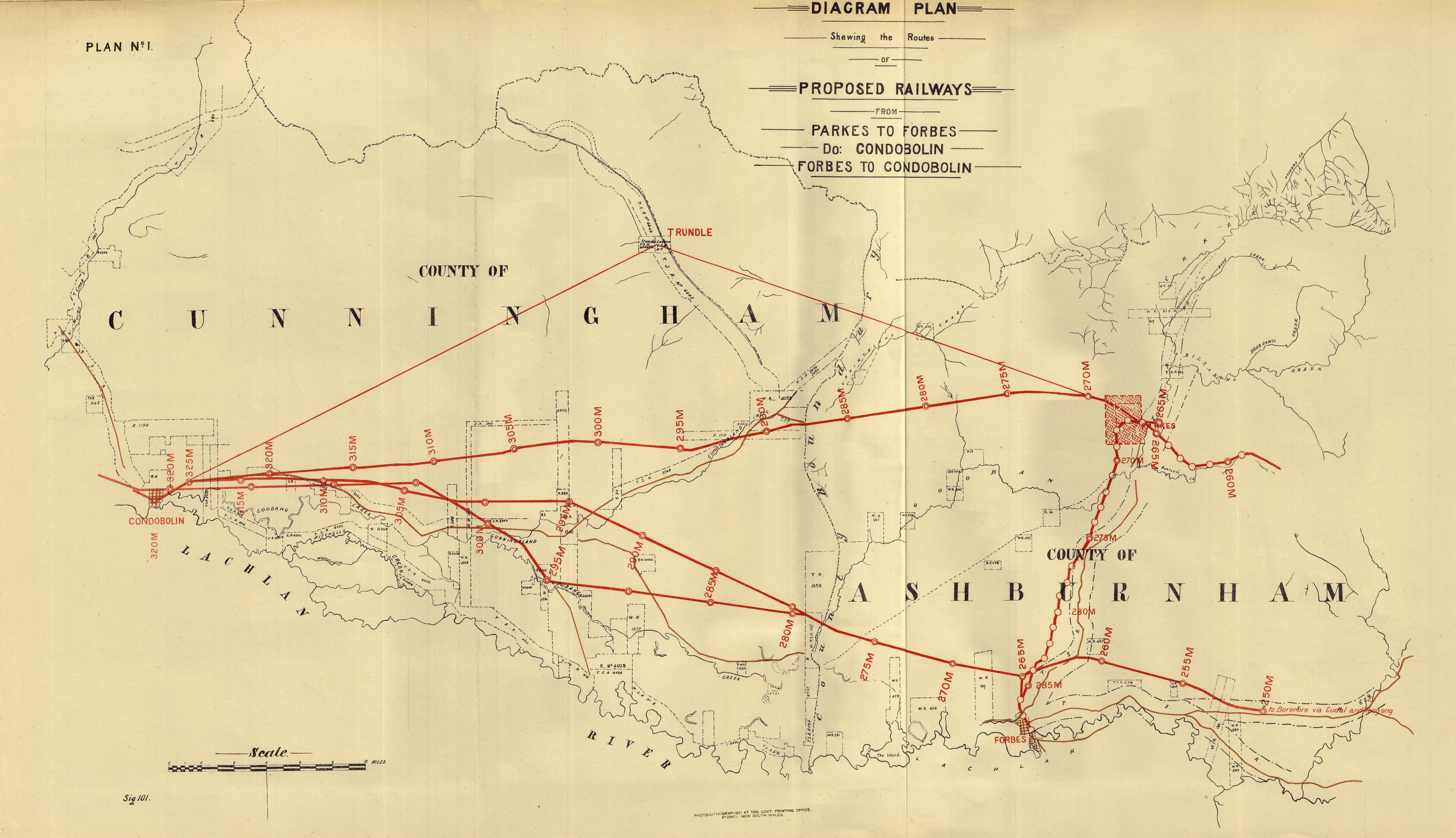
1872	21·85	1879	31·83	1886	18·84
1873	16·75	1880	19·03	1887	30·87
1874	21·12	1881	16·37	1888	9·79
1875	14·75	1882	14·24	1889	23·55
1876	10·00	1883	14·30	1890	30·26
1877	17·50	1884	12·45	1891	24·76
1878	22·75	1885	16·30		

Average for twenty years, 19·38.

[Two Maps.]

Sydney: Charles Potter, Government Printer.—1892.

[1s. 6d.


PLAN No. 1.
DIAGRAM PLAN
Shewing the Routes
OF
PROPOSED RAILWAYS
FROM
PARKES TO FORBES
Do: CONDOBOLIN
FORBES TO CONDOBOLIN
COUNTY OF
CUNNINGHAM
COUNTY OF
ASHBURNHAM
TRUNDLE
CONDOBOLIN
FORBES
PARKES
LACHLAN
RIVER
Scale.
MILES.
Sig 101.
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

PLAN N°2.

MAP
of
NEW SOUTH WALES RAILWAYS
shewing
COACH AND OTHER ROUTES FROM THE VARIOUS STATIONS

Scale. 60 Miles to an Inch

Miles 30 20 10 0 30 60 90 120 Miles

Explanation

Railway lines marked thus

Coach routes do do

Projected Railways do do

1892.

COLONY OF QUEENSLAND

COLONY OF VICTORIA

SOUTH AUSTRALIA

SOUTH PACIFIC OCEAN

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1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY FROM TAMWORTH TO BARRABA.

REPORT BY MR. STANLEY ALEXANDER, EXAMINER OF PUBLIC WORKS PROPOSALS, ON THE PROPOSED.)

Ordered by the Legislative Assembly to be printed, 29 November, 1892.

Sydney, 20 October, 1892.

THIS proposed line of railway is seen to take a northerly course from Tamworth, about centrally between the main northern line to Queensland, and the north-western line to Narrabri. This route was considered and reported on by Messrs. Scarr and Price, as one by which Inverell might be reached. It was in fact a route that had been surveyed for the main northern line. An extract from the report of Messrs. Scarr and Price is given in *Appendix* Q. From this it would appear that the good land, with which the district passed through is credited, quickly merges on the east of the railway route into the high granite country of the Moonbi and Nandewar Ranges, and on the west soon falls within the influence of the Narrabri line of railway. This statement appears in the report.

2. The quality and usefulness of the land within the district that is claimed to be directly interested in the construction of this railway are commented on in the evidence given by witnesses, but the extent of country that must come within the influence of such a line, if built, is very clearly indicated by its natural features. The western and eastern boundaries of the county of Darling have been laid out along the watershed of the basin drained by the Manilla and Namoi Rivers and their tributaries. This is on the crest of the Moonbi and Nandewar Ranges, which are abrupt and rugged enough to afford natural passing places for traffic at but very few points. The district, such as it is, is clearly defined by these features, which effectually isolate it from communication with the northern railway line, except at Tamworth, by any possible route and with the north-western line by any route that can be compared with that to Tamworth.

3. The statement supplied by Mr. F. Poate, District Surveyor at Tamworth, was applied for with a view of correcting the opinion I had formed on these points. By this it is seen that connection with Gunnedah and Breeza only on the north-western line can be obtained and that by one pass only through the Nandewar Range. This has been confirmed by Mr. R. E. Jones, supervising engineer in charge of this division of roads, who also informs me that an application has been made to connect Manilla by road with Gunnedah by the same pass.

4. The only actual use that has hitherto been made, as far as has been shown, of the north-western line by traffic from or through the district under notice, has been by travelling stock which branch off from the main Tamworth route at Tarpoly, and traverse a western course through Breeza. This route is, however, adopted for the most part by store stock on their way to southern districts, to which this affords a more favourable journey than *via* Tamworth. All the wool and produce from the district, and that passing through from the north, is taken to Tamworth. The table of rates published by the Northern Carriers' Union does not recognise any other railway station than Tamworth.

5. This route southwards, through Bingera, Barraba and Manilla to Tamworth has been long established as an outlet for the produce from extensive areas on the north as far as the Queensland border. Collection of loading has taken place from points as far west as Muckabundi, within 10 miles of Moree, and on the Gilgil. During bad weather, especially if continued for any time, the approach to Moree is more favourable from the direction of Barraba than from Narrabri, because of the rich black soil on the country between Narrabri and Moree, which becomes impassable. There are other substantial advantages afforded by this route to Tamworth, which, for all road purposes, count heavily, and render this a favourite track. The existence of good camping places, abundance of water, sound travelling ground, and plenty of supplies, have produced in the past very favourable rates of carriage in this direction. The present rates of the Northern Carriers' Union, though they are higher than were charged before its institution, are lower than those of the union trading with Narrabri.

6. The passes through the Moonbi and Nandewar Ranges in the eastern boundary of the district, affording communication from it with Bundarra and other places can, with reason, be regarded as providing feeders to the traffic passing through the district for the proposed line, unless Inverell be connected by railway with Uralla or Kentucky.

7. Traffic has been regularly brought down this main road through Bingera to Tamworth from the northern districts, extending up to the Macintyre River east of a meridian line drawn northwards through

Bingera. Some of this traffic has, as will be noticed later on, been diverted to Glen Innes by the institution of a new set of truck rate rules for carriage on the existing railways, and also, it is said, by the establishment of the Northern Carriers' Union on the road to Tamworth.

8. On the importance of the traffic from these northern areas, Messrs. Scarr and Price have much to say, and also Mr. Jones, who also refers to the traffic that may be drawn from Queensland in support of his recommendation of a line to Moree from Narrabri. It is necessary to point out the present existence of this large traffic, and of the extensive tract of country for which railway extensions are being urged from two other directions as well as from Tamworth, if only that justice may be done to the claims of the proposal now being reported on.

9. The district immediately interested, the development of which is claimed to be dependent on a railway being constructed from Tamworth to Barraba, is contained within four parishes of county Inglis and thirty-seven parishes (the whole) of county Darling; these are all in the eastern division.

Appendices A to D, Appendices E, F, and G.

10. The extent of this area and the state of the lands thereon is given by the following summary of the statement supplied by the Department of Lands:—

County.	Alienated.	Unalienated.	Total.
	Acres.	Acres.	Acres.
Inglis	87,950	13,680	101,630
Darling	457,433	486,125	943,558
	545,383	499,805	1,045,188
Square miles	852	781	1,633
Murchison	173,590	480,830	654,420
Square miles	271	751	1,022

11. On the Nandewar Range, extending east and west just north of Barraba, is the boundary between county Darling in the Eastern Division, and county Murchison in the Central Division. Particulars of twenty-eight of the parishes in county Murchison are also given above, as it is believed that the lands on these, being within a reasonable distance of a railway terminus at Barraba, will be greatly increased in value, and to show the large area of unalienated land which will some day be available for settlement in this vicinity of the proposed railway.

Appendices A to D.

12. The statistics of the settlement and the production that have been supplied by the residents of the district are here summarised as follows:—

District Surrounding.	Population.	Land cultivable.	Land under cultivation.
		Acres.	Acres.
Attunga	488	26,133	3,411
Manilla	705	64,287	2,534
Upper Manilla	237	12,180	2,852
Barraba	617	43,130	1,562
	2,047	145,730	10,389
Manilla township	300	.....	.....
Barraba township	500	.....	.....
	2,847	Including floating population (say) fully 3,000.	

13. These figures are exclusive of all within about 10 miles of Tamworth. In the neighbourhood of Attunga especially, Mr. A. Rodgers has exercised a very careful and judicious selection in returning only those items of the statistics which are fairly to be credited to this proposal. I have no reason whatever to doubt the reliability of the figures supplied from other places, but in those there has been no need for the discrimination for which I have to thank Mr. Rodgers.

Appendix A.

14. The quality of the land in the four parishes of county Inglis, as given by Mr. Poate and Mr. Rodgers, is vouched for by the extensive settlement that has taken place in this part, there being only 13,680 acres of unalienated land left out of a total of 101,630 acres. The land is described by Mr. Poate as being very good over about one-half of the whole area, and some portions along the Peel River, by Mr. Rodgers also, as being of the very best quality. Its richness is due to the extensive decomposition of limestone rocks in these parts.

15. Three townships have been laid out, viz., Bective, Somerton, and Attunga, and some sales effected. There are in all sixty-three holdings, of which four only comprise 48,000 acres, so the remaining fifty-nine holdings, aggregating 30,563 acres, give an average of 518 acres to each. The population of the area is 488. This may altogether be taken to be a locality which will certainly advance in all departments, and become populous, and if connected by railway with the main line it may be relied on to supply a considerable and an increasing traffic. The four large holdings alone might well carry a population as great as that of the other fifty-nine, if subdivided.

Appendix B.

16. The township of Manilla stands at the confluence of the Manilla River and the Namoi River at a point on the main road situated in relation to the natural features of the country in a position to command a very extensive area on the east and west. It is credited with being the centre of trade for twenty parishes of county Darling and a part of county Inglis. On these are some large holdings—Durham Court, for instance, containing 27,400 acres of secured land, of which the proprietor, Mr. C. Baldwin, estimates that 20,000 acres are cultivable. The total area of cultivable land is returned at 64,287 acres, though of this only 2,534 has been under crop. I belive that the quantity of good land has not been over-estimated. By far the greater part lies to the east of the township, as the country becomes very broken to the westwards, where the good land is confined to the vicinity of the watercourses.

17.

17. Manilla is accessible by several routes, some of which, however, can hardly be called trafficable, from points on the west of the Moonbi Ranges, viz., from Bundarra and Bendemeer, and it is proposed to connect it directly with Gunnedah, on the North-western line, by the pass in the Nandewar Range before mentioned. The distance is 45 miles.

18. The township has a population of 300. It is distant 27 miles from Tamworth. The road is passed over the Namoi River by a substantial iron bridge.

19. Upper Manilla is situated about 8 miles north of the Manilla township. The recognised centre of the settlement is not yet a township, comprising merely a public school, stores, &c. The surrounding settlement is distributed over five parishes, and is given as aggregating 74,221 acres, which, however, appears to include much leased land, of which 12,180 acres are set down as cultivable and 2,882 acres as having been cultivated. The resident population on this area is 237. There are thirty-two holdings in all. Appendix C.

20. There is room for and promise of considerable expansion in every department of farming, and there are signs of progressive improvement in every part of the district. There appears to be universal confidence in the capability of the land and the climate to produce a sufficient variety of marketable food stuffs, in addition to fat stock and wool, leading gradually to a state of improvement of all kinds. Much of the farming operations must be regarded as experimental, but the holding is certainly not for speculative purposes, and the settlement is decidedly of a permanent character by a class of farmer such as is most desirable.

21. The whole tone of affairs in these districts on the Lower Manilla is eminently healthy, and must certainly bring to pass considerable advancement of the district within the next few years. The settlement at Upper Manilla is within the valley of the Manilla only, and is therefore within narrow limits, but at Manilla proper it extends along the valley of the Namoi also, and is very extensive. Taking the whole together, however, the sum of the figures supplied by it is so small it is certain that a railway would have to work at a loss for many years and, on the promise of expansion alone, it is difficult to say for how long; but at the same time it is difficult to deny advantages to such tracts of country as would manifestly increase their prosperity many fold to the advantage of the Colony in general as well.

22. Respecting the direction to be taken in the way of general progress in the future, the owners of the large and moderate-sized properties anticipate with confidence that they will find tenants for properly proportioned farms, and that expansion in cultivation and population will take place by settlement of this character and not through the process of cutting up and sale of land, which is relied on in most parts for the advancement of a district. The evidence of witnesses taken at all points to Upper Manilla is in favour of such arrangements. There is no sign of anxiety to sever connection with the district by parting with their holdings to new comers. On the contrary, the faith in the prospective values of their properties seems to be strong.

23. The opinion of Mr. John Barling, supported by Mr. Wheeler, as to the value of the land still unalienated must be taken to apply to areas in accessible positions within reasonable reach of communications only. All the land of good quality in desirable situations that has been made available since the expiry of the pastoral leases has been taken up, but in the wilder parts, as the prospect of outlet for produce becomes more hopeful by the progressive improvement in communications, the available land is being slowly settled.

24. North of Upper Manilla, the river traverses a rough region to the east of the main road, and curving westwards past Barraba and then southwards again drains a very extensive area under the north-western sweep of the Nandewar Range. Within this extensive basin, and in the beds of the tributary water-courses to the west of the main road, lies the chief part of the good land in this northern part of county Darling.

25. The township of Barraba is situated within a few miles of the county boundary between Darling and Murchison. It holds a population of 500 residents. The mining districts of Wood's Reef and Ironbark are a few miles to the east connected by a good road, which is continued across the range to Bundarra, about 40 miles from Barraba. Eastwards of the township there is no public outlet from the country, but a proposal has been made to construct a new road to connect Barraba with the settlement on the Horton River in county Murchison. Appendix D.

26. The return supplied by Mr. W. J. Booth gives the total area of cultivable land at 43,130 acres, though of this only 1,562 acres have been cultivated. The population of the district, including that of the township, is given at 1,117, but as this does not include miners and other floating elements, the total will probably be found to be nearer 1,500. All the country to the east of the main road is extremely rough, becoming more so as the main range is approached, but I am informed that there are plateaus or terraces within this area, but difficult of access, carrying very good soil over extension breadths which have not yet been touched by selection. Two whole parishes, Darling and Wood's Reef, are all reserved and large portions of other parishes also, for mining purposes. The extent of Crown land in the separts is very large.

27. Speaking generally of the distribution of the land in county Darling, Mr. F. Poate states in his evidence that ". . . two-thirds of all the land to the west of the main road, and for 3 or 4 miles to the east of that road may be said to be good agricultural land capable of being cultivated. On the east of this tract the rest of the county may be one-quarter of the area of cultivable land and the remainder fit for grazing only."

28. The evidence of Mr. S. J. Lillis contains much information on the quality of the lands. His own property of 6,500 acres in the vicinity of the township, is said to be the best large block of good land in the district, but in smaller lots there must be much similar, as the geological formation is the same for long distances to the eastward.

29. My own observation leads me to indorse his estimate of the average quality and distribution of the good land. There are in fact large areas on Santo Campo and Burindi, on the upper part of the Manilla River, which have been highly improved and must be now capable of carrying a very high average number of stock. My conviction is that the general carrying capacity of the whole country, might be trebled or quadrupled by the ordinary improvements in use on forest land devoted to pastoral purposes without entailing undue expense. The capacity of the cultivable portions for production of foodstuff has as yet hardly been experimented on.

30. The main road from the north passes over the Nandewar Range, which divides the counties and the territorial divisions, a few miles to the north of Barraba at a part called Bell's Mountain. This is an abrupt mass 16 miles in width across the base and some hundreds of feet in height, which, excepting the rivers, forms the only serious obstacle to be surmounted by a railway on the whole route as far as Bingera. To the northern foot of this rise the road passes along the valley of Hall's or Bingera Creek from Bingera on an easy rising gradient, and over easy country throughout for 18 miles. Between Barraba and Tamworth, though there is some rough ground in places, an easy line would most probably be selected.

31. The quantity of wool brought down this road from the north of Barraba has been variously estimated at 6,000 bales.

32. As to the quantity of wool diverted from this route by the adoption of easy truck rates on the railway from Glen Innes, and the institution of union rates for cartage, the following comparative statement, from the Railway Commissioners' annual reports, gives the despatch from several stations during the last three years :—

From Railway Station.	Bales of Wool forwarded during Season of—		
	1889-1890.	1890-1891.	1891-1892.
Glen Innes	6,258	7,888	11,992
Tamworth and West Tamworth	13,765	15,113	15,524
Narrabri	52,317	63,689	68,270
Bourke	55,799	67,015	87,000

33. From this it may be inferred that the universal large advance in production has enabled Tamworth to maintain its average, but that a proportion must have been diverted to Glen Innes, where the increase is so marked.

34. This statement is also useful in showing the great importance of Glen Innes and Tamworth as receiving stations. The quantity of wool despatched from Tamworth is exceeded by that from five other stations only (excepting terminal stations) in the Colony, viz., Young, Cowra, Dubbo, Nevertire, and Nyngan. The despatch from Narrabri (a terminal station) is exceeded by that of one other station only (also a terminal station), viz., Bourke. These figures, for Narrabri and Bourke, are fully treble those shown by any other station on this Colony's railways. They represent each about an eighth or a ninth of the whole quantity of wool carried on the whole system. The magnitude of the traffic that is being contended for from three different directions—Glen Innes, Tamworth, and Narrabri—and the importance of the interests involved are indicated by these figures.

35. As the supplies into the districts would for the most part be carried by the same route by which the produce is sent out of it, a statement is here given showing the quantities despatched from Tamworth and Glen Innes :—

	Records of Goods Traffic.					
	1889-90.		1890-91.		1891-92.	
	Out.	In.	Out.	In.	Out.	In.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Glen Innes	4,412	7,114	4,588	6,551	4,527	8,771
Tamworth and West Tamworth	9,093	10,596	12,713	10,096	11,252	11,187

36. This and the statement in paragraph 32 give the whole receipt and despatch at each station for the surrounding district, not alone the quantities from or to the districts being reported on.

37. Carriage between Narrabri and the northern districts is in the control of the North-western Carriers' Union, but to and from Tamworth the Northern Carriers' Union, whose rates are given in Appendix N, is in operation. To and from Glen Innes union rates are not yet in force. The union rates affecting the road to Tamworth are necessarily lower, mile for mile, than those to Narrabri. In order to secure the traffic, and in order to keep it against Glen Innes, they must be pitched as low as possible, since the railway charges on wool from that station are the same as from Tamworth.

38. The railway charges on wool from Glen Innes are given in Appendix P. From any point between Tamworth and Glen Innes there is no increase of rate on the charge from Tamworth for carriage to the port. The rates for carriage of goods from the port to Glen Innes, are also much more favourable than to any station south of that place, the maximum charge to Glen Innes being £10 per truck load lower.

39. These rates, having for their object the securing of the traffic from the northern districts to this Colony's railways, would not be necessary for adoption on a railway line from Tamworth northwards, where that particular form of competition does not obtain. It will, therefore, be possible to charge for carriage of goods between Barraba and the port the same rates as are now charged from Narrabri with the result that some of the traffic will be diverted from the railway between Glen Innes and the port, on which the charges are so very low, with clear advantage to the railway revenue and also with benefit to the user of the railway, since the sum total of the charges paid by him for carriage will be lower by the Tamworth route. Considerable traffic would be diverted from Narrabri also, but this would neither be loss nor gain to the revenue.

40. Unless, however, special truck rates are charged for carriage of goods into the district over this new line all goods so carried will not return any revenue, as there would be no increase on the truck rates to Tamworth. This might be shown to be an actual gain to the railways in reduction of working expenses if the total quantity diverted from Glen Innes proved to be substantial enough, as goods are carried to Glen Innes—141 miles past Tamworth—at £10 per truck load less.

41. These speculations on the proportion of the traffic from the northern areas that might be carried by a Tamworth-Barraba railway, can be of interest only on the assumption that extension of the railway lines from Narrabri and Glen Innes will not be carried out for an indefinite time, or that their direction will be decided on so as not to control the whole of the territory up to the border, in fact in such a way as to leave room between them for a third trunk line to the border, since the effect upon that traffic of the construction of both of these lines, viz.:—To Moree and to Inverell would certainly be to divert it altogether from the Tamworth route.

42. There can be no doubt that the construction of a line from Tamworth to any point past Barraba would render necessary a rearrangement of the railway proposals for service of the country lying east of Bourke and north of Moree and Inverell, along the Queensland border. Extensions from Narrabri have been investigated and a line to Moree recommended. The connection of Inverell with the main line may be taken to have been decided on, though the route has not been fixed. It further appears that some difference of opinion has arisen already on the subject of extending the line past Inverell, Messrs. Scarr and Price proposing to continue it to Bingera, and Mr. Jones advocating a line along the Macintyre River, but as yet the merits of each line taken by itself have been weighed, and a direction selected for each that promises the largest traffic. The proper partition of this large extent of country in view to its efficient service for all time has not been given adequate consideration.

43. The view I have taken of my duty in this matter has been that I should confine this report to an investigation into the claims and qualifications of the district between Tamworth and Barraba for railway communication, making it thereby a contribution to the information on the general subject, and leaving the main question as to the general system on which the service of this northern part of the Colony shall be laid out to be decided hereafter.

44. I am inclined to think that a line of railway from Tamworth to Barraba would not influence the decision upon the large questions indicated in the foregoing to such an extent as to bar its serious consideration at the present time in advance of the more important subject.

45. The lengths of the various sections of the line would be:—

	miles.
Tamworth to Attunga	10
Attunga to Manilla	17
Manilla to Upper Manilla	8
Upper Manilla to Barraba ... ..., ...	24
Total... ...	59

46. The estimated cost of this construction has been given by the Engineer-in-Chief at £228,500. The total present population of the area to be served is about 3,000. The whole area is 1,633 square miles, of which 781 square miles have not been alienated. There are 145,730 acres of cultivable land, having 10,389 acres under cultivation. Barraba is close to the boundary of county Murchison, in the central division, in which, in 28 parishes within 40 or 50 miles of Barraba, are 751 square miles of Crown land. This is a very desirable country for settlement, being specially favoured in climate and average rainfall, and carrying sufficiently good land to ensure its being rapidly taken up as soon as made available for selection. The approach of railway construction will undoubtedly immensely enhance the value of this land. See para. 10.

47. The whole area credited to this railway proposal in this report in county Darling is isolated from and outside the influence of any other existing or proposed railway line. An old-established and very favourite route traverses the district from north to south, along which a large part of the produce from the extensive northern tract is carted and supplies returned. These would all be carried by the proposed railway until extension of other lines in the north diverted the traffic.

48. Some portions of the area in the immediate vicinity of the proposed line are of exceptionally good quality of soil, and enjoy conditions under which they are certain to become very highly productive and populous.

49. The mining interest has not been noticed hitherto, as the extent of ground opened out is too small to warrant any great anticipations, but the existence of a variety of minerals, including gold, has been proved and these are being worked or prospected for, giving employment to numbers of men. There is a deposit of chromic iron, that has been traced over a considerable distance, which may possibly turn out a source of profit when it can be worked economically.

50. The traffic carried by the existing railway at Tamworth from and to these and northern districts cannot be separated so as to show the quantity for this district alone. It amounted during last season to 11,773 bales of wool out of, and 1,788 tons of goods into the country. It is obvious that this latter does not represent the full tonnage of supplies forwarded, the larger part by far of which would be consigned to merchants in Tamworth and be distributed by them. There are ninety-six carriers, representing 113 teams in work on this road. During the busy season this number is considerably augmented. It is estimated that 5,000 bales of wool were collected in the district, and about 6,000 were brought in from the north.

51. From these particulars it must be clear that the justification for the construction of this line must rest, first, upon hopes of expansion in production and population in the district passed through taking place rapidly enough to provide traffic within a reasonable time, and, secondly, upon the enhanced value given to the Crown lands in the vicinity of which it is to be constructed.

52. In regard to the first condition, the traffic at present derivable from the area immediately served cannot be expected to support a railway, and the accessions to that traffic supplied from distant northern tracts cannot be depended on, as they will some day be diverted to other channels; but the settlement which may be assumed as being sure to take place on the Crown lands in county Murchison will certainly supply a substantial and a yearly-increasing addition to the traffic of a line to Barraba.

53. Expansion of all kinds in the northern part of county Darling, where the settlement is so largely pastoral, and where the quality of the soil is not so well suited naturally as in the southern parts for agriculture, must necessarily be very much slower and not so reliable.

54. The districts, the centre points of which have been taken to be Attunga, Manilla, and Upper Manilla, may certainly be expected to respond to the impulse given by a railway for their service. The present population of these areas amounts to nearly 2,000. The scope of country served on each side along

the

the valleys of the main water-courses, and by the routes converging on Manilla, gives promise that this point will become important in any event in the course of time, but as a terminal point of a branch line, it would be a very important centre from which the surrounding country would be served.

55. On the second point it would appear that the Crown lands of good quality within counties Darling and Inglis are not of a character to be enhanced in value to any great extent by the proposed line being built, but their settlement would certainly be promoted. On county Murchison, however, the enhanced value to the extensive areas of Crown lands would probably amount to a fair proportion of the cost of constructing the line.

56. I am looking upon the whole line to Barraba at present as a branch or feeder line only, and not as a portion of a trunk line that may be extended to the northern border, and I consider that as such its construction may be undertaken within a reasonable time, as the country is important and promising, and there is no other route by which an outlet can be found, and no clash of interests or competition is possible.

57. On these grounds, and in view of the importance of the districts on the Peel and Lower Manilla Rivers, I would advise that a portion of the line, viz.: to Manilla be undertaken for construction at an early date. This portion would be 27 miles in length. As it would not be taken across the Namoi River it might be built for £100,000.

STANLEY ALEXANDER, M. Inst. C.E.

The Under Secretary for Public Works.

List of Witnesses.

1. Mr. Alexander Rodgers, of Attunga.
2. Mr. C. E. Bull, of Big River.
3. Mr. J. T. Wearne, Bingera.
4. Mr. John Byrnes, Bingera.
5. Mr. William Finkernagel, Mayor of Bingera.
6. Mr. A. Grosbernd, Bingera.
7. Mr. William Garske, selector, Barraba.
8. Mr. W. Douglas, commission agent, Barraba.
9. Mr. S. J. Lillis of Barraba Creek.
10. Mr. B. Finkernagel, storekeeper, Barraba.
11. Mr. E. Bowman, farmer, Upper Manilla.
12. Mr. A. H. Sampson, farmer, Upper Manilla.
13. Mr. W. F. Hill, farmer, Upper Manilla.
14. Mr. Hugh Cameron, farmer, Upper Manilla.
15. Mr. W. Hall, selector, Upper Manilla.
16. Mr. J. T. Byrnes, farmer, Upper Manilla.
17. Mr. J. Geddes, farmer, Upper Manilla.
18. Mr. T. Bowman, farmer, Upper Manilla.
19. Mr. G. Nixon, farmer, Upper Manilla.
20. Mr. J. Wheeler, farmer, Upper Manilla.
21. Mr. J. Barling, grazier, Upper Manilla.
22. Mr. W. Hill, farmer, Manilla.
23. Mr. A. Stafford, storekeeper, Manilla.
24. Mr. Charles Baldwin of Durham Court.
25. Mr. L. J. Bailey, carrier.
26. Mr. M. F. M'Keown, farmer, Manilla.
27. Mr. J. Cartwright, secretary, Northern Carriers' Union.
28. Mr. M. Chusbrough, grazier, Barraba.
29. Mr. R. S. Pigott, forwarding agent, Tamworth.
30. Mr. J. T. Robertson, forwarding agent, Tamworth.
31. Mr. F. Poate, District Surveyor, Tamworth.

Attunga, 22 June, 1892.

1. *Mr. Alexander Rodgers*, of Attunga Station: The area of the run is 18,000 acres freehold, and about 7,000 acres of Crown lands; he sends away about 350 bales of wool annually to Tamworth; the fat sheep and cattle produced in the place would amount to 5,000 fat sheep and 300 head of fat bullocks; much of this is now trucked from Tamworth sometimes for the north to Armidale, and sometimes south to Quirindi and Homebush; produces now for his own purposes a large quantity of lucerne, in fact, a larger quantity than can be consumed, and would be able, with railway transit, to export 400 or 500 tons annually; this is grown on the low alluvial flats; the crop grows very luxuriantly; every few weeks between October and April the crop must be cut or it becomes too heavy; the settlers also grow lucerne for their own use, but not all of them; they also might export this crop; does not cultivate much grain, only for home consumption; the railway would induce him to cut up nearly all his land, and sell or let it in farms; of the 18,000 acres, about 12,000 or 13,000 is very rich agricultural land, fit for lucerne, wheat, and vineyards; the hills all round about are of limestone; this fact gives the value to these Attunga lands; the value of this land cannot be given, since none of it has been sold, but he has refused £6 per acre for some of the river land; similar land nearer to Tamworth has been sold for £30 per acre; is of opinion that all the land fronting on the main road and Peel River would be worth £10 per acre with a railway within the Attunga Estate; at present it is only used for pastoral purposes, and for this it has no great value; north-west and west of Attunga, the whole of the parishes of Burdekin and Bubbogullion consist of the very best land of a brown-chocolate soil; this country has nearly all been purchased, much of it by selectors; all this country would depend on a station at Attunga; the traffic that would come to Attunga would be from parish Attunga, from the leasehold area; Burdekin, from the whole area; Bubbogullion, from the whole area; Bloomfield, from the whole area; on the leasehold area of Attunga parish, the whole has been purchased, except some of the poor land only fit for pastoral uses; there is no good land available on it; there are a large number of selectors; they generally take up good farming land and grazing land also; parish of Bloomfield is like Attunga, of mixed character, some parts being very rich along the Namoi River, and some being poor; the Peel River Estate is on the opposite side of the Peel River, on the left bank; it comprises over 300,000 acres; the first sale of land is to be held in Bective in a few days; there is some sort of a township at Somerton, but in the neighbourhood there is a considerable population of prosperous selectors; their trade now is with Tamworth by a road through the Company's estate, on the left bank of the river; there is no township at Attunga; a few lots have been sold; generally speaking the settlers in the neighbourhood of Attunga and the parishes named are in very comfortable circumstances; with a station here there would very soon be a considerable township; has known numbers of settlers here who came here poor and have become wealthy; every steady sober man has done well in the district.

ALEX. RODGERS.

As nearly as he can estimate the number of fat sheep produced in the district in a radius of 13 miles, chiefly to the west, as the bulk of the fat stock would come from the Peel River and Keepit, would be 23,000, which might be trucked at a station in Attunga—and of fat bullocks 1,500—would expect considerable expansion of cultivation, production and population on the lands along the Peel River and between that river and the proposed railway line; this extent of country might be densely crowded with settlers

settlers, as a few acres on any part of it is capable of supporting a family; considers that the land just mentioned is, taken as one large block, the best tract of country he has seen in this Colony during an experience of fifty-four years.

Again, along the Attunga Creek, east and north-east from this place, the land is undulating, consisting of river flats and large valleys, all of which are cultivable up to the head of the creek, where the granite commences, a distance of about 6 miles. This land is not cultivated, but is all secured. This area would carry a population of 500 or 600 people, where but about 100 are now resident.

The results in expansion of population here indicated may be expected to result from sale or sub-division of the large properties into farms for leasing, since it is clearly to the interests of large holders to let farms at a price per acre considerably higher than can be made out of the land by it being retained for grazing.

A. R.

Bingara, 22 June, 1892.

2. *Mr. Charles Edward Bull*, of Big River Station, 10 miles eastwards up the Gwyder River: Sends away about 130 bales of wool annually to Tamworth; has never sent anywhere else; the route is through Bingera; if the railway were to be built to Inverell the carriage to it from his station would be only about 50 miles; he believes that there would be a saving in cost by this route, even if the line came from Glen Innes, but if a railway came to Barraba he would certainly use that line, as the road journey would be the same, but the road would be so much better; some of the stations to the north are sending wool to Glen Innes to be trucked, chiefly for the reason that they consider the union rates are excessive to Tamworth; the old rate, the highest paid by his station to Tamworth, was £3 10s., and seldom it was higher than £3, but the union rate is £3 18s. 6d, which they are obliged to give; a railway to Moree would divert all the wool traffic south and west of Warialda from the Bingera route; at present all this from as far as the border comes this way; along the Horton River there is good agricultural country; a large quantity of land on this river has been taken up in the last two years; on Piedmont and Cobbadah the grazing capabilities are very good, but there is not much cultivable land; on Big River the river frontages are all good land; all over the county of Murchison the flat lands are good, and there is plenty of good land for settlement as soon as it is thrown open; all the good land on the resumed area has already been taken up; many selectors from the western side of the Colony have been here, and many have settled here; there is no doubt that when the leases expire there will be a great rush for this land; taking Gineroi, 16 miles from Bingera, on the Gwydir, as the end of the mountainous land, the whole country north and east of it may be taken to be capable of carrying a sheep to the acre if ringbarked, because of its superior rainfall and of its being well supplied with natural water; taking the whole country, very little of the land has been improved, for the reason that so much is leasehold; the unimproved country carries a sheep to 5 acres; the Myall Creek Station are reported to have lately sold 4,000 fat wethers to the Aberdeen works; that is a first-class fattening property; the run sent fat sheep to Brisbane on one occasion (10,000 fat wethers); cattle are grazed extensively in county of Murchison; fat cattle are constantly being sent away; during the ownership of W. J. Dangar & Co. the Myall Run was one of the most noted fattening properties in the north, but the present owners (M'Farland Bros.) are getting rid of their cattle, being purely sheep men, and they ultimately intend to graze only sheep on this run; the railway would bring to pass so much improvement of the country that its fattening capabilities would be brought out and made use of; even now much of the unimproved land is capable of fattening stock, consequently the export of fat stock may be expected to be considerably increased by railway transit being made available.

C. E. BULL.

Bingera, 27 June, 1892.

3. *Mr. J. T. Wearne*, proprietor of a flour and saw-mill in Bingera: Has been here for twelve years; he built the first flour and saw-mill in the town; the capacity of the flour-mill is 1,000 bushels of wheat per week; there is another mill also of the same capacity in the town; the wheat is all grown in the district, and the market for the flour it at present principally in the west and the north for all flour outside of local requirements; the increase in the production of wheat during the last few years has caused the erection of the second mill here, and the conversion of his own mill from a stone to a steel roller mill; the quality of the wheat grown here is very much superior to that grown at Inverell and Tamworth for milling purposes, as the flour produced keeps much better in the hot climates of the west, and being drier, more bread can be made out of an even weight of flour; the competition is this country is now with the Adelaide flour, which is brought at a nominal rate to Newcastle in vessels which take coal back to Adelaide; now that import duty has been put on wheat and flour an impetus has been given to the growth of wheat, resulting in there having been put in about four times the acreage in wheat crop in these parts than formerly; the produce from all this will not find a market unless some means of carrying it is provided, as it will not bear the cost of carriage by road to Tamworth; the average of production is between 18 and 20 bushels per acre; construction of a railway to Barraba will make a very great difference to the trade in the respect of carriage; there are large quantities of cyprus pine in this district; the capacity of his saw-mill is 2,000 feet daily; there is also another mill here, and in the district another at Myall Creek; the largest size of tree procurable is about 3 feet diameter, but the average used is about 18 inches; very large quantities have been cut here; his mill has been here twelve years, but there are large quantities of timber still available; quantities have been sent to Barraba and Manilla but not to Tamworth, which is supplied cheaper by rail from Narrabri; also much has been sent to Inverell, in fact, hundreds of thousands of feet; a railway to Barraba will open out a large trade in this timber; there are also large quantities of ironbark of large growth, timber well suited for railway purposes.

JAMES T. WEARNE.

Bingara, 27 June, 1892.

4. *Mr. John Byrnes*, storekeeper, in business in Bingara for about ten years, would point out that the extension of railways to Inverell or to Moree that have been advocated would not be of any service to the district depending upon Bingera; this line from Tamworth to Bingera passes about centrally between the existing lines of railway, and would serve an extent of country which cannot ever be touched by the existing or proposed lines; this country has all along it a good rainfall; Bingera being in the Central Division, there is a large quantity of Crown land available for settlement which will all be much

enhanced

enhanced in value by a railway being constructed to Barraba; an extension of railway to Inverell from Glen Innes would place Inverell at about 467 miles from Sydney, whereas Barraba would be 339 miles *via* Tamworth; there would thus be a saving of distance of 128 miles by using a route *via* Barraba; this fact would be sufficient to prevent Bingara from using or assisting in any way in the construction of a railway from Glen Innes to Inverell; from Guyra to Inverell would not present so much objection; inspection of the map shows clearly that the extension to Moree from Narrabri would not be of any service at all to any of the country between Bingera and Tamworth; in the event of these projected lines to Inverell or Moree being carried out, the result would be to render the competition in produce on any of the lands about Bingera and Barraba prohibitive; settlement would desert these districts, and the land would revert to pastoral uses; the Bingera district would probably prefer that Inverell should be reached as originally proposed by a railway from Tamworth through Barraba; the features of the country for the most part of the distance from Tamworth to Bingera prevent the use of any of the existing or proposed lines from the districts adjoining.

JOHN BYRNES.

Bingara, 27 June, 1892.

5. *Mr. William Finkernagel*, Mayor of Bingera, is a storekeeper in the town: Has been in the town in business about seven years; the town was incorporated in March, 1888, as a municipal district; in 1889 information was collected of the number of teams of wool only that passed over the Gwydir Bridge; this amounted to 240 odd teams averaging 4½ tons each; in 1891, owing to the union rates having been instituted, the numbers fell off, and only a little over 200 teams crossed the bridge; during 1890 the number was 230; the rate from Bingera to Tamworth for carriage by the union rates is £3 12s. per ton, and this is higher than obtained before; the old rates were £3, and often less, according to agreement; at present the high rates, according to union rules, are not in force to Inverell and Glen Innes; by the railway the same rates are charged from Glen Innes as from Tamworth at present, so the route *via* Glen Innes is, on the whole, more favourable now for carriage from all parts east of Bingera, because the railway rates have been altered; formerly the charges from Glen Innes were much higher than they are now; a further reduction in the quantity of wool passing through Bingera is due to much of the wool from the north now being sent to Narrabri, which did pass through Bingera; the Narrabri route had union rates before they were imposed on the Bingera route, and the roads to Narrabri were worse; if a line of railway were constructed even as far as Barreba only, the lowering of the cost of carriage would bring a much larger quantity of wool through Bingera, including wool from Boggabilla and Merriwa, and Taloona Stations, which now is sent principally to Queensland; referring to the wool sent to Queensland he knows only of this being done from the stations he has named; the railway station on the Queensland line at which the wool is trucked is Cambooya; the stations from which wool is sent there are all about 100 miles north of Bingera, and from the New South Wales lines can be reached only through Inverell and Bingera and Narrabri; again, the Queensland railways also hold out inducement to draw the wool to their lines; the three stations he has named are those of which he is cognisant, but there are numbers of others in the same situation which are, no doubt, doing the same in their own interests, the trade being diverted from New South Wales; in addition to wool there is other loading such as hides, skins, timber, tallow and ores sent away; the stock passing through Bingera, between 1st January and 27th June, 1892, were sheep, 142,313; cattle, 14,399; horses, 30; total, 156,742 head for six months; there is a common here, and all stock passing has to be reported; this represents the passage both ways and in all directions, but chiefly of stock going to market.

W. FINKERNAGEL.

Bingera, 27 June, 1892.

6. *Mr. A. Grosbernd* is carrying on a baking establishment, but is principally connected with mining: Has had very great experience in this industry since 1862 in all parts of Australia; considers that they have in Bingera as good a field for minerals as he has known anywhere; within a radius of 40 miles all metals are represented; copper has been worked here; it is found in large quantities, but the fall in the price has stopped the working, as the carriage by road is higher than it can bear; there is a large show of chromic iron here, which has been proved to be worth £4 per ton in Sydney; kaolin is found in large quantities near Cobbadah, and has been proved to be worth £4 per ton in America and Germany; the diamond mining in Bingera is carried on by private parties, some having been worked on a large scale; coal has been found within 20 miles; the mining industry would receive great encouragement from a railway being constructed, even as far as Barraba; about three weeks ago a consignment of 6 tons of copper was sent to Newcastle; the cost of carriage by union rates is £3 12s. per ton to Tamworth, but as a special case a charge of £3 only was made on this ore; the Bingera Gold-mining Company are working a reef close to Bingera; the stone contains large quantities of arsenical pyrites; the concentrates have been sent to Sydney, but at such a high cost for carriage that it is doubtful if this process of extraction will be continued; the cost of bringing mining machinery here is so great as to prevent mines being opened out; there is room for dozens of companies on this line of reef, which has been found to be payable, if there were a possibility of carrying away the concentrates at a reasonable cost, and also of bringing machinery to work the mines; cinnabar has been proved here in a lode that has been traced for fully 6 miles.

A. GROSBERND.

Barraba, 30 June, 1892.

7. *Mr. William Garski*, a selector about 3 miles from Barraba, holds 800 acres of conditional purchase and 700 acres conditional lease; cultivates about 22 acres for home consumption, and grazes on the rest; has 1,300 sheep, eighty-six head of cattle, and twenty-two horses; has had the land for sixteen years; the land is all improved; it is all fronting Manilla River; the cultivable land amounts to about 400 acres; the crops he has used have been wheat and maize; has sent wheat to Tamworth; the average yield of wheat would be about 23 bushels per acre, but he has grown 42 bushels; of the maize crop the average yield is about 40 bushels per acre; he was working on a farm in Prussia before he came out here; has been in this district about thirty years; considers Barraba the best part of the district; has never known the wheat crop to fail here even during the droughts; cultivation cannot be carried on at a profit if the cartage of the crop is done by the farmer himself; as an instance, if he had 200 bags to cart with one waggon

waggon it would take him seven weeks at least to deliver it in Tamworth; from his experience of farming he can confidently say that if there were a railway he would go in for wheat-growing extensively, as it will pay better than grazing if the crop is 20 bushels to the acre, and wheat at 3s. per bushel; in addition, he would grow Hungarian millet, of which he has grown 3 tons to the acre; potatoes he has also grown successfully; he has not tried oats, but has known them to be grown very well; summer frosts are practically unknown here, and hot winds are not prevalent in Barraba; in this respect the place is better off than Tamworth; his flour he obtains from his own wheat, which he sends to Tamworth to be ground; the local wheat fetches 1d. per bushel higher than that of Tamworth; the last severe drought here was in 1877, not since; water in the Manilla River has never failed yet; there are plenty of springs all over the country; there is one on his own property.

WILLIAM GARSKE.

Barraba, 30 June, 1892.

8. *Mr. William Douglas:* Is at present a commission agent in the town of Barraba; has been a farmer and also a miner in these districts; came here first in 1862, but has resided here continuously since 1872; in 1886 he paid 2s. per bag for carriage of wheat to Tamworth; the result of this trial consignment was that carriage and all expenses amounted to £12, and the consignment realised £25; wheat was then 3s. 10d. per bushel in Sydney; he has not, consequently, tried the experiment again; there is gold all through the parishes of Tibundie, Woodsreef, and Eumur; the chromic iron is in parish Woodsreef; there are hundreds of tons lying on the surface, the value of this ore being £4 per ton in Sydney; if the carriage of it could be done at £2 10s., a very large trade would be carried on in this ore, as the mining of it can be done at a nominal cost; copper is found about 16 miles from here north-east; this is now being mined by small parties who send the ore to Newcastle at a profit; this has been done for the last two years; during about the last twelve months about 140 tons have been sent away of picked ore; does not know what quantity is there; the ore now being mined is black oxide; the carriage of this from the mine to Tamworth costs £3 10s. per ton; town allotments of Barraba have passed through his hands, fetching up to £15 per half-acre allotment, quite unimproved, and on the outskirts outside the town; the value of freehold land, in blocks of from 200 to 500 acres, is about £2 per acre; agricultural land is worth more than double this price; selections on which the instalments are not fully paid up are frequently changing hands, but old-standing properties have not been sold.

WM. DOUGLAS.

Barraba, 30 June, 1892.

9. *Mr. S. J. Lillis*, of Barraba Creek Pastoral Holding: There are 5,000 acres of freehold and 1,500 acres of conditional purchase, and no leasehold land; this will carry more than two sheep to the acre, being about the pick of the district; considers that the district, taking improved and unimproved land all round, is capable of carrying a sheep to the acre; he himself runs cattle principally, but has also sheep and horses; the whole of this is a very sound country for sheep; those bred here in the Barraba district are always marketable, not being subject to any disease; the price fetched by the wool compares very well with that of any other district; from Campo Santo, about six years ago, the wool brought the highest price in the English market; this country, though it is a fattening district, is not used very much for fattening, but mostly for breeding; a large number of stores are sent away from here; he sends fat cattle away, mostly to Tamworth, but also to Narrabri, Bingara, and other places, but he himself never trucks his stock; quantities are trucked by other owners; a large number of cattle are run in these districts generally; sheep-grazing has increased considerably since the railway opened to Tamworth, but formerly, the carriage of wool was so high, cattle were in greater favour; he does not truck, because he generally sells to buyers locally, but a railway to Barraba would induce him to truck largely; he estimated that about 10,000 head of cattle pass through Barraba annually; of these, he believes that about 6,000 would be fat; during the past week about 1,500 head of fat cattle have gone through; these are all from the north; he estimates that if there were a railway-station here about 8,000 head of fat cattle would be trucked here annually; of sheep, he believes that 20,000 fat sheep would be trucked here for market; within the last fortnight about 12,000 fat sheep have passed through; there is a common attached to Barraba of 1,100 acres of fairly good land, and there is a considerable amount of land within the population area still in Crown hands; there is a considerable amount of leasehold land still in the district—fairly good grazing land and some of it very good for cultivation; this is now being proclaimed as special areas. When the leases lapsed two years ago the greater part available was immediately taken up; some selectors came from outside the district, but the major part of the land was taken up by residents of the district; some of the special areas are rated as high as £3 per acre; the sizes run from 40 to 320 acres; some have been taken; the country, from a few miles north of Upper Manilla to Barraba, on the east of the main road, as far as the river, is not fit for agricultural purposes in very large blocks, but it is good grazing land; east of the Manilla River the country becomes mountainous, and is fairly good grazing land, but not agricultural, and it is badly watered; westward of the main road between Barraba and Manilla, there is considerable agricultural land, and along the Manilla River, right up to its head, there are large areas of good agricultural land; some of it is under cultivation and produces good crops; there are some large areas of Crown land left on Quirindi, Tarella, and Campo Santo; a good part of most of this is agricultural land; it would grow wheat well, and is cultivable; in county Murchison there has been little settlement up to about twelve months ago, and this simply took place on the Hunter River; knows of much good flat land on Ulumbaralla pastoral holding; Rocky Creek is more or less mountainous; Cobbedah is good grazing land, but strong and not good for agriculture; a good sound country for sheep; Piedmont is good sheep-country, with a good share of agricultural land on it; all north of the Devil's Elbow, on the road in that fall of the water, is all good country; believes that when the land in this Central Division is thrown open it will all be taken up by selectors; knows of several who are waiting to take up land there; there is a considerable population of young men in these districts, who require land on which to settle, who are looking forward to being able to acquire it in the Central Division, and this county of Murchison is very favourably situated, having a fairly good rainfall and situation with regard to the existing railways and markets; this route *via* Barraba is much used by stock from Queensland, because it is best served by natural water, and there is not so much black soil to be passed over; this, in and after wet weather, becomes almost impassable; from Moree to

Narrabri is a very dry route, but the Gwydir River always has water, and so has the Horton River and Cobbadah Creek; would note that wheat is ready for market at about the same time as the wool is going down, so the former cannot find carriage except at the full Union rates, and has to be kept back until the wool season is over, when it is taken at 7d. per bushel; believes that if a railway was built to Barraba greater quantities of hay would be grown, viz., wheaten, lucerne, and oaten, and by being pressed he considers that a market would be found for it in many places; also believes that large dairies would be started in the district; there would be great inducement to send fat lambs, calves, and pigs to Sydney; these always realise good prices; without a railway such a trade is impossible; he also finds that onions do well in this district; in 1891, 8,000 bales of wool passed through Barraba; in that year, passed 140 teams, counting both ways; he is informed that the wheat grown in this district compares well with the best grown in any part of the Colony.

S. J. LILLIS.

Barraba, 30 June, 1892.

10. *Mr. B. Finkernagel*, storekeeper in Barraba: Has been here about three years; is of opinion that the tonnage of general goods and merchandise for the town and station use arriving in Barraba from Tamworth amounts to 700 tons per annum; these goods would be distributed from Barraba, and not be carried further north or out of it in bulk; of this, about 300 tons would be delivered to hotel and storekeepers in the town, and the balance would be station goods, and for selectors; the production of the district in food-stuffs of all kinds is greatly in excess of the requirements for local consumption; the length of time taken in transit of goods from Sydney to Barraba is a great hindrance to business—as long as two months and six weeks having been consumed on the journey; pays for carriage from Tamworth to Barraba by Union rules, £2 12s. 3d. per ton; the return freight is at the same price; they carry grain at a special rate, viz., 7d. per bushel, but this is not the full rate, which is 52s. 3d. per ton, and is only charged at slack times; flour he brings from Tamworth; potatoes are produced in the district, but are only available for seven months of the year, being the Early Rose, which is not a good-keeping potato; the supply is supplemented from Tamworth; the quantity of this is not included in the weight imported into Barraba, viz., 700 tons; it would probably amount to 100 tons; has noticed a very considerable increase in building and other expansion in the town during the three years he has been here; has also noticed that there have been some new arrivals from other parts; at the present moment there is no vacant house in Barraba; the accommodation is not sufficient.

B. FINKERNAGEL.

Upper Manilla, 1 July, 1892.

11. *Mr. Edward Bowman*, a farmer in Upper Manilla, in parish Wilson: His holding is 1,280 acres, all told; cultivates 240 acres in wheat, and on the rest he runs sheep, cattle, and horses; the carrying capacity of the land is about a sheep to the acre; it is all improved; has been in the district since 1871; he considers that the average crop of wheat is 20 bushels per acre, but in some years the yield is very much lower, and in others much higher; in 1877, during a bad drought, there was a total failure of crop on most farms; about 4,300 bushels was the biggest yield of wheat that he has taken off the land; this was during the last season; this was sent to Tamworth; the cartage cost 2s. per bag, containing 4 bushels, making 6d. per bushel; these are the Union rates, which he has paid for several years; some was carted during the stripping-time, and some later, and a little is in hand now, but the one price he has paid all through for several years; some farmers he knows have had their wheat carted for less, but he never did; the only difficulty he has experienced in getting his wheat carted away has been during stripping-time; carters will not take wheat if they can get wool; stripping wheat and wool-carting are generally done at the same time; the stripping is done during December; hay he has only grown for his own use; has not sent away any fat stock; has sold a few on the ground to the butchers in the district; obtains his supplies from Tamworth; brings them out with his own team; sometimes he has to take a light team in, especially to bring out stores that are urgently wanted; the round trip takes five days if there is no delay; flour is included in the supplies brought out; knows the country well; it is all very well watered; even in the drought of 1877 there was a fair supply for stock; the Manilla River never fails; wishes to note that the quantity of wheat given, viz., 4,300 acres, was grown on 200 acres only; this season he has in 240 acres in wheat alone; of oats he has not grown more than 6 acres, but he has obtained 50 and 60 bushels per acre.

EDWARD BOWMAN.

Upper Manilla, 1 July, 1892.

12. *Mr. Alfred Horatio Sampson*, a farmer in Upper Manilla, in parish Wilson: Has known the district since 1879; his holding is 161½ acres; on this he will have this season 130 acres in wheat and oats (white); last season he got 2,000 bushels of wheat off 100 acres; he could not get any of this carted away until the wool-carting season had expired; in this instance he was a gainer, because the price rose, but he has suffered through not being able to get carriage; for instance, Gillespie Bros. last year, in season of 1890–91, offered him a good price for delivery within a month of a stated quantity, but he could not carry out the terms in time; he had to sell the wheat in Tamworth at a reduced price, viz., 2d. per bushel less than had been offered by Gillespie Bros.; he does not cart the wheat himself, but pays 2s. per bag for carriage to Tamworth; this is the regular price he pays, but after the wool season, as during the wool season wheat cannot find carriage; the price quoted is the Union rate; these rates only came into force last year in these parts; previously the carriage cost less; would point out that in a good season, such as the present, the wheat crop is apt to grow very rank; if there were a possibility of getting hay to market this crop might be cut for hay, and the risk of rust appearing in the crop be avoided; the heavy crops are generally more likely to be attacked by rust; much loss would be saved by the farmer having the option in his power of cutting the crop for hay or of leaving it for the grain; he has kept hay here for three years on the chance of a dry season enabling him to dispose of it locally, but without avail; has not grown oats as yet; will try it; believes in it, as his neighbours have found it to succeed; is of opinion that the benefits conferred by a railway would represent an increased value to the land of 9s. per acre per annum; has himself calculated this for a 20-bushel crop; this is applicable only to the best land in the district; has grown corn and obtained a fair crop; his land is the red forest land, white box country; he

he has also the heavy black plain land; would consider that anything might be grown, but the farmers have been obliged to confine themselves to wheat, owing to the heavy cost of carriage; his experience in potatoes was not satisfactory, as the season was too dry, but some of his neighbours have succeeded; now he obtains his potatoes from Tamworth.

A. H. SAMPSON.

Would add that on one occasion he had to burn a crop of 50 odd acres of wheat, and has known his neighbours having to burn large areas on their being attacked by rust; all this could, when the rust was first discovered, have been cut for hay, had there been a market available for it; again, with ground overrun with black oats the crop would make excellent hay, though it is bad for wheat

A.H.S.

Upper Manilla, 1 July, 1892.

13. *Mr. W. F. Hill*, a farmer in Upper and Lower Manilla: Has been here about twenty-two years; his holding is 256 acres; has in crop for next season about 112 acres in wheat; last season from 65 acres he obtained 335 bags, making 1,340 bushels; sold this in Tamworth, but this was not carted in the wool season; the stripping-time is about the latter end of the wool season; wheat is usually kept on the farm until about February, not solely because carriage is not available, but for market reasons; but, at the same time, there would very often be a difficulty in getting carts in December just after the wheat has been stripped; has been growing wheat on the same land now for fifteen years; the oldest part of the land he left out in fallow last year; the soil is principally sandy loam, a little land being red; the average crop is 20 bushels per acre; has succeeded with maize in a year of fair rainfall; during 1871, in the bad drought, the wheat crop did not fail on all lands; little of this crop was put in during that time; a partial failure—say a crop of 10 bushels per acre—is a rare thing; considers that if the land is properly worked and cleaned there need be no fear of a failure at all in this climate; his supplies are brought from Tamworth, mostly by his own teams; sometimes they are brought by carriers, at a cost of from 1s. 6d. to 1s. 9d. per cwt.; the distance is about 33 miles; when he first came here there were very few settlers in the district; it has grown up since then; makes his living altogether off this farm of his; the crops possible on this land, if they had railway carriage, are linseed; this he has grown, and will try again; it was a success—sunflower, for seed for making oil; the seed is saleable; has seen an offer of 9d. per lb. in the Sydney market; oats, and all the barleys, he feels confident, would do well here; the native linseed grows well here; linseed would be a source of much wealth to the Colony if the cultivation proved successful.

W. F. HILL.

Upper Manilla, 1 July, 1892.

14. *Mr. Hugh Cameron*, a farmer in Upper Manilla, parish Newry: His holding is about 1,400 acres; has under cultivation this season 110 acres; total of arable land on his farm would be about 350 or 400 acres; formerly he did not put in so much crop; the average crop has been about 18 bushels to the acre; has had trouble in getting the crop to market until the wool season is over; was offered last year 4s. 5d. per bushel for delivery in Tamworth within a fortnight, but he could not stipulate to do this, so he lost this chance, and sold the wheat for 2d. per bushel less; principally grazes sheep; the capacity of this land is under a sheep to the acre; he considers that 2 acres to a sheep is rather above the carrying capacity of this country, taking it all over; Tamworth is but a limited market for the wheat crop, as there are only two mills, one of which is the property of a storekeeper; when the requirements of these mills are filled up; there is no other market but Sydney to which wheat has to be sent; in this case the cost of carriage to Tamworth, 6d. per bushel, is a tax on the production, which many other districts do not suffer from, and this acts detrimentally in the competition; his supplies are brought up by carriers from Tamworth, at a cost of 2s. per cwt.; does not send away or sell any fat stock, but would do so, as his ground is capable of fattening, if there were a railway; he believes that if he could see his way to cheap carriage he would put 300 acres under crop; considers that the soil in this district is capable of producing crop after crop for a long series of years; has known land to be cropped successfully for twenty years without manure; English grasses have not, to his knowledge, been laid down in this district; prairie grass grows well here in the moist places; knows that root crops will grow here well, having known potatoes and carrots grown, but the distance from a market is prohibitive to the cultivation.

HUGH CAMERON.

Upper Manilla, 1 July, 1892.

15. *Mr. William Hall*: Has taken up a selection in this district, and intends to farm it; has lately come from Tamworth, where he was farming with his father; was dairying also for the last fifteen years in addition to the farming; is of opinion that a market is in existence in Tamworth for dairy produce; he considers that the river flats in this district are equally suitable for dairying to those about Tamworth; much cheese was made on their farm in Tamworth, but the manufacture is not generally understood yet; there is an unlimited market for it.

WILLIAM HALL.

Upper Manilla, 1 July, 1892.

16. *Mr. J. T. Byrnes*, a farmer of Upper Manilla, Mosa Vale, in parish Wilson: His holding includes that of his father, managed by him; is about 2,600 acres; cultivated last year 140 acres in wheat, and has in this year 160 acres; last year the crop was about 3,000 bushels; sent it to Tamworth after the wool season, as during that time teams are not to be had; has suffered loss through not getting teams to enable him to catch the early market; sells a few fat stock, both sheep and cattle, on the ground; of the whole area given above, about 300 or 400 acres is cultivable; if cheap carriage were available he would undoubtedly crop the whole of this area; at present he has over 2,000 sheep on the land; in addition to wheat, maize could be grown here, and potatoes, oats, and barley, but he has not tried them, because they would not pay with the long road carriage; he promised 3d. per bag extra to a carter if he would transport his wheat this season at stripping-time; the regular price paid has been 2s. a bag; there is no doubt that dairying could be carried on profitably in this district with a railway.

J. T. BYRNES.

Upper

Upper Manilla, 1 July, 1892.

17. *Mr. John Geddes*, a farmer in Upper Manilla, parishes Veness, Eumur, and Wilson: his holding is 5,600 acres all told; cultivated last season about 100 acres; this season about 140 acres; this cultivation is altogether for home consumption; the total of selected land is 1,583 acres; of this, 1,000 acres are cultivable; on the whole holding he runs over 4,000 sheep; sometimes sends fat sheep to Tamworth, but mostly sells on the property; has never sent to Maitland or Sydney; farms have been let in the district; one small farm of his own of 40 acres is now let to a tenant; has occasionally had inquiries for farms to lease; believes that much of his property would be cut up and leased, as the price obtainable, judging by the rent paid about Tamworth, is satisfactory; is of opinion that all the cultivation land, with a proportion of grazing land that might be cut up into farms, would be readily taken up by tenants; in short, a railway being built would enable him to cultivate more land, to fatten and send to market more stock, and to divide off and let much land in farms.

JOHN GEDDES.

Upper Manilla, 1 July, 1892.

18. *Mr. T. Bowman*, a farmer and grazier of Upper Manilla, in parish Veness: His holding is about 3,200 acres; the cultivable land on this amounts from 1,000 to 1,200 acres; has cultivated this season 200 acres—160 acres in wheat, and 40 in corn and oats; last season had 671 bags of wheat from 120 acres of cultivation, which he found trouble in getting away to market, even after the wool season was over; he had to cart most of it away himself; considers that he suffers loss every year in not being able to catch the market by not getting carriage for the wheat in time; his land fronts on the main road, forming a favourable situation for letting in farms; he certainly would divide much of the cultivation land into farms, as he believes that a better return would be received than from grazing; sells all fat stock on the place.

THOMAS BOWMAN.

Upper Manilla, 1 July, 1892.

19. *Mr. George Nixon*, a farmer, grazier, and storekeeper, in Upper Manilla: Has been in the district fifteen years, and storekeeping about five years; his supplies amount to about 50 tons per annum for the store; holds, with his relatives, altogether 10,000 acres of which there must be quite 3,000 acres cultivable; the chief part of this is river and creek frontage, all good land; has cultivated as much as 400 acres on the whole property, chiefly in wheat and corn; has been obliged to reduce this quantity because of the difficulty in getting the produce to market; for instance, in one season he sold 700 bushels to Gillespie Bros., in Sydney, at 3s. 8d. per bushel, to be delivered within a month, but he could deliver only about 300 or 400 bags within the time, so the remainder were not accepted by Gillespie Bros., and he had to sell it at 3s. and 3s. 3d. in Sydney, where it had already been taken; has grown 700 bags of corn on 50 acres of his land; he has had several applications for farms to lease; has 40 acres now leased at 7s. per acre; he and his relatives would cut up into farms and lease all the available cultivable land, and would expect to find tenants readily for all; has had offers already from strangers; would have no difficulty in letting any quantity of land at a fair rental, viz., from 7s. to 10s. per acre; of fat stock, (sheep) 1,000 to 2,000 could be turned off the property annually, but for the last two years none have been sold, because he renewed his stock then with young sheep, which have not yet become marketable; regarding dairy-farming, has frequently had applications from farmers wishing to dispose of both eggs and fowls, and also bacon, which he has been obliged to refuse, because there is no way of getting it to market; very large quantities could be produced in the district; it would become an industry and a great assistance to farmers if such produce could be readily disposed of.

GEO. NIXON.

Manilla, 2 July, 1892.

20. *Mr. John Wheeler*, farmer and grazier of Manilla, 3 miles on the road northwards from the township: His holding is 326 acres in the farm and 2,600 acres of grazing land, leased; on the farm he has 120 acre sunder cultivation now, but he could double this area; the crops are wheat, lucerne, and oats for hay; the average of wheat crop is 28 to 30 bushels per acre; in some seasons he gets over 40 bushels, but year after year the average is from 28 to 30 bushels; the cost for carting wheat to Tamworth is 1s. 9d. per bag; has great difficulty in getting it carried; sometimes all teams are engaged in carting wool, and sometimes bad roads through rainy weather causes the difficulty; last year he lost 2d. per bushel on 500 bags through not being able to deliver within three days; the offer was 4s. 6d. per bushel; it was then impossible by teams, but it would have been done had there been a train; his total crop sent away last year was 603 bags; the quality of the wheat is unsurpassed by any other district about for milling; a letter he received from Messrs. Cohen & Levy, written at the instance of Mr. Wearne, the miller in Tamworth, is produced, stating that the wheat supplied had been of a quality superior to the Dungowan for mixing with New England wheat; he could put in nearly 300 acres on his farm, as it is nearly all fit for the plough; has also grown white Tasmanian oats for hay, but not for grain; has obtained over three tons to the acre; a train would enable both markets of Tamworth and Newcastle to be used for hay; in some seasons hundreds of tons of crop are burnt when rust appears which would make good hay if it could be saleable; the district is well suited also for maize, as splendid crops are produced; lucerne also grows well; has grown it for the last nine years, and is never without it on a small scale, but would cultivate it on a large scale; the sowing of lucerne lasts for six years; he has taken seven crops off the ground in a year; fattens stock on the grazing land, but sells on the spot; does not send any away; his next neighbour has 60 acres in lucerne, but he can use much of it only by turning stock into it; his grazing land is mostly ringbarked, is principally mountain land, a rocky rough country of red soil from ironstone rocks; a railway would enable him to cultivate nearly the whole farm, growing crops, which he cannot attempt now; dairying could be done; has done dairying at his place for the local market, milking as high as twenty cows; he would probably lay down a large area under lucerne, which would, he thinks, pay better than wheat; this would apply to most of the farms in the district, as they are all good land, capable of growing almost anything; the great drawback to all branches of farming is the getting the stuff to market; has been in the district fifteen years; does not know of any farms being rented in this neighbourhood; has heard several owners say that they would lease their land; believes that there would be a considerable increase of population from this source alone; was here when the leaseholds expired two years ago; nearly the whole of the available land, excepting some rough country, has been taken up; the selections were taken up principally by people in the district, but some were

from

from outside; the selectors chiefly were the sons of local farmers; he himself did not take up any land then, but his sons did, and they are now forming farms of their own; people are looking forward to the leasehold in the Central Division being available; he believes that the land will all be taken up then, and the traffic along this route to Tamworth will thereby be doubled; his property fronting on the road, he has great opportunity for noticing the heavy traffic along it; has heard what Mr. Barling said about the unalienated Crown land in the district other than the reserves, and considers that he has spoken correctly as to its quality; most of the reserves are of good quality of land.

JOHN WHEELER.

Has made a calculation of the quantity of stuff produced by twenty-four farmers in the neighbourhood of Lower Manilla, including a portion of Hall's Creek and a portion of the Namoi River; it amounts to 8,000 bags of wheat, equal to 900 tons—the grist in and out between Manilla and Tamworth would be 62 tons; maize, 2,000 bags = 200 tons; hay, 1,000 tons; supplies outwards, 50 tons; wool, 250 bales = 50 tons.—J.W.

Manilla, 2 July, 1892.

21. *Mr. John Barling*, of Upper Manilla, of the firm of Barling Bros., holds about 9,200 acres of purchased land, and a leasehold of 12,000 acres; runs 14,000 sheep and 200 head of cattle; has under cultivation 120 acres, chiefly for home consumption, as hay and flour; another 120 acres will shortly be ready for cultivation; hopes gradually to bring into cultivation another 2,000 acres; this latter area is now being thoroughly cleared and grubbed; the extent of improvement on the 9,000 acres of freehold is, shortly, that the whole has been ringbarked and formed into paddocks, over 2,000 acres of it has been cleared of all timber by burning down to the ground, and, as above stated, 2,000 acres are being prepared for the plough; the intention is to bring the whole of this area gradually into cultivation, even if the railway is not built, but the construction of it would certainly induce the firm to place the whole under cultivation as soon as it has been got ready by their own agency, but as many offers have been made to lease their land they would probably decide to divide large areas into farms; the matter of leasing in farms has not yet been well considered, but proposals have been received for farms on clearing leases as well as for ready-prepared ground, so the rents that might be obtainable in this district are not fixed; the offers already received have been from 6s. to 10s. per acre per annum; considers that such prices would pay better than grazing, and that if a railway be built a large number of farms would be taken in these districts at a considerable advance on those prices; the population of the district would thereby be augmented considerably; the firm are willing to give all the land required for the construction of the line through their property free of charge; the property lies on both sides of the Manilla River; submits a sheet showing the records of the rainfall that have been taken at the homestead since 1885; excluding 1890, which was an exceptionally heavy record, the average for seven years has been 27·26 inches; the regularity of this rainfall is partly shown by the averages for the first and last half-years being so nearly equal; has had twenty years' experience in the Clarence and Richmond River districts, and considers that for agricultural purposes the land in this district is vastly superior, not half the labour being required to cultivate the land here, and the crops yielded being more certain; after having been over nearly the whole of New South Wales, he selected this district five years ago as being, in his opinion, the best for a combination of sheep-farming and agriculture; the market value of the wool from these districts always fetches a fair average price, and in London is always classed as of good quality; the whole district is well supplied with natural water, both in the Manilla and Namoi Rivers, and by springs and creeks; the climate is subject to a high range of temperature, the thermometer having gone as low as 22 degrees Fahr., and as high as 114 degrees, but for a short time only, but, in general, the climate is temperate; snow is unknown here to his knowledge; during the present winter 30 degrees is the lowest he has seen the thermometer; frosts have been known as late as November, but usually they cease in September; the road from Upper Manilla to Gunnedah passes through Manilla; Gunnedah is 45 miles from Manilla; traffic of all sorts goes to Tamworth; as far as he knows there is no use made of the Narrabri branch from this district; all the farmers in Upper Manilla are steadily improving their properties year by year, both by clearing the land of all timber, making much of it suitable for ploughing, and by clearing off all dead timber from the surface for grazing purposes; he knows of no district having greater claims for railway communication, or any more deserving of the accommodation; nearly all the land suitable for settlement has been alienated chiefly by selection; the Crown land left is generally rough, suitable only for grazing; is not such as would be selected at present, being rocky and incapable of improvement other than by ringbarking, excepting some reserved land, which is of good quality; the other Crown land will probably never be fit for other than for grazing purposes, but still its value would be enhanced by a railway being brought near to it, and it will certainly be purchased in time; he looks forward to the population of the district being increased by the adoption of a system of leasing farms and by employment of labour in cultivating by the existing holders; he would not expect any further subdivision of the properties, except for the purpose of leasing in farms; in this way he would consider that the population will be enhanced quite as much as by direct subdivision and transfer; the whole of the existing population is already fully employed; the additional labour that will be necessary for bringing additional areas into cultivation must come from outside; has hitherto sent away to Tamworth and sold on the spot about 1,000 fat sheep annually; this would be very considerably increased if he could truck them on the spot; his own observation is that the road traffic is very large between Tamworth and the districts to the north; the wool traffic is of itself very heavy, and also the wheat traffic, but for general goods and all sorts of requirements the road past Upper Manilla is seldom clear of waggons.

JOHN BARLING.

Manilla, 2 July, 1892.

22. *Mr. William Hill*, a grazier and farmer about 9 miles from Manilla northwards: Has been in this district twenty-six years; since 1st August, 1890, when the leaseholds expired, there have been forty-six selections taken up under the residential conditions to his knowledge, at an average distance of 12 miles from Upper and Lower Manilla, but there have been probably some taken of which he has no cognisance; these were chiefly taken by the sons of local farmers, but several selectors came from outside; these forty-six selections aggregate an area of 42,000 or more acres, including the conditionally-leased land; would point out that though this means a considerable addition to the population and production and consumption of goods in the near future, yet up to the present little increase in any of these

these directions has resulted, since the land has been taken up by young men without families, and nothing at all has been done on it as yet; the farms are now only being prepared; the unalienated Crown land other than reserves in the district, being mountain land, is rough and suitable only for grazing, but it still is being taken up now and then; he knows of areas having been selected for grazing purposes on which 5 acres in one piece of cultivation land could not be obtained; the country on which the forty-six selections were taken is chiefly of red soil, and he believes that large areas on them will be cultivated, as some of the selections have large quantities of cultivable land on them; his holding is altogether about 5,000 acres; this carries about 3,000 sheep and 150 head of cattle; it fattens very well in summer; he has fattened 100 bullocks in the year from this land; could send away on an average about 500 fat sheep; so far, has only cultivated 40 acres, but would extend the area; has about 500 acres of cultivable land; believes that there will be a great rush for land in the Central Division when it is thrown open; has heard of many who intend taking up land there; there are the young men of this district; there is no more good land about here for them.

WILLIAM HILL.

Manilla, 2 July, 1892.

23. *Mr. A. Stafford*, managing for Mr. M. C. M'Kenzie, storekeeper in Manilla: Has been here five years; the tonnage brought up from Tamworth for his store during last year was 100 tons, not including any heaving loading, such as wire, rock salt, or iron; such goods are principally brought by station-owners and farmers on the return journey when they take their produce in; these are not kept in stock in the store; cost of carriage to Tamworth is £1 12s. 6d. per ton; wool is carried at the same rate; these are Union rates; as to the value of land in the township, three years ago he bought a corner block, one-third of an acre, for £106; allotments other than corners are worth (say) £60; during the last five years thirty-five buildings have been erected in the town; last wool season 14,000 bales of wool passed through Manilla; during that season 4,000 bales of wool, which formerly passed down through Manilla, were taken *via* Inverell to Glen Innes; during this week 530 head of fat cattle passed through Manilla, and 4,000 fat sheep; of wheat of last season 20,000 bags have passed through Manilla already during this year; does not take any dairy produce from farmers, as there is no sale for it locally; farmers take some in to Tamworth themselves; he believes that a trade could be made in this produce with a railway.

A. STAFFORD.

Manilla, 2 July, 1892.

24. *Mr. Charles Baldwin*, grazier, in the Manilla district, owner of Durham Court: The homestead is 2 miles from the township of Manilla; the total area is 27,400 acres of secured land and 13,000 acres of leasehold; runs sheep, cattle, and horses—10,000 sheep, 300 horses, 5,000 cattle; of the freehold land about 20,000 acres are cultivable; he would be disposed, if there were an inducement by cheap carriage to market, enabling him to obtain a satisfactory rent, to divide large areas of this into farms for leasing; cultivates only for station and stable use; the property is a very good fattening one; would send away about 1,000 head of fat cattle annually; this is about what he sends now, and about 2,000 sheep; he breeds only blood horses of which he sends about fifty yearly away, but additional facilities of transport would induce him to expand his business in this respect considerably; as showing the increase of population in this district, would mention that in August, 1890, when the leases expired, about 5,000 acres on his own holding were taken up by people from outside the district; there is not much land left now within his holding available for selection of the proper quality; in fact, there is little in the whole district; certainly a railway will give facilities for farming that will induce people to rent farms in this district; has some knowledge of the land in county Murchison, and considers that much of it is such as would be taken up by selectors as soon as thrown open; considers, therefore, that settlement on it would be considerably induced by construction of a railway to Barraba, and the value of the land enhanced; but would point out also that there is a very large tract of country north and north-west of Bingera, including Warialda, up to the M'Intyre, which consists of land equal to anything in the Colony or anything in the best part of Liverpool Plains; this country would measure (say) 200 miles by 150 miles; there are numbers of selectors there now; this being in the Central Division, there are large areas of it still locked up; the people on it have now no option but to use the land for grazing, but if a railway were built near to them they would no doubt make use of the land for other purposes, which would pay better than grazing alone, and supply vastly more traffic for a railway; the traffic to a railway from this country would, in fact, be greater than that obtained from the country through which the railway would pass; if a railway were constructed only part of the way to this country (say to Barraba), still a considerable extent of that country would be benefited by the communication being brought so close, irrespective of any other line of railway that might be built, as by geographical location, and also because the roads to Barraba are fit for travelling in all weathers, whereas the roads on the plains are impassable in wet weather, the traffic from it would more easily reach Barraba than any other point on the railways.

CHAS. BALDWIN.

Manilla, 2 July, 1892.

25. *Mr. L. J. Bailey*, a carrier: The railway rates for wool are the same from Glen Innes as from Tamworth; this has induced much wool to Glen Innes which formerly came down past Barraba; much of the wool from the M'Intyre used to come down this road, but now some of this goes to Glen Innes; for instance, from Yetman Station about 1,000 bales were taken to Glen Innes, and also from a few of the selections; the Union rates now hold on the road to Tamworth, but not to Glen Innes; the price of carriage is the same, as near as can be, to both places from the M'Intyre; from Myall Creek wool—3,000 bales—was, all but two loads, taken to Glen Innes, though the charges are the same to both places; he believes that the opposition to Union rules was the cause of Glen Innes being adopted; wool is now brought this way from 20 miles this side of Moree, and loading goes back by the same route regularly; the reason, he believes, is because this route is the better for fodder and water; Yaleroi wool, over 1,000 bales, all comes this way; it is 60 miles north of Warialda; Taloona wool regularly came this way, but part of it was sent to Glen Innes last year because of the Union rates; Boggabilla wool, on the M'Intyre, sometimes goes to Narrabri, and sometimes to Tamworth; Mungibundi wool is brought this way at times in part; last year some was so taken; this route, *via* Manilla, is favourable in every way along the Inverell route in point of climate and water.

L. J. BAILEY.

Manilla,

Manilla, 2 July, 1892.

26. *Mr. M. F. M'Keown*, farmer, in parish of Dinawirindi, south-west about 6 miles from Manilla: The country over six or seven different parishes, in the south-west and north-west, within 20 miles of Manilla, is all over of very good quality, being mostly cultivable land, held by selectors, but some large areas are in the hands of the original lease-holders; there are a number of valuable reserves in that country under lease, which, if thrown open to settlement, would be at once availed of by people who are very anxious to settle on the lands, and would be a source of revenue to the proposed line of railway to Barraba; Manilla would be the station for all of this country; the traffic for this country for the greater part is taken *via* Manilla, but there is another road through Somerton, direct to Tamworth, by which the people from the lower parts of the country, about Keepit Station, send their goods; the greater number of the people in this tract are about 16 miles from Manilla; their distance from Tamworth is 40 miles by direct road; the facilities given by this shortening of the road carriage would enable them to extend their cultivation considerably; again, the nearest point on the Central Division due west would be about 17 miles; the leasehold area on Titcumba Station will be nearer to Manilla than to any station on the Narrabri line; there are large areas of good land there which will be available in three years.

MICHAEL FRANCIS M'KEON.

Tamworth, 4 July, 1892.

27. *Mr. John Cartwright*, Secretary of Northern Carriers' Union: There are ninety-six carriers, representing 113 teams of Union men, working on the road between Tamworth and Bingera; these work along this road solely; the Union carriers delivered last season's wool in Tamworth, amounting to 14,000 bales, brought from stations on the Gilgil; some from Taloona, Yaleroi, and Yetman, Gunnywaraldi, Muckabundi, about 10 miles from Moree, and all south, excepting the Myall Creek wool, which was taken to Glen Innes; wool was brought from near Moree, because this Union's rates are lower than the Narrabri Union rates; they are the North-western Carriers' Union; their rates of carriage are 1s. per ton per mile for the first 100 miles, 10d. for second 50 miles, 8d. for third 50 miles, and 7d. for fourth 50 miles; whereas the Northern (his own) Carriers' Union rates are 9d. per ton per mile for from 90 to 100 miles, and over 100 miles 6d. per ton per mile; these reduced rates have been adopted because the railway rates from Tamworth and from Glen Innes for wool are the same; the charges made by carriers to Glen Innes are higher per mile than by the Northern Union to Tamworth, but the distance being less, the total charge amounts to a less sum, so a large quantity of wool which formerly came to Tamworth is now taken to Glen Innes, and carried by the railway, 140 miles, to Tamworth for nothing; he cannot understand that these differential rates by the railways are designed to divert wool from Queensland, because before these low rates were adopted wool from stations near the border, for instance, from Boggabilla, Coppamurrambilla, and many others—always came in to Tamworth or Narrabri, and never to Glen Innes or to Queensland, but the immediate effect has been to induce the wool to diverge from its natural course past Bingara and Barraba to the Glen Innes route; among the inducements and facilities to carriers on this Bingara-Tamworth route are the abundance of feed and water and good hard roads obtainable at most times, whereas on the Narrabri route in dry times there is no water, and very little feed, if any; Taloona, Yaleroi, and Gunniwardledai, are the principal stations from which wool was taken to Glen Innes during last season having before then always come to Tamworth and Narrabri.

JOHN CARTWRIGHT.

Barraba, 30 June, 1892.

28. *Mr. F. M. Chusbrough*, a grazier in Walrooda, on Barraba creek station: Has been in this part of the country for twenty-nine years; in county Nandewar, on Lindesay Station, within 25 miles of Barraba, there is a large forest reserve of about 10,000 acres; the timber is principally stringybark and ironbark; this is not accessible to the Narrabri line, because of the rough country intervening; the timber here is considered exceptionally good of its kind; the quantity is almost unlimited, is of very lofty, straight, and heavy growth; this forest has hardly been touched; again, out towards the Crow Mountain, in parish Eumur, a very good class of ironbark timber is procurable in fairly large quantities of very large trees, accessible particularly to Barraba; also in parish of Ironbark, not exceeding 14 miles from Barraba, the same kind of ironbark is found; it is known here as the black narrow leaf; there is plenty of this timber in that parish; regarding the cultivation of wheat, he is cognisant of the enormous scope of cultivable land in the district, the whole of the valley of Barraba Creek being suitable for agriculture, and also the whole of the Manilla River from Barraba to its head, including a great stretch of forest land on its western side; lucerne grows luxuriantly on almost any river frontage in these parts; a large quantity of this land is in the hands of small holders, as will be shown by the statistics, who would go more largely into agriculture if assistance were given by railway construction for carriage of the produce to market; regarding the settlement in county Murchison, he would point out that the settlement that has taken place on the Upper Horton during the last twelve months was due chiefly to the prospect of a road being constructed by Little Creek to Barraba; this, by allowing them to come *via* Barraba, places the Upper Horton settlements nearer to Tamworth by 25 miles; he infers from this that a railway being made to Barraba will give an impetus to settlement and agricultural pursuits in this county; latterly there have been a great number of strangers inquiring for properties in this district about Barraba, requiring ready-made farms, and owners' reserves seem to be the only obstacle to sales; has also heard a great number of inquiries from people who are waiting for the leases of the Central Division to be thrown open; the land in that neighbourhood seems to be very much coveted; latterly, in that district, settlement has taken place of people who have come there from between Grafton and Armidale, Mudgee, near Nundle, and Cootamundra; regarding the value of land in the town of Barraba, lots 61–62, on the left bank of the Manilla, opposite the town, about 5 acres, brought nearly £30 per acre lately, and eight or nine years ago some portions on the same frontage realised about £22 per acre; lots 66 to 70, five lots, fronting the river, owned by Mr. Lillis, planted in orchard, is very prolific, showing plainly the suitability of the land for orchard and vine cultivation.

FRANK M. CHUSBROUGH.

Tamworth, 5 July, 1892.

29. *Mr. R. S. Pigott*, forwarding agent: This railway if built would divert a very considerable quantity of wool which now goes to Queensland; Brown Bros., of Coppamurrumbilla, sent their wool to Queensland

Queensland last year; the Taloona wool may be said to be wavering between the rival routes, and merely requires some inducement to adopt the Queensland route to Camboya, or any other Queensland railway-station similarly situated; they will go for the least costly; speaking generally, the greasy wool is sent to Glen Innes and the scoured to Tamworth, for the reason that the railway freight on scoured wool is so much higher than on greasy, the latter wool being at equal price for Tamworth and all stations north thereof; the freight on wool from (say) Taloona is lower to Tamworth than to Narrabri, and the road-travelling is more favourable to the teams, as the road to Narrabri is over black soil; he considers that in any event Bingera and district would continue to send goods to Tamworth for despatch in preference to sending to Inverell, were a railway constructed to this place, as on and all up goods extra haulage and expense would be entailed by sending through Inverell; considers that 6,000 bales of wool are brought to Tamworth from north of Barraba, and 4,000 from between Barraba and Tamworth, and that 5,000 bales are brought into Tamworth from places in the vicinity, making up the total of 15,000, said to be delivered in Tamworth; in addition to the wool, there would be fully 1,000 tons of kangaroo skins, hides, tallow, fat, and sundries, carried into Tamworth annually, and also considerable quantities of copper ore from Ironbarks and Barraba; the wheat brought in would amount to 2,000 or 3,000 tons; to the quantities of general goods sent direct from the railway-stations should be added the large quantities despatched by the storekeepers, which will increase the totals fully one-third; a despatch from Tamworth towards Barraba of 50 tons per week would be a low estimate; during the wool season the salt sent out amounts to 200 or 300 tons; he considers that in the course of the next two or three years the population of the districts will have expanded fully 25 per cent. on the present figures, through the settlement on the lands lately taken or now being taken up; he knows this from the expansion of his own business, the quantity of goods sent away annually having doubled in the last few years; the prospective value of a railway passing through these districts cannot be too highly estimated.

R. S. PIGOTT.

Tamworth, 5 July, 1892.

20. *Mr. J. T. Robertson*, forwarding agent: Goods are brought to Tamworth by railway in preference to Narrabri, consigned to places at or near Moree, because, owing to the greater distance to Narrabri, the railway charges are heavier, and also because the Carriers' Union rates are a little higher on Narrabri line; goods of the third class comprise by far the largest quantity carried; as the charges in this class by railway are the highest, so the saving by sending *via* Tamworth is greater, while for all classes of goods the road charges are the same; thus it happens that some classes of goods can be delivered at Moree through Tamworth at less cost than through Narrabri; again, the roads from Tamworth are always reliable, whereas from Narrabri they are frequently impassable, and by that route the difficulties in feed and water are always greater, and sometimes they are prohibitive; the institution of Union rates for carriage of wool on the roads has forced a considerable quantity on to the main line at Glen Innes, whence it is carried at the same price as from Tamworth, although it is carried 140 miles further on the railway; formerly mileage rates were charged on the railway for carriage of wool from Glen Innes, and then the through cost of carriage *via* Tamworth was more favourable; the special charges on the railway are with the object of diverting wool traffic from the districts immediately adjoining the railway going to Grafton, but the rate has operated over a wider extent of country than was anticipated, having attracted some thousands of bales of wool to Glen Innes which never were sent there before, and which have now to be carried to Tamworth for nothing.

J. T. ROBERTSON.

Tamworth, 5 July, 1892.

31. *Mr. F. Poate*, District Surveyor, concludes from inquiries he has made that the quantity of loading despatched from Tamworth for the districts to be served by the railway is 90 tons per week, including all manner and kind of goods and all ways of carriage; according to his information there are from seventy to eighty teams constantly employed on this road; additional teams are run during the wool season, bringing the number during those busy times up to 120; the Crown lands in parish Attunga are a small area only, suitable for grazing only, except where reserved; for a width of 3 or 4 miles easterly of the Peel River the whole is good agricultural land; parishes Burdekin and Bubbogullion, excepting the north-east corner of Burdekin, are all very good land; cultivable, limestone country, intermixed with basalt; a similar quality of land is in parish Bloomfield; there is here no Crown land except in reserves; taking county Darling as a whole, two-thirds of all the land to the west of the main road, and for 3 or 4 miles to the east of that road may be said to be good agricultural land, capable of being cultivated; to the east of this tract the rest of the country may be for one-quarter of the area of cultivable land and the remainder fit for grazing only; the Moonbi Range and the country for about 3 or 4 miles west of the range, in county Darling, is of granite formation, with patches of coarse olivine dolerite and mudstones, more or less altered, viz., from claystone to a quartzite; the Nandewar Range, on the western boundary of the county, is passable at present at two points only, viz., on the road from Gunnedah to Barraba, between parishes Nangiri, in county Darling, and Rangira, in county Nandewar, and from Lindsay Station to Barraba, westernmost corner of parish Borindi, county Darling; Simpson, of Borindi, has made a track for his buggy over the range somewhere opposite the homestead; this is passable, possibly, but, as stated, there are but two trafficable roads, viz., the main road and the other, the Lindsay Station road; between counties Darling and Inglis there is a crossing of the Moonbi Range to Bendemeer, at head of Hall's Creek, in parish Gulligal; there is also another crossing from Giant's Den, in parish Hall, to parish Haning, but the connection between Giant's Den to the road at Hall's Creek is bad, and possibly impracticable; Giant's Den traffic goes to and from Bendemeer; there is another road from Manilla up the Namoi River to New England, *via* Glen Barra, to Longford Station, and again another on the road from Manilla to Bundarra, between parishes Nangahrah and Baker; by this road traffic would probably come to Manilla from county Hardinge; then from Ironbarks another road, which is hardly practicable, junctions with the former Manilla-Bundarra Road, using the same gap in the range; again, from Ironbarks the travelling-stock route branches to the north, crossing the Nandewar Range between parishes Bundarra and Drummond, in county Hardinge; an application has lately been made for a road from the head of the Horton River, in county Murchison, across the Nandewar Range, in the northernmost part of parish Nandewar, county Darling, into Barraba; this application is by residents on the Horton River.

F. POATE.

LIST OF APPENDICES.

A.—Statistics of district to be served by a railway-station at Attunga.
B.— " " " " Manilla.
C.— " " " " Upper Manilla.
D.— " " " " Barraba.
E.—Particulars of land in county Inglis.
F.— " " " Darling.
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H.—Particulars of Manilla township.
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L.—Statement of goods carried by rail for and from the district at West Tamworth Station.
M.— " " " " Tamworth Station.
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P.—Railway rates for carriage of goods.
Q.—Extract from report by Messrs. Scarr and Price.
R.—Extract from report by Mr. R. E. Jones.

(A.)

STATISTICS of the District to be served by a Railway-station at Attunga. Supplied by Mr. Alexander Rodgers.

County.	Parish.	Population.	Acreage. Of holdings.	Acreage. Cultivable land.	Acreage. Under cultivation.	Wool.	Grain.	
			acres.	acres.	acres.	bales.	bags.	
Inglis	Bloomfield	33	8,940	948	184	18	785	
	Bubbogullion	85	19,530	4,560	730	209	3,860	All alienated in this parish.
	Attunga	153	31,585	14,661	890	469	2,937	
	Burdekin	107	8,488	2,494	1,376	53	5,136	
Darling	Keepit	50	10,020	3,170	231	319	517	
		488	78,563	26,133	3,411	1,068	13,235	

(B.)

STATISTICS of the District to be served by a Railway-station at Manilla. Supplied by a committee of residents.

County.	Parish.	Population.	Acreage. Of holdings.	Acreage. Cultivable land.	Acreage. Under cultivation.	Wool.	Grain.	
			acres.	acres.	acres.	bales.	bags.	
Inglis	Burdekin	5	2,200	170	60	11	170	
	Bubbogullion	6	2,000	160	50	11	160	The whole parish alienated.
Darling	Hall	16	1,800	65	14	7	.....	
	Borah	25	8,000	2,700	12	55	.....	
	Gulligal	18	20,000	50	20	100	.....	
	Rangiri	19	9,560	2,650	10	75	.....	
	Fitzroy	15	7,000	2,500	10	50	.....	
	Hobden	16	7,000	2,500	10	50	.....	
	Tarpoly	16	7,000	2,500	10	50	.....	
	Dinawarindi	53	18,327	8,410	422	96	1,896	
	Baldwin	58	13,400	6,600	10	40	50	
	Halloran	7	2,560	180	.....	.....	.....	
	Dowe	38	11,480	4,000	250	113	832	
	Lowry	60	9,570	865	102	80	240	
	Wilson	30	18,226	1,390	70	180	195	
	Fleming	77	13,171	2,040	229	165	740	
	Alfred	12	600	90	17	7	52	
	Manilla	81	32,157	16,947	554	228	1,763	
	Veness	53	20,340	3,180	241	214	705	
	Keepit	45	64,820	5,620	92	426	150	
	Namoi	19	1,930	600	102	14	140	
	Cuerindi	36	12,134	1,070	259	109	850	
		*705	283,475	64,257	2,534	2,081	7,942	

* The population of Manilla township (300) being added, brings this total up to 1,005 residents.

(C.)

STATISTICS of the District to be served by a Railway-station at Upper Manilla. Supplied by Mr. John Barling.

County.	Parish.	Population.	Acreage. Of holdings.	Acreage. Cultivable land.	Acreage. Under cultivation.	Wool.	Grain.
			acres.	acres.	acres.	bales.	bags.
Darling	Hobden	6	3,840	120	.....	.....	.....
	Tarpoly	46	6,440	1,310	480	62	2,800
	Wilson	19	3,900	800	425	30	1,000
	Newry	57	8,100	750	225	27	1,300
	Veness	18	3,240	1,040	220	36	1,340
	Dinawirindi	13	956	360	162	10	900
	Various parishes	78	47,745	7,800	1,370	390	8,250
		237	74,221	12,180	2,882	555	15,590

(D.)

STATISTICS of District to be served by a Railway-station at Barraba. Supplied by Mr. W. J. Booth.

County.	Parish.	Population.	Acreage. Of Holdings.	Acreage. Cultivable land.	Acreage. Under cultivation.	Wool.	Grain.	
			acres.	acres.	acres.	bales.	bags.	
Darling	Barraba	135	28,250	9,540	568	185	2,197	
	Gladstone	77	23,058	5,080	300	248	1,125	
	North Barraba	125	17,771	2,320	317	329	1,189	
	Tiabundi	35	8,404	790	97	47	364	
	Belmore	71	14,086	2,260	80	48	337	
	Nandewar	35	17,500	2,100	40	244	150	
	Nangarah	20	8,500	500	.....	140	.....	Large gold reserves.
	Welsh	8	7,520	20	.....	222	.....	Large gold reserves.
	Warrabah	24	4,019	150	5	54	.....	
	Fitzroy	14	10,454	3,100	.....	315	.....	
	Bundarra	6	1,250	100	20	10	75	
	Borindc	33	58,000	17,000	120	725	.....	
	Darling	...	30,000	.....	.....	.....	.....	All reserved.
	Woodsreef	34	2,450	170	5	70	75	Large gold reserves.
	Ironbarks	...	.....	.....	.....	.....	.....	All reserved.
		*617	231,262	43,130	1,562	2,637	5,512	

*The population of Barraba township (500) being added, brings the total of residents up to 1,117.

(E.)

LANDS in County Inglis (Eastern Division). Supplied by the Department of Lands.

Parish.	Alienated. C. P., C. L., and Freehold.	Unalienated. Reserved and Unreserved Crown Lands.	Totals.
	acres.	acres.	acres.
Attunga	23,700	6,280	29,980
Bloomfield	15,900	1,650	17,550
Bubbogullion	28,250	.....	28,250
Burdekin	20,100	5,750	25,850
	87,950	13,680	101,630
	137 sq. m.	21 sq. m.	159 sq. m.

(F.)

LANDS in County Darling (Eastern Division). Supplied by Department of Lands.

Parish.	Alienated. C.P., C.L., and Freehold.	Unalienated. Reserved and Unreserved Crown Lands.	Totals	Parish.	Alienated. C.P., C.L., and Freehold.	Unalienated. Reserved and Unreserved Crown Lands.	Totals
	acres.	acres.	acres.		acres.	acres.	acres.
Keepit	15,727	3,780	19,507	Eumur	11,810	15,060	26,370
Baldwin	21,660	6,400	28,060	Nandewar	26,140	2,110	28,250
Dowe	21,460	12,130	33,590	Borindio	20,330	11,360	31,690
Veness	17,760	4,100	21,860	Belmore	13,850	7,920	21,770
Fleming	11,560	2,780	14,340	North Barraba	19,250	10,180	20,430
Lowry	9,750	10,220	19,970	Barraba	20,800	2,240	22,940
Mundowey	6,725	27,870	34,595	Fitzroy	13,860	4,995	18,855
Alfred	3,570	22,660	26,230	Bundara	430	26,400	26,830
Rangiri	13,090	7,950	21,040	Tiabundie	14,615	17,490	32,105
Borah	9,100	9,750	18,850	Gladstone	23,270	1,985	24,255
Dinawirindi	16,315	9,240	25,555	Woodsreef	4,523	17,990	22,513
Manilla	3,520	21,450	25,270	Darling	.....	21,000	21,000
Cucrindi	16,780	7,070	23,850	Nangahrah	9,623	21,430	31,053
Hall	4,000	19,630	23,630	Welsh	1,800	31,140	32,940
Gulligal	8,395	23,190	31,585	Warrabah	3,840	38,640	42,480
Halloran	9,570	17,095	26,665	Ironbarks	.....	24,600	24,600
Wilson	22,870	6,230	29,100		457,483	486,125	943,558
Namoi	11,790	1,550	13,340				
Tarpoly	14,780	8,030	22,810		715 sq. m.	760 sq. m.	1,475 sq. m.
Hobden	14,770	7,910	22,680				
Newry	21,500	1,950	23,450				

(G.)

(G.)

LANDS in County Murchison (Central Division). Supplied by Department of Lands.

Parish.	Alienated.	Unalienated.	Totals.	Parish.	Alienated.	Unalienated.	Totals.
	C.P., C.L., and Freehold.	Reserved and Unreserved Crown Land.			C.P., C.L., and Freehold.	Reserved and Unreserved Crown Lands.	
	acres.	acres.	acres.		acres.	acres.	acres.
Cobbadah	10,566	9,010	19,576	Gouron	1,805	26,380	28,145
Piedmont	3,173	19,730	22,903	Kiera	2,860	13,560	16,420
Crawley	11,953	8,520	20,473	Tange	5,920	10,240	16,160
Anderson	6,800	19,100	25,900	Bingarra	8,143	7,320	15,463
Capel	2,660	23,380	26,040	Molroy	3,450	9,645	13,095
Dunnee	3,360	15,960	19,320	Myall	3,930	26,330	30,260
Horton	8,575	15,030	23,605	Wyndham	14,180	11,100	25,280
King	8,986	11,490	20,476	Delingera	3,250	12,545	15,795
Eulowrie	3,925	8,285	12,210	Delungra	11,866	23,450	35,316
Boomi	9,545	16,800	26,345	Bangheet	11,050	11,580	22,630
Lindesay	6,230	25,040	31,270	Derra Derra	6,683	26,415	33,098
Pringle	1,680	30,840	32,520	Pallah	8,020	20,915	28,935
Curragundi	3,330	24,950	28,280				
Macintyre	1,350	16,500	17,850		173,590	480,830	654,420
Hall	2,700	20,540	23,150				
Dinoga	7,540	16,365	23,905		271 sq. m.	751 sq. m.	1,023 sq. m.

(H.)

RAILWAY, Tamworth to Barraba.—Statistics of Manilla Township.

Population, 300; number of dwelling-houses, 58. Public buildings—Court-house, school of arts, public school, Commercial Bank, police-station, post and telegraph office. Places of worship—Wesleyan church, Anglican church. Hotels, 2. Places of business—General stores, 3; produce store, 1; baker, 1; blacksmiths, 3; painter, 1; butchers, 3; brickmaker, 1; mason, 1; builders, 4.

Statistics of Upper Manilla.

Places of business—General stores, 2; wine-shop, 1; blacksmith, 1. Public buildings—Public school, post and telegraph office. Place of worship—Wesleyan church.

(I.)

DETAILS of the Town of Barraba.

Population, 500; number of dwelling-houses, 63. Public buildings—1 Court-house, 1 school of arts, 1 post-office, 1 hospital, 1 bank, 1 police barracks. Places of worship—1 Roman Catholic church, 1 English church. Schools—1 public school; number of scholars, 70. Places of business—4 hotels, 3 stores, 1 saddler, 5 blacksmiths, 2 wheelwrights, 1 painter, 2 butchers, 1 photographer; 3 auctioneers and stock agents. Total tons of wool passing through Barraba yearly, 1,600; estimated tonnage general goods and supplies brought into town from Tamworth yearly, 700.

(J.)

RETURN, Municipal District of Bingera.

Area, 4¾ square miles; population, 850 to 900; number of dwellings, 125; annual value of property, £4,295. Public buildings—Court-house, Lands Office, gaol, gaoler's dwelling, police barracks, post and telegraph office, public school, school of arts, hospital. Places of worship—Wesleyan church, Church of England, Roman Catholic church. Schools—Public school and convent school; scholars, public school roll, 216; ordinary attendance, 155. Business places—General stores, 5; fancy goods, 1; fruit, 3; bakers, 3; butchers, 2; flour-mills, 2; saw-mills, 2; auctioneers, 3; solicitor, 1.

Fat stock from May, 1891, to May, 1892—Sheep, 29,283; cattle, 7,055

842

6213

(K.)

PARTICULARS of Schools within 15 miles of probable course of Railway.

Name of School.	Parish.	Number of Children on Roll.	Name of School.	Parish.	Number of Children on Roll.
Woolomol	Woolomol	33	Uknlan	Fleming	20
Moor Creek	,,	31	Hawarden	,,	29
Attunga	Burdekin	40	Wougan Creek	Rangiri	21
Attunga Springs	,,	29	Colonna	Gladstone	24
Bona Vista	Manilla	20	Barraba	Barraba	89
Somerton	Somerton	39	Hawkins Creek	,,	52
Cluri	Manilla	18	Hoskisson Creek	,,	20
Manilla	Veness	122	North Cuerindi	Fleming	32
Upper Manilla	,,	30			

Tamworth, 24 June, 1892.

C. BLUMER,
Inspector of Schools.

(L.)

STATEMENT showing tonnage, &c., of traffic conveyed by rail for the districts of Manilla, Barraba, Bingera, Warialda, and minor places *en route* for the twelve months ending 29th February, 1892.

Tonnage of goods received by rail at West Tamworth, for the above-mentioned districts, 1st March, 1891, to 29th February, 1892, 1,601 tons.

Tonnage of grain despatched by rail from above-mentioned districts, 1st March, 1891, to 29th February, 1892, nil. All grain trucked at Tamworth.

Number bales of wool forwarded by rail from above districts from 1st March, 1891, to 29th February, 1892, 11,620 bales.

Supplied by Traffic Superintendent.

(M.)

(M.)

STATEMENT showing tonnage, &c., of traffic conveyed by rail for the districts of Manilla, Barraba, Bingera, Warialda, and minor places *en route*, for the twelve months ending 29th February, 1892.

Tonnage of goods received by rail at Tamworth for the above-mentioned districts, 1st March, 1891, to 29th February, 1892 :—187 tons 18 cwt.

Tonnage of grain despatched by rail from above-mentioned districts, 1st March, 1891, to 29th February, 1892 :—145 tons. 120 tons of this grain came from Attunga, about 15 miles out from Tamworth.

Number bales of wool forwarded by rail from above districts during year 1891 and 1892 :—Bales, 153.

Remarks.—The traffic for the districts stated above almost absolutely passes through West Tamworth.

Mr. S. Alexander,—

Dear Sir, Tamworth, 7 September, 1892.

Yours of the 6th to hand. We have made a reduction of 5 per cent. on all wool coming to Tamworth from 137 to 180 miles, and 7½ per cent. on all wool coming over that distance.

I beg again to ask you to draw the attention of the proper authorities to the way that the differential rates are working from Tamworth to the Border or Glen Innes. The natural channel for the Talloona wool and the Myall Creek wool is Tamworth. I speak of these two stations because they shear more sheep than any four stations on this line, and the wool is carried from Glen Innes to Tamworth for nothing.

Yours, &c.,
JOHN CARTWRIGHT,
Secretary, N.C.U.

(N.)

Northern Carriers' Union.—Rates of Carriage to Tamworth.

Places.	Miles.	Out and in loading. £ s. d.	Places.	Miles.	Out and in loading. £ s. d.
Benall, less 7½ per cent.	196	6 0 0	Gravesend	127	4 8 6
Bogabilla			Gunema	134	4 12 0
Bogamilda, less 5 per cent.	147	4 18 6	Ironbarks	67	3 1 5
Binnegui	135	4 12 6	Keera	114	4 2 0
Bangheet	112	4 1 0	Keepit	38	2 1 2
Borah	45	2 1 3	Long Arm	62	2 16 10
Barindi	60	2 15 0	Myall Creek	111	4 0 6
Barraba	57	2 12 3	Manilla Town	28	1 12 8
Bell's Mountain	65	2 19 7	Morse, less 5 per cent.	157	5 3 6
Bingara	97	3 12 9	Mungibundi		
Campo Santo	69	3 3 3	Maggan		
Cragin			Oregon	130	4 10 0
Cuerindi	35	1 17 11	Pallal	100	3 15 0
Cobbedah	68	3 2 4	Pallamallawa, less 5 per cent.	142	4 16 0
Cooliti, less 5 per cent.	150	5 0 0	Piedmont	67	3 1 5
Croppa Creek, less 5 per cent.	137	4 13 6	Rocky Creek	97	3 12 9
Coorangoora	107	3 18 6	Rockwell, less 5 per cent.	152	5 1 0
Dead-horse Gully	20	1 6 3	Reedy Creek	137	4 13 6
Durham Court	30	1 15 0	Taloona, less 7½ per cent.	196	6 0 0
Eurambodello	87	3 10 8	Teleraga		
Euloarie	87	3 10 8	Upper Manilla	35	1 17 11
Glen Riddle	57	2 12 3	Warialda	122	4 6 0
Gil Gil, less 5 per cent.	162	5 6 0	Wallangra	167	5 8 6
Gineroi	115	4 2 6	Yetman, less 7½ per cent.	182	5 16 0
Gunerwaldi Station, less 5 per cent.	144	4 17 0	Yagobie	132	4 11 0
Glendon	130	4 10 0	Yalleroi, less 5 per cent.	162	5 6 0

Sliding scale, up to 90 miles.

One mile to 8, 2s. 3d. per ton per mile.

Per ton—18s., 18s. 4d., 18s. 4d., 19s., 19s. 6d., 19s. 10d., 21s. 3d., 22s. 8d., 22s. 8d., 24s., 25s. 4d., 26s. 3d.
9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20.

Per ton—28s. 2d., 29s. 8d., 35s., 37s. 11d., 41s. 3d., 45s. 10d., 58s., 59s. 7d., 64s. 2d., 65s. 7d., 70s.
22, 25, 30, 35, 45, 50, 60, 65, 70, 75, 80.

Ninety miles to 100, 9d. per ton per mile; over 100 miles, 6d. per ton per mile.

G. WHEATLEY, President.
Tamworth, 9 January, 1892. JOHN CARTWRIGHT, Secretary.

(O.)

RECORD of Rainfall.

Year.	Tamworth.	Tamworth West.	Manilla. 1	Manilla. 2	Upper Manilla. Mr. John Barling. January to June.	Upper Manilla. Mr. John Barling. July to December.	Upper Manilla. Mr. John Barling. Total.	——	Barraba.	Bingera.	Rangari.	Myall Creek.
1878	31·96	.....	.....	.....	.....	.....	.....	Excluding 1880, the mean is 27·25 inches. For first six months " 14·13 " For second six months " 13·13 "	.....	.....	.....	.....
1879	35·85	.....	.....	.....	.....	.....	.....		.....	48·68	.....	45·20
1880	21·16	.....	.....	.....	.....	.....	.....		.....	23·08	.....	26·01
1881	19·30	.....	.....	.....	.....	.....	.....		13·91	24·36	.....	21·70
1882	26·35	.....	.....	.....	.....	.....	.....		33·00	27·92	.....	23·30
1883	25·10	.....	.....	.....	.....	.....	.....		.....	29·10	.....	26·89
1884	19·67	18·11	16·82	.....	.....	.....	.....		.....	22·66	.....	20·00
1885	21·74	16·67	21·93	.....	15·35	11·45	26·80		28·37	.....	19·00	25·71
1886	.....	28·54	29·33	.....	14·12	18·26	32·38		28·79	43·31	13·10	40·04
1887	.....	37·18	.....	31·24	16·26	15·63	31·89		44·13	40·25	29·19	39·91
1888	.....	13·67	17·85	17·85	10·12	5·51	15·63		18·71	20·95	13·86	19·68
1889	37·16	36·10	30·92	31·10	17·04	15·91	32·95		34·80	33·62	35·76	39·14
1890	43·51	40·09	44·38	44·46	30·64	13·69	44·33		43·38	44·94	50·33	43·58
1891	.....	.....	.....	.....	11·90	12·01	23·91		.....	.....	.....	.....
Mean	28·19	27·19	.....	31·16	16·50	13·21	29·70	.....	30·63	32·63	29·63	30·51

(P)

New South Wales Railway Goods Rates—1st August, 1891.

Miles from Newcastle.	Wool.			
	From	To	Scoured.	Greasy.
			£ s. d.	£ s. d.
252	Narrabri	Newcastle	4 4 11	3 5 1
183	Tamworth	"	3 8 11	2 17 6
182	West Tamworth	"	3 8 7	2 17 6
324	Glen Innes	"	4 8 0	2 17 6

Maximum Tonnage and Truck Rates.

From Newcastle to Glen Innes, for 1st, 2nd, and 3rd class goods, in 6-ton truck-loads, the maximum charge is per truck, £27; from Newcastle to Glen Innes the maximum tonnage rates are—For 1st and 2nd class goods, per ton, £5 5s.; for 3rd-class goods, per ton, £6.

The mileage rates between Newcastle and Glen Innes are—1st class, £4 7s. 8d.; 2nd class, £5 9s.; 3rd-class goods, £7 11s. 7d. per ton.

From Newcastle to any station (Tamworth) south of Glen Innes, or to any station on the north-western line (Narrabri), the maximum charge for any class of traffic (except explosives) is, in 6-ton truck-loads, per truck, £37.

The mileage rates are as follows:—

	1st class.	2nd class.	3rd class.
	£ s. d.	£ s. d.	£ s. d.
Between Newcastle and Narrabri	3 13 3	4 11 0	6 6 4
" Newcastle and Tamworth	2 18 7	3 12 8	5 0 9
" Newcastle and Glen Innes	4 7 8	5 9 0	7 11 7

(Q.)

Extract from Report by Messrs. Scarr and Price on railway connection for Inverell; dated 31st May, 1890.

Tamworth, via Manilla to Inverell.

We travelled from Inverell to Bingera, and thence *via* Barraba and Manilla to Tamworth.

Land.

Although there is along this route, between Tamworth and Bingera, a considerable quantity of good land, it, on the east, quickly merges into the high granite country running out northward from the Moonbi Range and that forming the watershed between the Bundarra and Manilla Rivers, whilst on the westward the better country soon falls within the influence of the Narrabri line of railway.

We, therefore, do not consider that at present this line is necessary.

A large traffic, however, now exists, coming from Warialda and the north and north-west, in the direction of Goondiwindi and Moree, and trending to Tamworth Railway Station.

Inverell to Bingera Extension.

And this, we would suggest, may be best met by the extension of the Inverell line to Bingera, thus effectually intercepting this traffic at Bingera.

This extension would also serve to carry produce such as flour, forage, potatoes, &c., from New England and Inverell to the westward, as well as to bring in further traffic from the west to the sea-coast when the coast connection is carried out.

This Bingera extension would run through one of the most fertile parts of the Inverell District.

For nearly 20 miles this is thickly occupied by farms, and on it are some of the best in the district.

The rich red or black soil extends for 15 miles further, though principally occupied by the Myall Creek Station, while the remaining 12 miles to Bingera is on the whole fairly good land.

The land at Bingera, and for about 12 miles in the direction of Tamworth, is also of a very rich quality, and will doubtless be cut into farms and cultivated—when the alluvial gold-mining ceases—and prove an additional feeder to this suggested extension from Inverell.

Traffic.

The question will probably be asked,—Will the Warialda to Tamworth traffic make use of the railway if extended to Bingera?

The position would be this,—Bingera is 100 miles from Tamworth by road, the greater part of which is still unmetalled, whereas Bingera would be, with a railway *via* Inverell and Glen Innes, from Tamworth 231 miles.

It may be thought that goods can be sent 100 miles by road at less cost than 231 miles by rail.

Taking wool, at present one of the most important items of carriage, the Railway Commissioners carry wool from Glen Innes to Sydney, 422 miles, at £3 15s. per ton; add to this the full ordinary rates for wool 90 miles, Bingera to Glen Innes, say £1 10s., and we have a total of £5 5s., Bingera to Sydney per rail.

The road freight, Bingera to Tamworth, 100 miles, would be, say, £3 10s.; add rail freight, Tamworth to Sydney, £3 15s.; total, £7 5s. per road and rail. Showing a saving in carriage by rail against road of £2.

And if the wool traffic be intercepted and taken by rail it follows the return loading must go by the same route.

As to passenger traffic.—The coach fare, Bingera to Tamworth, 100 miles, is £1 17s. 6d., and rail, Tamworth to Sydney, 281 miles first-class, is £2 7s. 5d.; total, £4 4s. 11d.

Bingera to Sydney by rail would be, say, 512 miles, and we find the first-class fare for that distance would be, say, £4 3s. 6d., or, in round numbers, about the same amount for a first-class rail fare (with comfort) as for a day and a night's coaching with a night's train travelling to follow.

If the extension from Glen Innes stops at Inverell, this large traffic now passing from the north and north-west *via* Warialda and Bingera to Tamworth will continue as at present, and none, or very little of it, be obtained for the railway until Tamworth is reached.

This Inverell to Bingera extension, as we have above stated, passes through a rich stretch of country studded with farms, so that considerable wayside traffic would be picked up.

We, therefore, after due investigation, confidently urge consideration of the advisability of this extension to Bingera in connection with any from the Great Northern Railway to Inverell, and the propriety of drawing sooner to the rail a traffic which, although not sufficient to justify the construction of a railway for itself, is large enough to become a very valuable addition to that of the Northern Railway and proposed branch.

A railway from Tamworth to Inverell would be practically a competing one against the Great Northern and any connection with Inverell.

(R.)

EXTRACT from Report by Mr. R. E. Jones on railway extensions into the country north of Narrabri, Bingera, and Inverell.

* * * * * * * * * * * * * * *

UPON reference to Messrs. Scarr and Price's report on proposed railways in the Northern district, the reasons advanced for an extension from Inverell to Bingera appear to be—

1st. To intercept at Bingera the large traffic from Goondiwindi, Yetman, and Warialda districts which now finds its way to the railway at Tamworth.

2nd. To carry produce from New England and Inverell to the westward, and to bring in traffic from same to the coast, when the connection therewith is carried out.

3rd. To tap the farms on the Little Plain near Inverell and the large area of rich agricultural land on the Myall Creek Station and in locality of Bingera.

In the above recommendation, the probability of rail extension from Narrabri to Moree has not, I think, been entertained. Such a line, if made, must have an important bearing upon the necessity of an extension to Bingera, especially with respect to the northern traffic interception. Taking the three townships through which this traffic passes before reaching Bingera, Warialda, the nearest, is distant 29 miles; from Moree, 53; and Inverell, 42. Yetman, the next township, is 89 from Bingera; 80, Moree; and 70, Inverell—with a fair road. Goondiwindi, just over the Border, is 129 miles from Bingera; 80, Moree; and 110 from Inverell.

It will thus be seen that the proposed railway termini at Moree and Inverell will get all the northern traffic without the need of extending to Bingera.

Even Warialda would use Inverell or Moree, the saving in railway freight compensating for the increased road haulage. Taking Newcastle as the nearest sea-port, at any rate for some years to come, Moree will be but 324 miles by rail, as against Bingera, 425, and Inverell, 378.

No doubt the farms at Little Plain would be greatly benefited by a line passing through, but as they extend for barely 20 miles from the proposed terminus at Inverell, the inducement may not be considered sufficient to warrant the construction of a most costly piece of railway, including a bridge over the Macintyre River. The Myall Creek Run contains some splendid land of black and red soil; much of this is, however, alienated, 60,000 acres belonging to the station-owners. South of Bingera, on the creek, there is a narrow belt of fertile soil well suited for cultivation; also patches on the Big or Gwydir River, near the town; while west of Bingera and Cobbedah there is a lot of settlement, and fair amount of land under crop on the Horton River. This traffic at present goes to Tamworth by way of Cobbedah, and I much doubt if a line to Bingera from either Inverell or Moree would alter this.

There are several mines in operation near to Bingera. A few men are employed upon the diamond-fields. Gold, however, is the mineral which furnishes use for the greatest number of hands. At the time of my visit nearly 200 men were employed in mining pursuits.

Bingera is a municipality prettily situated, with every appearance of progress. It possesses two banks, four hotels, two steam-roller flour-mills, five large stores, one of which has the electric light, usual Government buildings, cordial factory, two saw-mills, &c.

* * * * * * * * * * * * * *

13. Although a line to Walgett will tap a very large portion of the country to the west and north of same, yet there remains to the east of the Barwon and north of the Namoi a great area of splendid pastoral land still unserved, except at a distance, by the railway at Narrabri.

To reach the latter terminus means considerable and costly road haulage.

I find that within the area above mentioned there are 10,000,000 acres, a population of 8,000, with a large quantity of stock.

Taking the statistics of traffic at Narrabri, and judging by my examination of the country and its capabilities, I consider an extension of the present railway into this large area of rich land is needed, and can be best carried out by a line from

14. Narrabri, *viâ* Gurleigh Point, to Moree.

* * * * * * * * * * * * *

A large area of Queensland, extending from Mungindi to east of Goondiwindi, with its population and stock, will make use of the line at Moree, being by far the nearest point of railway communication.

* * * * * * * * * * * * *

16. Should future extension be needed to the Queensland border with a view to join the railways of that colony, it can be effected from Moree in the direction of Goondiwindi, or from Inverell down the Macintyre to same town.

Since writing the above, I have seen the Sydney agents of the Australian Pastoral Company, who state that a railway to Moree will, in all probability, be made use of by the Company for the transit of their clip—wool from nearly one million sheep; but should a line not be made to Moree, it is almost certain their wool-scouring establishment now at Dayreel will be re-erected at some point nearer the Queensland railways, in which event the whole of the clip will go to Brisbane.

[Two Plans.]

Sydney: Charles Potter, Government Printer.—1892.

[2*s.* 6*d.*]

PROPOSED RAILWAY FROM TAMWORTH TO BARRABA

SKETCH MAP

OF NORTH WESTERN & NORTHERN RAILWAY LINES

Stanley Alexander
M. Inst. C.E.

SCALE OF MILES

The Proposed Line is shown thus.



(Sig 358)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE.
SYDNEY, NEW SOUTH WALES.

MAP

TO ACCOMPANY REPORT ON

PROPOSED RAILWAY FROM TAMWORTH TO BARRABA

Scale of Miles

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

PHOTO LITHOGRAPHED AT THE GOVT PRINTING OFF OF SYDNEY NEW SOUTH WALES

NOTE

County boundaries shewn thus —·—·—·—·—

Parish " " — — — —

Main Roads " "

Stanley Alexander.
M. Inst. C.E

MURCHISON

NANDEWAR RANGE

NEMINGHA RANGE

NAMOI RIVER

DRUMMOND RANGE

McKINNON

DRUMMOND

BUNDARRA

PIEDMONT

COBBADAH

CRAWLEY

IRONBARK

DARLING

CAMERON

Bell's Mtn

NORTH BARRABA

BAKER

STONYBATTER

LINDESAY

NANDEWAR

Tareela M.

Santo Campo

BARRABA

TIABUNDIE

WOODSREEF

NANGAHRAH

to Bundarra

BARRABA

BELMORE

WARRABAH

BALDWIN

LINDESAY

BORINDE

GLADSTONE

NEWRY

EUMUR

WELSH

Haydons Accomodation House

DARLING

EITZROY

WILSON

ALFRED

PRINGLE

CONNOR

HOBDEN

TARPOLY

LOWRY

Upper Manilla

FLEMING

MUNDOWEY

HANING

RANGIRA

BORAH

VENESS

RANGIRI

DINAWIRINDI

MANILLA

HALL

CUERINDI

HALLORAN

WILLURI

Durham Court

MANILLA

GULLIGAL

BENDEMEER

DOWE

TALCUMBA

MILLIWINDI

BALDWIN

BURDEKIN

YARRARI

GILL

NAMOI

KEEPIT

BLOOMFIELD

BUBBOGULLION

INGLIS

PERRY

ATTUNGA

GUNNENBEM

DANGLEMAH

CARROLL

MOOROWARA

SOMERTON

MOONBI

WOOLOMOL

BUCKLAND

PARRY

TAMWORTH

183 M from Newcastle

Hand R del
(Sig 358)

1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

BRANCH RAILWAY TO WALCHA.

(REPORT BY R. E. JONES, EXAMINER OF PUBLIC WORKS PROPOSALS, ON.)

Ordered by the Legislative Assembly to be printed, 11 *October*, 1892.

WALCHA is the most southern town on the New England table-land, and is situate 12 miles to the east of the Great Northern Railway at Walcha Road, the latter being 320 miles from Sydney, and 222 miles from Newcastle. Walcha. Railway distances.

Like most towns off the railway line, Walcha considers its trade, importance, and prospects warrant the construction of a branch, and asks that what is termed the original error of not taking the northern line through the town should be remedied by a rail connection from Walcha Road. It is pleaded that 12 miles of heavy road haulage is a great hardship, causes inconvenience and delay, and greatly impedes the progress of the locality. No doubt there are disadvantages connected with this want of a railway, but it must be apparent lines cannot be made to every township, and I think these short branches can only be justified—1st. When there is a present or early probability of the line being a commercial success, giving a fair return for money invested and cost of working; 2nd. By providing improved facilities of transit, enabling distant producers to compete with those nearer the centres of consumption; 3rd. To aid in the establishment of new industries and occupations, which, without railway communication, could not profitably exist. 4th. When such branch forms part of a larger and more important scheme. Of course, in regard to any new line, the additional or fresh traffic brought on to the main or parent railway should not be lost sight of. There are cases, also, where saving in road maintenance should be considered, but generally this item is balanced by increased outlay on feeders to the new terminus, &c. Branch railway.

Walcha is a thriving municipality, containing at the last census 953 people; many of the buildings are of brick, and generally the town has an appearance of prosperity and permanency. Walcha Town.

The district is at present essentially pastoral, although no doubt there are some thousands of acres, the soil of which is most suited for the production of cereals, especially wheat. As bearing upon the progress of the locality, I may state that in 1871 the census gave 246 as the population of Walcha District; in 1881, 309; while last year the return was 3,016—this great increase having taken place notwithstanding the absence of near railway facilities. The town post office receipts expanded from £712 for stamps in 1887 to £1,066 in 1891, while 3,500 telegrams were forwarded in 1883, as against 8,000 for last year. District.

The area within the trafficable sphere of a line to Walcha embraces 879,175 acres, made up of 327,320 of alienated land, 371,836 Crown lands exclusive of reserves, which latter amount to 180,019 acres. Trafficable area.

Stock, as per this year's return, includes 1,890 horses, 17,282 cattle, 317,072 sheep, and 950 pigs, the owners numbering 161. Stock.

Last season, within the above trafficable area, 1,415 acres were cultivated, comprising 236 of wheat, producing 3,630 bushels; 103 maize, giving 2,070 bushels; 148 acres of oats yielded 3,196 bushels, whilst hay (oaten, wheaten, and lucerne,) produced 965 tons from 608 acres. Five hundred and three tons of potatoes were obtained from 178 acres, but, although supposed to be a fruit district, only 41 acres were returned as being orcharding or gardens; artificial grasses were laid down on 1,611 acres. Cultivation.

The rainfall for the last seven years averaged 33·17 inches, with a maximum of 42·30 and minimum of 22·81. Rainfall.

Gold and silver mining is carried on to a small extent near the Tia River and at other places; the most important fields are, however, at Nyangula and Swamp Oak, where gold-reefing has been in operation for some time. The population, unfortunately, has of late greatly diminished; and as these "diggings" are equidistant from Walcha Road and Walcha, to both of which good departmental roads give access, they can scarcely be considered within the sphere of traffic of the proposed branch. Mines

Very little good timber is to be found in the vicinity of Walcha; but, between Nowendoc and the falls to the Macleay, forest reserves exist, and, in what are known as "Murphy's Brush" and the "Comboyne Scrub," good red stringy-bark, black-butt, sassafras, cedar, &c., are to be found; but the drawing to Walcha would not be less than from 30 to 40 miles. There is a little stringy-bark near Nyangula. Timber.

A tannery, two flour-mills, soap-works, woolscouring establishment, brick-works, aerated water factory, &c., exist in Walcha. Industries

Four schemes have been put forward for the proposed branch:— Railway routes, four schemes.

No. 1 is that suggested by Messrs. Campbell and Wright, starting at 224 miles on existing main line, or two miles above Walcha Road Station. The length given is 13 miles, with grades of 1 in 30, 70, and 35.

No. 2 differs only slightly from No. 1. Starts at 224 miles 17 chains; follows up Breakfast Creek Gully, where it crosses the previous scheme. It then bears southward, passing over Great Dividing Range at a low gap; joins No. 1 line near the Half-way House; and terminates in Walcha, near Dr. Boodle's residence.

Both

Both these schemes are about same length, but latter gives better grades; although the ruling inclination would not exceed 1 in 50. Both would mean a junction with main line or duplication to the present station.

No. 3 proposal starts at 224 miles 70 chains, where there is a good site for a depôt, the idea being to transfer Walcha Road Station to this point. This scheme joins No. 2 at about 2 miles; after which it is identical. Length, about 13¼ miles.

No. 4 commences at 600 yards north of Walcha Road; crosses Surveyor's Creek; then proceeds at back of township and police barracks; crosses the Dividing Range at a gap about half a mile south of the road to the station, and continues on same side to near Walcha. Length, not quite 13 miles.

No surveys or levels.

In the absence of surveys and levels it is difficult to determine the best route. The grades, however, of No. 1 preclude its adoption; while No. 3 means the abandonment of present station at Walcha Road, and the cost of providing another with necessary road connection, &c. I am inclined to think the residents of Nyangula and Swamp Oak would, with some justice, raise an objection to this scheme, although, it must be admitted, they have means of communication with Woolbrook, another station nearer Sydney. Of Nos. 2 and 4 I prefer the latter, which, I think, will be found the cheaper. It also makes full use of the present accommodation at Walcha Road, and avoids the creation of another junction with the main line. I am afraid on either of the routes a better grade than 1 in 50 cannot be got on the western side of the Dividing Range.

Most southern route preferred.

Ballast.

Ballast will not be difficult to obtain, although not of very good description.

Sleepers. Water.

Ironbark sleepers not obtainable within easy distance, but fencing timber is available, also water from the Bergem-op-zoom Creek.

Cost.

I estimate the cost of No. 4 scheme at £43,300, based on the supposition that second-hand rails may be used. There will be heavy works at Walcha Road, the crossing of the Dividing Range, and at the terminus in Walcha; hence the apparently high estimate.

Present traffic.

Calculating the present traffic for 14 miles, and deducting therefrom a small percentage for what would still go to Walcha Road, I find the revenue would amount to £1,003 per annum. Very little credit can be taken for wool or parcels, as the rates for the former, in grease, are the same from Walcha Road and all places north, while under the "Zone" system Sydney parcels would produce no revenue.

Interest on construction.

Working expenses.

Taking, therefore, interest on cost of construction at 4 per cent. we have £1,732, whilst maintenance and working, calculated for but seven trains each way per week at the small rate of 63d. per train mile, would require £2,580; so that to pay expenses a revenue of £4,312 per year is needed, and, as present traffic would only give £1,003, there is a deficiency of £3,309 to be met.

Extension towards coast.

It is not advanced, nor is it at all probable, that this branch will form part of a through line to the coast.

Future revenue.

It is clearly a matter of speculation as to what additional revenue may be expected by an extension of railway into Walcha. A strong point has been made of the large area of soil well adapted for the production of cereals, especially wheat.

Land for cultivation.

Imported flour.

I have no doubt there are thousands of acres of rich soil within the districts that might be cultivated. The fact, however, remains that at present Walcha is not self-supporting in breadstuffs, for during the last twelve months no less than 230 tons of flour were imported by rail from Tamworth, Goulburn, and other places into the town. According to last return only 236 acres were wheat producing, and it would require an additional 1,000 acres to give enough for the district's own consumption; and as the whole of New England Electorate, including Armidale, &c., had in 1891 only 3,440 acres under wheat, it can scarcely be expected the mere extension of 12 miles of line is going to revolutionise the production of grain within a radius of 40 miles of Walcha. The road carriage from the town to present Railway Station is 6d. per bushel. At present little fruit is grown in the district, although with suitable soil and climate this is difficult to account for. Potatoes are largely grown; the soil, especially around St. Leonard's and Orundumbie being favourable for root crops. An increase in this item of production may be expected, also in oats.

Fruit.

Potatoes.

Passenger traffic.

Passenger traffic will undoubtedly expand, there being much to recommend Walcha as a summer resort, and the 12 miles of coaching from rail at present are a great drawback to the advent of visitors.

Increased traffic.

Benefit to parent lines.

Saving on road maintenance.

Granting, however, that passenger receipts will increase by 50 per cent.; goods, 30; stock, 10; that wool, with 30 per cent. increase, can be charged for at tramway rates, 5s. per ton (for 988 tons), and allowing for mails, parcels, and sundries, the probable revenue will not exceed £1,680, thus giving a likely loss on the line of £2,632 per year. Against this may be put additional traffic brought on to the parent or main line, which, after deducting working expenses at 61·6 per cent., cannot be put at more than £1,000. To this may be added a possible saving on road maintenance, say, £300, so that we have a net deficit of £1,332 per annum.

Influence on settlement.

That such a short extension should lead to much increase in settlement is highly improbable, and although there is a large area of Crown land available, much of this is of such a character that at present it is not even held under license, and being at some distance from Walcha the extra 12 miles to rail is of small importance, I therefore consider the proposed line will not produce much increment upon lands still in possession of the State.

Timber traffic.

As already mentioned the good timber requires from 30 to 40 miles of haulage even to the town, so that traffic in such, to any extent, is not probable, especially with respect to cedar, which at present is a "drug" even in the coastal districts where the road haulage is merely nominal.

Mining industry.

A line into Walcha would have little beneficial influence on the mining industry.

CONCLUSIONS.

It is possible the rapid progress which has taken place in the district during the last ten years may continue. I cannot however base my estimate of traffic on such an assumption, and having given careful consideration to the proposal for a branch line to Walcha, I am of opinion that the advantages to the community are not such as to warrant the Government in constructing what must be, at any rate for some years to come, a nonpayable railway.

ROBERT E. JONES,
A.M.I.C.E.

Sydney: Charles Potter, Government Printer.—1892.

[3d.]

1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY FROM WAGGA WAGGA TO TUMBERUMBA.

(REPORT BY MR. STANLEY ALEXANDER, EXAMINER OF PUBLIC WORKS PROPOSALS, ON THE PROPOSED.)

Ordered by the Legislative Assembly to be printed, 31 *August*, 1892.

Sydney, 6 June, 1892.

TUMBERUMBA stands upon a huge spur from the Main Dividing Range of the Colony separating the valley of the Tumut River from that of the Tarcutta. The town is accessible from the railway lines from three points, viz.:—(1) from Albury, along a regular road, which is very good travelling until the mountains are reached; (2) from Wagga Wagga by a road which joins the Albury Road at the foot of the ascent, viz., at Little Billabong, up to which point it is good; and (3) from Gundagai, *via* Adelong.

2. From Tumberumba an outlet exists down to the Murray, communicating then with a very good road that traverses the right bank of that river.

3. Between the spur on which Tumberumba stands and the main line of railway in the neighbourhood of Wagga Wagga the tract of country embracing the drainage areas of the Tarcutta and Kyamba Creeks, which both discharge into the Murrumbidgee, comprises the whole of the country that can be served by the portion of the railway between Wagga Wagga and Humula, respecting which a separate report has been asked for. The situation of the country on the high land, its products, and the objects to be served by its connection by railway, render the subject quite distinct from that of the service of the low country.

4. The distance by the surveyed line from Wagga Wagga to Humula is 36 miles. The cost of construction has been estimated at £240,500. The height above the sea at Wagga Wagga is about 606 feet, and at Humula 936 feet. There are considerable undulations on the line, as might be expected, through its being taken across the general direction of the course of the drainage of the country. The summit passed over is 1,111 feet above the sea, at 19 miles out from Wagga Wagga, and for the same cause the cost of construction is high.

5. This district is traversed by the Main Southern Road, which enters it from Gundagai at Lower Tarcutta, and leaves it at the crest of the ridge above the Billabong Falls, between Kyamba and Little Billabong. From Wagga Wagga the roads connecting with this main road join it at Kyamba, at Upper Tarcutta, and at Lower Tarcutta, distances of 25 to 30 miles. To the eastward of this main road, which traverses the foot of the mountains, the only recognised connection with Tumberumba branches from that main road at Little Billabong. The travelling stock route forms a short cut across this corner, shortening the distance by a few miles, but this is not passable for vehicles, for which the only route is *via* Little Billabong. This point is convenient, and from it a number of distances to important places can be given.

From Little Billabong	to Albury	52	miles
" "	to Tumberumba	40	"
" "	to Wagga Wagga, *via* Kyamba and Alfred Town	42	"
" "	to Upper Tarcutta	30	"
" "	to Lower Tarcutta	37	"
" "	to Germanton	16	"

6. There are other routes connecting the low country with the mountains, which will probably in the course of time be properly formed, but are now in a state of nature. One of these passes from Upper Tarcutta up the Umbango Creek. This creek, though a tributary of the Tarcutta, is fully equal to that watercourse in size and importance. The track passes through Humula and bifurcates, one branch passing up the Carabost Creek and connecting at Carabost with the main road at Tumberumba. A third route is also available, but as a bridle-track only, up the Tarcutta Creek, past Oberne. This, in its upper reaches, traverses some extent of formidable country, but both the routes up the Umbango Creek present very favourable lines of approach to the high country.

7. The areas drained by the Tarcutta and Kyamba Creeks, contained within the following parishes, form the district from which the proposed railway as far as Humula may be expected to draw its traffic:—Tarcutta, Cunningdro, Gumly Gumly, Gregadoo, Woomarigong, Tywong, Livingstone, Humula, Umutbee, Oberne, Mate, Belmore, Carabost, Borambola, Book Book, Kyamba, Kilgowla, Murraguldrie, Kiajura, Coreinbob, Umbango, Bulalgee, and Wood.

8. In addition to this list, the parishes of Goldspink, Bago, and Courabyra are also within the same drainage area in county Wynyard, but they belong rather to the Tumberumba portion of the report.

Appendix D. 9. Respecting the lands in this district, the following information has been summarised from a letter and a tabulated statement supplied by Mr. William Orr, District Surveyor, of Wagga Wagga. This gives the area and estimated value on that date, 2nd June, 1891, of the unalienated lands.

Leasehold area	126,763 acres.
„ cultivable—one-fourth	31,441 „
Estimated value cultivable on 2nd June, 1891	£181,483.
„ „ if connected by railway...	£251,526.
Resumed area	55,460 acres.
Reserves on resumed area*	37,497 „
Estimated value on 2nd June, 1891, of reserves on resumed area ...	£60,000.
„ „ if connected by railway...	£100,000.

Appendix G. 10. The statistics of this part of the country have been supplied by the Borough Council of Wagga Wagga, together with reports by Mr. J. T. Williamson, who was specially deputed to go through the district for the purpose of collecting information. According to these the last estimate—made in October, 1890—gave a population of 3,000 people resident between Wagga Wagga and Humula in the districts concerned. The words of the report, which is reproduced as an Appendix, are here given:—"A reliable estimate based upon the number of residents, and taking the average membership of the families at five, gives, with the employees, a total population of over 3,000 souls living in contiguity to the proposed railway line." The stock in the same district is set down as—of sheep, between 300,000 and 400,000; horses, 2,600; and cattle, 12,000. In the same report the statistics of the country between "Humula and Tumberumba" are also given, but how much of this should be credited to a railway terminating at Humula is not defined.

Appendix F. 11. A statement supplied by Mr. R. S. Douglas, the Honorary Secretary of the Humula Progress Committee, gives the following as the statistics of the country immediately surrounding Humula, and being directly interested in its connection by railway:—

Population	600
Tobacco cultivation	814 acres.
Cultivation ordinary crops	469 „
Estimated tonnage of crops and goods passing through Humula both ways annually	1,551 tons
Sheep	132,300
Land suitable for cultivation	24,760 acres.

Appendix F. 12. A copy of this report is given in Appendix F. It has been very exhaustively drawn up, and is believed to be a correct statement of the condition and capabilities of the district surrounding Humula; though written, as it avowedly is, in support of the construction of the line, the anticipations of progress are pitched on a scale not likely to be realised for a very long time, and in some points the advantages possessed by particular limited areas are by inference credited to the whole district. Under the head of timber general terms only are used. It is a fact that there are large areas covered with ironbark and stringybark, but of a quality useful only for local purposes. The district cannot produce in quantity any timber except for fencing and the rough purposes of settlers. Sleepers will always be procurable in some quantity from forests of stunted and twisted growths wherever trees of suitable kinds grow, but these districts do not carry any of the heavy growths of forest, nor are the conditions in any way suitable for the propagation of such except along the Murrumbidgee and on the river reaches of the Tarcutta, on lands that are all in private hands.

13. Humula is situated on the Umbango Creek, a tributary of the Tarcutta, flowing parallel with it, and divided from it by a well-defined rocky spur, and, like the Tarcutta, draining directly from the mountains. The flat, bottom land along the courses of these creeks is of a very fertile character, being light, workable, and well supplied with water at all seasons. To these limited areas only are the descriptions given in the various reports and statements applicable. With this limitation the expressions contained in them can be entirely supported. The ridges, however, and the blocks of high land intervening between these main watercourses, are, in general, the very opposite of fertile in character. The actual condition at the present moment is one of unbroken bush of stunted growth, of use for no industrial purpose, with a soil which is, in general, sparse, the rock being near the surface when not actually outcropping. This same rock is, in fact, in most parts, not of a character to produce good soil by its own decomposition *in situ*. The whole of the blocks of land dividing the Tarcutta from the Umbango Creek, and the Umbango from the Kiajura Creek, is of the character described.

14. On the other hand, the greater part of the area drained by the Kyamba Creek and its tributaries, which throughout their courses lie removed from the foot of the mountains, and drain undulating land, is less marked by the rugged features obtaining on the Tarcutta, and the soil, though in general not of a better character, is more plentiful. The whole of this country is exceptionally well watered naturally. Settlement has spread over the whole of it wherever land has been made available, and the general appearance is indicative of prosperity.

15. The chief factor in this consummation has undoubtedly been the climate, for the general character of the soil is poor, except in patches. The rainfall at some points shows:—

At Kyamba, a mean of 10 years	30·98 inches.
At Borambola „ 4 „	30·82 „
At Humula „ 14 „	31·21 „
At Carabost „ 5 „	36·90 „

16.

* One-half of the quantity of land given above as "reserves on resumed area" is considered to be of good quality.

16. These high averages produce a moist condition of climate, and the general altitude of the land, and its proximity to the mountains, a low temperature. These are conditions favourable to settlement, the production of food-stuffs and wool, and rearing of stock. Though the country seen in passing through does not present a favourable impression, because of the prevalence of unimproved bush land, the figures of the returns showing the stock actually carried by the pastoral holdings give a high average. The presumption is altogether in favour of the capacity of the country in production of all kinds, being vastly enhanced by the progress of improvements.

17. The following has been supplied by Mr. Lyne, the Stock Inspector at Wagga Wagga, from his records of the stock carried on the pastoral holdings in this district:—

Name of run.	No.	Acreage.	Stock.		
			Sheep.	Horses.	Cattle.
Oberne	C.D. 707 / E.D. 571	60,000	30,000	300	3,000
Borambola	724	50,000	59,902	289	639
Book Book	189	19,000	21,892	32	53
Umutbee	438	57,000	7,033	150	1,185
Toole's Creek	408	10,000	12,560	.....	.....
Kyamba	456	23,000	21,800	43	38
O'Brien's Creek	346	40,000	35,900	30	85
Gregadoo	495	6,000	10,520	5	4
Carabost	198	Not supplied.			
Humuda	624	Has been sub-divided and sold.			

18. The distances from the railway at Wagga Wagga to the several centres in this district are here given:—

To Lower Tarcutta	25 miles.
To Upper Tarcutta	30 ,,
To Kyamba, *via* Alfred Town	30 ,,
To Little Billabong, *via* Alfred Town	42 ,,
(The above are all on the main South Road.)	
To Borambola	20 ,,
To Alfred Town	9 ,,
To Humula or Umbango Creek, *via* Upper Tarcutta	47 ,,
To Oberne, on Tarcutta Creek, *via* Upper Tarcutta	44 ,,
To Billy Owen's Water-hole, at confluence of Umbango and Tarcutta Creeks	39 ,,
To Carabost, *via* Upper Tarcutta and Humula	57 ,,

From Wagga Wagga to Gundagai, by a good road passing through Alfred Town, Borambola, Lower Tarcutta and Mundarlo, the distance is 55 miles.

19. As the greater part of the wool produced is carted to Wodonga from this district, and much of the stores is brought back thence by road, the distances from the principal centres to Albury are given:—

From Albury to Little Billabong	52 miles.	
,,	Kyamba	64 ,,
,,	Upper Tarcutta	82 ,,
,,	Lower Tarcutta	89 ,,
,,	Humula, *via* Kyamba	76 ,,
,,	Oberne, *via* Upper Tarcutta	96 ,,
,,	Carabost, *via* Little Billabong	66 ,,

20. The railway freight on wool from Wagga Wagga to Sydney is £2 18s. 6d. per ton for greasy; and from Wodonga to Melbourne, £1 7s. per ton. The cartage rate from Humula to Wodonga is £3 per ton, and to Wagga Wagga, £2. The cost of carriage from Humula to Sydney thus turns out to be £4 18s. 6d., and to Melbourne £4 7s. per ton, exclusive of some small incidental charges.

21. The railway freight on wool from Wagga Wagga to Wodonga, inclusive of the junction charge, is £2 per ton; and from Wodonga to Melbourne, 4s. 6d. per bale, (say) 27s. per ton. The road carriage from Humula to Wagga Wagga (£2 per ton) added, makes the total cost by this route to Melbourne £5 7s. per ton.

22. These figures are now given side by side for reference:—

Cost of carriage of wool from Humula to:—		
Melbourne, by road, to Wodonga	£4 7s. 0d.	per ton.
,, ,, Wagga Wagga	£5 7s. 0d.	,,
Sydney ,, Wagga Wagga	£4 18s. 6d.	,,

23. As a corroboration, I may mention that Mr. A. J. Rial, at Humula, showed me a sale account from Melbourne, amounting to a cost for carriage of wool, inclusive of all charges (such as insurance, commission, etc.), of £1 per bale.

24. Stores are brought back from Albury into this district at reduced rates by the returning drays, whereas by the railway high restrictive charges are made on goods brought into this Colony from Victoria.

25. The movement of goods from Victoria into New South Wales is encouraged by the following high rebates allowed by Victorian railways:—

A miscellaneous class	10s. per ton.
First and second classes	20s. ,,
Third and fourth classes	30s. ,,
Fencing-wire	25s. ,,
Wool-packs and cement	10s. ,,
Rock salt	15s. ,,

26.

26. The Custom duties lately imposed on importations into this Colony will affect the motion of general goods to this particular part, so far as the articles manufactured or produced in Victoria, and on broken parcels, on which duty has already been paid, are concerned, but goods in bond will not be at all affected. It is well known that there is a strong firm in Albury to whom the trade of these parts has been a special study for a long time, and who will probably be in as good a position in regard to it as heretofore in spite of the new tariff.

27. The state of affairs hitherto obtaining is given by Mr. W. V. Read, late general manager of railway traffic in New South Wales, in a report dated 30th October, 1888, "That the products of the district, except wool, would find markets within the Colony, there cannot, I think, be much doubt, but that the general supplies would continue to come from Melbourne . . . . is almost equally certain." "The best proof . . . . is that all the grain grown between Wagga Wagga and the Murray finds a market in the Colony, while the principal supplies for the same district come from Melbourne." Mr. Read also added, "It is well known that it is from the general supplies, and not from the produce of a district, that the great bulk of our revenue, and particularly our profit, is derived."

28. The regulations in force on the railways of this Colony for the carriage of goods, given in the rate-book having effect from 1st August, 1891, give certain maximum charges for carriage of goods to stations distant over 305 miles from Sydney on the Southern line. This maximum charge is £7 5s. per ton, or in 6-ton trucks loads, £30 per truck for 1st, 2nd, and 3rd class traffic. Wagga Wagga and the surrounding district being 309 miles from Sydney by the railway benefit by this rate, and also by the Victorian rebate rules, and the special high rates charged for carriage of goods by the railway from Albury towards Wagga Wagga do not seem to have had the effect of keeping out the importations into this Colony from Victoria, so it now remains to be seen how the new Customs duties since added will operate in this direction.

29. The production of the districts under consideration have hitherto been curtailed by the costliness of the long road carriage in any direction, except in the case of tobacco and maize. In tobacco, the cultivation does not seem to have been thoroughly mastered. The product is said to be of very good quality, but failures of whole crops, for which no adequate cause seems assignable, point to some radical change in the processes being necessary. In any case, however, the cultivation is of a character that cannot be appreciably affected by the construction of a railway for its transport, as the quantity of tobacco for which a market can be found under the existing excise laws is very easily exceeded. Probably any one of the districts, such as Humula or the Tumut Valley, could easily supply the whole demand alone. For maize, however, this inland situation insures an unlimited market. This grain is cultivated here under favourable conditions on the same bottom land which is suited to tobacco, but the extent of such land in the district is not great enough to give hopes of a large quantity being produced.

30. All the other products for which credit is taken by witnesses and other supporters of the scheme are such as would certainly be produced, and for which unlimited markets will always be found within the Colony, but for the production of these in quantity appreciable for the revenue of a railway, the population is not in existence as yet, and it cannot come into existence except by the slow process of the cutting up of estates, which experience shows may be prolonged over several generations.

31. Again, for the transport of the products from considerable tracts within the area that has been credited as within the influence of the railway, and for delivery of supplies to them, there are roads in existence which will probably always afford to many of the settlers the best means of reaching the main line of railway. Among them must be placed the whole of the extensive district through which the road from Wagga Wagga passes to Lower Tarcutta. This road serves extensive tracts of low land along the Murrumbidgee and the Lower Tarcutta, and also a part of a good district on the Coreinbob, besides that of Gumly Gumly.

32. Southward of the surveyed line the length of cartage by road to the Victorian border becomes less, and the conditions are more favourable to that competition.

33. The lump form in which the statistics have been supplied is, as was pointed out to the Mayor at Wagga Wagga, useless for the purpose of an investigation of this kind. Details showing the distribution of the settlement on the district are necessary. These were asked for, and efforts were made to supply them, but the result is incomplete and unsatisfactory, being useless as a basis for conclusions as to the probable direction of traffic, or in support of, or in refutation of, deductions which I am compelled to draw from my own observations.

34. Regarding the contributions to the traffic of this line to be received from the Tumberumba district, the following facts and figures relating to that district are here given as shortly as possible. The distances from Tumberumba are:—

To Albury	92 miles
To Wagga Wagga, *via* Little Billabong, Kyamba, and Alfred Town ...	80 ,,
To Humula, *via* Umbango Creek	30 ,,

The total population may be taken at 1,600 persons, of whom 700 are resident in Tumberumba. The road travelling to and from the town in any direction is of the most onerous character, and, therefore, a shortening of this journey by less than one-half, as would be achieved by the railway being built to Humula, could not but have a very useful effect upon all the industries in the district about Tumberumba. A large quantity of wool is now despatched from stations on the mountains through Tumberumba to Wodonga, even from half-way down to the Murray. As in the case of all other wool, this practice would still be continued, since the return supplies would be brought back so cheaply. Timber certainly would afford revenue, as the peculiar suitability of mountain ash to certain purposes would probably lead to establishment of factories if the forests were accessible. This high country is, it seems, peculiarly suitable to production of crops which are now articles of import—for instance, potatoes and oats. Of areas on which wheat can be grown the Colony affords a superfluity, but of moist and temperate climates, combined with suitable conditions in soil in near connection with the dry western country, this and the district about Orange alone are available.

35. I believe that the whole of the products of the Tumberumba district, except wool, would be carried through Humula by railway, and that a considerable part of the supplies would also be brought by the same route, because in this case the producers would, as they do everywhere, deal with the merchants through whom their produce is sent to market. These would probably be in Wagga Wagga.

36. I believe that the opening of 36 miles of railway, and shortening of the road carriage to 30 miles by a new route along the Umbango, which is very favourable, would suffice to divert the course of supplies for settlers and population generally of the mountain district—that is, for about three-quarters of them, from Wodonga direct to Wagga Wagga.

37. Regarding the transport of sheep to the mountains during periods of drought on the plains, on which so much stress has been laid, all that can be said is that the conditions are favourable to this traffic being a payable one as far as Humula, because on this length trains of good weight could be drawn. From Humula stock would have to travel about 10 miles to join the stock route at Carabost. There is no stock route, excepting the ordinary roads, west of the main south road. This traffic must, however, be considerable to have any weight in the question. It is doubtful if stock-owners will go to the expense of using the railway during droughts. During good times they do not require to do so—droughts are fortunately not the ruling condition in the parts affected, so the traffic, if any were created, could not be reckoned as a revenue-producing factor. I consider that this source should be altogether disregarded.

38. The general conclusion on this part of the inquiry deducible from the foregoing is that under existing conditions a line from Wagga Wagga to Humula cannot be self-supporting unless it can be worked in such a manner as to draw to the railways of this Colony the inward traffic of supplies which has hitherto been brought in from Victoria. This, as shown in paragraph 34, will not result. The newly imposed duties will have put a substantial check upon the movement of all Victorian productions and of broken parcels, but the transit of goods in bond is unimpeded, and freetrade on the border will some day remove all restrictions.

39. It appears to me that the opening of a railway from Wagga Wagga to Humula would not have any effect upon the course of the inward traffic in supplies to the district, nor aid appreciably in diverting the source to Sydney of such as are now procured in Victoria. I do not consider that the additional bar to this course afforded by the new customs duties on the border will be felt. Those articles really affected, viz., the productions in Victoria, are few and unimportant; and from some parts, as, for instance from Warnambool, the products have been regularly brought round through Sydney. The produce of the district between Wagga Wagga and Humula, excepting the wool, will continue to find a market in this Colony, and a considerable impetus will be given to cultivation, but the areas likely to be devoted to such purposes, though they will be added to yearly, will not for a considerable time supply the traffic necessary to make the line payable.

40. It is further to be noted that the traffic of Tumberumba is absolutely essential to the revenue of a line between Wagga Wagga and Humula. The low country alone obviously cannot supply tonnage to keep a railway in work, so the question of constructing this line must be held to be dependent upon a decision as to Tumberumba being eventually connected from the western rather than from the eastern side of the mountains.

41. The district of which Tumberumba is the centre is given in the statistics as carrying a population of 1,600 persons, of whom 700 are the residents of the town. Details of Tumberumba are given in the Appendix. These are approximate only, as the town has not been incorporated.

42. The approaches to Tumberumba are:—From Albury, through Germanton and Little Billabong, a distance of 92 miles; from Wagga Wagga, *via* Little Billabong, 80 miles; and from Gundagai, *via* Adelong, about 60 miles. The last route, though the shortest, entails the passage of a summit near Laurel Hill, 3,200 feet above the sea, Tumberumba being 2,100 feet. The money hitherto spent upon this road has sufficed to make it little more than passable. The explored route for a railway *via* Adelong passes this summit at an elevation about 500 feet lower, viz., at about 2,700 feet. The line would climb over very rugged country in the ascent from Adelong, but between Pilot Hill and Tumberumba for about 20 miles, all about 2,500 feet above the sea, there are no special difficulties.

43. The approach to Tumberumba by the surveyed line from Humula is along the Umbango Creek. For the last 14 miles the line is near the main road through Rosewood and Glenroy. These are the important farming localities of the district, where the largest population is settled, some miles away from Tumberumba, and on the valley of a distinct watercourse, the Mannus. This separate location, and some divergence in interests, have been the cause of a division among the townspeople of Tumberumba, a section of whom advocate railway connection from the side of the Tumut Valley.

44. The whole district is credited with extraordinary fertility in all crops suited to such an elevated locality, a quality which can be judged of by a visitor only from the appearance of the soil and the class of rock from which it has been derived. In view of these points, doubts on the subject are unavoidable, but in the matter of extent of cultivated land there can be no difficulty, if proof were needed, in measuring the length and breadth of the land that could possibly carry an agricultural population within several generations. It would be found to be limited to very few square miles.

45. Except in points of climate and timber the district has no exceptional advantages in its favour as a producing one. On the contrary, the good land within an accessible distance and in a practicable position is of small extent. The decomposition of a volcanic overflow has formed land of the highest quality in situations quite inaccessible for agriculture on the Tumberumba and Maracle Creeks, and at an elevation on the plateau about Laurel Hill, where the climate is too severe for any cultivation to be payable.

46. The town of Tumberumba owes its birth and continued existence to gold-mining. As a sanatorium its unsurpassable climate, and as a tourist resort its magnificent surroundings, will be properly appreciated in the course of time, but its distance from any of the great centres of population make that time a distant one.

47.

47. The subject of the timber in this country is more encouraging. The urabie seems to be distributed over tracts of poor country, and is not plentiful. It would certainly be carefully conserved, and in the course of time become of value if made accessible by a railway. If this estimate of the quantity now available is incorrect the blame must rest with those who failed to show me the extensive forests of which I have heard. The mountain ash seems to flourish at elevations over 2,500 feet above the sea, and on the richest black soil derived directly from the basalt, at that height and greater elevations all along the basaltic ridge up to Laurel Hill; and thence eastwards to great elevations, and on the spurs running down into the Burra, Maracle, Gilmore, and other creeks extensive areas of this growth are found carrying trees of great size. The quality of the timber is well-known, as it is supplied from Beechworth, in Victoria. From the Tumberumba districts the cost of it on reaching the railway would now be prohibitive for any industry at a distance. Its quantity under proper rules of conservance may be taken to be unlimited.

48. The direction in which traffic moves to and from Tumberumba is altogether between that place and Albury, except in the matter of the agricultural produce, the surplus of which is taken to Wagga Wagga. The small profits from this course would prohibit any cultivation for the purpose. The traffic is due entirely to the need for stores for which the produce is exchanged, the transport of both being done by the producer himself. As before stated, considerable impetus would be given to production of good stuffs by a line being built to Humula, and a regular traffic by that line would be assured both ways.

49. The wool from stations half-way down to the Murray, on the Tumberumba Creek, is taken up through Tumberumba to Wodonga by road. All the supplies, including flour, excepting such as are brought by farmers from Wagga Wagga, are procured from Albury, but, as before stated, the construction of a line to Humula would so alter and ameliorate the conditions as to transfer to the railway the carriage of full three-quarters of the supplies used in Tumberumba which are now brought there by carts from Albury.

50. In view of the foregoing the conclusion necessarily drawn is that the extension of the railway from Humula to Tumberumba cannot be justfiable for an indefinite length of time.

51. I would here point out that the country between the mountains and the main line of railway south of Wagga Wagga can be exploited from the railway terminus at Gundagai by a line through Adelong Crossing, Mundarlo, and Lower Tarcutta, having 10 miles of railway construction, and a bridge over the Murrumbidgee in common with the proposed line to Tumut. Such a scheme would considerably further the prospects of the Tumut connection, and assist the Gundagai length to make up some of the loss hitherto incurred in working. Gundagai is 22 miles nearer to Sydney than Wagga Wagga, and Lower Tarcutta is 30 miles from Gundagai. The saving in distance by railway to Sydney by the suggested line would be but 10 miles or so to any point, such as Upper Tarcutta or Humula, but this line might be looked upon as part of a comprehensive scheme for eventually reaching the Murray at Jingellic.

STANLEY ALEXANDER,
M. Inst. C.E.

LIST OF APPENDICES.

A. Details of the town of Tumberumba.
B. Letter by the Secretary to the Wagga Wagga to Tumberumba Railway League.
C. Letter by Mr. E. W. Donnelly, of Borambola.
D. Letter and returns by Mr. William Orr, District Surveyor, of Wagga Wagga.
E. Letter by Mr. P. J. Hartnett, of Umbango.
F. Report by the Humula Progress Committee.
G. Reports by the Borough Council of Wagga Wagga.

A.

Tumberumba, 6 December, 1890.

The following information regarding the town of Tumberumba has been supplied by Mr. R. Levis, J.P., President of the Wagga Wagga–Tumberumba Railway League:—

Places of Business.

Messrs. S. F. and H. Ramsay, general stores, commission agents and auctioneers.
Mr. M. H. Simpson, general stores.
Mr. R. D. Matthews, general stores.
Mr. E. M. Denyan, saddler, and fancy goods store.
Mr. E. F. Feeley, saddler.
Mr. — Figures, saddler.
Messrs. Adams and Witt, fruiterers and confectioners.
Mr. G. Blake, baker and pastry cook.
Mr. L. Kinstler, baker and pastry cook.
Mr. J. Bradley, butcher.
Mr. E. Vickery, butcher.
Mr. M. Bradley, butcher.
Mr. T. Williams, blacksmith and wheelwright.
Mr. — Walsh, blacksmith and wheelwright.
Mr. — Penhorn, carpenter and joiner.
Mr. J. P. Swanston, carpenter and joiner.
Mr. G. Burt, contractor and joiner.
Mr. J. M'Arthur, contractor.
Mr. T. Reece, painter and decorator, and tinsmith.
Mr. C. H. Read, bootmaker.
Mr. W. Williams, solicitor and proctor.
Mr. G. D. Belson, M.D.
Mr. — Featherston-Haugh, surgeon.

Hotels.

Hotels.

Mr. J. Byrne, "Star Hotel."
Mr. S. Daly, "Tattersall's Hotel."
Mr. M. Mearbach, "Globe Hotel."
Mr. J. M'Glynn, "Tumberumba Hotel."
Mrs. Murphy, "Union Hotel."

Mr. J. F. Makinson, P.M., C.P.S., and Warden.

Manufactures.

Flour-mill, F. Wenley.
Brewery and cordial factory, J. Chapman.

Population, 700.
Number of dwelling-houses not known.

Public Buildings.

Court-house.
Lock-up.
Police Station and residence.
Post and Telegraph Office.
Public School, average attendance, 140.
Convent and school.

B.

Gentlemen, Rosewood and Glenroy, 29 November, 1890.

In urging our request for railway communication to this district, we would respectfully draw your attention, in the first place, to the fact that we are a long distance from the principal markets of the Colony; and, in the next place, that we are a *bona fide* agricultural population, striving in the face of great difficulties to retain our holdings, in the hope of having a railway constructed to Wagga Wagga at an early date—Wagga Wagga and the lower Murrumbidgee districts being our best markets for the produce grown here, which is principally wheat, oats, hay, and potatoes; also dairy produce, such as cheese, butter, eggs, bacon, hogs' lard, and poultry; also fruit—this would increase to a large extent if the farmers had a means of sending it away quickly, and being later than the Sydney seasons, would come in after theirs was consumed; also vegetables and tobacco. There would be a large trade done in timber also, as the timber of this district is equal (if not superior) to any in the Colony. We wish to draw your attention also to the immense quantities of agricultural produce annually sent into the Murrumbidgee district from Victoria. With this trade we are utterly unable to compete, owing to the long distance and bad roads we have to travel, and that, for these reasons, we have not cultivated nearly as much land as we undoubtedly would had we facilities for transporting our produce.

We would point out also that there is a very large extent of land in this district eminently suitable for cultivation, which is already settled upon, as well as a large area at present locked up in reserves for various purposes, which in due time no doubt will be thrown open for settlement. There is a large number of stock annually travelling up from the lower country to the mountains for summer grass, and in a dry season the number increases to an enormous extent. Our minerals are as yet undeveloped, but it is thought by experts that there is great wealth in our hills, especially the basalt ranges. We would impress upon the Examiners that this district is blessed with a bountiful rainfall, the annual average being from 27 inches, consequently all kinds of crops can be grown which are mostly in demand in the hotter and drier districts of the Colony, and does away with the necessity for costly irrigation works. From all these considerations we are fully convinced that a large and increasing revenue would be derived towards the working of the line, and we respectfully submit that in the near future the line would more than pay for the interest on the cost of construction.

There are at present thirty-two holders of land on Rosewood alone within 3½ miles of that township. Several allotments of the town site have been sold, some realising as high as £24 per acre.

There is no doubt, owing to its situation, that Rosewood will in time become the city of the hills should a railway be constructed. We have a public school there with a reserve of 20 acres for school purposes; also a cemetery of 20 acres extent. There is a large reserve in township for railway station purposes.

There are about twenty-three holders of land within 4 miles of "Glenroy Hotel" at the present time, and a public school close by.

We feel, gentlemen, that we need not further enter into particulars, but sincerely trust that from these facts and the details and evidence which we hope to lay before you, as well as what yourselves have seen, that you will be able to report favourably on the line, and recommend its immediate construction.

Signed on behalf of the Wagga Wagga-Tumberumba Railway League,

ROBERT LEVIS,
President and Acting Secretary.

The Examiners of Public Works Proposals.

C.

Dear Sir, Wagga Wagga, 22 February, 1892.

I now enclose the particulars which I think you require. My Borambola freehold consists of about 50,060 acres; conditional purchases, 3,560 acres; conditional leases, 1,630 acres. Out of the freehold I consider there is from 27,000 to 30,000 acres fit for cultivation, and about 1,500 acres of the conditional purchase land fit for cultivation; and conditional leases, about 300 acres, could be made suitable for cultivation. Under cultivation this season, about 2,000 acres; and if the season is suitable I may put in another 500 acres. I am clearing about 1,200 acres at the back of Gumly, upon the proposed railway line from Wagga Wagga to Tumberumba, and next year I intend clearing another 1,200 acres or 1,500 acres joining this land, upon the east side of the proposed railway line. Selectors, Borambola, other than those in the Corienbob [Those in the Corienbob are already down in one of the returns.—A. McP.]:—John Bradney, 1,400 acres, about 800 acres fit for cultivation; Alex. Banatyne, 1,420 acres, about 600 acres fit for cultivation; Roohan, 321 acres, all fit for cultivation.

Kyamba

Kyamba Creek country I am unable to give you all the particulars of, as there are a great many selectors on nearly the whole of that country. It is suitable for cultivation. Sheep, 100,000; cattle, about 3,000; horses, 450 (Borambola Holding). This, I think, should be of great value to the proposed railway line.

Smith and family hold about 1,000 acres of land, and I think from 500 acres to 600 acres is suitable for cultivation; also a few 40 acres held by people just for homes for their families while away working.

Alexander Macpherson, Esquire,
Umbango, Tarcutta.

Yours, &c.,
E. W. DONNELLY.

Dear Sir,

Wagga Wagga, 2 June, 1891.

In answer to your letter of the 25th ultimo, asking me for information as to the quantity and quality of Crown lands in that part of this district which is likely to be benefited by the proposed Wagga Wagga-Tumberumba railway, I now beg to enclose herewith a tabulated statement, prepared in accordance with your wishes, showing the Crown lands within leaseholds, within resumed areas, and within reserves.

You will observe that there are 125,763 acres within leases; of this, about one-fourth only may be estimated as cultivable. Under existing circumstances this ground is worth £131,483; with railway communication it would be worth £251,526.

Most of the land unalienated in the resumed areas is reserved temporarily, only about 18,000 acres remaining, and not included in the reserve column. The reserved land I consider to be at least one-half good, and worth, under existing conditions, £60,000; but with railway communication at least £100,000.

Stanley Alexander, Esq.,
Examiner of Public Works Proposals.

Yours, &c.,
WILLIAM ORR,
District Surveyor.

Statement showing area of unalienated lands which, in the opinion of Mr. S. Alexander, is likely to be benefited by the construction of a line of railway between Wagga Wagga and Tumberumba:—

Name and No. of Holding.	Crown Lands (Leasehold).	Crown Lands (Resumed).	Reserves within the boundaries of Reserved Area.	Remarks.
Book Book, 189	3,980 acres	1,157 acres	790 acres	
Borambola, 724	9,648 "	7,054 "	8,962 "	Reserves from lease included in area of reserves.
Carabost, 198	20,550 "	12,059 "	2,320 "	
Gregadoo, 495	1,200 "	256 "	220 "	
Humula, 624	25,709 "	13,019 "	10,000 "	
Kyamba, 456	6,283 "	5,241 "	5,433 "	Reserves from lease included in area of reserves.
Oberne, 707	23,983 "	...	...	Resumed area of "Oberne," in Eastern Division.
O'Brien's Creek, 346	11,783 "	5,777 acres	5,920 "	Reserves from lease included in area of reserves.
Toole's Creek, 408	1,485 "	1,249 "	980 "	
Umuthee & Toonga, 438	21,127 "	8,759 "	5,115 "	
	125,763 acres.	55,460 acres. (17,927, rocky; 37,497, in res. next coln; 36 good).	30,737 acres.	

Cultivable land (one-quarter) = 31,441 acres; not cultivable (one-half) = 20,000 acres.

WILLIAM ORR,
District Surveyor, Wagga Wagga, 1/6/91.

Wagga Wagga–Tumberumba Railway—Information not asked for by Mr. Alexander:—

Reserves from Lease within Leasehold Areas:—

Book Book	1,200 acres.	Oberne	Nil
Borambolo	865 "	O'Brien's Creek	86 acres.
Carabost	750 "	Toole's Creek	780 "
Gregadoo	Nil.	Umuthee and Toonga	967 "
Humula	935 acres.		
Kyamba	780 "	Total	6,363 acres.

Crown Lands in reserved area of "Oberne" ..... = 18,224 acres.
Reserved within boundaries of reserved area of "Oberne" = 6,116 "

WILLIAM ORR,
District Surveyor, Wagga Wagga, 1/6/91.

E.

Dear Sir,

Umbango, 12 December, 1891.

My holding on Umbango Creek is thus selected:—Land, 2,500 acres; conditional lease land, 129½ acres; freehold land, 131 acres; total on Umbango Creek is 2,760 acres; and on this land I keep 3,400 sheep, 20 horses, and 40 head of cattle. I cultivate none, because there is no access to forward any produce to market; roads bad, and carriage high. If we ever get a railway this way I could cultivate for wheat, oats, barley, &c., &c.—of this about 2,000 acres. And in addition to my Umbango holding I have in the parish of Oberon, about half a mile from Umbango holding, land as under:—Selected land, 640 acres; conditional lease land, 270½ acres; total here, called Forest Lodge, 910½ acres; and on this land I keep (and have them on now) 2,000 sheep; and when cultivation will pay I can, if I wish, cultivate 500 acres;—that is, when we hear the whistle of the train going into Tumberumba, and till then we must only live in hopes.

My

My holding on Umbango Creek is 2,760½ acres, and in Forest Lodge, parish of Oberne, half a mile from Umbango holding, is 910½ acres; total of both places is 3,671 acres; and if a railway ran to Tumberumba there is fit for the plough of my land 2,000 acres, more, or no less.

PETER JOHN HARTNETT.

F.

THE PROPOSED WAGGA WAGGA-TUMBERUMBA RAILWAY.

Report of the Humula Progress Committee.

The following report prepared by the Humula Progress Committee is presented to the Railway Examiners appointed to report on the proposed Wagga Wagga-Tumberumba line. The village of Humula is about 45 miles from Wagga by road, about 39 miles by the surveyed railway line. Elevation above sea-level, about 1,100 feet. Annual rainfall average for fifteen years, 27 inches. This part of the country differs so materially from many farming districts, which are wheat-growing only. It is thought a list of our staple products, with some remarks on each, may assist the Examiners in gaining the information they require. Our report is intended to deal only with land included within the old Humula pastoral lease, Carabost, Oberne, and the lower part of Bago, an area of about 200,000 acres, traffic from which will centre in the village of Humula.

Tobacco.—Giving a larger money return per acre and a comparatively light cost of carriage, is the crop most generally grown. There are only exceptional land-holders who have not a certain area in tobacco every year. The average yield is from 10 cwt. to 15 cwt. per acre, a similar weight to that obtained in America, where the land is now regularly manured to keep up the yield. The crop, ranging in price from 4½ to 6d. per lb., is a most paying one when the season is favourable. But the plant being delicate, it occasionally withers in the first stage of its growth, and the crop is a failure for that season. The crop having failed, under present circumstances, the land, though ploughed and all ready for planting, must remain fallow till the next planting season, the grower losing the cost of ploughing as well as the use of his land. Had we the means of getting heavy crops to market the grower could immediately sow his land with maize, potatoes, onions, or some other root crop, the time of year being favourable for any of these, which would bring in, say, £10 per acre, and give nearly as good a return as tobacco, when the difference in labour of harvesting and handling is allowed for. In 1889, on the failure of the tobacco plants at Oberne, a large area was planted with maize, and there are now, 5,000 bushels of maize at Oberne waiting to be carted to market. Under the same conditions some of the growers of Humula planted potatoes and crops, which would have paid well, only for the heavy cost of carriage. By far the larger area of rich ploughed land was left unprofitable, to the loss of the owner and the State, the growers considering they could not crop to advantage under present conditions of carriage. Tobacco is generally grown on the co-operative system, the owner of the land getting one-third or one-fourth of the crop. Mr. Bardwell, Oberne, the largest grower about here, estimated his return for some years at £6 per acre per annum net profit. Tobacco requires exceptionally good land.

Wheat.—This crop is not generally grown for market, though there are several who grow it every year, proving that the soil and climate are suitable. What is grown is a fine grain, which yields a good weight of crop. The carriage of wheat to Wagga Wagga, estimating carriage at £2 10s. per ton, is 1s. 3d. per bushel, a prohibitive rate to those who do not cart their own grain. Though wheat may not become our staple product, yet had we the means of railway carriage a large area would be sown every year. There are thousands of acres of undulating land which is too high for tobacco or roots, but quite suitable for wheat, the timber (on the land, not at present in crop) having been ringbarked for years. The cost of clearing the land for cultivation would be very light. There is no doubt that when land-owners are satisfied the line is to be started, men will be put on at once to clear large areas of new land in preparation for wheat. While the best land will produce up to 40 bushels per acre, it is probable that were a large area cultivated the yield would average from 25 to 30 bushels per acre.

Oats.—This crop grows to perfection. Mr. W. Abbott on one occasion harvested 100 bushels to the acre, while many crops have been cut for hay which would probably have yielded as much. Mr. E. Seaping had nearly 60 bushels to the acre last year on high land not suitable for tobacco. This crop is generally cut for hay, as much as 8 tons per acre being sometimes harvested.

Maize.—Small areas of this crop are grown every year by most land-holders for home use. The crop does well, and would be largely grown when tobacco is at a discount, if there was cheap carriage. Crop, 80 bushels to the acre, which, at even 2s. 6d. per bushel, gives a good return per acre.

Potatoes.—But for the high rate of carriage a very large tonnage would be grown. Few beside those who cart their own venture to grow for market. The yield varies from 4 tons to 10 tons per acre. It is a very profitable crop. In conjunction with Tumberumba we could send away some thousands of tons every year, and supply Wagga Wagga and all towns and stations to the west. With cheap carriage we could undersell all imported potatoes. Even now those from this district command a much higher price in Wagga Wagga than imported stocks, owing to their freshness and better keeping qualities. At the recent show in Wagga Wagga all entries of potatoes but one were from Humula, and all the first and second prizes came here. Potatoes would be our staple crop for some time to come, and provide a very large tonnage for the railway.

Onions.—This is one of the most paying crops a farmer can grow. Yield, from 10 tons to 20 tons, and sometimes 40 tons, per acre. They require more attention than potatoes, but are generally dearer, and would be largely grown if there were means of carriage. Soil, climate, &c., suit them well. They would grow as well as at Port Arlington, near Geelong, from which place thousands of tons are sent annually.

Turnips.—In his address to the Examiners in Wagga Wagga, Mr. Gormly mentioned the well-known fact that during a recent drought a station-owner in Riverina had spent £40,000 in feed to keep his stock alive. Most of that feed was said to be imported hay. Had the railway been running to Tumberumba the £40,000 would have been spent in this district. Unfortunately, droughts are neither few nor far between, and it is only reasonable to assert that immediately after the opening of this line a large trade would arise with Lower Riverina in produce for feeding stud sheep, not only in dry seasons, but every autumn, provided a large quantity could be furnished at a reasonable price. If the owner of a

valuable

valuable stud could, by merely sending an order to a local agent, get 100 tons of turnips delivered at his nearest railway station cheap, we may feel confident the 100-ton orders would become very frequent, and would be often increased to 1,000 tons in the dry seasons. Turnips are among the heavy-yielding crops, from 10 tons to 40 tons per acre. Climate and soil suit them admirably.

Dairying.—About twelve months ago a movement was made to start a co-operative butter factory at Humula. After discussion it was decided that the difficulties attending carriage were insurmountable. When the railway comes a co-operative butter factory will be one of the first industries started at Humula. The climate and pastures are peculiarly suited to this industry.

Bacon.—Where so many root crops are grown and milk is plentiful, pig rearing should be extensively carried on, and a bacon factory become a paying concern, especially in a district where the climate is so suitable and in close connection with districts where the climate is not suitable for curing. Price in the inland towns is said to be 11d. per lb. during some months every year. Even at 7d. per lb., and easy carriage, this article would pay handsomely.

Hay and Chaff.—As long ago as the palmy days of the Beechworth diggings (about forty years ago) hay was grown at Humula and carted to Beechworth, selling there at up to £100 per ton. This fact itself proves the great disadvantages we labour under, as the fine land where that hay was grown has not been cropped during the last thirty-five years. It would not pay to cart hay 45 miles when the price is only £3 per ton, though all difficulties were faced to carry it 150 miles for a paying price. Any land here that is considered fit to cultivate will produce 3 tons of hay per acre, while as much as 8 tons per acre has been harvested. There is a good deal of farming about Wagga Wagga now, and it might be supposed that in this line the farmers there could compete with us. Yet in two successive shows in Wagga Wagga the prices for hay and chaff have come this way, Mr. J. Archer, of Tarcutta, winning on both occasions against a number of Wagga Wagga competitors.

Fruits.—All kinds of fruits suitable to a temperate climate grow here to perfection, and there is no doubt were facilities of transit afforded there would soon be a co-operative preserving factory at Humula to use up the smaller kinds, such as raspberries, currants, &c. This is a trade capable of any expansion, increasing as time goes on. There are thousands of acres of land suitable for orchards, requiring no irrigation. At the last Wagga Wagga show, held in September, samples of apples and pears were shown in the Humula trophy which would have commanded good prices anywhere—even in London.

Durability of Soil.—Land here does not wear out after a few years cropping. Amongst many other examples may be cited one paddock, which has been cropped continuously for hay for over twenty years. During that time the crop has never been less than 3 tons per acre, and sometimes 5 tons per acre.

Improvement of Grass after Ringbarking.—Mr. Gorudy in his statement to the Examiners in Wagga Wagga laid great stress on the wonderful improvement in the quantity and quality of grass even on the highest hills after ringbarking. We shall have pleasure in showing you examples of this where what were apparently barren hills before ringbarking are now covered with fine grass equal to carrying three sheep to the acre throughout the year, while ten sheep to the acre would not keep the grass down during the luxuriance of the spring growth. It is generally believed that with proper clearing and subdivision the whole of this fine district may be brought to the same state of perfection.

Fattening.—This was also mentioned at the meeting in Wagga Wagga. Cattle have always fattened well in this district. Sheep used not; but since the improving and sub-division of the land sheep fatten well. Of late years fat sheep from here have brought high prices. At Sydney, up to 14s. 9d., with only seven months' growth of wool. In Wagga Wagga, to 10s., with only three months' wool. We mention this as a proof of the wonderful change made by improving the land.

Root Crops.—Generally averaging many tons to the acre. We consider that 2,000 acres of land cropped with potatoes, &c., will produce railway carriage equal to 20,000 acres of the ordinary wheat land of Australia, and pay the grower better.

Wool.—There is the wool of over 120,000 sheep to be trucked at Humula.

Timber.—Though we have not the magnificent forests that adjoin Tumberumba, there is still a large quantity of fine timber here, there being over 37,000 acres of forest reserves, besides numerous other reserves and Crown lands not yet ringbarked. Already posts for fencing purposes are becoming scarce and dear down the river. We could supply them with thousands of tons per annum at one-half the price they now pay, and yet make a good profit. In a few years the great mileage of fencing there will want renewing. They must look to us to supply them with posts. That means many thousands of tons of carriage for the railways annually. In fact, those who have carefully thought out the matter, and know the state of the timber trade in Riverina, are disposed to believe that that commodity alone would almost afford sufficient carriage to pay the expenses of the Wagga Wagga-Tumberumba line. Every week now teams may be met carting railway sleepers from this direction to Wagga Wagga.

Value of Land.—This question was asked by the Examiners in Wagga Wagga. Land without improvements has been sold by auction in Wagga Wagga equal to £3 15s. per acre freehold, and privately at the same price. Partially improved land has brought to £4 15s. per acre. Township allotments sold by auction in Wagga Wagga (land agent) to £34 10s. per acre. Special areas, unimproved, have been selected at £5 10s. per acre (Tarcutta). There are about 2,000 acres of land on Oberne and Humula which, if situated in Victoria within a reasonable distance of a railway, and cut up into farms of from 20 acres to 50 acres each, would bring up to £40 per acre. Most of this land has already been cultivated for tobacco and potato growing. Cultivated for roots, it should bring to the grower from £5 to £10 per acre per annum clear of expenses. If the whole were planted with root crops, and it is already cleared and fenced, while the plant and men are ready for the work, it would produce, independently of all other cultivated land here, from 10,000 tons to 20,000 tons of produce per annum.

Population.—The bulk of produce grown in this district will always be of the character that requires many hands, and not machinery, thus supporting a very large population.

Irrigation.—While speculative projects are frequently advocated for spending vast sums of public money for irrigation purposes, here we have a district entirely neglected, where no irrigation is required, the opening up of which would be no speculation; while for crops that require irrigation in almost any climate—such as hops—there are larger areas than could supply hops for the use of the whole Colony, splendidly adapted to the crop, which can be irrigated by gravitation at a nominal cost. Hops grow here like

like a weed. It is one of the great advantages of the future. After the railway has been running a few years hundreds of people will leave Wagga Wagga and the village about to go picnicing to hop grounds, for gathering the crops, as they leave Hobart, in Tasmania, for the hop grounds at New Norfolk.

Possibilities.—The possibilities of the district are so great it would require a large pamphlet to even lightly touch upon them. We must, therefore, confine ourselves to commenting on things as they are. To revert to previous statements: in pointing out the root crops are our strong point, we do not wish to imply that large quantites of grain will not be grown. Without the development which will follow the opening of the railway, there are now good areas which are cropped with wheat and oats as inducement offers, and which are available without further preparation. As another instance of how peculiarly this country "works" in connection with Western Riverina we may mention that our grain crops are harvested in December and January. By that time it is known what the season is likely to be in the west. Should this season be dry and hay likely to be wanted, crops which had been sown for grain could be cut for hay, greatly to the benefit of the lower country and the railway tonnage. Another peculiarity is, that in wet seasons, when forage is plentiful, hay crops are seldom as good as in dry seasons.

Statistics.—The latest statistics gathered were handed to Mr. Williamson, Secretary of the Wagga Wagga Railway League, who has embodied them in the report of the Borough Council.

Reserves.—There is a railway reserve of 10,000 acres on each side of the line, commencing about 6 miles south-east of Humula, a timber reserve of 30,000 acres at Carabost, commencing about 8 miles south-west of Humula, and another timber reserve of 7,000 acres, commencing about 8 miles west of Humula. Besides these, are a number of smaller reserves, some of them being very good land.

It must be borne in mind that the statements throughout are respecting our own immediate district only, though some remarks apply with equal force to the land south of us to Tumberumba, as well as the Tarcutta district. If Humula can do so much, what can the whole line do? To us this Wagga Wagga-Tumbarumba railway line appears a national undertaking, not for the benefit of the people of Wagga Wagga, Humula, or Tumberumba only, but all the country to the west and north-west of Wagga Wagga seems absolutely to depend on this district for the various products mentioned in our statement. Railways have been run into those unproductive regions, while here is land and timber of unsurpassed quality lying useless for want of means of transit. Our produce would also help to make these railways pay.

Of course with you, gentlemen, the main consideration is, will the line pay? There can be no doubt the line will pay if we grow the produce, and if the timber is here. We think we have proved that if we have the line it will pay us to grow the produce. Therefore, we will grow it. We shall have pleasure in showing you samples of all products mentioned herein, growing healthily, and of good quality. Several gentlemen have volunteered to be examined on any subject mentioned herein, or on which you may wish to be informed.

Though you have already been presented with a valuable report, prepared by Mr. Williamson, we have thought it our duty to go more into detail, owing to the large variety of products grown here. Trusting this may be of service to you, we are, gentlemen, your obedient servants, the Humula Progress Committee (*per* R. S. Douglas, Hon. Sec.)

Submitted at Humula, on 6th November, 1890, by R. S. Douglas, Secretary Progress Committee.

G.

WAGGA WAGGA-TUMBERUMBA RAILWAY.

In accordance with a resolution of the Borough Council of Wagga Wagga, the sub-committee appointed for that purpose has deemed it expedient to compile the arguments, adduced from time to time, in favour of the construction of a line of railway from Wagga Wagga to Tumberumba, and the statistics collected in support of those arguments. The compilation is presented to the Examiners of Railways in this pamphlet. It consists of a report handed to the Railway Commissioners, on the occasion of their visit to this district, by the then Mayor, H. B. Fitzhardinge, Esq.; a condensation of the circular issued by the Railway League in the year 1884; a revision of the report and statistics furnished in 1887 by Mr. J. T. Williamson, who was appointed specially for that purpose; and a final report prepared, at the instigation of the sub-committee of the Council, with a view to verifying the former statistics. To these is appended the report of Mr. Inspector Roberts, which is considered favourable to the construction of the proposed line.

C. H. CROAKER, Mayor.

Reports.

The Special Committee of the Borough Council of Wagga Wagga, appointed to take into consideration the matter of the proposed railway from Wagga Wagga to Tumberumba, desires to place before the Commissioners for Railways the fact that the construction of the proposed line of railway will be of great advantage in aiding the opening up and settlement of a large tract of country, eminently suited for pastoral and agricultural purposes, and which also contains timber and minerals of great value; but which, for want of means of communication, and facilities for carriage of produce and live stock to available market, has long remained thinly populated and almost unsettled. During the last ten years, notwithstanding the great drawback to settlement by the difficulty of access to the country in question population has increased, and considerable settlement has taken place, and there is no doubt if the proposed line is constructed the country will become thickly settled on by agriculturists and producers, all of whom will furnish revenue to the railway.

It is well known that in seasons of drought on the plains, in the large area of pasture country known as Riverina, the sheep and stock are sent from that portion of the country to the hill country about Tumberumba, and that a line of railway in seasons of drought would be the means of saving many thousand of pounds worth of live stock to the Colony, as well as producing large revenue to the railway.

The climate of the Tumberumba district in summer months is cool, healthy, and invigorating, and if means of access thereto by rail were available they would be largely made use of by persons residing in the hot climate of Riverina, thereby adding revenue and traffic to the service.

From

From careful inquiries, made from reliable sources, the Committee has ascertained that, within a sufficiently near distance to the line, as surveyed, to make use of the same there is a population of about 5,000 persons, occupying an area of about 500,000 acres of land in grazing and agricultural pursuits, producing great material wealth to the Colony, which would be considerably increased by the means of communication and carriage of produce which would be afforded by the construction of a railway.

As there is a large area of Crown lands along and adjacent to the proposed line of railway available for settlement, a considerable revenue to the Crown would accrue from the sale of the land; and revenue would increase to the railway. Owing to the difficulty of access from the country about Tumbarumba to the Riverina district and district, between Sydney and Tumberumba, and the easier access to the Victorian border, a large quantity of the trade of New South Wales finds its way into Victoria which would come to New South Wales if the proposed line was constructed.

In further proof of the contentions of the Special Committee as to the necessity for and advisability of constructing the proposed line, attention is requested to the exhaustive and able pamphlet compiled in the year 1884 by the secretary of the then existing committee of residents of Tumberumba and Wagga Wagga, appointed for the purpose of advocating the construction of the proposed line of railway; also, to the further full report and reliable statistics as to population, products, and live stock on the lands contiguous to, and which would be benefited by, the line, and add to its revenue, compiled by Mr. Williamson from personal visits and inquiries in and along the country in December, 1887, and published in the *Wagga Wagga Advertiser* of 3rd December, 1887.

HY. BERKELEY FITZHARDINGE, Mayor.

RAILWAY LEAGUE REPORT, 1884.

THE following information is extracted from a pamphlet published by the Railway League Committee, copies of which were handed to each member of the Legislative Assembly, to the members of the Chamber of Commerce, and to the leading business men of Sydney:—

It will be most desirable to show in what the trade of the Tumberumba and Upper Murray districts of New South Wales consists—

In the first place, the line will traverse a country which is used for sheep-raising and wool-producing. It will also tap the Upper Murray districts, where also there is a considerable amount of wool grown. Hitherto the clips of these parts have been sent for sale to Melbourne, but it only requires the construction of the proposed railway to have them diverted to Sydney. Here, then, is to be found a trade which must help to augment the payable prospects of the line. Of course, not only will the clip be forwarded by it, but the pastoralists will also draw their supplies from Sydney over it. Too much cannot be said in favour of the construction of branch lines, which, when constructed, will act as feeders to the main trunk line; but where, as in this case, such branch lines will divert the trade from a neighouring colony, and entail the enlargement of a trade with our own markets, their value is to a very great extent incalculable.

As regards agricultural products, it is recognised that the line will pass through and tap some of the most fertile lands of the Colony. All that is required to make this district the granary and the greatest cereal-producing centre of the Colony is the opening of it up by means of a railway which will give quick communication and reasonable carriage charges to other places where grain and produce cannot be raised. The soil is admirably adapted for the raising of hay, oats, corn, barley, and maize. Hops too are grown, and as the soil is of the same description as that of Gippsland—the hops from which realise good prices in the home market, it will be seen that their production will be of immense value to the trade of the Colony. As a matter of fact, and as showing the enormous productiveness of the soil, it is on record that "from lands which have been cropped for the past twenty years 40 bushels of wheat per acre and 60 bushels of oats have been returned." Then, again, potatoes are grown to perfection. It is true that with ready communication an immense trade in this esculent would spring up. The return per acre is above the average, and the crop itself is equal to any grown in the potato districts of Victoria. Want of access to markets has been the active deterrent to the raising of potatoes in this district. In its absence it has been found impossible to compete with the Victorian product, for Warrnambool potatoes can be landed in Riverina by ship and rail at a cheaper rate than they can be dragged over a rough bush road 70 miles in bullock or horse waggons. Here again would be found payable freight were the railway in existence. Nor must it be lost sight of that the whole of the Riverina district is entirely supplied with this very necessary article of diet from Victoria; while our on lands, which can produce an article equal if not superior, in comparison and in value, lie locked up—shut out from any chance of competing with those of the sister colony. All other descriptions of root crops invaluable for food in dry seasons, can be raised equally as successfully. Tobacco is also grown in considerable quantities; and as the commercial worth of this product is of such large magnitude, surely it will be wise to assist in developing an industry which must cause large sums of money to flow into the Colonial Treasury.

In regard to these products, it must be borne in mind that what is now actually raised is forwarded solely by the Great Southern road to Albury, and thence finds its markets in Victoria.

A trade in the timber which grows on the mountain sides would also soon grow into large proportions, for here are the mountain ash, white and yellow box, blackwood and urabi, ironbark, and stringybark, and all species of valuable gum-trees. Among these are to be found such timbers as grow upon the mountains of Gippsland—timbers which a late report (handed in by the Commissioners appointed for the purpose to the Victorian Government) states are superior to any other, indigenous or brought from other climes, for the construction of railway rolling-stock. These timbers would also be utilised by the residents of Central and Lower Riverina and the Lower Darling towns and plains, who are now supplied with timber from Victoria, by way of the Murray, and thence up the Darling and Murrumbidgee Rivers, and by road up the Lachlan. The mountain ash is invaluable for coopers' work, palings, and shingles, as it readily and evenly splits, and bends with freedom in any given direction.

These mountain districts teem with minerals of every valuable kind. Here have been found gold, tin, silver, copper, lead, and iron. For many years the gold and tin mines have been worked, and to a great extent satisfactorily. There has, however, been one great drawback to the development of the wealth which lies hidden in the bowels of the earth, and it is the absence of any road over which the heavy machinery necessary for the extraction of the ore could be carried. The workings, therefore, to a great extent, have been mere surface scratchings, and the extraction of the minerals has

has been performed in a most perfunctory manner. With better means of carriage at disposal, fields would be opened up which would find employment for the sturdy miner, who, it is well known, in a short time settles down as a cultivator of the soil. The proposed line would meet the difficulty of carriage, and the development of the mines would soon become a factor in the production of payable returns for its construction.

It is well known that when the heat of the summer parches the herbage and grasses of the plains, sheep-owners turn their attention to the mountain country, where the herbs and grasses grow greenly luxuriant. Their great desire is then to travel their stock to these pastures new, where they can fatten on the most succulent of food, while at the same time opportunity is given for the grass to shoot under influence of summer and autumn showers upon the plain country.

During droughts hundreds of thousands of sheep have been left to perish on the runs, while the travelling stock routes have been choked with the carcases of thousands of sheep too weak, in the absence of feed, to travel on to their destination, and the grass of the mountains has been left unutilised, to be burnt away to make room for next year's growth. This great loss to the pastoralist and to the Colony could be overcome by the construction of a line of railway over which the sheep could be trucked to their destination. The construction of the line herein proposed would meet this difficulty, and save to the owners and the Colony immense wealth. Should the line be made, there would rapidly spring up a large passenger traffic, particularly during the summer months. The mountain air of the high-lying table-lands is famed for its salubrity and equable temperature. As a huge sanatorium, the Tumberumba district cannot be surpassed, and with a railway running into it, no doubt there would soon spring up summer residences, to which could be sent the families of the Lower Murrumbidgee and Darling pastoralists, and town residents, with a view to their escape from the prostrating influences of the great heat. The clear bracing mountain air would be eagerly sought by such, and so a traffic ensue calculated to materially increase the returns of this line.

This line would be but 68 miles in length. For the first 30 miles it would be easy of construction, for it passes, as surveyed by the Government Engineer, over a level country. For 45 miles from the starting-point (Wagga Wagga) there would be no engineering difficulties to be overcome, and the remaining 23 miles do not present any obstacle to the construction of a not too expensive line. The desirability of the line is unquestioned, and the reader is requested to consider well the advantages that must accrue to the district itself and to the Colony generally by the tapping of the mountain districts by a line of railway which will divert a growing trade to Sydney, which trade has up to the present, by reason of a want of communication with the markets of New South Wales, rolled uninterruptedly towards Victoria.

Report of the Secretary of the League.

(From the *Wagga Wagga Advertiser*, 3 December, 1887).

In accordance with a resolution passed at a committee meeting on Tuesday, the 22nd inst., held at the "Commercial Hotel," I went to Humula, for the purpose of gathering every possible statistical detail which should be of importance for the information of members of Parliament when Mr. Lyne's motion, "The necessity for constructing a railway from Wagga Wagga to Tumberumba," comes on for debate on the 6th December.

I proceeded to strike the railway line where it crosses the Kyamba Creek. On my way to that point, which is 11¼ miles from Wagga Wagga, I interviewed a number of people, and ascertained that between it and Alfred Town, within a radius of 7 miles, there were twenty settlers, all of whom were family men, the school averaging an attendance of from thirty-eight to forty children. The means of exit from the selections to the railway line are good, and as no doubt there will be a station where the line crosses the Kyamba Creek Road, the railway would, with great advantage, be used by the settlers for forwarding their produce to market. Each settler grows his crop, and, in addition, most of them deal in dairy and farm produce generally, in addition to running sheep and cattle. This point, too, would be the only centre for the produce grown on Yellow or Toole's Creek, between Kyamba Creek Road and the main Sydney road. The nearest selector is Mr. Jeremiah Doolan, who owns a freehold of 215 acres. He has this year 40 acres of wheat sown, and could he get his crop to market down the river by railway carriage he would have every acre cultivated. He has a family of five children, and is so satisfied with the productiveness of his holding that, given a market, he could live most comfortably.

The line here passes through Mr. Maloney's Toole's Creek Station. This year he shore 16,000 sheep, with an output of over 165 bales of wool. They would, of course, be trucked at Kyamba for the Sydney market. Then, again, his fat stock would also be trucked there. To the right of the line are Mr. Ingram's Book Book and Mr. Alex. Smith's Kyamba Stations. Book Book Station shore 25,000 sheep this year, and it has some 100 head of cattle upon it also. The wool has heretofore been forwarded by the Sydney road to Melbourne, *via* Albury, but with railway communication at the station above this clip would be forwarded to Sydney. Kyamba shore 30,000 sheep, and has some 100 cattle besides.

Passing on up through Toole's Creek, I came to the selection of Messrs. Chapman, Laneys (3), White, Cruickshank and Jones, Schumack, and another on the back of Book Book, while away in towards Borambola are numerous families, all of whom have the usual number of acres under crop, and would increase the crop area could they find easy access to market. Mr. Chapman, junr., holds 400 acres. Nearly every acre along the railway which passes through this holding is capable of growing splendid cereal and potato crops. Here was to be found proof of the adaptability of the soil and climate for fruit-raising. An embryo orchard has within it apple, peach, mulberry, orange, and pear trees, while strawberries are very plentiful, and the gooseberry bushes yield fruit almost as large as a pigeon's egg. Mr. Chapman would crop largely if railway communication were available. The other selectors gave the same experiences.

After crossing the Sydney road the line strikes away in the direction of Umbango Creek, and although till that creek is reached there are not many settlers on the line, still those who are there are prospering, and prognosticate the opening up of large areas as soon as the country is brought within easy access of markets. The line here passes through Mr. Mate's Tarcutta station, and the wool crop and the fat cattle raised would aid much toward the railway revenue. Mr. Mate shore some 30,000 sheep, and has besides between 6,000 and 7,000 cattle on the run.

The

The line then passes up the Umbango Creek to the American Yards or Humula. Every acre on each side of the line here is of rich alluvial and chocolate soil, and the growth of grass and crops this favourable season is hardly to be realised without a personal inspection. Here there is a dense population, and on this creek alone there are 200 acres under tobacco cultivation, besides the usual crops of barley, wheat, oats, and potatoes. Away to the left of the line is Oberne Creek, with an equally dense population, but with a much larger area under tobacco and other crops. It cannot be denied that these creeks could produce crops tenfold, and the settlers aver they would cultivate ten times as much land could they get their produce to market. At the Umbango Creek, near the residence of Mr. Peter Hartnett, there is a public school, with a large average attendance. The settlers were prepared to guarantee at once four or five times as much crop as they now produced if they could get it away, and the limit is an unknown quantity. I was credibly informed, and the fact was brought under my immediate attention by inspection, that one-half of last year's tobacco was lying on the hands of the growers, because there was no means of getting it away. This seemed so incredible that I inquired the reason, and was informed that the season had been so wet that teams could not travel, and that now the summer had set in the teams were employed at the more lucrative work of carrying away the wool. Hence it has come about that between £5,000 and £6,000 worth of tobacco is lying on the Umbango Creek. Now, that is one-half of the crop. Tobacco crop is worth about £50 to the acre, so that last year there was grown, on the Umbango Creek, £11,500 worth. Tobacco buyers from Sydney have inspected the crop, and are prepared to pay down for every leaf so soon as it can be got to market. It will be perceived, therefore, what an immense loss it must be to the struggling settlers who, having expended their savings in cultivating the land, have to wait a year or so for a return, because of the absence of easy communication with the markets. I also saw lying at Mr. O'Keefe's shed, besides tobacco, eighteen bags of oats and sixteen bags of barley, both of excellent sample, showing the capbability of the soil.

The Oberne Creek is in exactly the same position, and if it were possible the settlers there have to contend with worse roads and harder difficulties of carriage. On this creek there are some 150 settlers, while with those on Umbango and Humula the total reaches some 300, making a population with the families, with an average of five to a family (some families consisting of from ten to thirteen children), of about 1,500 souls. Mr. C. D. Bardwell, of Oberne, shore some 40,000 sheep this year, and has between 6,000 to 7,000 cattle as well. He also crops very largely over 300 acres tobacco. These Umbango, Humula, and Oberne districts raise an immense number of sheep, and when it is pointed out that within a distance of some 7 miles on either side of the line there are some 100,000 sheep and 9,000 cattle, and 700 or 800 horses, besides a number of pigs raised, in addition to the crops already referred to, the immediate advantage of the line to the people of these districts and the Colony generally must be apparent.

I desire to more immediately point out what is somewhat of a new divergence from the old order of things on the part of pastoralists. Through all this country I met with encouraging information from the managers and holders of the different holdings, and when I found such men as Mr. George P. Wilson, of the Big Springs; Mr. Bardwell, of Oberne; Mr. Maloney, of Toole's Creek; Mr. William Abbott, of Umbango; Mr. Kennedy, of Humula; Mr. Galvin and Mr. Nugent, of Oberne; the Messrs. Cheney, of Umbango; Mr. Phelan, of Humula; Mr. D. Cox, of Murraguldrie, and so many others, so deeply identifying themselves with this proposed railway line, their support alone should be a great factor towards advancing the arguments in favour of the line.

On my return I visited Gregadoo, Big Springs, and went all through that district, so that the statistics compiled from the information gathered by me are accurate and reliable, I having taken good and every care that my compilation should be under rather than over the exact figures, but still venture to think that they are as nearly as correct as possible.

On the southern side of Kyamba Creek I also met with every encouragement. Mr. Wilson, of Big Springs, who now sends his wool to Melbourne, would send every pound to the Sydney market, and would also send all his fat stock there. The railway passes the most fertile portion of his estate, and were it running he would commence agricultural pursuits on a large scale (he has since done so), but from this he is now debarred by want of railway carriage.

Nor must it be forgotten that the commencement of the line, before it passes through the Kyamba district, traverses the celebrated Lake Albert district. Members of the committee and members of the district are thoroughly conversant with the resources of this fertile district.

In the district there must be over 100 families, each producing cereals, dairy and other farm and agricultural produce, in addition to sheep, cattle, and horses.

It is desirable to again have the fact impressed upon members of Parliament and the Colony generally that the opening up of this country to Tumberumba by rail would enable supplies of all kinds of produce which now came from Victoria to be forwarded to Lower Riverina, and so materially aid the revenue of the Junee-Hay railway line. Further, the return from the trucking of sheep from the dry plains of the interior from Hay to Tumberumba during the summer months would almost pay the interest on the outlay.

In conclusion, I find the following facts, compiled from my journal. Between Wagga Wagga and Humula, on the proposed Tumberumba railway line, the following statistical information is substantially and reliably correct:—

Population to be benefited by the proposed railway	2,500
Sheep	300,000
Cattle	18,000
Horses	2,600
Crops—	
Cereals (acres)	4,000
Tobacco „	700

To these statistics must be added a great number of pigs and poultry, the quantity of which I could not procure, and so cannot reliably estimate.

It will be noticed that I have not mentioned the freehold and leasehold areas. This is not an omission, but the importance of this fact will at once be seen when it is explained that, with the exception of the reserves, almost the entire acreage has been alienated from the Crown. The construction of the proposed railway, therefore, means the opening up of these vast areas for agricultural pursuits, and I have

have been convinced from conversation with the pastoralists that they have become awakened to the fact that as the country becomes opened up it will enhance the value of their holdings by encouraging agriculture, and so in time the big estates will become divided as is now proposed at Humula. (Since divided and sold.)

As regards the Tumberumba statistics, members of the League assured me that they could not forward me in time for the despatch for Sydney a full report on the district, but requested me to call attention to the fact that yearly large areas of grass, to be counted by the hundreds of thousands of acres, had to be burnt off, because of the inability of stock from the plain to reach the luxuriant pasturage to eat it off. This would be remedied if the country were opened by rail, and so not only lead to the utilisation of nature's gifts, but also save the country thousands of pounds, which are now annually lost by reason of the scorching heat of the interior drying up the herbage, and so entailing the death of scores of thousands of sheep, cattle, and horses.

They also again desire to have the fact of the adaptability of the immense forests of timber—the mountain ash and other—lying around Tumberumba for cooperage and carriage-building purposes again brought prominently under notice. Here alone, they contend, is to be found a mine of wealth for the Colony. Lastly, they desire members of Parliament to be impressed with the great wealth to be found in the mineral deposits of gold, iron, tin, copper, &c. And with these facts they furnished me, by telegram, with the following statistics:—

Between Humula and Tumberumba, and the latter district—

Population	1,670
Freehold land (acres)	155,786
Horses	3,673
Cattle	6,979
Sheep	99,881
Pigs	1,070
Leasehold area (acres)	278,215
Cultivation (acres)	3,128

Grand Total.

Population	4,170
Sheep	455,786
Cattle	24,979
Horses	6,273
Crops (acres)	7,828

Besides some thousands of pigs and poultry.

His Worship the Mayor, C. H. Croaker, Esq.,— Wagga Wagga, 16 October, 1890.

Sir,

I have the honor to inform you that, in accordance with instructions received from the sub-committee, I proceeded to Humula on Tuesday last for the purpose of verifying former statistics prepared in connection with the Wagga Wagga-Humula-Tumberumba railway line, and of ascertaining what increase had taken place in the population, area under cultivation, products, &c., since the date on which they were prepared.

On my arrival at Humula I placed myself in communication with the principal residents, and, in response to a request from me, they assembled on Tuesday night, and gave me information, which is contained in the following report:—

Population.

By means of the sub-division of the Humula estate, and the ever-increasing settlement upon lands open for selection and purchase, the population of the district lying between Wagga Wagga and Humula has increased very considerably during the past three years. A reliable estimate, based upon the number of residents, and taking the average membership of the families at five, gives, with the employees, a total population of over 3,000 souls living in contiguity to the proposed railway line. In addition to this settled population, there are a great many Chinese, who are employed in tobacco culture, numbering between 300 and 400.

Live Stock.

The increase in live stock has been very material all through the district of Wagga Wagga, as shown by the returns furnished to the Inspector of Stock, that for the last year being, in sheep alone, 330,000. It is, therefore, only natural that in the portion of the district now immediately under notice the increase has assumed similar proportions. From the stock returns I find that sheep have increased nearly 100,000 since last estimate, the total now being 400,000, instead of, as then, 300,000. The number of horses has not materially altered, and can now be placed at the same figure, 2,600. Of cattle there are not so many, there being now 12,000, instead of, as in 1887, 18,000. Pigs and poultry are in the usual proportion, but it would be difficult to arrive at a correct estimate of the numbers.

Agriculture.

In the vicinity of Wagga Wagga the area under cultivation has gone, and is going, on steadily increasing. In whatever direction one turns, where the roads are at all good, giving access to the township and railway station, increased areas are being cultivated, and it is a noteworthy fact that the pastoral lessees are turning their attention to farming. The owner of Big Springs, Mr. G. P. Wilson, has this year placed under cultivation 500 acres, and will year by year increase that area. As the farms become further distant the increase in cultivated area is not so marked. The reason for this is simple. It is given in the words of a farmer, "What is the use of growing crops when it is impossible to get them to market, except at a prohibitive cost." In this connection it may be stated that the present charge per ton from Humula to Wagga Wagga, a distance of 39 miles on the measured railway line, is £2 10s, and the roads are so bad that it takes over a week to cart them that distance. The area under cultivation this year is estimated at slightly over 5,000 acres. There are thousands of acres ready for the plough when

when access to market is given, and the fertility of the soil, together with the reliableness of the seasons, guarantee immensely increased cultivation of hay, corn, oats, barley, and potatoes, so soon as that access is conceded. With regard to oats, one grower, Mr. W. Abbott, threshed 312 bushels of sound oats and 32 bushels light oats, from a crop grown on 3½ acres of ground.

The soil and climate of Umbango and Humula and Oberne are suitable for the extension of tobacco culture. Already many tons are grown annually, and owing to the very bad state of the roads hundreds of tons of this valuable product have lain year by year stored where it has been produced. On the Umbango and at Humula over 400 acres were cropped last year, and notwithstanding the many tons that have been sent away, there still remain nearly 250 tons in the district. At Oberne the area cultivated is greater, and the proportion of tobacco stored for a similar reason the same. When it is estimated that at a low value tobacco is worth £35 per ton on the ground, it will be seen that, with 500 tons stored, there is a sum of £17,500 lying dormant, to the great loss of the producer.

Timber.

There is, in great variety, timber suitable for all kinds of manufacture and useful purposes growing in profusion all through the district. For bridge-making it cannot be surpassed. In farm-work it has proved most durable and strong. It is in sufficient plenty to supply all the wants of Lower Riverina for years to come, and it is to this district that Lower Riverina must look for her supply. The wattle grows here luxuriantly and quickly, its bark being an article of great commercial value.

Minerals.

Many kinds of valuable minerals have been found all through the district, and mines would be developed if it were possible to convey machinery to sites waiting for it. Tin, silver, and gold are all known to exist in the locality.

Reserves.

There are many valuable reserves abutting on, and in proximity to, the railway line, and when thrown open these would readily be taken up for settlement were the railway constructed.

Increased Cultivation.

I must add that, in considering the advisability of constructing the proposed line, the fact must not be lost sight of that, given the railway, cultivation would increase ten and twenty fold, and by the time the line would be constructed the available goods for carriage along it would fully warrant the expenditure.

Statistics.

Population	3,000
Sheep	400,000
Horses	2,600
Cattle	12,000
Area (acres) under cultivation at present	5,000
Tobacco cultivation area (acres)	900
The area (acres) of the holdings is over	400,000

To these figures may be added the estimated statistics of the Tumberumba district, including that between Tumberumba and Humula:—

Population	2,000
Sheep	130,000
Horses	3,700
Cattle	7,000
Agricultural area	3,500

Total.

Population	5,000
Sheep	530,000
Horses	6,300
Cattle	19,000
Agricultural area	8,500
Tobacco	900

I have, &c.,

J. T. WILLIAMSON.

MR. INSPECTOR ROBERTS' REPORT.

Government Railways of New South Wales,

Secretary's Office, Sydney, 7 May, 1889.

Sir,

In compliance with the request contained in your letter of the 17th ultimo, addressed to the Honorable the Minister for Works, I have the honor to forward herewith a copy of the report furnished by Mr. Inspector Roberts, relative to the proposed line of railway from Wagga Wagga to Tumberumba.

I have, &c.,

H. McLACHLAN,

For Acting Secretary.

James Gormly, Esq., M.P., Legislative Assembly.

I have the honor to report that I left Junee on Friday morning for Wagga Wagga, to proceed from that town along the surveyed railway line to Tumberumba, with the view of obtaining statistics or any further information respecting the probable amount of traffic, and so satisfy myself if the circumstances had altered in any way since my report some four years back. Immediately before starting from Wagga Wagga, I personally interviewed Mr. District-Surveyor Orr, to obtain from him, as near as possible, the number of acres held under leasehold and reserves on either side of the line. This information he could not furnish me with at the time, but promised to have it ready by the time I returned from Tumberumba. The information is supplied in tabulated form, and I am indebted to Mr. Orr for his courtesy and attention in preparing it. I next interviewed the police, with the object of getting latest census of the Tumberumba district, embracing number of stock, acres under cultivation, population, &c. Captain Battye, Superintendent of Police, promised to furnish me with the particulars on his return to Albury. I attach telegram from him on the subject. Although the police collect the returns referred to, when completed they forward them to the statistical branch, Sydney, but do not keep copies. No doubt these returns have a very important bearing on the subject of constructing the new line, and for that reason I assume the particulars will be obtained in Sydney. In their absence I was compelled to do the best I could along the route.

I next interviewed Mr. Williamson, the Hon. Secretary for the Railway League, who kindly furnished me with particulars of the route to be travelled and names of persons to be interviewed on the way, which I found of great service.

In order to give a fair and impartial report on the railway, and knowing that my actions would be closely watched in dealing with the matter, I considered it necessary, if possible, to procure some one thoroughly acquainted with the district and route of the surveyed line to act as a guide. I was particularly fortunate in securing the voluntary services of Mr. Maloney, of Toole's Creek Station, who accompanied me. This gentleman is a native of the Wagga Wagga district, and knows every inch of the country between Wagga Wagga and Tumberumba, and if, during the journey, he could not furnish me with full particulars I required, he was ever ready to introduce me to someone who could do so. For the success of my trip I feel deeply indebted to Mr. Maloney.

Attached you will find enclosed full particulars of the different points that I consider will be convenient for the accommodation of the squatters and selectors, &c., along the proposed line. The prospects of a fair traffic at each place appear good.

Description of route and character of the country.—As you are aware, I reported on this surveyed line some four years ago, so that it is hardly necessary for me to recapitulate what I then stated, having nothing further to add.

The population along the line of route has considerably increased since my last report, with every prospect of a further increase as soon as the Humula and Rosewood properties are cut into small areas and sold. The same remarks apply to the thousands of acres under lease and reserve, which, if cut up by the Government, would also materially increase the population.

Timber and Grain.—If a line is adopted a very large traffic will be opened up in timber, as the country abounds in mountain ash, white and yellow box, iron and stringy bark, &c. As for grain traffic, there is a large quantity of excellent land still available for agricultural purposes, which would be immediately placed under cultivation if the farmers had any means of transit by rail.

Minerals of every description have been found in the locality, but owing to the inaccessible nature of the country they cannot properly be worked. The high rate of carriage to and from the mines has militated considerably against their development.

In the low lands of Riverina the squatters, &c., send stock in large quantities to the Tumberumba country during the summer months. It would be a source of great convenience to them, particularly in dry seasons, if they had rail communication direct to the mountains.

Should a line be made, there would rapidly spring up a fair passenger traffic to the mountains from such places as Wagga Wagga, Junee, &c., in the summer months, and it naturally follows the mountain residents would come down to the lowlands during the winter, on account of the extreme climate in both places at the periods mentioned.

Like all mountainous districts, the rainfall is abundant, and consequently the vegetable products are numerous and plentiful, and the climate is most salubrious.

I append a memorandum from Mr. Willans, solicitor, of Tumberumba, which speaks for itself.

In conclusion, I beg to state that in consequence of the greater facilities for obtaining information, which I was fortunate to have at my command for the report, as compared with my previous one four years ago, and the fact that I was enabled to get more particulars, consequently, I am more favourably impressed with the country.

The population and land under cultivation has considerably increased since my last visit, and the large estates of Humula and Rosewood are about to be cut up into small areas, which must of necessity increase the number of acres under tillage, and number of selectors, &c.

I was not aware, either of the large amount of unalienated land and reserves, which, if submitted and sold, would be eagerly taken up, and would bring good prices.

There is also the fact that the trade of portions of the Upper Murray, Tumberumba, Glenroy, Rosewood, and Humula might be diverted towards Sydney by the proposed line.

Taking all these matters into consideration, I am somewhat more favourably impressed with the necessity of a railway line than on my former visit.

G. J. ROBERTS,
Traffic Inspector.

7th July, 1888.

THE PROPOSED RAILWAY FROM WAGGA WAGGA TO TUMBERUMBA.

LIST OF WITNESSES.

1. Mr. James Gormly, M.P.
2. Mr. R. S. Douglas.
3. Mr. John Archer.
4. Mr. J. J. Peadon.
5. Mr. D. Copland, M.P.
6. Mr. W. Abbott.
7. Mr. G. P. Wilson.
8. Mr. E. W. Donelly.
9. Mr. C. Hardy.
10. Mr. John Chapman.
11. Mr. Bennett.
12. Mr. Heydon.
13. Mr. Rogers.
14. Mr. D. Cox.
15. Mr. P. J. Hartnett.
16. Mr. R. Tresillian.
17. Mr. J. M'Cracken.
18. Mr. P. Nugent.
19. Mr. W. Squire.
20. Mr. R. Levis.
21. Mr. Thos. Bullock.
22. Mr. C. Woodhouse.
23. Mr. W. Mott.
24. Mr. W. S. Cheshire.
25. Mr. G. W. Evans.
26. Mr. J. Doughty.
27. Mr. R. MacMicking.
28. Mr. E. W. Banyan.
29. Mr. S. F. Ramsay.
30. Mr. W. Willans.
31. Mr. D. McHugh.
32. Senior-constable Donaldson, and Mr. John Byrne.
33. Mr. A. McGlynn.
34. Mr. J. McArthur.
35. Mr. G. Burt.
36. Mr. J. Booth.
37. Mr. E. F. Feely.
38. Mr. R. D. Mathews.
39. Mr. M. H. Simpson.
40. Mr. L. Kinstter.
41. Mr. J. Walsh.
42. Mr. A. Wolfe.
43. Mr. R. Levis.
44. Mr. A. Chauffourier.

(1.)

Information supplied at a meeting held at Wagga Wagga on 20th October, 1890.

Mr. James Gormly, M.P., said:—I am prepared to make a statement as you are here to make inquiries as to the desirability of carrying out the proposed railway line from Wagga Wagga to Tumberumba, for which a permanent survey has been made, and for which money has been granted by Parliament. I have had a very intimate knowledge of the country between Wagga Wagga and Tumberumba for the last forty years, and within the last twelve or fifteen years have, on several occasions, visited Tumberumba, and on two occasions I think sent stock from the neighbourhood of Wagga Wagga to that district during the summer months. On one occasion I rented a paddock near Tumberumba, and I gave at the rate of £50 a thousand for the grass for the sheep for two months. As far back as the year 1850-51, I have known stock to be sent from the neighbourhood of the Murrumbidgee River to the table-lands, when a drought occurred, for the purpose of tiding over very difficult times. I have likewise on two or three occasions inspected properties in the neighbourhood of Tumberumba for the purpose of purchasing, and think this has caused me to look very closely at the character of the country and its values, and I found that not only the land in the valleys in the neighbourhood of Humula and Tumberumba and the country between Wagga Wagga and Tumberumba was very rich, but the rich soil extends in a great many instances to the very tops of the hills. I likewise found that the country is heavily covered with timber; when this is ringbarked, and the scrub destroyed, very nutritious grasses grew on the sides of the hills and on their very tops. The white clover which is very valuable and nutritious grass grows to a very large extent in that country, when the timber is removed. I have found on many occasions that when the grass on the country in Lower Riverina, and the country even about Wagga Wagga, was very scarce—in fact when scarcely any grass was growing, and stock was in an impoverished condition, that the grass was growing in a very luxuriant way in the country at Tumberumba, which is a much higher elevation than that about Wagga Wagga and the Lower Riverina. On one occasion I wrote to the telegraph master at Kyamba to give me his record, that had been kept in his office for a number of years—of the rainfall in that neighbourhood. Kyamba is only about 30 miles from Wagga Wagga in the direction of Tumberumba. I found that in a period extending over about eleven years that the rainfall at Kyamba exceeded that at Wagga Wagga by fully one-third. I would therefore consider that, as the country is of much higher elevation at Tumberumba than at Kyamba, the rainfall at Tumberumba would considerably exceed it and as a great deal of the losses of stock and the failure of crops and other inconveniences that persons have suffered from in Riverina and a great portion of New South Wales has been caused by a deficient rainfall, and the rain falling at uncertain intervals, I think that the Tumberumba country, from the matter of rainfall alone, is a country that is very likely to keep a large population. I have to a great extent—a considerable extent—been engaged in agricultural pursuits in the Murrumbidgee District for something like forty-five years. I have owned land now for a number of years, and when very young I assisted in agriculture, and I am of opinion from observations I have made that the country between Wagga Wagga and Tumberumba will carry a large population, and that a family can get a comfortable living on a much smaller portion of land than in many other portions of this Colony. Although to the western and northern directions from Wagga Wagga the country is eminently well suited to the growth of wheat, still the country from Wagga Wagga to Tumberumba and about Tumberumba is well suited to the growth of root crops, and the production of oats: a large rainfall and humid climate is required for those productions. I think that if a railway were constructed from Wagga Wagga to Tumberumba there would be a ready market for all those productions. Besides in the neighbourhood of Tumberumba there is a large quantity of very valuable timber that grows to a very great height and is perfectly straight. This useful timber is required in Lower Riverina and the country in and about Wagga Wagga at the present time. We have had constructed, a little time since, a bridge at Narrandera. I found that all the timber used for the construction

construction of that bridge—the whole of it—had to be brought from Sydney—a long way for carriage. Besides it has to be brought by coastal vessels and steamers to Sydney. If a railway line was constructed to Tumberumba that would not be the case, and a very large trade in timber could be carried on. I find now that a great portion of this district about Wagga Wagga is heavily stocked with sheep, and a great many of the properties here carry a sheep to the acre, and in some instances even more. During the winter and spring months there is usually an abundance of grass. I think that a number of stock-owners have purchased properties in the Tumberumba district, freehold and conditionally purchased. They found that when there was a scarcity of grass on their stations in the low country, they had to remove their stock to the high lands during the summer months—usually going to Tumberumba in the spring months. There was then some grass for this stock, but in the autumn months when the stock wished to return, the travelling-stock routes were totally devoid of grass. The stock have to travel for long distances through bare lanes, and the wool is deteriorated, owing to the sheep having to go through these bare lanes. I have found on many occasions that the wool sold from the sheep which had travelled during the summer brought a much less price than the wool taken off the sheep which had been kept on the station during the whole of the year. I do not see under existing circumstances how those owners of properties on the table-lands could utilise those properties with any considerable amount of advantage without they had some means of sending their stock to Tumberumba in a time of need. Some owners would only send their stock to these lands when they had some means of carrying their animals by railway. Persons do not wish to trust their valuable stock on the roads for the reason that there is always a considerable amount of risk and danger run in travelling. The stock in the Riverina country has improved more than that of any other pastoral district in the Colony, and the owners of these properties wish to avoid travelling their stock to their properties in the high country without there is a necessity for doing so. I feel sure that all these persons would be willing to send them up by railway to avoid the risk of travelling. Besides, the country about Tumberumba, Humula, and Tarcutta, and in the south-easterly direction from Wagga Wagga, is eminently suited for growing hay, and for growing oats, and I find that some time since a stock-owner in Lower Riverina spent between £20,000 and £30,000 in buying hay and chaff with which to feed his stock when there was scarcely any grass, in order to save his valuable stock from perishing. A great deal of this lucerne hay had to be brought from the Hunter River; some hay and chaff had to be brought from Cootamundra, and feed had also to be bought at Sydney. Still, this person found the mode adopted a profitable one. Very large crops of hay could be produced on the land about Tumberumba—in many instances, the yield has been from 4 to 5 tons to the acre. I think that trucks that would take sheep to this country would be loaded back with feed for the more valuable stock which was left behind. Therefore immediately a railway was constructed this country would be utilised by small land holders—and the country would carry a much larger population; still immediately on the line being constructed I think it would be extensively used not only in times of drought by removing stock from the Lower Riverina by those persons who have properties at Tumberumba, but I find that persons, even for a distance of 100 miles past Hay, have on many occasions sent their stock on to the table-lands when a drought seemed likely to occur. Even as far as 50 or 60 miles on the other side of the Lachlan, in the direction of Mossgiel and Lower Riverina. From my experience I find that stations at one time could well tide over a drought when they had abundance of couch and salt bush, but these perennial shrubs and the grasses had been destroyed by the hot scorching winds. The owners had been depending on these grasses for feed for their stock and the stock was left without any feed. I consider now that there is an unlimited quantity of this rich soil and with its very abundant rainfall and very suitable climate it is advantageous to the country to construct a railway in that direction. I have taken a considerable amount of interest in this country, before any preliminary steps were taken, to have a survey made by the Government or even before Parliament voted the money. I was Chairman of the Railway League here on several occasions, and visited Tumberumba for the purpose of looking closely at the country. As I told you I sent stock to that part of the country on two or three occasions and gave very high prices for the use of the paddocks. I have looked at the country from an agricultural point of view now for a very great number of years. I have had as much agricultural experience as most men in the district and I am of opinion that this is such a valuable country, and it will support such a large population, and it has such a great rainfall, and it has such a good soil that it would be beneficial that the line that the money has been voted for and sanctioned by Parliament should be carried out. There are besides this, large mineral deposits even in the neighbourhood of Tumberumba but, as it had been so difficult to carry necessary machinery to that district, many of the mines are lying idle, otherwise they would have been worked. I know that there are reefs there—gold reefs—in the neighbourhood of Tumberumba, from which, if they existed in parts of Victoria, where suitable machinery could be brought to bear, a large production of gold could be obtained. Of course in referring to the carriage of stock I think that is only one thing that could be said in favour of the line but still I think it is a strong one. I will leave to the gentlemen along the route who are engaged in growing, to say what the country is capable of producing. I know that even a considerable distance this side of Humula, the country about Kyamba is even found to be well suited for the growth of tobacco. A friend of mine in that neighbourhood has had a large amount of land used for the production of tobacco. I do not think that there are many agricultural productions that will produce a greater return from the same quantity of land as tobacco. In fact the land must be extremely rich and the climate extremely good where people will at all engage in that industry. The country about Humula, a great portion of it, is very rich. On one occasion I inspected a property and I found there was rich black volcanic soil right to the tops of the hills. Of course I do not say that all the country is of that description. I think you might see one hill which did not have very rich soil, still you might go to the next and you would find it to of the most prolific character. Besides this, I have looked carefully over and into the question of where water could be conserved in that country and I find from observation, and I am of opinion, that many of those gorges could be dammed at a very trifling cost and the land irrigated from these reservoirs. In fact I may say, in a valley near Humula, I think, at a cost of about £7,000 or £8,000 or £10,000 there could be a larger amount of water stored than the amount of water stored in the Prospect Reservoir near Sydney, for the surplus water could be run over some stony country which would not scour very easily and thus they could have their waters stored over the summer months and they could save some for dry seasons. I think that the land there is so rich that the agricultural productions from a small quantity would be very great. I find that in going over portions of Victoria where there is similar country which they have caused to be very prolific for agricultural

productions

productions, the land about Courabyra, and the upper portion of the Tarcutta Creek is, I think, as rich as any land I have seen in any portion of the Colony, also the country about Bringenbong, the Upper Murray, and about Tooma and Durra and other stations up there. I think that I have not seen as rich soil in any of the Australian Colonies. As I have stated before I was surprised to find that the rich land existed on the hills' sides. In speaking to a colonist of very large experience, Mr. Brown, the police magistrate of Albury, who, when Chairman of the local Land Board, used to travel on the road through from Albury to Tumberumba and from Tumberumba to Tumut, I found that that gentleman was of the same opinion as I was, namely, that the land on the tops and sides of the hills about Tumberumba was very rich, in fact as rich as any land possibly could be. Therefore in putting this draft statement before you, gentlemen, it may be the means of getting you, when you are going over the line of country to look very carefully on it from the point I have taken in making my observations. I was chairman during the time that the Railway League was in existence, and I visited Tumberumba on one or two occasions for the purpose of viewing the country and seeing whether I was of opinion that the railway should be made. I might state that I visited Tumberumba as far back as the year 1850–51, for the purpose of sending stock from the Murrumbidgee to that country. I think that considerable reliance would be placed for the traffic of the railway on stock. A great deal of the Tumberumba country is covered now with timber; when that timber is removed probably a great portion of the country would carry from five to six sheep during the summer months. When the timber is removed the grass immediately commences to grow or when the timber is destroyed, or its life destroyed. During the summer months, it will carry from five to six sheep to the acre. A large amount of country, when the timber is removed, would be capable of carrying sheep in a healthy condition during the whole of the year. The grass becomes sweeter when the shade of the trees is removed; when the sun is allowed to come on the land it sweetens it considerably. The country grows such a quantity of timber that it could not be expected to grow sweet grasses also. A large amount of money expended on the road from Albury to Tumberumba while the road from Wagga Wagga to Tumberumba was almost wholly neglected. Until lately it was almost impossible to approach Tumberumba by way of road from the direction of Wagga Wagga. A small amount of money would prevent the trade from going along the Albury road. A very good road was constructed in the direction of Tumberumba from Albury, while the road from Wagga Wagga has been almost totally neglected. You pick up the travelling stock route between Wagga Wagga and Tumberumba, I think, somewhere about Kyamba. I have not a map before me but I know from looking at maps some time since that there is no travelling-stock route provided until you get to a place 30 miles from Wagga Wagga. The stock have to travel chiefly through lanes. There are reserves where they can camp, and perhaps feed. You pass chiefly through lanes from Wagga Wagga, and I say that after 300,000 or 400,000 sheep have gone through these lanes the ground is as bare as a road. But if the lanes had some grass when the stock was going through them, the chief losses of stock have taken place at the time when the sheep were returning and there is a great scarcity of grass on the lanes. There is a quantity of large estates in the country but mixed in with these there is a quantity of smaller properties. Of leasehold there is not much. Most of it has been secured. There is a considerable quantity of Crown land on Kyamba Station—a considerable quantity on the leasehold area and some of it is very good land. I think you can wholly rely on the present survey. The permanent survey was made and the whole of the plans were prepared for the purpose of calling for tenders for the work and the money voted by Parliament. The Minister made a promise that you, gentlemen, would be asked to make a special report on that portion of the line from Wagga Wagga to Humula. At present it is considered that Tumberumba should be the terminus. In some other directions a proposal has been made for a light line being constructed from Adelong to Tumberumba. Still I might state my own opinion, knowing that that country is of such an impracticable character that a light line could not be carried out. From my observations of forty or fifty years, I consider that such a line could not be carried out. I have heard no opinion expressed here that any line should be constructed further than Tumberumba. A light line from Wagga Wagga to Tumberumba would benefit and develop all the Upper Murray trade. The extension of the railway from Wagga Wagga to Tumberumba would develop the New South Wales trade that now goes across the Murray River and to Victoria. This extension I consider would develop the New South Wales trade and of the Upper Murray. The trade from these districts would pass through Tumberumba and come to Wagga Wagga. I think the roads from the direction of Wagga Wagga to Tumberumba are very difficult. The roads up the Murray River follow up the valley of the Murray and the population there, for a considerable distance near Albury, is very sparse, for the reason that the mountains run into the river in a great many places and the roads can only be constructed by cutting sidings in the spurs of the hills, and in some instances I have known teams to have fallen down the valleys into the rivers. In many instances the roads go right into the river of the Murray, as at the Greg Greg and Tooma country. The Murray valley widens out, and about Tooma and Greg Greg, and up in that direction, there are numbers of large rich flats. In the Greg Greg and Tooma country the valley of the Murray River opens out into a big valley on the New South Wales side, the mountains and hills run into the river. I might state, as to the roads leading from Tumberumba to the Upper Murray, that, with an outlay of a moderate amount of money, the road from Tumberumba could be made very passable. I know that there is considerable amount of trade carried on—at least I know that there is a fair proportion of trade—I might say it is considerable, carried on on the road from Tumberumba to the Murray, and on to some of the centres of population on the Victorian side of the Murray River. I think that when I visited Tumberumba there was a considerable amount of trade carried on these roads, and I found on driving from Tumberumba to the Murray River by two or three different roads that these were roads which could be very easily made into suitable ones. I would not consider the railway tariffs to be the cause of directing traffic by road to Albury. I chiefly attribute the course of trade to the want of suitable roads. I am aware that some time since, for the purpose of getting the mails from Sydney in a shorter time than was the case at present, the residents of the Tumberumba district requested Mr. Lyne to agitate to have a mail from Wagga Wagga to Tumberumba as it would be the means of their getting their letters and other correspondence and also newspapers and other mail matter to Tumberumba in a much shorter time than they get it now from Germanton. Mail communication is now chiefly through Germanton with Tumberumba. That has been caused by the large amount of money laid out on the main southern road which goes to Albury, branching off near Germanton, while there has been comparatively little spent on the road to Wagga Wagga. I am not in a position to speak of the road from Wagga Wagga to Tumberumba, as to its having being improved during

during the past three years, because I have not been over the country. The road, I know, between Tumberumba and Tooma used to be in a most miserable state; a small amount of money would have made the road quite good. I have driven a four-in-hand from Tumberumba, when the country was very little improved, to Wagga Wagga in something like seven hours. The country was then only in its natural state. I do not own any land in the district. I rented properties there on more than one occasion, and that was the reason of my looking very closely into the qualities of the land in that district, and I do not think that a man will look more carefully into such matter as these than when he is going to invest his money in them. I likewise told you, I think, that I sent sheep to that country on two or three occasions, and also that I rented paddocks there for stock, and that I have sent stock from the Lower Riverina and the Murrumbidgee district in June to Tumberumba. I think that in the year 1864 there was a drought, and that the greatest portion—if not the entire portion of the stock from Lower Murrumbidgee, came through Wagga Wagga, and went along by Alfredtown, by Gregadoo, and by Kyamba, and up to the Tumberumba country. Of course some of the stock might have branched off that route for the purpose of getting feed on the route. They might have gone by way of Adelong, but they chiefly came through Wagga Wagga. I know that on several occasions that stock have been trucked when they were going back from the mountains, because there is less grass always available then. There is little grass in the spring and no grass in the autumn. I think that stock have been trucked. Sometimes stock would have been trucked, but I know that there was considerable difficulty in always getting trucks available. The Railway Department had on many occasions run very short of stock trucks, especially within the last five or six years. Of course you know that it takes a very considerable time for stock to travel a couple of hundred miles by road, at the rate of 6 miles a day, and sheep usually lamb in Lower Riverina—they usually lamb in April or May. In many instances in March. It will be found that the whole of the lamb-crop would be lost if the sheep had their lambs with them. All the lambs would be lost if they had to travel all that time with their ewes.

(2.)

Wagga Wagga, 10 October, 1890.

Mr. Richard Stanford Douglas, grazier, resides 4 miles from the township of Humula. He has 5,000 acres of freehold land, and owns 8,000 sheep; cultivates about 70 acres in tobacco, for which his market is Sydney; grows also some wheat, about 10 acres, which is mostly cut for hay for sale. His nearest town on the railway is Wagga Wagga. The cost of carriage from Humula at present to the railway station at Wagga Wagga is £2 10s. a ton. Sends his wool generally to Sydney:—There has been a good deal of settlement along the route of the line compared to that in most pastoral districts. I consider we have very few districts which have communication with a market which have been so thoroughly settled as this one has been. It is composed of small holders principally. They have kept to their holdings chiefly because they can farm special products, such as potatoes, tobacco—things which produce a lot of money when a small area is cultivated, and these things they can cultivate by their own labour. They cultivate crops to a certain extent, but, owing to the difficulty of getting their stuff away, not so very heavily as they wish to. They could cultivate at least ten times as much. If they grew ten times as much produce as they do now, it would be almost impossible for them to get it away. If they grew any quantity of crop the roads would be so cut up—you can easily see how that would be—for even now they can scarcely get along the road. The roads are so much cut up. They want to send their crops to market, and cannot, owing to the bad state of the roads. The roads are very bad at the beginning of the winter. The average rainfall has been a little over 27 inches in my district, which includes a great many years. There are a great many large reserves available for settlement. One is a railway reserve, and one of 10,000 acres, and there is another of 7,000 acres, and there are other small ones. They are within a reasonable distance of the proposed line. The railway reserve is upon the old Humula run. The proposed line of railway diverges from the old travelling-stock route, and does not join it until it is within 10 miles of Tumberumba, and then it follows it to Tumberumba. The stock route would be perhaps within about 9 miles at the farthest point, from where the station would be at Humula township. The travelling-stock route would be available for settlement. Would be able to reach the existing travelling-stock route 9 miles from the proposed line of railway at the farthest. The present value of land got for agriculture is about from £2 10s. to £3 an acre; but, of course, for special areas, much more has been given. Taking a large area, he considers this a fair average value. The average production of wheat, oats, and hay per acre is from 3 to 5 tons of hay per acre. The wheat is sent to Wagga Wagga. It all goes to Wagga Wagga to be gristed. He believes that it is purchased by the millers. They do not suffer from dry seasons, and they never have a failure of hay crop from that cause. Has never known a hay crop to fail during the twenty years he has lived there. Has never known any crops to fail. The production of tobacco was increasing very much, but it received a check this last year from the market being rather overstocked. If they had railway communication the land that has now been devoted to the production of tobacco could be used to grow something else, and would relieve the people of the necessity of putting in tobacco. The market for tobacco must be considered to be a limited one at present. Humula from Wagga Wagga is about 39 miles by the railway route, and about 45 by the road. There is a Progress Committee. Has not made any special collection of statistics. What have been collected are embodied in that report. [*The pamphlet given to the Examiner.*] Gave them to Mr. Williamson, as Secretary of the Railway League in Wagga. His wool might not be sent always to Sydney. Has been sending it there of late years. It would all go to Sydney if there were railway communication. Their only other road out of the district is towards Albury and Germantown. Only that their business is all connected with Wagga Wagga, that would almost be a shorter route to Melbourne. It is more advisable to go this way. The road from Humula to Germanton is not good for the first five or six miles, but after that it is a good road. There is very little traffic on it. There is far more traffic on the road which has never been improved between Wagga Wagga and Humula. No money has been expended on the road between Humula and Kyamba for the first twelve miles or so of it. All the money has been spent on the road from Tumberumba to Albury. It was the state of the road from Tumberumba to Wagga Wagga that had kept the trade back from Wagga Wagga to Tumberumba. Everything has tended to take the trade towards Albury. There would be a much stronger and larger connection between the districts of Wagga Wagga if the roads were good.

good between Wagga and Tumberumba and Humula. This want of good roads has kept back the district very much. Get £4 10s. a ton for potatoes here and have to pay £2 10s. a ton for carriage; so they actually pay more for carriage than they get for the potatoes. The money has been spent on the Albury road and that takes the trade from New South Wales to Victoria. For they can grow potatoes at £2 10s. a ton at Humula but if they had to pay £2 10s. a ton for carriage and only got £4 in Wagga Wagga, they would be actually growing them at a loss; whereas if they get £2 10s. a ton, they can deliver them at Narrandera and Hay, places which require that kind of produce. The country at Humula is not mountainous; it is hilly, nice, undulating; the elevation is about 1,100 feet above the level of the sea, and Wagga Wagga is about 600 feet. The country between Wagga Wagga and Humula is slightly undulating. There is a good deal of level land for the first 20 miles, and between Humula and Tumberumba the latter part of the distance would be all rich flat land and the railway would go through this. The original Humula run has 80,000 acres. This is now all held in small holdings from which the railway would draw traffic. It has all been cut up; the leasees have sold it. It is all nearly timber reserves. There is a stock route near it. The traffic from all the districts would centre in Humula if the railway were made; the Obern traffic and the lower part of Bago trade also. At Tarcutta creek there is very rich land. A great deal of Mr. Bardwell's station at Obern was in tobacco and corn. There are large quantities of corn there now. He has a large quantity of his own. From the other side of the range traffic would all centre in Humula. The trade would go to Wagga Wagga and Kyamba. Land used for agricultural purposes is worth from £10 to £20 an acre taking a large area. I think from £10 to £20 is the price per acre for a large area. There have been large areas opened up by graziers and the Humula run has been divided. Over £3 an acre was given for large areas for grazing purposes. £5 10s. has been put on special areas near Tarcutta and at some considerable distance from the proposed route. And it has been taken up at that figure. The market for the produce that would be grown in that district is the Riverina district and out west. It is not thought to grow to supply the Sydney markets but to supply the Riverina and Wagga Wagga and out west. They could grow products for sale in those places where they were scarce such as Lower Riverina, Hay, Narrandera, Jerilderie, Deniliquin. If this railway was made we could grow many thousands of tons of turnips which would be bought by graziers down the river. In ordinary seasons I think that a very large traffic could be done in feeding stud-sheep annually. In fact from the number of stud sheep down the river, they would be able to take thousands of tons of anything of that kind. They can grow it at a rate that would be remunerative, if we can only get it taken away for us. There is a large quantity of timber about the district, comprising—gum, ironbark and stringybark. They are the very best timbers and they are very good lasting timbers. With reference to my first answer to the question referring to the value of the land purchased for grazing purposes only. A great deal of it was unimproved. No land has been sold lately for agricultural purposes. I have been offered £4 per acre per annum for land to grow tobacco on. I prefer to hold the land and take a share in the tobacco crop. I made a small error in regard to the wheat-land owned by myself; it is leased. I said, if the man was satisfied with the crop he obtained last year would be start growing wheat. He said, "If the railway was only coming to Humula he would have liked to take a 100 acres adjoining this on a clearing lease of that land at £1 per acre for wheat-growing." The principal centres of settlement where there are post-offices or townships are Alfredtown, Tarcutta, Kyamba, and Rosewood. Rosewood is the nearest to Tumberumba. There are no others between. There is a good deal of settlement about, but Humula is the centre.

Humula, 6 November, 1890.

Mr. R. S. Douglas, grazier. Owns 5,000 acres freehold and about 3,000 acres leasehold on Carabost Creek. Of this area 1,100 acres may be good cultivatable land, and of this about 300 acres would be of good tobacco land, viz.:—the flat alluvial. Runs 8,000 to 9,000 sheep, also 40 head of cattle and 20 head of horses. Sends his wool to both Sydney and Melbourne according to the market but if the railway were built it would always be sent to Sydney. When selling in Melbourne he carts to Wodonga. Obtains all his stores in Wagga Wagga. Is Secretary of the Progress Committee. Submits a report that he has complied of the capabilities of the district in support of the railway. Has been in this district for twenty-three years. Wishes to point out that the artificial grasses have made very great progress in these lands—that their growth has got quite beyond the experimental stage notwithstanding the opinion of many people that they will not hold in New South Wales. It has been proved that these grasses do last here. If there were railway communication the land would be broken up and sown in wheat, and after that it would probably be laid down in artificial grasses, which would more than double the carrying capacity of the land. As the case stands there is no inducement to cultivate wheat and it would not do to break up the land especially for the artificial grasses. Has tried lucerne which has done very well. Has in now about 20 acres of crop. The land used is the flat land near the creek. Considers that it will be generally grown though perhaps not in large quantities if the dairying industry is established here. In 1868 and 1869 the Carabost and Umbango Creek only ran after rain generally during the spring months, but since 1870, when ringbarking became general throughout the district, they have never ceased running. He is satisfied that since the country has been ringbarked, the channels of all the creeks have been widened from the larger body of water carried and the smaller creeks from the hills run for a longer time each year.

R. S. DOUGLAS.

(3.)

Wagga Wagga, 20 October, 1890.

John Archer said:—I am a contractor at Tarcutta. I own about 1,000 acres there. I have a portion of it leased for the past seven years for grass purposes. And of the rest some I have only obtained lately. I use it mostly for stock, and growing a little crop. My market is Wagga Wagga. I generally use all my produce on my farm, what little I grow, as the cost of carriage is too great. My tenant deals with Wagga Wagga. I am a contractor on the roads and bridges. At the present time I am doing a Government tank at the Rock. The character of the country about Tarcutta is very good land. There were some special areas thrown open to selection at £5 10s. per acre. They were

were all taken up, and some small areas of only 80 acres each. That is the maximum area which could be taken up. They were thrown open at £5 10s. an acre, unimproved land, and they were all taken. There was a small piece left. This was on a reserve close to Tarcutta, having a frontage to the Tarcutta Creek. They would be used as farms. They could not be used for anything else. They could not use them for any other purpose. The nearest point to the railway would be Keajura, on the main southern road, where the line crosses the main southern road 6 miles from the permanent survey. There is a school at Keajura, nothing else. Of course there are selections all round there. At Tarcutta there are a Public School, with about sixty on the roll; a police station, a telegraph office, post office, church, hotel, and stores, and a blacksmith's shop, and fully 150 inhabitants. It is about 30 miles from Wagga Wagga. Has always advocated the railway for the past eight or nine years; before Mr. Melrose made the flying survey. His property is on Umutbee, Mr. Mates' station. There is some Crown land; there are a reserve on the leasehold area of 7,000 acres and a railway reserve. There are also other reserves. There is one of over 7,000 acres in the leasehold area. There is some land on that reserve which would bring from £1 to £10 per acre. The principal industry up to the present time has been tobacco. This is the only thing we can grow. It is sold by the pound. Land would produce nearly as much in value, if they had a railway, of maize or some other crop. Tobacco being sold by the pound there is little carriage. Not much wheat is grown. I grow some; it costs about 8d. per bushel to get to market. The land will grow maize or tobacco. There is not much of that land available. Some of the land the Government sold as special areas they valued at £5 10s. an acre and it was all taken up close to Tarcutta. The other reserves were as close to it almost adjoining it. There is scarcely anything grown in Tarcutta. The land is used for feeding and breeding stock. The main southern road leads to Keajura. The timber about there is gum, ironbark, stringybark, box, plenty of it. They are cutting railway sleepers there now from ironbark trees, up to about 4 feet diameter. There are ironbark forests of which not much has been cut until last year. I think about 14,000 sleepers were got there. The resources of the district are, given the railway, in growing of wheat and oats. There are a great number of selectors there who use their land only for sheep who would grow wheat. On the creek frontages the soil is black, and the rest is chocolate soil. There is no saw-mill there. The forests are practically untouched; they are maiden forests. A mail from Sydney comes three times a week, one from Wagga Wagga three times a week, from Sydney, *via* Gundagai, and by Wagga Wagga on the three days. Gundagai is 37 miles, Wagga Wagga is 30 miles. The wool is sometimes sent to Wodonga. Mr. Mates' wool goes to Albury, on the main southern road, past Germanton. About £2 per ton is the carriage from Tarcutta to Wagga Wagga. The principal things carried are potatoes and tobacco. Potatoes are grown above Tarcutta. The soil is good and rich. The rocks about there are slate-rock, and some quartz, not any bluestone metal. Just about Tarcutta, towards Gundagai, there is blue-stone metal. Sheep and cattle are run on the station. It is mostly a grain-producing district (timber would not be sent away in any quantity) consisting of wheat, oats, and barley. The rainfall is something like that at Humula. It is only 18 miles from Humula by a good road. The other outlets from Tarcutta are one to Humula and Wagga Wagga, and the great southern road going down to Germanton, and there is a road to Gundagai. Wagga Wagga is the nearest railway station. Kyamba Creek is on the way, a railway line leaving the Rock or Sandy Creek would not be nearer than Wagga Wagga. This would be the only point you could go to except Wagga Wagga. I do not think the roads would satisfy the requirements of the country. The cost of carriage by rail for produce is so much less than by teams. I do not think the road would satisfy them. The land is sufficiently level, and of sufficient extent to bring about a large quantity of cultivation. There is plenty of room. I have seen the survey, where the pegs of the proposed line from Humula to Wagga Wagga cross the main southern road near my homestead, at about 3½ miles distance. I am about 13 or 14 miles by road from Kyamba Creek. The southern road is only 18 miles from Tarcutta to Kyamba. To go to the Kyamba Creek to Tarcutta would be much shorter than to cut off from my place and go in by Book Book. It would be about 12 miles by the short route. The road crosses the Kyamba Creek somewhere near Toole's Creek. The road coming to Wagga Wagga by the Big Springs. There is a large amount of land fit for agriculture on Kyamba Creek. It is from 4 to 5 miles wide from Toole's Creek to the Big Springs. It is perfectly level and fit for agriculture. It is open forest country, well suited for agriculture. From Toole's Creek to Kyamba, there is a large quantity of level land suited to agriculture. And also from Toole's Creek down to Alfredtown to the Murrumbidgee. The proposed railway would be on the average not more than 5 or 6 miles from the valley to the Kyamba Creek. The entire valley of Kyamba Creek, from the Murrumbidgee to Kyamba Creek, is about 25 miles. From the river to Kyamba that is a wide valley 3 or 4 miles or 5 miles wide. That land is all suitable for agriculture and good crops are grown there. I have been over that land often. It is particularly well suited for agriculture for 25 miles. It would not be more than 5 or 6 miles on an average from the railway line. The railway traverses that valley for a long distance. The railway survey follows the creek up to the boundary of Toole's Creek and Book Book. It crosses about half-way. The agricultural settlement on Coreinbob Creek carries good land. They are using it pretty well all. The people have been growing crops for years. There are wide valleys and light-timbered lands. I am acquainted with the Ti-Tree Creek on the Kyamba road, there are a number of selectors there; the Coxs and Fitzgeralds, Broadribb and others. There are a large amount of open, well-watered valleys in that direction. Mr. Fitzgerald has a vineyard there, I cannot say what extent he has under vines. The vines seem to look well. There are about 10 acres. He has a large production of grapes from this vineyard. The land in the neighbourhood of Ti-Tree Creek is good for oats. Mr. L. Cox devoted a large quantity of the land to the growth of tobacco, and has stumped and cleared it. I am of opinion that there is a good quantity of agricultural land about the Ti-Tree Creek. About Kyamba the flats are all good land. There is another branch creek on the road from Coreinbob Creek to Upper Tarcutta that branches along the road. It is on the road from here to Tarcutta, Mates' Gully. There is a selection there with a large amount of cleared land on the boundary. That valley from Humula seems to be very good land and well watered. All the country about there is well watered; I have been there for a great number of years, I never had to make a tank or well. The distance of my place to where the line crosses the main southern road to Tarcutta is about 6 miles. There is a large water-course which enters the Tarcutta Creek near the Tarcutta homestead, the Keajura Creek. There is rich level soil in the valley. Corbett had the selection some time ago on the Keajura Creek, about midway; the creek is about 12 miles long. There is a large amount

amount of land moderately level, deep red soil, where Corbett had a selection. I know the old road, the Pullitop road. There is good land along there. I know the situation of the old sheep station, there is a good deal of rich land about the neighbourhood. That is part of the railway reserve there. In going up on the western side, the side the railway line from Tarcutta Creek passes over the creek, that land has been cleared, the timber ringbarked, and destroyed, along the road going from Tarcutta to Humula almost parallel with the railway line, the quality of land there on the side of the roads is very good. It is heavily grassed. It would be well suited for agriculture considering its formation and quantity of grass. There is a little crop grown there. Whatever is put in there is always expected to give a good return. I am of opinion that the land is good from the side of the ridges. I have been all over from Narrandera, and I consider it is better than any there. That is contiguous to the railway reserve not more than a mile from it. The trial survey was closer to it, but the permanent survey is farther away from it. About five or six miles. The line strikes the Humula Creek where it gets to Humula station. The distance from the creek to the road is not very considerable. The trial survey crosses the main southern road almost at right angles, and goes towards Umbango. It would be accessible to the railway line. The road known as the Coreinbob Road goes out on the southern road where the survey meets it. All the land from Tarcutta Creek up to the railway line is reasonably good where the timber has been ringbarked and cleared. It grows heavy crops of grass, and has sufficient rainfall to devote it to agriculture. I am well acquainted with the land close to the proposed railway line from Wagga Wagga; the survey where the line branches off up to where it strikes the creek at Humula right to Tumberumba, and am of opinion that most of the land with the timber cleared off would be suitable for agriculture. There are water reserves, travelling-stock reserves, timber and railway reserves in the neighbourhood of Tarcutta, Kyamba and Humula. A large portion of Crown lands is still reserved. That is chiefly heavily covered with timber. Some heavily and some lightly, and some has scrub on. There is too much scrub and timber to allow the grass to grow. My experience with regard to the destruction of timber is that it materially improves land for grass purposes when the timber is killed, I mean for grazing purposes. I think a lot of land carries four sheep to one formerly. If the reserves were devoted to other purposes, I think the land would carry a great deal more stock; if it was used as persons should use their purchased land. The small holders generally speaking carry more stock in proportion to the larger holdings. I do not think Tumberumba will be the terminus. There is splendid land at Greg Greg, Tooma, Welaregang and Bringenbrong, and there would be trade for a railway unless the Victorian people take it all. It is a question which side takes the trade. The Victorian people have lines from Wangaratta to Beechworth, Everton to Bright, and Wodonga to Tallangatta. These lines tap the Upper Murray trade. A possible extension from Tumberumba would go by way of Tooma to Greg Greg, striking the border at Greg Greg. Towong is on in the opposite side of the Murray. Tumberumba Creek goes right down to the Tooma. It is a splendid district about the head of the Murray, and the people are pretty well off. At the present time they generally depend on stock-breeding, and feeding stock. About the timber: posts and rails could be carried down to Hay and sold there at a price at which they are bought at Illiliwa and other stations. There is a sawmill at Rosewood and one at Burra Creek, beyond Tumberumba, but none about Tarcutta.

(4.)

Wagga Wagga, 20 October, 1890.

Mr. John Joseph Peadon, storekeeper, of Wagga Wagga:—My experience is short. I have only been in the district two and a half years. Since my arrival I have been over this part of the country and I think first impressions are best. The possibilities of this country are, I think, wonderful. The rainfall, I think, is very even, and the part about Umbango and Tarcutta Creek and towards Humula on the way from here to there reminds me of Picton and that part of the country. It is a similar class of country in the quality of the soil; it requires very good soil to grow tobacco. I have spoken to different growers of tobacco and they told me that they got from three-quarters to a ton per acre. There is a difficulty in getting this crop to the market. They have to pay something about a farthing per lb. At the present time the tobacco trade is in rather a depressed state. I do not think so much from over-production as it is the manufacturers are combined together to place the market at their disposal; so that when you are up there I would ask you to take that into consideration. Although the tobacco trade at the present time is rather unsatisfactory it is not likely to always remain so. The country is very suitable for growing maize and such like crops. I know there are crops of maize being grown on Obern Creek, and in fact right from here to Mount Airey is good agricultural land. The difficulty the farmers have to contend with is the transit, and the long roads to bring it to market. I know one case in which a man brought wheat down to Wagga Wagga this year; only a small quantity that cost nearly a shilling a bushel to get it here. Wheat growing will not pay at that rate. The crops they got off the land are far in excess of the crops they could get in this part of the country. There was one matter which should not pass at the present time, it was in reference to the Humula run. I think it has been cut up recently and £3 an acre was the price. It is a very large holding and it will give you an idea of the value of the land. That is really the grazing portion and not the land through which the creek runs, where the tobacco grows. With regard to trucking cattle away from here it would mean up to the mountain stations. Mr. Gormly mentions he had known some cattle to be trucked, there was a scarcity of trucks to take them away. It will be fresh in your memory, I should think, with regard to certain stock dealers who monopolised the whole of the trucks, and no outside people could get them. I should think that that had a great deal to do, of course, with the trucking of cattle away from here at this time. They found the trucks monopolised by outside people who were ready to benefit by the dry times. I am a storekeeper in Wagga Wagga. My business relations extend through the country to be served by this railway. I do no business with Tumberumba, but as far as Humula, or 10 miles beyond that. I have had tobacco through my hands and grain. I send out about 140 or 150 tons a year of stores to these districts and other storekeepers are doing the same thing. Some are doing more. It is impossible to arrive at the sum total of store sent out from Wagga Wagga accurately; 600 or 700 tons annually from Wagga Wagga alone. That does not take into consideration the goods sent direct to this place from the metropolis and the other business done direct with Sydney firms.

(5.)

(5.)

Wagga Wagga, 20 October, 1890.

Mr. David Copland, M.P., storekeeper, of Wagga Wagga, stated:—Mr. Gormly has pretty well exhausted the details of the products, and character of Tumberumba. One or two features I could mention. The essential point to which I would call attention is the fact of this district being partly blocked by Victoria by reason of the bad state of the roads between Tumberumba and Wagga Wagga. The trade has partly drafted to Victoria. The distance between Albury and Tumberumba, is something like 90 miles, and between Wagga Wagga and Tumberumba, 65 or 67 miles. The trade goes to Albury irrespective of the distance. Properly speaking it should gravitate towards Wagga Wagga, but on account of the Government being so niggardly in spending the money on roads between Wagga Wagga and Tumberumba, the trade has been deserted there. If the railway were built, between Wagga Wagga and Tumberumba, the whole of the trade would gravitate to Sydney, and that is a very important point. As the trade of Tumberumba is considerably restricted by reason of the want of transit, it has not grown as it should have grown. If a railway was made, I am quite positive the population and trade would take leaps and bounds as the character of the country warrants a large population. I think Mr. Gormly, or some one, informed you the cost of carriage between Humula and here is about 50s. a ton; it does not pay to grow wheat. The only think they can grow is potatoes, and they can only be grown satisfactorily when there is a scarcity or dearth in Melbourne. At present potatoes are worth about £5 a ton, but as a rule the price is about £2 in Sydney, and you can land them here at about £3 a ton. The potatoes in Tumberumba are simply thrown aside for pigs. The growth of potatoes, and wheat, and oats, are so restricted by want of transit; if the railway was made, it would become the Warnambool of New South Wales, and would supply the whole of the Southern Districts. Another matter which wants to be considered is the carriage of stock in time of drought seasons to the mountains. The number of stock lost between here and Tumberumba during drought seasons, is something immense. If the railway is made, half, or three quarters of a million head of stock, would be carried by rail and brought back again. In the dry seasons there is no feed, and the stock die in thousands. Pastoralists would avail themselves of sending stock there and back by rail. That is a very important item, I think it is one of the items at present. As regards the quantity acreage available for selection, I could not speak positively, but there is a large number of reserves I know which could be opened, and would enable men to select and grow produce. Not only so; the land would be considerably increased in value. The Crown lands would increase in value, and if special areas are proclaimed, it would help considerably to pay for a railway. Tobacco has been mentioned as a produce of Tumberumba, and is about the only payable thing which can be grown to pay carriage. It has received a check lately on account of the low price. It only wants the knowledge of manipulation, and I think it would ultimately drive the imported article out of the market. The soil there is adapted to the growing of tobacco; they would make £20 or £30 an acre by the growth of tobacco; it is a very paying product. It wants a proper manipulation and cheap transit to bring it to market to make it a large export. All these products: potatoes, tobacco, wheat, and oats, would naturally gravitate to Sydney, and would, with the traffic, be brought here instead of going to Melbourne. Victoria has been getting the whole of the traffic, and has been bidding high for it. The New South Wales Government seem to be a little dilatory in taking up the matter; in allowing Victoria to abstract the trade from them and leave us in the lurch. I believe the Commissioners are extremely anxious, as far as I learn, to assist in getting stock away from the droughty country in the event of droughts. The Riverina district is a very important one, and has 4,500,000 sheep. If there was a means for the sheep to go to the mountains, a very large revenue would be derived from it. I think that matter should be considered by you as one of the most important points in the whole of the argument. We generally have a dry season about every three years. There have been four dry seasons lately, and sheep have come in immense numbers to the mountains. In many cases they have been brought in trucks as far as Wagga Wagga from Hay, but the grass is not so bad from Hay here, as from here to Tumberumba, so that there is nothing left for the others. They die on the road, or get there in a most exhausted condition. It is a very fine country, I believe, beyond Tumberumba, on the Upper Murray, and a large number of sheep grow there. All that wool would drift to Sydney, together with all the Tumberumba trade, and all along there. A very large district for wool-growing, and that with tobacco and potatoes, the carriage of sheep, and the various other matters I have referred to would, I think, materially assist in making the revenue of the railway. I do not think there is much more to add. I do not know whether the country to be tapped would be at Tumberumba, but the land from Tumberumba-Tooma way. The Victorian people use every effort to get the trade; they charge low rates for the traffic from Tumberumba to Albury. Nearly all the traffic goes that way. It is a very rich country. If a railway were constructed it would tap a large district in the valley of the Murray at Greg Greg; and the country open into a very wide valley well down towards Albury. Traffic would all gravitate towards Sydney if the line were made. In running up the line towards Humula you pass through a largely populated district, you get there about 3,000 people, who can come within a very short range of the railway. These people would increase the railway revenue, and there would be a very great future for the line, as the district would be a valuable feeder. The summer grazing is in the Tumberumba district and beyond it, the table-land of Tumberumba. I believe the land under sheep between here and Tumberumba would more than pay the freight both backwards and forwards. You pick up the first stock-route about Kyamba. There are reserves and resumed areas available for selection which, I think, if thrown open, would add considerably to the population, and increase the freightage of a line. The country is in the central district. They have five years to run. A gentleman remarked to me that some one said there was snow on a portion of the line running to Tumberumba in this month of the year. It seems absurd; I do not believe there is an ounce of snow seen once in ten years in the place. There is snow at Mount Kosciusko; I think you will find it here occasionally. There is one essential point. We want the trade to go to Sydney, we do not want it to go to Victoria. The trade from the district near the border, Victoria has had for some time, and she would like to run a railway up there to tap it. No doubt these branch lines are feeders to the railway, although they do not show extraordinary profits at the start. You see the class of country about Tumberumba and Humula, and to make a railway there the population would grow sufficiently large to warrant it. The class of country, fertility, and rainfall show the country can carry a large population. As far as I understand, the Tumberumba line is much preferable and better country than that by way of Adelong. Sheep coming from the south of Riverina, have to turn a long way round

to

to go Gundagai way. As far as the question of carrying sheep is concerned, it is certainly a better and more expeditious route from Wagga Wagga to Tumberumba. We do a little business with Humula and Tumberumba, but a much larger business could be done if the rates were better. There is a considerable population in that land already. The heavy excise duty put on by the Government may have some influence on the falling off of the tobacco industry, but I think it is the cost of carrying it here, and the season not being particularly good is partly the reason.

(6.)

Wagga Wagga, 20 October, 1890.

Mr. William Abbott: My holding is just this side of Humula. I have 4,000 acres there. Last year I had 120 acres of ground under tobacco and I had 20 acres in hay. About 10 acres of it was oaten hay and 4 acres of wheat. I keep about 5000 sheep, 30 head of horses and from 70 to 80 head of cattle. My market is Wagga Wagga. I do not send any of my produce in. I do not send any hay or wheat or anything in. I use all that I grow; I grow for my own consumption. My wool goes to Sydney nearly always. A couple of times I sent it to Melbourne, but Sydney is my general market. The effect upon me by the construction of the railway would be that I could put 300 acres under cultivation if I could get the crop away. I could grow tobacco or potatoes. I have never sold any tobacco yet. I have got it all there yet. I have only grown tobacco for one year. I have got the whole crop there and part of another one. I think the reason of that is because I have not sold any. The buyers I believe are up there now. I think they are. You can't send it to market and pay the carriage on it. If you can't get cheaper carriage you can't send it down. Plenty of tobacco is sent down to Sydney for sale and plenty is brought up there. I think that there is plenty of land up there which is worth £20 an acre. Tobacco land is all let out in shares. Mr. Bardwell, of Obern, has told me he has got as much as £6 an acre rental. We have had no droughts in the Humula district. They have very good seasons. We never lose any crops for want of a rainfall. I have been up there all my life and I never heard of it. I think there are six different families settled on the run within a reasonable distance of the line. The line goes right through my place. And there is still land available for settlement on the reserves and some of them are very good reserves, and moreover I think that if the railway came up that there is a lot of the holdings which would be cut up and rented into farms. One of Mr. Bardwell's which he has just bought he would cut up and rent out. The Humula holding was held by a Melbourne firm, but it was sold to four others. These would most likely be from Sydney. The run was divided into four and sold. I think some of them went up to £12 an acre. Mr. Bardwell has got 40 acres and the railway runs through it—and he told me that as soon as the railway came through there he would cut it up into allotments. The New Zealand Loan Co. owned the Humula run. Wilkinson, Lavender, and Chapman sold it. One of the township allotments went up to £35. The line runs through my place. It is on this side of Humula. There is a good deal of it level country. I grew 312 bushels of heavy oats, and 32 bushels of light oats on a piece of land 7 chains by 5 chains. I have got much land of the same quality. It is a good crop. Last year I got 29 bushels of wheat off a crop which I cut. The crop of oats I got would be taken off about 3½ acres of land. Potatoes grow very well up there. If there was a railway there would be a large quantity of land put under potato and oat crop. I do not think there would be the least doubt of it, I would have a considerable quantity of land under crop if I had the means of transit. I would put in over 1,000 acres of grain crop and of tobacco crop. The length of the valley of the Tarcutta round from Tarcutta up to where the line runs through is 17 miles, I think from Tarcutta to where it strikes the railway route up the creek, and it is all very good land.

Humula, 6 November, 1890.

Mr. William Abbott, farmer and grazier, owns 4,000 acres, 300 acres leasehold, and 1,020 rented. Carries between 5,000 and 6,000 sheep all the year, seventy-five head of cattle, and thirty head of horses. This land is on the Umbango Creek, about 1½ mile from Humula. Is planting this year 120 acres of tobacco; this is done by Chinamen on terms. Has also 20 acres in oats for hay, for his own use. Has been resident of the district for forty-eight years. Has spent 14s. 6d. per acre ringbarking and scrubbing 300 acres, of which 60 acres are bottom-land, the remainder ridges. This now carries 600 sheep all the year round, fit for the butcher. Prior to the ringbarking would require 20 acres to a sheep. Property improved; considers his 4,000 acres will carry 8,000 sheep all the year round. Believes that at the lowest estimate he has 300 acres of flat alluvial land on his freehold, fit for corn or tobacco cultivation. Of this he has in tobacco 120 acres, in partnership with Chinamen. Has now about 80 tons of tobacco in bale. This was produced in 1889. The last crop was almost a total failure, producing only about 3 tons. Would expect to obtain from the crop now about 15 cwt. per acre, amounting to about 90 tons of tobacco in bale. As yet he has not sold any tobacco, so does not know how it will pay. Prior to this tobacco cultivation he used the land for oats, potatoes, and grazing. This is the land on which the 100 bushels per acre of oats was harvested, as stated in the printed report by Mr. Douglas. This was in 1884. He had only 3½ acres of crop in of oats. Sends his wool to Sydney, having tried the Melbourne market. In addition to the 300 acres noted above as being of the best alluvial land, he has in the freehold fully 700 acres, which is cultivable for any kind of grain crop.

WM. ABBOTT.

(7.)

Wagga Wagga, 20 October, 1890.

Mr. George Patterson Wilson, grazier, of Big Springs Station. His station is between Gregadoo and O'Brien's Creek. It is between the two. It is about 45,000 acres; carrying about 60,000 sheep; there is a good portion of it resumed area. There is some 8,000 acres of resumed area, and 8,000 or 10,000 acres of leasehold area. The rest is all secured by purchase. It would not be more than 8 miles from Wagga Wagga, following up the Kyamba Creek to the Book Book boundary, and it is all good agricultural land. It is specially good land. The line passes through a

portion

portion of the Gregadoo run land. All the land is good. Up the Kyamba Creek it is exceptionally good agricultural land, which I have no doubt would be put to agricultural use if they had the means of taking away their produce. It is level land; you can call some of it hilly. It is undulating land. It is mostly red soil. In fact all the land from here to the Sydney Road is specially adapted for cultivation in large areas. The timber is box mostly interspersed with gum. The Yerong Creek and the Rock is a drier country than this country is. We have, I suppose, an average rainfall, it may be of from 5 to 7 or 8 inches more than it is at Yerong Creek, and consequently there is some gum, box, and yellowjacket. There are settlers interspersed there. I myself have put in 400 or 500 acres of crop this year, and next year I expect to have a great deal more. If this railway line went ahead, I have got 2,000 or 3,000 acres which I would certainly let on shares to people to produce wheat. The further you go away from a railway, the more difficult it is to make land pay under cultivation. The railway line would induce cultivation to a very large extent. I have only just commenced cultivation—this is the first year. I have not a great knowledge of the soil beyond Kyamba Creek, and up to the Sydney Road, but on both sides of the proposed route the soil is exceptionally good. Take it all through it is first-class agricultural country. There may be a few acres which are not so good, but most of the soil is exceptionally good. I have been a resident there for a great length of time; I have no special knowledge of the country. I think the greatest point in connection with the construction of the railway to Tumberumba, in many instances, would be the trucking of stock, and there would be no possibility of those extremely dry seasons. The taking of valuable stock to the mountains in dry seasons by the railway would be to the community, as a whole, and to the individual proprietors, something enormous, if they could truck their sheep right away to Rosewood, or to Tumberumba, where a drought is almost never known. If there was a line there would be nothing like that. The sheep die at present from starvation between Wagga Wagga and Tumberumba. They are weak when they get to the end of the journey. They generally leave there at the end of April. They go beyond Tumberumba, leaving there at the end of April or May; well, you know what they would suffer from travelling over 40 or 50 miles of a two-chain road, with no feed on it. In winter time they would suffer from the cold, in the summer time they would starve. There is certainly a lot of grass to sustain stock for a certain length of time in the mountains, and you know what a great advantage that is. I am very sorry that I cannot speak as to the Tumberumba country exactly. They never suffer from a drought there, and they would never suffer from anything like that in travelling our sheep through. The average rainfall is 27 or 28 inches. I always send my wool to Sydney.

(8.)

Wagga Wagga, 20 October, 1890.

Mr. Edward Wilfred Donnelly, of Borambola: I have a piece of land on the other side of Tumberumba. It is called Toolong. That is 35 miles from Tumberumba. It is too long to get to it sometimes under the existing circumstances. I send my stock there nearly every year, in the dry season. In some seasons we don't require to send them up there. On an average we send them there every second year. We keep this land as a stand-by. We have not any difficulty in getting our stock up there. It is the getting back. Of course I have got only 35 miles the other side of Tumberumba to go and I only travel 85 miles altogether. I am not so badly off as some others not having so far to go. If this railway was made it would be to my advantage to truck sheep both ways. It would be a great advantage to us. We would truck both ways. The other squatters under the same circumstances would do the same if they could. I have been over the country followed by the line frequently. I have been over it nine or ten times altogether. I think the railway would be benefited by the increase of agriculture, by the increase of settlement and the cultivation of the soil, because when I was up there nine years ago we bought this place Toolong, there were very few settlers there at all. I was away for many years and I returned to it within the last twelve months and I hardly knew the country it was so much settled upon, and I did not know the right way, there, owing to the gateways and other things which seemed to me to be private property, and which was originally Government land. They seem now to cultivate there tobacco wheat and also oats. Of course I did not make any inquiries on my visit. I did not stop to make any inquiries as I was driving through there. I was up there in last August and the country seemed to be as if it was just going into cultivation. They were ploughing and regulating the land for whatever they intended to put into it. I have been away from there for some time and I saw a wonderful change on my return. I was away from there for eight years travelling. Since I was there the Government land seemed to be occupied by farmers who were all over the land there. They generally rent land in the mountains by the month or three months. For 10,000 sheep I have known them give £700 a month. That is the highest I have known paid there for grazing sheep. It would of course graze more than that. When a man says he has got with him 10,000 sheep he is pretty certain to have got probably 15,000 but he does intend to put them all on. I have known as much as £700 a month paid. That is the highest price I think I know of. Of course it was down to £200 month. We have to leave there about the middle of April as a rule. It gets too cold for the sheep after that time and they get back in time for lambing. If not it will be a loss and they will lose their lambs on the road, if they had their lambs with them. In order to save our lambs we would be able to start later and save weeks by trucking. That is it as we have not got any means of getting our sheep brought down from there we have to leave there much earlier. Our place is called Toolong, it is 35 miles on the other side of Tumberumba. I have also a place here at Wagga Wagga. If the line were constructed we could send sheep straight away from Wagga Wagga for that country. We could truck there both cattle and sheep. When it was a drought or dry season we could truck cattle away. All round Tumberumba there is country which is available for rent. In travelling from Wagga Wagga to Tumberumba stock have to pass through lanes which are bare. The large number of stock take all the feed going out leave none for the stock returning. There is no doubt that stock would prefer to travel by rail without going up these narrow roads. You can truck, say, to morrow morning, and you will be there in the evening. The stock would thus be only one day starving, that would not be so bad as starving for days on the lanes, and the grazier could send few back. They took ten days to travel there by the road, and they would be starving. I have seen

some

some of the finest produce in the country grown there. It is all volcanic country. There is some beautiful timber there. There is some eurabie, mountain ash, and stringybark. It is some of the finest timber I have ever seen in Australia. In fact it is almost equal to Gippsland timber. I believe the railway would not open up a large mining district. There are several surfaces there which seem to me to be equal to Broken Hill. I know that, because I was there on one or two of the mines; there the surface shows them to be equal to, if not better than Broken Hill. It wants some capital to develop the country. There are no means of getting the stone out of the mines. I myself have gone into it in a small way. We had to get the stone brought down here to Wagga Wagga by teams. It cost a good deal of money. We got 5 tons of stone down, and we sent some to Sydney and some to the Ballarat School of Mines. It is within 25 miles of Tumberumba. I am not particular about telling you, but perhaps it is better kept quiet. I can show you some of the stone. I think the Tumberumba district is very rich in gold and silver. As a squatter, I have travelled a good deal, and I believe there is tin there to a certain extent. I am not a judge of tin. I know that there are other precious metals about there. I think it is likely to be a good mining district from what I have seen on my last trip to Tumberumba, there is every prospect of it. It wants developing, and capital seems to be scarce. There is a difficulty in access and in getting machinery there. There are no means of getting there by private individuals unless they go in private buggies. When I visited Tumberumba I went and looked at a mine. I was determined to go into it. I myself went in to develop the mine single-handed. It looked very much like those at Broken Hill. I thought it was like a Broken Hill one. It might not be equal to those at Broken Hill, but on the surface it is quite equal to Broken Hill if not better. That is what I think of it. I believe that there would be a very large exodus of people from Wagga Wagga up there to a cooler climate. I know that I would like to get there if I could. At present you have got to drive your own trap. I think it is a delightful climate, and all the English soft fruits, such as strawberries, raspberries, and all these things grow there well.

(9.)

Wagga Wagga, 20 October, 1896.

Mr. Charles Hardy, senior, contractor and builder, Wagga Wagga: I think the only evidence which I can give you in regard to the line is in connection with the timber. I have been over the country round Tumberumba, and I was there two or three years ago, and I saw the forests for myself, and without exception they are the best forests I have ever seen in the southern district. We get timber from there now by teams, that is when we can. It is a very difficult matter to get it at the prices that we can afford to pay and give for it, because the carriage at the very lowest we can get it now is £3 10s. a ton, so we could not afford to pay for timber at that rate. The timber is of an excellent kind. There is eurobie and mountain ash. This is immediately at the back of Tumberumba, and the trees are something enormous. I have seen trees there 60 feet and 70 feet high, and as straight as a die. In fact, it is the best timber I have seen anywhere inland in the whole of the Colony. Of course, I have seen better on the coasts. On the coasts we get immense forests. Inland I have never seen anything to equal this. There is no doubt, I think, that if the line was constructed to Tumberumba, the whole of this Riverina and southern country, and not only this, but as far as Goulburn, would be supplied with timber from there. We have nothing like it. Take the timbers we have in this district. We have only the river gum and the pine. That is really all when you sum it up. That is all we have got here until we get 40 miles below Goulburn, where they have even to get timber from there (Tumberumba). In fact, I had some timber last week from Sutton Forest. That is 220 miles from here, and that is an inferior timber to the Tumberumba timber, especially as we have the eurabie; it is more of a blue gum. The mountain ash is a very solid timber. It is the most suitable timber I have ever seen. I think it can almost be used for any purpose. I think it can be used for building purposes or for bridge construction, and for even furniture. I should think that even furniture could be constructed out of it. It is such a magnificent grain timber, and the ash, of course. I sell a great deal of the mountain ash to the wheel-wrights, and they pronounce it to be equally as good as the American ash. In fact, I am sure it is as good in some respects as the American ash. And we can only get any timber like it, or of the kind, by going to Beechworth for it—above Beechworth for 20 or 30 miles. When there I looked over the line that is to be constructed to Tumberumba. We should have a continual stream of that timber at present. There are only two sawmills there, and there would be more like twenty mills, because the fact is we have no timber in Riverina country. The supply we have to depend upon here is the pine and the gum. At the most it is very little. There is ironbark between here and Tumberumba, and that of course is not equal to the ironbark of the coast. It is very good. There are one or two Government reserves between here and Tumberumba. The ironbark is not as good as the ironbark of the coasts. It is stunted in a measure, but still there is some very fine timber between Tarcutta and Tumberumba, and the stringybark there is very good. In point of fact, it is as good as any I have seen anywhere. There is a large freehold reserve, and I think that there are one or two Government reserves which have been surveyed to conserve the timber. I have no doubt that they would be dealt with by sawmill proprietors if the railway line was opened up there immediately. There is a large quantity of eurabie. I went through 5 or 6 miles of it. It seemed to me to go right back towards the Murray, or Lobb's Hole, for about 10 miles. It is 4 miles direct from where the principal timbers are to Tumberumba. The principal timber of that country is the mountain ash, and there is the eurabie. The mountain ash seem to me to be of an unlimited area and there is the stringybark. The stringybarks are nearer to Wagga Wagga, between Tumberumba and Tarcutta. There is one sawmill right in the eurabie and there is one at Rosewood. That is almost 6 or 7 miles on this side of Tumberumba. The river gum is more suitable for heavy work. I am quite sure that if the country was opened up the timber trade would be a good one. The mountain ash is a most valuable timber. You can do almost with the ash as you can with the American ash timber. I have no doubt myself that it would be a great source of revenue, at all events for the railway. In fact it is a thing that is really required. They can supply all the timber for the Lower Riverina country. They would want it here and up to Hay and Albury and up as far as Murrumburrah. Therefore I think that we have got a great future for the timber supply from that quarter. They are all on Crown lands, and especially as we have a forest ranger here who takes charge of these things. In fact, I went over a portion of it with him. In fact, it would not pay a man to build up a sawmill there at present, we could not pay for it. I cannot speak as to the extent of the timber in the country, but it must be great because of the extent of country. I cannot speak if it is unlimited. It is timber of a magnificent quality. It is the best timber I have ever seen this side of Sydney by a long way, by far and away.

(10.)

(10.)

Wagga Wagga, 20 October, 1890.

Mr. John Chapman, a resident and brewer of Tumberumba:—I do not hold any land at Tumberumba. I have resided there nearly two years and have been in this district for nearly twenty-five years. I do not know much about the productions of the district. I know that there are miles and miles of area which is fit for production, and for 15 miles this way along the line is all suitable for agricultural purposes. There are a number of settlers upon it. They can produce potatoes, but to carry it down here does not pay them, and it does not pay them to grow anything else. The difficulty is to get to a market. I fancy the Tumberumba district could supply the whole of the district and the Colony with potatoes and other root crops if they would only get a line of railway. The trade from Tumberumba is all done with the colony of Victoria, *via* Albury. You see a coach runs from Tumberumba towards Albury, and the teams always follow the same road. It is very difficult to get teams to come this way. I would prefer to get my own stuff from here, but very often I cannot do so, and I have to get it from Albury. They go that way, although it is longer, because the road is always better looked after than this one to Wagga Wagga. The distance by it to Albury is about 96 miles from Tumberumba, and the road by Humula to Wagga Wagga is about 70 miles. And, as a matter of fact, they go 26 miles further on a road that is better looked after. I fancy that the road from Wagga Wagga to Albury is the better road of the two. For 30 miles from here you have no hills at all, and the other way it is pretty well hilly all the way. Tumberumba is not a large place. The township is not very large. There is a good deal of settlement there. From Tumberumba, going towards the Murray—going towards Jingellic, there are miles of level lovely agricultural land. When you get about 3 miles from Tumberumba after you get on to it, and you can follow it up for 20 miles. The character of the country towards Bago is that it is simply heavy forest land—it is not cultivated. It is just forest land. The forest is peppermint and white gum. Of a nice red soil, and it was of a very nice loam. It is beautiful agricultural land. There is good timber there. You can go for miles there and get eurabie trees 100 feet high, and all without a limb. You can take every tree for miles; you have not got to take one tree and miss a lot, but each one is alike for 10 miles. You get the best of the timber at about 5 or 6 miles, and a little to the right of that you can get the mountain ash which is a beautiful timber. It is very suitable for casks. It is a magnificent timber. They can make wine casks from it. It is a kind of bastard blue-gum. I think we have about 25 inches more than they have at Wagga Wagga. I take the beer to Jingellic, down on the Murray, and they will not drink any other beer there when they get the Tumberumba beer. There are very good roads to Jingellic and Tooma. Jingellic is 30 miles from Tumberumba, and Tooma is 24 miles from Tumberumba. The climate and soil of Tumberumba suit hay and oats, but they do not suit wheat-growing. Hops grow there splendidly. They grow all about the brewery where the seed has been spilt. There are hops under cultivation. People grow hops for their own use. We do not use any in my brewery, because we have no means of drying them. There is no market. It is not any use. There is no kiln there to dry the hops. It is a very similar country and climate to that of Gippsland, in Victoria. I have had, I think, half a dozen persons ask me to look out for allotments for them at Tumberumba. I only had one gentleman to-day asking me to look out for a place up there for him to live in. I think that many people would go from Wagga Wagga to live at Tumberumba for the summer.

Tumberumba, 5 December, 1890.

Mr. John Chapman, brewer:—Brings up generally from Wagga Wagga, if he can get the teams, about 12 tons of malt yearly, and about the same of sugar. Also about half a ton of hops and an average of 4 or 5 tons of bottles and casks. Total about 30 tons. At present he distributes all his produce of beer by his own teams, but the railway would enable him to sell in the distant markets, and he believes that he could make a large business, as the quality of the beer brewed in this mountain district is very good. His outturn at present averages about 5 hogsheads per week—could produce with existing plant about 18 hogsheads, but with very little expense he could turn out four times as much. A hogshead weighs 5 cwt., so that he could send away on the above estimate 18 tons of beer weekly, but there is no limit to the quantity that could be produced. This increase of outturn of beer would also necessitate proportionate increase of import, which would also be quadrupled. There is no doubt as to there being a market if he could deliver the beer at a reasonable rate of carriage. These figures worked out for the year mean an import into Tumberumba at present of 30 tons, but no export. But with a railway he would import 120 tons and export 900 tons. He brings all goods from Wagga Wagga, except when he cannot get teams. Once he had to send the stock from Wagga Wagga to Albury and had it carted up from there.

JOHN CHAPMAN.

(11.)

Wagga Wagga, 20 October, 1890.

Mr. Bennett:—Any remarks which I have to make will be more confined to the sheep and cattle trade and traffic. I am a farmer and a grazier; any land that I have is north of the Murrumbidgee in an opposite direction to this proposed line of railway. I have land property at Brucedale and Mimosa. I have land some 4 miles out from Wagga Wagga. I have no property on this side of the river, I formerly owned land within 15 miles of Tumberumba I have never been in Tumberumba. I have been living within 65 miles of Wagga Wagga with the exception of three years all of my life, and I have been fifty years in the vicinity of Wagga Wagga. I know the country within 15 miles of Tumberumba well. I may say that for five years I had a paddock—rented the same. I think some 15 or 20 miles north of Tumberumba, and during that time I had this paddock rented. On three separate occasions I made a heavy loss, in having to take travelling stock up there. If there had been a railway I would have saved what would have more than paid for the trucking of this stock three times over. I rented this paddock as a stand-by. I rented the paddock for five years, and three times I sent stock up there. I sent the others up in good seasons, and three times I sent sheep up there from the effects of the drought by paying railway freights on them. I would have paid for them three times over, and, so far as the grazing capabilities of the country are concerned, I have not the slightest hesitation in saying, when it is settled upon and thickly populated, it would carry equal to anything in the Australian colonies. In the county I had there is a rough piece of country. It embraces the highest point up there. It embraces the Pilot which was a rough piece of

country

country and the tops of the hills were growing white clover, and you could scarcely see where you were going with the thick trees and timber. It is a splendid class of country but it requires to be opened up, ringbarked and scrubbed and cleared. It requires a line of railway so that the people who are there can get their produce away. The paddock I had was supposed to contain 1,100 acres. I sent up there from 4,000 to 5,000 sheep and they had always plenty of grass for at least four or five months. It is open forest land, some land there had—I can show you returns for it—produced 40 bushels to the acre. I have not the slightest hesitation in saying if that land was rung and improved within five years, it would keep from four to five sheep to the acre. It is a large extent of country and the farther you go up that country the better the quality of the land becomes. The climate becomes colder, but the land becomes sweeter. From here past Tumberumba, the land is capable of being still further improved. It is not ringbarked. I have not been up there for two or three years—unless it has been ringbarked during the last two or three years. There was plenty of crown country up there some two or three years ago. As soon as the people get hold of the land and get possession of the land the first thing they do is to ringbark it, and I should imagine the whole of the reserves are rung land. The sheep would be going round if they came to Tumberumba from by way of Gundagai. They would have to travel through lanes for want of travelling-stock routes. The sheep would be forced to go on the lanes between here and Tumberumba. If there were 40,000 sheep camping on these little reserves, those sheep which come last would fare very badly. In the winter time, I suppose, where the country was rung or open, the grass would become much richer than it is at present, and consequently stock would do much better there. As a matter of fact stock do not do better in the winter. They must be taken away. Up in the Bongongo ranges snow falls. Not in Rosewood and Tumberumba. I do not think so. Under the present conditions it is only summer country. It is a country that can be used from the beginning of October up to the end of May. Later than that the sheep might get flukes, and you run the risk of getting snowed-up in the mountains. I am speaking now about Tumberumba, the railway would have to carry the stock to Tumberumba. From Adelong to Tumberumba, I think it is about 20 or 30 miles—I do not know. In the head of the Bago and Humula there is an immense amount of tobacco country up there and land that is fit to grow tobacco.

(12.)

Wagga Wagga, 20 October, 1890.

Mr. Heydon: I have forty years experience of Australia, and I think as a rule a wheel-wright has better opportunities of testing timbers than even a builder has. I may state that I pay 9s. a 100 ft. for it and the cheapest rate that I have got it from Tumberumba to Wagga Wagga was 11s. a hundred for carriage, and you cannot always get it. For instance at this time of the year the trains are otherwise engaged, and I suppose that they get better paid for other work. The mountain ash is a nice wood and I have had an opportunity of testing it, for I have had it from Tumberumba for two years, and I can say that, for my work, there is nothing in Australia which looks so much like American ash as our Tumberumba mountain ash. I showed this ash of ours to a travelling gentleman who is a good judge of timber, and he said "That is American ash" "No," I said, it is Tumberumba timber, and that gentleman had been among timber all his life. At a first glance it takes a good judge to tell this mountain ash from the American timber. It is a wood that would sell in any part of the Colony. It is very suitable to a wheel-wright or a carriage-builder; then there is the eurabie wood; that is a better timber for heavier purposes and work. Now, for instance, I make heavy waggons here, the timber that I have made them from I have to get from the Clyde River. That is a long way from here, other wood I get comes from the Clarence. These are the gums heavy woods, and of course they cost a lot of money to get them here, and we are thus heavily handicapped. If you bought anything of the kind that is sold at Goulburn or Sydney there is the additional cost of getting the timber to here. We cannot get the Tumberumba timber in Wagga Wagga. This eurabie timber has a strong strain of the box in it. It appears to me to be like a bastard timber. It will stand any amount of pressure. I am putting in bottoms and sides with it to carry from 6 to 12 tons and it is equal to any of those spotted gums that I get from the Clyde River. Not better. I have spotted woods from the Clyde River that are unrivalled, and it is a big thing if it is equal to that, and more particularly you will get no ironbark away from the coast, and yet you will get ironbark—which is a hard wood—here. I have been nearly thirty years in the Murrumbidgee, and there are no timbers here at all fit for my business. The gum is worked out. We used to work that, but it is clean worked out. Of hard woods there are none here. We have to use the short timbers—the box-wood. The red gum is a good wood but it is hard to get here. The mountain ash would sell well in Wagga Wagga and Sydney for carriage underwork. I do not know much about the prices of building timber. I cannot speak as to that. The Clyde River spotted gum costs here 27s. per 100 ft. Of course for this mountain ash and eurabie I give 9s. a 100 ft. at the pit Tumberumba, and 11s. a 100 for bringing it here. That brings it up to £1 a 100 ft. It is really a good wood. The red gum is about 22s. a 100 ft. That is a timber that we never use.

(13.)

Wagga Wagga, 20 October, 1890.

Mr. Rogers: I know all this country. I have been up there for years. I am in the habit of sending stock up there in the dry seasons. I have not any land on the mountains. Rented land up there, but I have sold it. It was up at Tumut, beyond Tumberumba. If this line were built I would send about 10,000 head of stock by it, and bring them back from there again in the same way. By sending stock up to Tumberumba in the present state of the roads, the sheep get there in such a poor condition. They lose a lot of condition going there. More especially when they are heavy in lamb, and whether the lambs are with their ewes or if the ewes are dry. I think that everybody would truck both ways. I think it would amount to about 2,000,000 of sheep which would pass through Wagga Wagga; trucking both ways—backwards and forwards, that would be 4,000,000 of sheep. I do not mean to say that there would be that number every year, but in every dry season. You see there is such a big risk, and in taking sheep about in dry weather by the roads, it damages the wool even if the sheep do not die. I know that district well, right out to the Murray River. From my own experience the settlement is increasing gradually. Up to Tumberumba there are a great many farmers. They have often spoken to

me

me about the line when I have been at Tumberumba, and they have asked me to help in some way in this matter. I did what I could for them, but of course I could not do much. They have grown and do grow wheat up at Tumberumba, but it hardly pays them to do that as they cannot get it taken away from there to a market. They have said that they would grow more if they only could get it away to a market. They grow splendid wheat. There is a mill to grind it for the consumption of those about Tumberumba. They do not grow anything to send away to a bigger market. They could grow a lot to send down to Sydney and to Wagga Wagga if they had a line of railway. I have noticed that the crops in that district are superior to what they are down about this way. I have seen there a crop that would go a 100 bushels of tartarian oats to the acre. I have seen the land there which is excellent to the extent of 40 miles, oats grow splendidly up there, and corn too. I think that the potatoe crop is double what it is down here. It grows wonderfully well up there. A great deal of tobacco can be grown on the flats and creeks up there, but they have no means of getting their productions away. The carrying capacity of the country is different. In some places, on the average, it would carry I suppose from four sheep to five sheep to the acre—that is when the country is improved and ringbarked. That is the mountain land there not the low lands. You can fatten bullocks up there on two acres. At Tumut you can do that. You can run sheep there all the year round, but higher up towards Tooma you cannot do that on account of the snow. In some parts of that country round about Tumberumba you can run sheep all the year round—all round about Tumberumba. The Tumberumba line would take away a great deal of the traffic which now goes to Wodonga and on to Melbourne. I believe if the line of railway went up to Tumberumba from Wagga Wagga it would take away that trade from Victoria and bring it to Wagga Wagga, Sydney, of course. The people up there like Sydney the best, but it is more convenient for them now to send them round to Melbourne. There is no coach between here and Tumberumba. The people there have no means of getting to Wagga Wagga by coach. All the facilities for communication with Tumberumba to the south are with Albury. There are no facilities for communication this way, except the express coach and that is not much. Now all the trade goes to Victoria; instead of going to Melbourne it would come to Wagga Wagga. I am acquainted with a great many of the people up there and many of them have told me that they would like to go to Sydney on a trip but that it is more convenient for them to go to Melbourne, and thus they go to that place instead of going to Sydney.

(14.)

Humula, 6th November, 1890.

Mr. David Cox, farmer and grazier:—Owns 1,240 acres, and has 2,500 acres of conditional lease with the right to purchase; also leases about 1,600 acres from private individuals. This land lies about north-west of Humula on the Murragaldrie Creek; on both sides of the creek, runs 3,500 sheep, 10 horses, 8 cattle; is fully stocked as the greater part of his conditional lease is a forest reserve, and he is unable to ringbark—only grows 6 acres of hay for his own use, has about 40 acres of land suitable for growing tobacco or root crops, potatoes, onions, pumpkins, melons and fruits all do well; would go into their production with railway facilities. Turnips grow here in a season when they could not be grown in other districts and could be sold for the use of sheep when grass failed on the river. Has lived in the district for forty years; calls attention to the point that sheep travelling to the mountains for grass often meet with heavier losses on the return journey, owing to the grass being eaten off, and if kept late in the season waiting for rain to fall on the plains get weak and low in condition from the cold weather. If it were possible to truck the sheep to the mountains they would arrive in better condition, and fewer losses would result from the coldness of the climate. £50 per 1,000 is about the average cost of a grass right of four to six months, but in extreme droughts these prices reach a much higher figure. The bottom land on the creek frontage will carry three sheep to the acre, the ridges ringbarked and scrubbed one sheep per acre during the year round. Since the timber on the ridges has been rung the Umbango, Obern and the principal creeks have been perpetual. The bottom land suitable for tobacco or root crops is worth on the Tarcutta, where the flats are more extensive, he thinks, on an estimate £10 per acre; the bottom land on the smaller creeks is not so much. The travelling-stock route from Wagga Wagga passes through Kyamba being a proclaimed stock route only from Kyamba. From this point it is only half a mile wide through Carabost to Rosewood. It passes within 2 miles of his own property. The number of sheep passing during droughts is very large but he cannot give an estimate of the number. Stringybark is the principal timber in this part of the country. On his own land these trees run from 2 feet to 2½ feet. There is plenty of good timber on the forest reserve. There is ironbark on the crests of the ridges showing some very good timber. Railway-sleepers are now being got on the Kyamba range and being carted to Wagga Wagga. Wishes to point out that the excise duty imposed some years ago limits the sale of colonial-manufactured tobacco raising its costs to nearly that of the imported. This is the opinion generally held in the district. If at any time this duty is taken off the demand and production of tobacco in these districts will be very largely increased. Points out that he sends his wool to Melbourne, *via* Wodonga. This is because it costs less to do so than to send *via* Wagga Wagga to Sydney. He pays freight to Wodonga £2 5s. per ton. From Wodonga the railfreight is 4s. 6d. per bale; carriage to Wagga Wagga is £2 per ton and from Wagga Wagga to Sydney the freight is £2 13s. 6d. The difference is more than £1 per ton in favour of the Melbourne market. As to the markets—he has received a better price in Melbourne but he does not think that there is really any advantage to be gained in the long run by selling in that market. He would send his wool to Sydney if the railway were built. Obtains all his stores in Wagga Wagga.

DAVID COX.

(15.)

Humula, 6th November, 1890.

Mr. Peter John Hartnett, farmer and grazier:—Owns 5,000 acres on the Umbango Creek, half-way between Tarcutta and Humula; grazes 6,000 sheep, thirty head of horses, and 100 head of cattle. Has grown tobacco for five years, but has stopped doing so having no means of getting it to market; has 6 acres in for hay for his own consumption, and 15 acres of wheat. His market is Wagga Wagga; being charged storage for his tobacco while waiting for a market, and having to pay that and the freight to Sydney,

Sydney, he considers it would pay if he could send direct to Sydney; would farm a good deal of land. Has been a resident for twenty-seven years; his land is well improved. Sent his wool to Sydney for some years, but now sends it to Melbourne; pays £3 a ton for the carriage of his wool to Albury. His land is on the Umbango, on the north side of junction with Tarcutta, which is the nearest point on the good main road—about 8 miles to Tarcutta. He took a crop of 55 bushels of wheat per acre off 50 acres four years ago. This was on the flat land on the creek. Has cropt maize also, but there is no market, and he has it to feed pigs. Of the whole property there are fully 1,000 acres of flat land. Considers that this land is worth £10 per acre, the rest is worth from £2 to £3 per acre. When sending his wool to Melbourne he carted it to Albury—paid £3 per ton. The commission in Melbourne was slightly lower than in Sydney. Thus, the Melbourne market offered him greater advantages than the Sydney. Give the district a railway, and there will be no more traffic with Melbourne, it will all go to Sydney. Sells every year fifty to 100 fat cattle in Wagga Wagga or to buyers on the spot. Has not trucked any myself. Yesterday morning he put 2,000 fat wethers into agents hands for sale. These had to travel down the road 40 miles to Wagga Wagga. Would have trucked them if he had facilities.

P. J. HARTNETT.

(16.)

Humula, 6 November, 1890.

Mr. Robert Tressillian, farmer and grazier:—Owns 857 acres selected land, and 1,130 acres of leased land, situated about 3 miles from here down the Umbango, on the east of, and fronting on the creek. Of this there is not more than 130 or 140 acres of flat land on the freehold on the main creek. In addition there are about 200 acres of good land fit for wheat cultivation in the gullies on the freehold. Runs of sheep, about 1,500; of cattle, forty head; of horses, ten. Cultivates a few acres for his own use only. Does not grow tobacco, but the land is all suitable for it. Has grown maize, but for his own use only. Does not send away any fat stock. Sends stock down to his other place below Wagga Wagga, and also has to bring other stock up from there. For these purposes the means of trucking would be very largely availed of if they were available. During droughts stock cannot be travelled. About twelve months ago a meeting was held in Humula to consider a proposal for instituting a factory for dairying purposes. Nothing came of this though many were very anxious to undertake the business. The difficulty of transport was considered to be too great. Considers that the flat lands along the creeks are eminently well suited to support such an industry. The market for the produce would be directly in Wagga Wagga, which is not fully supplied by the districts surrounding it. Another market would be along the Murrumbidgee as far as the railway goes, where, in some seasons, none is produced. Grass-land is leased for from £40 to £50 per 1,000 sheep for six months, but in very dry seasons the grazing lease is much higher. Sheep would be trucked yearly from the plains if there was a line; the difficulty of travelling would ensure this. As the sheep return to the plains in April or May, just before the lambing. Considers the ewes would be trucked down again in order to save their lambs. With railway facilities would grow from 50 to 100 acres of crop yearly. Sends his wool to Sydney *via* Wagga Wagga, paying carriage at £2 10s. per ton. Thoroughly improved, considers his property capable of carrying three sheep to the acre, including bottom land and ridges. The improved land will fatten stores or ewes after bearing, within three months.

ROBERT TRESSILLIAN.

(17.)

Humula, 6 November, 1890.

Mr. James M'Cracken, farmer:—Owns 565 acres freehold, and leases 830 acres on the Umbango and Carabost Creeks, adjoining Humula township. Has owned it in part for about ten years. Has known the district for over twenty-three years. The land is capable of carrying from 1,000 to 1,500 sheep, and about fifteen head of cattle and nine head of horses all the year. Cultivates from 15 to 20 acres of tobacco. About 10 acres of potatoes, and a little oats—about 12 acres—for home use. The tobacco-crop has averaged from 14 cwt. to 22 cwt. to the acre. The potatoes have averaged from 4 to 10 tons to the acre. The oats have yielded from 60 to 80, and 90 bushels per acre, and of hay from 2 tons to 4 tons per acre. The carriage of produce to Wagga Wagga costs £2 10s. per ton. The last tobacco he sold was about twelve months ago; 11 tons realised for No. 1, 5½d.; for No. 2, the same. This tobacco was delivered in Sydney for the price. No. 3 quality brought 3d. per lb. The year before that he got 6d. per lb. all round on the same. Has now very little stock in hand, as last year's crop failed, and he planted potatoes in its place. For potatoes he received £5 per ton on the place for the last he sold. Has obtained in Wagga Wagga prices varying from £6 to £4 10s., being from 10s. to 15s. per ton in excess of prices given for potatoes brought from outside sources; got first prize, and also a special prize at the Wagga Wagga show for potatoes; out of the selling price for potatoes the cartage has to be paid, viz., £2 10s. per ton, unless the grower carts them himself, so to men who cannot do this, the cultivation of potatoes would not be profitable. With regard to the capacity of his land—the leased land has not been improved. He has applied for permission to ringbark; when this is done the carrying capacity of the land will be greatly enhanced. On his freehold of 565 acres, there would be about 200 acres of good bottom land. Would cultivate all this if there were a railway, as it would then pay better than grazing. The land is very suitable for fruit; he has only planted for his own use, but the cost of transport to market prevents its being extensively gone into. Has never lost any crop; from a bad season the farmer can rely upon getting a fair average return yearly. The tobacco crop during the last few years has failed occasionally; this is from some disease in the young plant before it is planted out—he has only lost one crop, that for 1889. Is aware of sixty families settled in the district, and farming in conjunction with grazing. Takes his produce to Wagga Wagga by Kyamba, that being the shortest road and the best. Of ironbark, there are many trees between 3 and 4 feet in diameter. Timbers for bridging, 20 and 30 feet, long are procurable. Sleepers have not been cut here, but in Kyamba. That part is being denuded, and sleeper-getters are gradually coming out further in this direction. The stringybark is good for house building. The timber splits well, and would supply unlimited quantity of fencing material. Red-box stands as well in the ground as ironbark, and is used for fencing indifferently with ironbark and stringybark. There being no saw-mill in this district, there is no export of timber; at Tumberumba there are mills, and timbers of other quality, such as urabie, messmate, and mountain ash. The stringybark grows here to 3 or 4 feet in diameter.

J. M'CRACKEN.

(18.)

(18.)

Humula, 6 November, 1890.

Mr. Patrick Nugent, farmer:—Owns 1½ acres; does not crop; leases no land. Lives on land belonging to his sons—1,000 acres—grazes twenty horses, twenty cattle, and 1,000 sheep. Resident fifty years in the district. The average production of wheat in the district, 30 bushels to the acre, is the highest, and 20 bushels the lowest he has had on one farm; but on the Tarcutta Swamp he has grown as high as 80 bushels. Considers 60 bushels of oats an average for this neighbourhood. Of oaten hay, from 2 tons to 2½ tons. Tobacco averages about 15 cwt. per acre, although he has not grown much. Was managing the old Humula station at one time; the country is sound, healthy land for cattle and sheep. The improvement of the country by ring-barking and scrubbing has trebled its carrying capacity. Has known paddocks to be leased to stock-owners from the lower country, but as a rule, they go farther towards Tumberumba and Kiandra, where the paddocks are larger. The low alluvial flats are worth £10 per acre, the forest land improved, from £2 10s. to £4. The market for produce is at Wagga Wagga; the cost of carriage is from £2 to £2 10s. per ton; has paid 1s. per bushel for wheat. Most of the wool from the district goes to Sydney, not much to Melbourne. His land, 1½ acres, is on the Murraguldrie Creek 6 miles from Humula, north-west. This is a tributary of the Humula Creek. Grows fruit-trees on this, peaches, plums, cherries, medlars, gooseberries, Isabella grapes and other sorts, quinces, pears, also; in fact, all sorts of fruit, including an orange tree for experiment, which is also doing well. All these are flourishing; does not grow for market. It would not pay to cart fruit from here. Has spent some time in prospecting in this district. About ten years ago there were large numbers of Chinamen and others, amounting to 200 or 300, washing for gold in Umbango Creek and Carabost Creek. At present there would be very few men. There is gold all through the district. Does not know of any reefs about here with gold. Knows of several reefs showing lead. There are indications of tin in the Murraguldrie Creek, and in the granite around Kyamba. Tin has not been worked here. Gold has only been worked as yet. The building stones in the district are granite, which is of very good quality at Kyamba and on Shokeroo. The slate in the Billabong falls is also very good, and might be used for over-mantel purposes. Ironbark is along the Murraguldrie Creek and the great reserve, and on the dividing range between Kyamba and the Southern Road there is very much ironbark over a distance 42 miles by 4 miles. The best stringybark in this part is on the Carabost timber reserve, about 8 miles up the creek from here. Stringybark, ironbark, and red-box, are the principal timbers here. There is also some red gum along the creeks. Timber is used here for fencing principally. The building timber is brought from Wagga Wagga, as there is no saw-mill here. In one contract 70,000 feet of stringybark was sent to Wagga Wagga for building the Convent, about fifteen years ago. There is now no traffic in timber from these districts, as there is no saw-mill. He considers that good flag stones may be procured from the slates on the falls of little Billabong, as there are indications of good splitting to about an inch thick, and have large surfaces.

PATRICK NUGENT, senior.

(19.)

Glenroy, 1 December, 1890.

Mr. William Squire, farmer, Parish Glenroy:—940 acres conditional purchase, 467 conditional lease, Parish Munderoo. He holds 850 acres conditional purchase, grazes and farms on both properties. In Glenroy property he cultivates about 75 acres of wheat and oats, and in Munderoo about 85 acres of the same crops. On both properties he runs 200 head of cattle, and eighty head of horses. The conditional purchase property is nearly all ringbarked, about 20 acres are in fallow, making 180 acres altogether which have been, or are, in use for cropping. Is not utilising the leased land as yet. Considers that the conditional purchase property would carry another fifty head of stock very well. If there were railway communication he would cultivate 300 or 400 acres. He has about 20 bags of oats, and 20 tons of hay, which he cannot get rid of, as there is no market, though the oats might be sold in the locality. Considers that oats and potatoes are the suitable crops for this land. On the whole conditional purchase land, 1,790 acres, there is but little that is not fit for the plough—in fact the whole, with the exception of 20 acres or so, is suitable for cultivation. Carries his own produce and potatoes to market. He takes potatoes to Albury, but oats to Wagga Wagga, and on the return trip he brings up stores for storekeepers and others. The trip to Albury and back can hardly be done in twelve days in the best weather, but it frequently takes much longer. The trip to Wagga Wagga and back takes nine or ten days. Each load is 4 tons, with 8 horses on an average. At present he obtains, as back freight from Albury, £2 10s. per ton, but during winter he has had as high as £8. This was an exceptional case, produced by bad roads, scarcity of teams, and dear feed. The freight from Albury is rated low because of the wool teams that are running. £2 10s. per ton is about the lowest price taken for goods from Albury. Does not fatten stock except for home consumption, but breeds for stores. Cattle bred here are in great request for fattening purposes. Bring £1 or £1 10s. higher in price than the Queensland cattle, although these are very much heavier. He does not breed many cattle, but he chiefly buys young stock in Albury, and brings them up to his grass here. The horses bred here are noted for hardiness. He breeds both heavy and blood horses. Usually sells his horses on the ground. At present he is grazing cattle only, because he considers that the market is favourable for that business, not because he considers the country unsuitable for sheep. He would take to sheep again if the conditions became favourable for grazing them, as he thinks that they afford the best means for keeping the land clear, and manuring it.

WM. SQUIRE.

(20.)

Glenroy, 1 December, 1890.

Mr. Robert Lewis, farmer, Rosewood:—Holds 344 acres freehold in parish Craven and Selwyn. His farm is 2½ miles from the present post-office, but within half a mile of the surveyed township where the Public School is situated. Has been in the district about twelve years. Is President and Acting Secretary to the Wagga Wagga Tumberumba Railway League, advocating a line from Wagga Wagga to Tumberumba. Will give in a copy of a statement he has just read. He can get the details of the statistics of the holdings in these districts, up to the date when they were collected in 1887. The figures just quoted in his statement are of that date. There are at the present time thirty-two settlers on Rosewood alone, within a radius of 3½ miles of the township. Also there are twenty-three settlers within 4 miles of Glenroy Hotel at the present time. These are all householders or holders of land. These include

include the pastoralists, M'Auliffe and Williams only. On his farm he has 30 acres under cultivation, in grain crops principally. On the rest he runs about twenty head of horses, and forty head of cattle. If he had railway communication he would go in more for cultivating grain crops. Wheat, oats, and hay, for chaff, as well as fruit-growing, also potatoes and dairy produce. Has grown at the rate of 37½ bushels of wheat to the acre. Also about 35 bushels of oats. Has had as much as 14 tons to the acre of potatoes, in a favourable season. Would consider the average yield of potatoes in these districts would be from 5 to 8 tons per acre. The principal market for produce is Wagga Wagga, a distance of about 64 miles. Sometimes produce is sent to Albury, a distance of 90 miles. This road is *via* Little Billabong. The Wagga Wagga road is *via* Carabost. Kyamba and Book Book. A road is now being formed *via* Humula along which a mail route is being asked for. During winter the heavy traffic will have to go *via* Little Billabong, an extra round of 10 miles, until the road is properly made. This route, therefore, becomes 74 miles into Wagga Wagga counting from Glenroy Hotel. The produce sent to Albury is taken there because teams have to go to fetch loads. The principal business is done by T. H. Mate and Co. Wagga Wagga is a better market for produce than Albury. What goes to Albury is not intended or transported over the border into Victoria, it is all sold in New South Wales. The trade with Albury is principally in potatoes. Has not grown maize to any extent here. Grain has been grown experimentally. The freight for produce to Wagga Wagga is £3 per ton; but when back loading can be had £2 10s is charged. To Albury the freight is £4—per ton on an average—having been as high as £7 in winter and down to £3 in summer. This is taking the back loading into consideration. It would not be profitable to send potatoes to Wagga Wagga or Albury if their freights had to be paid by the growers. They usually cart the produce themselves, or it is sometimes purchased by teamsters who would otherwise have to go down empty. Principally however the farmers cart their own produce. The Manus Creek, Munderoo Creek, and Back Creek, Boggy Creek, and other main creeks are always running. Have never been known to be dry. Numbers of minor creeks also constantly hold water. As yet nothing has been done in the way of selling fruit outside the district as no profit could be made in carting it away. All sorts of fruit suitable to a cold climate will grow to perfection. Potatoes from these districts are very much sought for in Wagga Wagga and other markets than from any other, and higher prices are given. The potatoes grown here are generally larger than are grown in Victoria. He himself has grown them averaging 2½ and 3 lb. each, but he has known them to run as high as 5 lb. Supplies have been chiefly purchased in Albury; by far the largest proportion comes from there, the principal storkeepers deal with Albury, but consider that the trade is increasing with Wagga Wagga. Tobacco has been grown about Tumberumba but the cost of transport has been against its being cultivated to any great extent; very good tobacco has been grown about the Manus Creek, Mindaroo, and Coppabella. The district is chiefly a breeding one for both cattle and horses. Sheep can be and are fattened. Partly improved land suitable for agriculture has been sold from £2 10s. up to £3 per acre.

ROBERT LEVIS,
President and Secretary.

(21.)

Glenroy, 1 December, 1890.

Mr. Thomas Bullock, farmer:—Owns 80 acres land, rents 100 acres. Has ploughed and laid down 16 acres of clover rye grass of which he has now for hay this season 12 acres. Considers that 1 acre laid down in English grasses is worth at least 10 acres of the native grasses. From one paddock of clover he turns off twenty pigs in good condition; the clover referred to is both the red and white; these grasses have been grown for the last four years. From the first 2 acres sown last season cut 3 tons of hay. Is of opinion that Swedes properly cultivated will yield 40 tons to per acre. Makes this statement from experience, believes they could be grown for export at a good profit with railway communication. From the experience he has had in the cultivation of hop is of opinion that this is the finest district he has ever known. Has taken the first prize in Albury and also in Tumberumba. The district is equally adapted for the cultivation of potatoes; is of opinion that at least 1,000 tons will be produced this year, all that prevents it from supplying all Riverina is the cost of the carriage. He took the prize at Germanton last year for potatoes—112 potatoes weighing the hundredweight. Oats are probably the best cereal grown; has had 63 bushels per acre. Considers his average is at least 40 bushels. Wishes to add that owing to the cost of transit without a railway he will be obliged to abandon farming in this district.

THOS. BULLOCK.

(22.)

Glenroy, 1 December, 1890.

Mr. Charles Woodhouse, storekeeper and hotelkeeper and grazier in Glenroy:—Owns 390 acres freehold; 200 conditional lease, and 640 acres conditional purchase, total 2,264 acres. The parishes are Glenroy, Rosewood and Craven. Has been here twenty-one years. Acquired all by purchase. Uses all the land for grazing. Is cultivating 20 acres in hay for home consumption. Grazes 2,200 sheep, 100 head of cattle, and about 16 horses. 500 acres of this land is cleared and fit for the plough, but fully 2,000 acres is cultivable. Has cropped this land for many years, but gave it up about five years ago. The trouble in getting the produce away induced him to abandon cultivation in favour of grazing sheep. The largest crop he got off this land was 1,000 bags of wheat. It averaged about 27 bushels to the acre. The oats were a little over 60 bushels per acre. His land is sown in English grasses, and the whole of it, but 454 acres, have been cultivated and laid down for five years. Considers this is now a permanent grass. Considers now that his land is fully stocked. Has but a small patch to be ringed, so his land is very highly improved throughout. His average total weight of tonnage brought in would amount to 200 tons yearly. Has had much more, but has not pushed his store business much for the last few years. Obtains his stores both from Melbourne and Sydney, all being delivered in Albury because of the nuisance of getting local carriers there. The average cost of cartage from that place will be £3 per ton. Buys in bond from T. H. Mate & Co., in Albury, large parcels at times. Is doing business with Coorabyra, Glenroy, Rosewood, Mundaroo, and Manus. On reference to his books, finds there are about eighty-two, all landholders. Is doing a business with these of about £8,000 per annum. His object in carrying the small head of the stock at present upon the land is to fatten; as a rule he purchases from the shears and grazes until fit for the butchers. Wishes to add that he not only butchers himself, but sells largely to the butchers in the district.

CHARLES WOODHOUSE.

(23.)

(23.)

Glenroy, 1 December, 1890.

Mr. Walter Mott, farmer:—Owns 1,400 acres, and 600 acres lease in Rosewood, parishes of Craven and Glenroy, and about 57 acres about 9 miles south of Humula township. Has about 45 acres under crop, under wheat and and oats. Runs 1,500 sheep, sixty head horses, 180 head of cattle. Considers a fair average production is 35 bushels oats and 20 bushels wheat per acre; bases this estimate on ten years' experience; has never suffered a failure of crop from dry seasons; Wagga Wagga is his market for produce; people in the district used to deal chiefly with Albury, the road being a better one although some miles further. He does not pay for much carriage, carting his own goods as a rule. Considers as a rule freight to Albury averages £3 per ton down, and £5 back, and to Wagga Wagga about 10s. per ton less, the road to Albury being so much better accounts for the difference being so small. Has not cultivated fruit for sale there being no market for it. Sends his wool to Melbourne, his reason for doing so is that he gets back loading in supplies. The greater portion of the supplies come from Albury. Is aware that very large numbers of sheep come up from Riverina every year to rented grass lands; in 1888 rented 1,000 acres of leasehold land unimproved, except by fencing, for six months for £100; this carried three sheep to an acre during that period, the rental of that grass land varies with the demand in good or bad seasons. There is a travelling-stock reserve 8 miles long by ½ mile wide through Glenroy and Rosewood, and a travelling-stock reserve from Kyamba to Tumberumba of the same width; this is interrupted in places by selections that have been taken. On Carabost, there is a forest reserve adjoining Rosewood of at least 20,000 acres. His holding south of Humula, is a long gully. Is clearing and fencing, and getting it ready for sheep. Wheat has been grown there, also oats and potatoes—purchased it from a selector. From that holding Wagga Wagga is his market as it is so much nearer than any other. To get to Albury he would have to go up Long Gully southwards 4 miles to the main road—this is a surveyed road. He could get to Albury through Little Billabong. In fact the only outlet to Wagga Wagga is northwards through Humula by a surveyed road. There is a road from Humula to Rosewood at Long Gully. The tobacco grown on that land belonged to the former owner of the property who sent it to Sydney.

WALTER MOTT.

(24.)

Glenroy, 1 December, 1890.

Mr. William Silvanus Cheshire, farmer and grazier:—Owns at Glenroy 2,000 acres, and 4,380 acres conditional lease, and in Mundaroo 1,562 acres, and 2,600 acres conditional lease. Runs 5,000 to 6,000 sheep, 230 cattle, twenty-five head horses, has 55 acres under crop, of wheat and oats; has 60 acres more that has been under cultivation. Has only resided here about a year. Sends his wool to Melbourne; the freight is cheaper—as it costs him as much from here to Wagga Wagga per bale as it does from Wagga Wagga to Sydney. Grows no produce, the cost of getting to market is prohibitory; with facilities for getting to market would cultivate 500 acres. His object would be to crop for a few years, and then lay the land down in English grasses, bringing a fresh area under cultivation, which would be treated in the same way; this would enhance the carrying capacity of his land. Considers 1 acre so treated will carry as much stock as 2 acres in its natural state. Obtains all his supplies from Albury. Has paid 35s. to £2 per acre for partially improved land. He considers that there are areas of land worth nearly double that price at the present time. Neither makes a practice of fattening or breeding, but confines himself to dealing. Is at present very much understocked, as he has only recently taken delivery of one part of his purchased land, amounting to about 4,000 acres. There are a large number of eurabie trees on his property. A very small percentage has been cut. There is also very good stringybark, also peppermint and white gum. Of the total acreage he holds he considers that 4,000 acres at least is good arable land. Is of opinion that the soil and climate are eminently suitable for the growth of English grasses, and he believes that these will be found to be permanent in these districts. He intends to lay down his land gradually with these grasses, and considers that an acre of these will carry as much stock as two acres in their natural state. In order that this may be done to any extent here it is necessary that cultivation should be undertaken extensively, and in order that this may be done profitably, radical improvements in communication must be made. There are at least two reefs on his property, in which gold and silver have been found. These so far as tested have been pronounced to be not payable, but they have not been sufficiently prospected as yet. Has acquired the whole of his property here within the last sixteen months by purchase from selectors. He has purchased out five of these; four of whom had cultivated more or less, and who might be expected to remain as permanent settlers had there been an outlet for their produce.

W. S. CHESHIRE.

(25.)

Glenroy, 1 December, 1890.

Mr. George Wilde Evans, farmer:—Owns 960 conditional purchase and 200 conditional lease, and has an application before the Board for 120 acres more. All in the parish of Glenroy. Has 55 acres under crop, 11 acres wheat, balance oats; also 2 acres sorghum, ½ acre turnips, 10 acres potatoes; runs about 140 head of cattle, twenty-five horses; sends his produce chiefly to Wagga Wagga and carts it himself. Makes cheese, milking between thirty and forty cows and turning out from 2 to 3½ tons in the season, that is from November to April; this cheese, with the exception of what is sold locally, goes to Wagga Wagga, where he sells it wholesale from 6d. to 8d. per lb.; fattens, kills, and cures about twelve hogs each season; what is not used by the family is sold in Wagga Wagga at an average price of 7d. per lb. Has still on hand from last year's crop 8 tons of wheaten hay, for which he cannot find a market, as the cost of carriage prevents him from taking it to Wagga Wagga. Considers the average crop of oats at 35 bushels, wheat about 20 bushels, potatoes 3 tons. Has 120 acres cleared for cultivation which he would crop if he had transport to a market. Has been a resident fifteen years. When he came there were but three other settlers in the district. Obtains his supplies chiefly from Wagga Wagga. Farmers suffer chiefly from rust in this district. Has never suffered from any seasons. Has never known the principal creeks, such as the Mannus, Tumberumba, and Boggy Creeks to be dry. Considers ⅔ of his land to be arable, and would cultivate very largely if there was a railway.

GEO. W. EVANS.

(26.)

(26.)

Glenroy, 1 December, 1890.

Mr. John Doughty, sawmill owner and farmer in parish of Crareen:—Owns 45 acres freehold, and 139 acres of conditional purchase.—Total 184 acres. Cultivates 70 acres in wheat and oats but he has only had 40 acres in crop for the last two years, 20 in wheat and 20 in oats. He has reduced his average in crop because he cannot dispose of the produce. Has now 5 or 6 tons of chaff in stock for which he has no buyer. His sawmill could turn out from 500 to 600 feet daily. Has more orders than he can fill, and intends to put up a bigger plant next year. Saws stringybark and peppermint, sometimes white-gum. The timber is chiefly used for house building in the district. Has sent to Germanton and Humula. There is an unlimited demand for such timber in Wagga Wagga, but it cannot be delivered there at less than 20s. or 22s. per ton; but even at that price stringybark is taken there for building purposes. Sometimes saws eurabie for wheel-wright purposes. Gets the same price as for other timber, viz., 10s. per 100 feet, delivered at the mill. The eurabie is rather scarce and the land on which it is found has become mostly all private property. The stringybark runs up to 3 feet in thickness at stump high, and the peppermint runs a little larger. Obtains his timber about 4 miles from his mill towards Coppabella. The railway would enable him to make a good living on his 180 acres of land independently of the mill, as he could then get rid of his produce. It would also give him an outlet for his timber. Has grown 82 bushels of oats to the acre, and 38 bushels of wheat, and he believes he could repeat this. His land is no better than that of others. Much of the land in the district would do the same if it got tillage. Has been farming since he was a child. Was brought up as a farmer in England. Has been farming on his own account in New South Wales since 1858. Has been in Tumberumba since 1866. Selected the land he is on now in 1869, and has made his way in this line since. Has not grown tobacco on any large scale; does not consider it a profitable crop owing to the early and late frosts. Although he is aware that Chinamen have grown it about Tumberumba successfully. Rust is the principal enemy of the farmer in this district. Has never heard of a crop suffering from a dry season. Wishes to say that there is no local market; that the storekeepers will not buy unless payment is made in goods. He would grow enough hay upon his 184 acres, if there was transport for it to the railway, to make him independent of any other means for earning a living.

JOHN DOUGHTY.

(27.)

Manus Creek, 24 November, 1890.

Mr. Robert M'Micking, grazier at Manus, 5 miles from Tumberumba:—Owns 12,000 acres and 6,000 acres leasehold runs—20,000 sheep, 1,000 head of cattle and 200 horses. Is aware of the object of this inquiry, is of opinion that the line should start from Wagga Wagga following the water courses, viz.:—The Umbango Creek and the Manus Creek to Tintaldra, the former being a tributary to the Murrumbidgee and the latter running into the Murray at Tintaldra—where there is a Victorian Custom House. By following this course is of opinion the railway would secure the whole of the traffic from the Upper Murray which would go through Wagga Wagga while the supplies for that district would come that way. Is of opinion that this would be the case as the Victorian Railway Terminus was at Talangatta, about 60 miles from Tintaldra, and the intervening country is of such a nature as to preclude the probability of that line being extended to the Murray for many years to come; the line proposed by him would pass through Humula, Rosewood, and Glenroy, but would leave Tumberumba about 4 miles to the east, by the present road. This line would obviate the heavy cuttings and grade up to Tumberumba. Is of opinion that this line would open up a much larger area of arable land, the line would be much more cheaply constructed, and cartage to the line would be brought chiefly down hill, instead of being taken up, as it must be if the terminus is at Tumberumba. From this to Bago where forest reserves of valuable timber exist is about 20 miles—and is a steady ascent and a better road than *via* Tumberumba; from Bago to Adelong, about 25 miles, the road falls towards Adelong. Is of opinion the line suggested would attract all traffic from Bago; the soil between this and Bago is of the richest description and when cleared of timber will be of great value for agricultural purposes. Has been a resident for over thirty years; during the last fifteen years a great many small settlers have come in and settlement is still increasing; land is being taken up now, that a few years ago would not have been looked at. The district is popular on account of the regularity of the rainfall, the abundance of permanent springs and streams, and the richness of the soil throughout the greater portion of the district. Hay and root crops could be grown and shipped to the Lower Murrumbidgee and a large trade established between the two districts profitable to each; the fat stock traffic to Sydney and Melbourne would be a considerable item, and would embrace the drafts from the Upper Murray if the charges or rates were not prohibitory. His nearest railway station is either Wagga Wagga or Gundagai, both about 70 miles, the former road being the best. Sends his wool and fat stock to Melbourne, that being the most convenient market; obtains supplies from Albury and Melbourne; has purchased in Sydney, but the delay and trouble is too great. On one occasion sent an order to Lorimer and Rome, Sydney, for supplies and on the same day posted a letter to England, to which he got a reply before he received the stores; he also had to send information to the police to look up the carriers as he feared otherwise he would not obtain them at all pays £2 10s. per ton both ways; from Wodonga and Albury. Sends yearly about 35 tons of wool and obtains about 30 tons of goods. Has been introducing English grasses during the whole of his residence, and they have spread all over his land, and have proved to be thoroughly suited to both soil and climate, wherever the land is ring-barked. Tobacco has been grown, but the cultivation has been abandoned owing to the fall in price since the introduction of the excise. With respect to the value of land, considers that a fair estimate cannot be given for agricultural purposes at present owing to the distance to a market, bad roads, and cost of transport, but adds that the adjoining run of Walregang, consisting of 8,000 acres, was sold some years ago for £4 per acre; some of this at the time was not fully paid up. Is of opinion that the storekeepers of Tumberumba are not only opposed to the extension of the line from Wagga Wagga, but are in reality to any railway, fearing that it would induce competition, and reduce their profits. Is of opinion that the construction of the line would give a great impetus to mining, as the whole neighbourhood is not only gold-bearing but shows indications of copper, silver, tin, and other minerals; at present, machinery and repairs to it are very costly owing to the distance and cost of transport. With cheap transit this would be done away with and enable miners to work ground at a profit which they are at present unable to touch.

ROBERT M'MICKING.

In

In the event of this line being constructed is willing to give the land required for the line, through his property, and also land for a station on the main Jingellic to Tumberumba road at Manus Creek.—Robert M'Micking.

(28.)

Tumberumba, 5 December, 1890.

Mr. Edward William Benyan, saddler, has also a news agency and fancy goods' store:—Has been in this town for twelve years. Imports into the town about 1½ tons of goods yearly, mostly from Sydney, *viâ* Albury. Does not get much goods from Melbourne; some lines are cheaper if purchased in Melbourne. The colonial manufactured goods are 25 per cent. dearer in Victoria than in New South Wales. Does not ship from Sydney to Melbourne; uses the railway only. Goods are brought up from Albury because of the teams working regularly along that road. On several occasions, goods that had been consigned to Wagga Wagga from Sydney had to be sent on to Albury, because no teams were procurable in Wagga Wagga to bring them on to Tumberumba. His business is confined to the local requirements. His property is in the town in which he resides. Has five head of stock running on leased ground. Has some knowledge of the cultivation of fruit, having been a long time in the Goulburn district, where he was Secretary to the Horticultural Society for many years. The fruit produced here is quite equal to that produced in the Goulburn district, where the climate is very similar to this. Has a family of ten children, and wishes to bear testimony to the salubrity of the climate. During his residence there has very seldom been any sickness; considers it would be found that the death-rate is much lower here than the average of the Colony, and he considers this to be a strong argument in favour of its connection by railway.

E. W. BENYAN.

(29.)

Tumberumba, 5 December, 1890.

Mr. S. F. Ramsay:—Self and his mother are executors for his father, storekeepers and commission agents and auctioneers. Have been in the business here for seventeen years. Deals in all kinds of stores. Brings into Tumberumba 300 tons of goods per annum from Albury. Nothing is brought from Wagga Wagga. There are contract carriers working to and from Albury, and carriage is more favourable thence. Carriers can hardly be got from Wagga Wagga. Any goods, such as timber or colonial pine from Coolamon, are all taken to Albury and brought up thence. Deals, principally in Melbourne, because of the cost of carriage by rail. All goods purchased in Sydney are delivered by Sydney merchants free at Spencer-street Railway Station, in Melbourne; so the only charge on it is the carriage thence—dutiable goods are carried across Victoria in bond. Has no preference for the Melbourne market over the Sydney for purchasing. It is merely a question of the cost of transport to Tumberumba. As to the quantity of goods yearly sent away by the firm, an estimate cannot be given, because it is very fluctuating. Farmers usually cart their own produce, and bring back loading for storekeepers and others, which helps to pay for their time and horse feed. His tonnage despatched is mostly as a commission agent. Has not amounted to much of late years. Considerable quantities of wool used to be sent away, and tobacco. Of tobacco, 20 tons were sent to Albury in one year, and thence to Sydney. - Cost of carriage from Albury: The contract price all the year round paid by the firm is £3 10s. per ton. Colonial pine delivered here, lining and flooring, costs about 30s. per ton; he brings up all dressed timber, no rough stuff. The Baltic timber of the same kind lining, costs 22s. 6d. per 100 feet. During last year there was brought into town and passed through 73,000 feet super of timber from Hassell's, on Burra Creek, in which the firm have an interest. This was principally mountain ash and curabie, but a little stringybark. The difficulty is getting the timber away to Wagga Wagga, where there is a splendid demand, extending up country as far as Junee, is in getting teams. Is advertising now for teams. To one man alone he would send 40,000 feet if he had carriage. In order to get timber carried to Wagga Wagga he has to buy pine there to give the carrier a return load. Does not send timber to Albury. There is no demand there for this timber. The demand is in New South Wales, and to satisfy this the timber must pass through Wagga Wagga. The development of this timber trade depends upon the transit between Tumberumba and Wagga Wagga. The sawn kind of timber (curabie), called there blue-gum, is cut at Hillsborough, near Beechworth. Wheel-wrights in Albury have given opinion that the timber of this country is superior to that at Beechworth. The business carried on there is very large. The Hillsborough firm have timber yards in Wodonga, whence they send timber into New South Wales. Their mills are more suitably situated to Albury than any in New South Wales. The cost of timber at Hassell's mill is 11s. per 100 feet, but, delivered in Wagga Wagga, the cost depends on the carriage. If a carrier gets a return load he can carry the timber there at a cheaper rate than if he got none. The firm had a tender lately for this carriage; it was 13s. per 100 feet, for delivering from the Burra mill to Wagga Wagga. The firm buys gold. An average of 1,000 oz. per annum passes through their hands. The connection extends along the Tumut road about 10 miles south as far as Tooma, and along the Wagga Wagga road as far as Carabost. The average yearly turnover of the business alone would be about £10,000. Stream tin is got in the Burra Creek; it is got in sluicing for gold. Amounts to about 5 tons per annum. Has property in the town and district—2,000 acres conditional purchase in several parishes; 250 acres freehold, and 1,700 acres conditional lease—of this 1,500 acres has been rented. On this rented area there are three families, containing twenty-five souls all told. The remainder of the land is used occasionally as required. Land is rented in farms at an average of about 1s. per acre. Believes that 750,000 or 800,000 is not an exaggerated estimate of the number of sheep that passed through Tumberumba during the dry season of 1888.

STAN. F. RAMSAY.

(30.)

Tumberumba, 5 December, 1890.

Mr. William Willans, solicitor:—Has been resident in Tumberumba since 1886, but previously he was in Wagga Wagga for twenty-three or twenty-four years. Has watched the progress of the town of Tumberumba, and the conclusion he has arrived at is that its greatest progress is made at the time of drought. The town being busy, they are busy supplying the many hands required for the stock that in such times of drought

is continually travelling to the mountain country through Tumberumba. It appears to him that that fact makes the district a safety valve at it were for the Wagga Wagga and Riverina districts. Has seen sheep on the reserve at the bridge in the town covering the whole mountain reserve for the whole length of the day at times. These were sheep that had been kept too long in the Riverina country, and were consequently weak when they arrived here, and could not recover their strength till the winter had set in here. Any attempt to get them back proved fatal in most instances, as from the continual travelling of sheep there was no grass left on the travelling-stock reserve, nor could it have time to grow naturally. Most of these sheep could in my opinion be saved by having a fresh means of transit from and to Tumberumba from their runs. The progress of Tumberumba is retarded, principally by the fact of lands suitable for increasing the size of the town being locked up in temporary commons. These commons extend on the south to the north boundary of Burra Burra run, a distance of 5 miles, while on the north they extend nearly 3 miles to Wolf's selections. It is therefore clear that settlement is barred between those two distances. This could in a great measure be saved by revoking portions of these temporary commons around the town, and subdividing the areas so revoked into areas of 10 to 40 acres, subject, however, to conditional purchase, and not to the confined limits allowed in a so-called gold-field, as Tumberumba is supposed to be. If the land were so disposed of, a large population would centre round Tumberumba, and this as much for residence as in search of health. Numerous applications have been made to me by residents of Wagga Wagga and its district as to summer residence for their families, and escape from the terrific heat, sometimes 119 or 120 degrees for weeks in the Riverina district. His answer was that there was no ground to be got in the town except for miners, who could get a quarter acre on condition of living in a hut. That there was no available place for villas as summer residences near the town at present, or until the Government as a feeder for the railway thought proper to open the lands. Their response was, "Oh! if we had a railway from Wagga Wagga to Tumberumba, most of us would reside at the latter place for some time during the summer to avoid the awful heat and lassitude," and he believes that if Government decided on making a line, and opened the lands, that Tumberumba would become a large and flourishing town, instead of relying at present on the earnings of working miners. The climate is humid, Tumberumba being 2,250 feet above the sea. In summer it resembles the June weather in an English or Irish summer, and towards sun-down a cool breeze sets in and continues till midnight, on this account many invalids from Riverina have recovered their strength, and hence their inquiries about being able to reside here in the summer months, which they cannot compass now owing to the expenses and length of the journey. As to farm produce, wheat and oats grow well. There is a farm at Glenroy where he is told that 45 bushels of wheat has been reaped. Potatoes also grow well, but there being no means of transit to the market, very few potatoes are sent away. The farmers decline to plant them for this reason, and in many instances feed their pigs with them. The yield is sometimes 6 tons to the acre, and the quality is equal to the Warnambool. The lands are suitable for Swede turnips, which would be food for Riverina sheep in a dry season, but no one will grow them for the reason that the cost of carriage is prohibitive. Pears grow splendidly here, equal to the Jersey pear supplied to the Queen's table. Apples, baking and eating, grow to great sizes up to a circumference of 16 inches. The small fruits, such as cherries, currants, raspberries, and stawberries grow luxuriantly, equal to any in the home country.

W. WILLANS.

(31.)

Tumberumba, 5 December, 1890.

Mr. Dominic McHugh, farmer in Manus Creek, 5 miles from Tumberumba, about 1½ miles from Glenroy:—Owns about 1,500 acres freehold including selections in parishes Manus and Tumberumba. Cultivates between 20 to 30 acres. Runs about 130 head of cattle and 40 head of horses. Deals principally with Wagga Wagga, but occasionally with Albury. Average number of stock fattened is 15 to 20 head yearly; generally sells them on the place to the butchers. Takes down to Wagga Wagga usually 10 or 12 tons of potatoes in the year and brings back stores for home use. Of the whole area held he has about 300 or 400 acres of cultivable land. This would grow any cereal crop or potatoes or turnips. Does not cultivate more because he could not get rid of the produce. The trip to Wagga Wagga and back takes about eight days. The load he takes is 3 or 4 tons in an eight-horse waggon. The only road he has to Tooma and on to the Upper Murray goes through Tumberumba, but to Jingellic he would go by Munderoo. There is a fair road by that route. There is a rough track to Coppabella and Germanton. Could take a dray that way. There has been very little traffic that way since the other main road has been kept in repair. This track is not maintained at all. There is a bush track. No dray-road across the range from Glenroy to Courabyra or Bago. He is distinctly in favour of the Wagga Wagga route. The district about Tumut and Adelong can grow more than they can find a market for; whereas if they had a railway this route to Wagga Wagga would open out the whole of Riverina and the western country to the products of those districts about Tumberumba.

DOMINICK McHUGH.

(32.)

Tumberumba, 5 December, 1890.

Senior-constable Donaldson, in charge, and *Mr. John Byrne*, hotel-keeper, gave the following information:—Mr. Donaldson has been here twelve and a half years, and Mr. Byrne twenty-nine years. Tooma shears about 40,000 sheep at woolshed and sends away about 500 bales of wool yearly; all this wool and the return goods passes through Tumberumba on their way to Wodonga, *via* Carabost, Billabong, and Germanton. The return stores of all kinds that have to go back by the same route must amount to 100 tons. Burra station has not yet been fully stocked. Lately purchased from Donelly of Borambola. Sheep were not shorn here to any extent before. If under the new management shearing is done here the clip will probably amount to 400 or 500 bales which will all have to pass through Tumberumba, and the return stores would probably amount to 100 tons. Mr. Bardwell owns, besides Obern, the Bago, Coorabyra, and Adelong, and he shears at Bago, about 22 miles from Tumberumba, on the Bago Creek. He sends his wool across by Tarcutta to Wagga Wagga. If the railway came to Tumberumba this wool would probably be sent to Humula, as the shed at Bago is only 9 miles from that place. It would amount to 400 or 500 bales, and there would be a quantity of stores to be returned.

R. DONALDSON.
JOHN BYRNE.

(33.)

(33.)

Tumberumba, 5 December, 1890.

Mr. Andrew McGlynn, farmer, Tumberumba:—Owns 41 acres freehold on the Tumberumba Creek, on the main road to Tooma, within half a mile of the town. Has not cultivated for two years. Keeps fifteen cows running on the common, makes butter for sale in town. He would cultivate all the land which is all good if there were a railway. Took the land eight or nine years ago. The first year he obtained 28 bushels of wheat to the acre off 5 acres. Since then has grown oats and made hay, but he cannot get a good price for it. Could make a good living by raising potatoes and selling at the station for £2 per ton. Has had from 3 to 8 tons to the acre of potatoes. Frost does not cut down the crop if put in the proper time, but if they are in early for the main crop they are not damaged. They should be put in three weeks or a month before Christmas for the regular crop. Has known a crop of 60 tons taken off an area of 5 acres; all these were marketable potatoes. This crop was taken off by Travers and Byrnes.

his
ANDREW x McGLYNN.
mark.

(34.)

Tumberumba, 5 December, 1890.

Mr. John M'Arthur, contractor for general building and bridges:—Has been three years in the district. Has a number of Government contracts for buildings and bridges and road work, amounting altogether to £2,611 worth. The best timber for bridge girders is eurabie, in this district, and for piles stringybark, and for skirting, stringybark, and for decking, eurabie. Would not use mountain ash for bridge work. It is suitable for building purposes out of ground. Seven years is its age in the ground, nor is eurabie a good timber in the ground. Does not consider that mountain ash is as good as eurabie in any way, either for lasting under exposure, or as weight-bearing. Eurabie girders are procurable here in 55-foot lengths, 12 inches by 13 inches, and could be got larger and longer if required. Has built much bridge work, having built on the Cooma and Gundagai lines. Considers that eurabie may be classed with any of the good timbers for weight-carrying as girders. It is more pliable than ironbark, box, or grey-gum. Would class it as next below grey-gum. He built the two laminated arch bridges at Queanbeyan and Molonglo, on the Cooma line (J. C. Johnson & Co.) as foreman for the contractors. They were of spotted gum for the arches, and ironbark for the struts and girders. Considers that eurabie is good enough for the whole of such bridges, if not placed in connection with the ground. Girders could be supplied at Tumberumba, from 40 to 50-foot lengths, at 2s. per cubic foot. Shorter lengths would be 1s. 3d. and 1s. 6d. per cubic foot. Decking and skirting would cost 2s. per cubic foot for sawn timber, delivered. Box 1s. per lineal foot delivered. Fencing posts should be of stringy-bark and chippy-gum, which is a choice timber taken by the Railway Department for fence posts. These could be supplied for £3 15s. per 100. Rails should be of ash and stringy-bark, at £3 per 100, delivered along the line. The proper timber for sleepers here would be stringy-bark, which is the most suitable timber in the Tumberumba districts for work in the ground. Sleepers would be delivered here for 3s. 6d. each. He put down the shaft in what is known as the basalt deep claim, which has been aided by the Government. The depth is 108 feet, and the drives are in total length about 100 feet. About £1,300 and £1,400 has been spent in them, including the Government subsidy. The prospects obtained from the drive running east of the shaft is from 1 to 3 grains to the dish, and the depth of the wash, and width, is an average of 4 feet, 70 feet wide. Considers that the drive should be carried south to get better gold, as it has now come on to where the bed rock is falling. Believes that the claim would pay good dividends, and it would be the forerunner of many other claims in the same locality. There are about five claims at work on the basalt lead, employing about fifty men; on other claims engaged in sluicing, there are also 150 men employed. All these miners would be within a radius of 20 miles. Considers that the connection should be with Wagga Wagga, because that route would suit the country better, enabling a distribution of the products of those districts over the Colony, to be made to more advantage than by any other route.

JOHN M'ARTHUR.

(35.)

Tumberumba, 5 December, 1890.

Mr. George Burt, contractor for buildings:—Has been in Tumberumba ten years. The principal timber used for timber buildings here is eurabie and mountain ash. The weather-boarding is mountain ash, the studding and plates eurabie. The cost of these timbers delivered in this town is 17s. 6d. per 100 feet superficial. He built the Court-house; all the roof timbers in this are colonial pine—the floor joists and plates are of eurabie. The pine cost, delivered here, 27s. per 100 feet. He built the school also, that is of eurabie and mountain ash throughout. The parsonage and the brewery are also built of local timber. For posts of fencing, stringybark is used; cost, delivered in Tumberumba, £2 10s. per 100. The rails are of mountain ash or eurabie cost, £2 per 100 delivered. Timber for railway bridge building would be eurabie, girders would cost 1s. per cubic foot at the stump, carriage would have to be added. Delivered in Tumberumba, the cost would be about 1s. 4d. to 1s. 6d. per cubic foot. The girders should be of eurabie, decking and skirting would be mountain ash. This would cost 12s. per 100 at the saw-pit, and, delivered in Tumberumba, about 14s. 6d. per 100. Piles would be of eurabie or stringybark, the latter in this country is a very good timber, is better in the ground than eurabie. The cost of piles would be about 1s. 6d. per foot lineal; mountain ash has been taken down country for staves for wine casks and cooperage of all kinds; considers that the stringybark would be the best timber to use for sleepers. Baltic pine flooring and lining has cost him 25s. per 100, which was a little less than the cost of the colonial pine from Wagga Wagga.

GEORGE HAYDON BURT.

(36.)

Tumberumba, 5 December, 1890.

Mr. James Booth, farmer, now living in Tumbarumba, having rented his farm in Glenroy to his son:—Owns property in Tumberumba—three allotments of ¼ acre each. Has had the farm in Glenroy a little over twelve years. Has cultivated 70 acres in wheat, oats, and potatoes, on the rest he runs cattle—

seventy

seventy head. The wheat crop which he had on the farm averaged about 18 bushels to the acre, and 40 to 45 bushels of oats, and of potatoes, about 5 tons to the acre as an average. Has never had this crop spoiled by the frost. Has, however, had damage done to the potatoe crop by frost, but this was when the crop had not been planted at the proper time. Sells his cattle as stores. He breeds for stores. His land is not suitable for fattening. When he takes produce to Wagga Wagga he brings his stores up in return. It does not pay otherwise to cart produce to Wagga Wagga. Stores are purchased much cheaper there than in the stores in these districts, and the advantage gained in this way repays the carriage. Grows a large quantity of fruit in his garden in Tumberumba, of very good quality. Sold over £20 worth off these trees last year.

JAMES BOOTH.

(37.)

Tumberumba, 5 December, 1890.

Mr. Edward F. Feely, saddler in Tumberumba:—Has been in business here for six years. Imports into the place about 5 tons of goods of raw material per annum from Albury or from Wagga Wagga, just as he can get teams, but mostly from Albury. Makes all his purchases, except in a few lines in which he gets better quality of goods in Melbourne or Sydney. Sends nothing away from the town. Does not supply the farmers to any extent. They usually bring all their supplies from Wagga Wagga. His customers are mostly station-owners, contractors, and miners. His custom extends to Khancoban and down the Murray to Jingellic, westwards to Carabost, and eastwards to Kiandra. There are three saddlers in the town. Employs three hands in his business.

EDWARD F. FEELY.

(38.)

Tumberumba, 6 December, 1890.

Mr. D. Mathews, storekeeper, Tumberumba, puts in written statement on this subject:—Is in favour of the connection between Adelong and Tumberumba. His grounds for this belief are that it connects the country town directly with the metropolis of New South Wales. Whereas the line from Wagga Wagga would play into the hands of the Victorian metropolis. Has been acquainted with both routes for many years, and considers that the country passed through between Tumberumba and Adelong is superior to that between it and Wagga Wagga, and calculated to settle a far greater number of small proprietors than on the lower line to Wagga Wagga. About half of the soil of the country passed through to Adelong is a ferrigineous nature of great depth, and capable of growing any crop suitable to the climate. The quality of the soil may be judged from the size and girth of the timber growing on it, and the timber is of that class—mountain ash and eurabie for the most part—as would be of great value for industrial purposes, providing freight for many years to come to a railway, and after all the timber has been utilised, the soil then would be of more value than ever. Considers that the lower country below Carabost is more suitable for sheep, the soil being light, but 50 acres of this upper country would be worth more to a small settler than 250 acres of the lower country. Further, on the line *via* Adelong, the greater part of the land is Crown property. Considers that more than half the line would pass through Crown property. The land would, therefore, be less costly to resume. Whereas, as far Humula from Wagga Wagga the land will all have to be resumed for the railway. Believes that two or three times the number of sheep pass up through Tumut and Talbingo to the Niandra Mountains than come up yearly from the Wagga Wagga direction. The Wagga Wagga route takes the Riverina and that part of the western country only, whereas the other line from Cootamundra through Gundagai, draws from the centre of the Colony. Believes that in the time to come an extension of this line from Adelong to Tumberumba on to the Murray will be more favourably considered than such an extension if connected with Wagga Wagga. Considers that the interests of the town of Tumberumba would be very much damaged by the line being brought from Wagga Wagga through Rosewood and Glenroy. These points would be quite as accessible from large areas of the country and nearer to other considerable areas. So that much of the trade now done with Tumberumba would pass through Glenroy or Rosewood. The country on the east of the Tumberumba being all granite formation is the poorest in the district, all the good country lies on the west of that river.

R. D. MATHEWS.

Statement supplied by Mr. R. D. Mathews.

I have resided in Tumberumba for about twenty-three years, the former portion as manager for a Victorian firm (H. and J. Littlewood), and the last sixteen years in business on my own account. Part of my goods are imported, the balance being purchased in Melbourne, Albury, and Sydney. Imported goods for a couple of years by way of Sydney, but for facility and expedition in transit I had to change to Melbourne. Most heavy goods such as groceries I also procure in Melbourne, owing to the lower Victorian railway freight and facility of despatch on the border. Some items of groceries I procure from Sydney as well as some other classes of goods and have done so for sixteen years past and would do a much larger business with Sydney were it upon equal terms with Melbourne as regards carriage. The tonnage I received for last twelve months would be 75 tons. My business, that is regular customers, extends 18 or 20 miles north of this or (say) half-way to Adelong and 40 miles south-east to the head of the Murray River. The town would be retrograding but for the influx of Government money expended in contracts for road-work, &c., as most of the adjacent lands are in a few hands who spend comparatively no money in the district, employing merely a minimum of labour on their estates. Many of the selectors of a dozen years back have been selling out to their large neighbours. Every such transfer of land impoverishes the district as it means sheep instead of population. A more stringent law as regards land transfers, a land tax, and railway communication with the metropolis would, I believe, resuscitate this district by giving encouragement to small settlers to make permanent homes and go in for raising suitable produce, whether stock, crops or fruit, which latter must in the near future become one of our chief resources, the country for 30 miles or so north of this towards Adelong being eminently suited for the growth, possessing as it does an

English

English climate and richest chocolate soil capable of growing anything and of inexhaustible depth. This region could be further vastly fructified by a system of irrigation which the numerous hill side rivulets so much favour. The magnificent and valuable class of timber in this region also would prove a vast source of wealth and furnish freight to a railway line for many years to come. In dry seasons the local trade receives a welcome impetus from the influx of many thousands of travelling sheep from the plain arid country seeking pasturage in the mountains. This traffic would be cultivated by a line of railway approaching the mountains. Gold-mining is now at a low ebb compared with what it has been in past years, my twelve months' purchase being under 200 ounces. Many parcels of gold from Upper Tumberumba, &c., reach Adelong and Tumut by private hands; confident anticipations however are entertained of developing a valuable deep lead under the basalt which may then render this the premier gold-field of the Colony.

R. D. MATHEWS,
Storekeeper.

Tumberumba, 6th December, 1890.

(39.)

Tumberumba, 6 December, 1890.

Mr. Moses Henry Simpson, storekeeper, Tumberumba:—His yearly tonnage brought up from Albury would amount to 150 tons in the year. All this is brought up from Albury. From Wagga Wagga he would not bring up more than 20 tons in the year. His purchases are made for the most part in Melbourne. The weighty goods—sugar, iron, salt, kerosene, &c., come from Melbourne. The rest come from Sydney. The only preference he has for Melbourne is in the cost of freight. They can be landed cheaper with the duty which has been paid into Victoria, less the rebate allowed for crossing the Border into New South Wales at Albury, from Melbourne than from Sydney. Has also brought goods round by sea from Sydney to Melbourne, and thence across Victoria to Albury. It is a question of railway carriage only. If the stuff could be got at a less cost of freight from Sydney it would all be procured there. The carriage from Albury to Tumberumba averages all the year round £3 5s. per ton. There is a difficulty in procuring teams from Wagga Wagga to Tumberumba; roads are not suitable. Again, the railway rates charged from Albury to Wagga Wagga prevents the carriage of any goods to Wagga Wagga from Melbourne. So it happens that all goods, whether from Melbourne or from Sydney, are sent to Albury and carted up thence. Advocates the Adelong route because it will give a direct route to the large markets of the Colony and to the metropolis; also, he considers that the cost of construction will be less, because the bulk of the lands are still in the hands of the Crown, and that the heavy forests covering the lands comprising the rich basaltic range between Tumberumba and Adelong, will supply timber of the best quality for the markets of the Colony. The clearing of these forests cannot be done by ordinary settlement without assistance, such as a railway will give, and this land is of the richest in the Colony, and will carry, if cleared, a large population. Regarding the sawmill at Pilot Hill, a large trade is already carried on with the lower parts of the country, the difficulty being the lack of teams to carry away their orders. Tumut and Adelong are supplied from that mill almost entirely. A large quantity of timber is sent to Gundagai also to Wagga Wagga thence. There will be an interchange of traffic between Tumut and Adelong and Tumberumba. In those parts he has resided for long periods extending over the last thirty years. During this time he has been thoroughly intimate with the Tumut district. At present oats are brought there from all parts. Maize is grown in large quantities and sent away. Last year he had 1,000 bushels of maize from Tumut to Tumberumba, and this year he had up 700 bushels, and could have sold more if he could have got it. There would be an exchange of oats and maize if there were a railway; and potatoes, which are also imported into Tumut, would also be sent there by the railway if made.

M. H. SIMPSON.

(40.)

Tumberumba, 6 December, 1890.

Mr. Louis Kinstler, baker, and secretary to the trustees of the Temporary Common:—Has been in Tumberumba for the last thirty years. Uses about 20 to 25 tons flour annually:—Procures this from Albury. There is a local mill but he uses very little of that flour. The mill grinds flour for the producers of the wheat. The wheat in this humid climate is not so good for milling as that grown in a dry climate. All his flour comes from John Burrowes' mill in Albury. Would obtain it from Wagga Wagga as he hears that that flour is preferable to Albury flour, but the teams are not working regularly from that town. Pays freight from Albury to Tumberumba £2 10s. to £3 per ton according to the season and the weather. Distributes bread to distances of 12 miles away from town. Supplies about thirty daily customers and others about twenty more. There is one more baker in the town. Has preferred the Wagga Wagga route for the last nine years since it was first mooted for the railway. Believes that flour of better quality will be brought from Wagga Wagga than from Gundagai direction. He considers also that the Wagga Wagga route will suit the country better. The town has improved and grown to its present dimensions as the mining industry has developed. The common comprises 13,000 acres. It is a temporary common. It carries about 600 horned cattle and horses. The common is 5½ miles by 4½ miles in dimensions. Is the secretary of the Tumberumba Progress Committee.

L. KINSTLER.

(41.)

Tumberumba, 6 December, 1890.

Mr. James Walsh, blacksmith and wheel-wright, in Tumberumba:—Has been in business here for two years. Has known the district for about eight years. Imports into the town between 50 and 60 tons per annum, principally from Albury. Does not bring from Wagga Wagga, because teams are not to be had. There are regular carriers from Albury. The freight from Albury costs him £3 10s. during summer, and £4 during winter. He cannot get loading done as cheaply as the storekeepers because they

 have

have a regular traffic, and give large contracts. He has paid as much as £5. Brings up particular kinds of timber for wheel-work from Albury. Ironbark for spokes, red-gum for felloes, and white-box naves, ready turned. The local timbers he does not consider suitable for wheel-work. Uses the local timber for the bodies of vehicles. Brings up American timber also from Albury for buggy-work. Prefers the Wagga Wagga route because by it he will be able to reach his market nearest. *Via* Adelong, he would have to send to more distant points for his materials. Employs two hands. Burns charcoal in his forges. It costs 1s. per bag. He burns about 14 bags per week; but for certain heavy jobs, he has burnt 15 or 16 bags per day. Considers that a railway to bring coal up for his forges would save £15 or £20 per annum. Would probably require 3 or 4 tons of coal yearly because he would burn it with charcoal. Considers that a railway would extend his business.

JAMES WALSH.

(42.)

Tumberumba, 6 December, 1890.

Mr. Antonia Wolfe, farmer, at Upper Tumberumba, 2½ miles from town, holds 76 acres, has lately sold 230 acres:—Obtained for 200 acres a sum of £400, and for the 30 acres, with a house, he got £300. Of the 76 acres still held he has 50 acres under crop in oats, wheat, and potatoes. Has resided in the district thirty-six years. Sells all the produce on the place.

his
ANTONIA x WOLFE.
mark.

Does not prefer any particular route whether from Wagga Wagga or from Adelong.

(43.)

Tumberumba, 5 December, 1890.

Mr. Robert Levis, president of the Wagga Wagga-Tumberumba Railway League, and acting secretary:—Puts in a statement in writing—Will give the statistics collected in 1887, embracing the country surrounding Tumberumba which would be served by a railway from Wagga Wagga, terminating at Tumberumba. These figures include Tooma, Bago, and Coorahgia, Taradale, to the boundary of Rosewood. All these people signed in support of the line from Wagga Wagga. Has some printed forms supplied by Mr. Croaker, and undertakes to supply the statistics of the country surrounding Tumberumba, up to the latest date on these forms.

ROBERT LEVIS,
President and Acting Secretary, Wagga Wagga and Tumberumba Railway League.

To the Examiner of Public Works Proposals at Tumberumba,—

Sir,

5 December, 1890.

The statistics which I now lay before you are those collected in 1887, for the district of Tumberumba, by special collection, paid by the Wagga Wagga-Tumberumba Railway League, and comprise those who then signed in favour of the railway from Wagga Wagga, and represent a population of 1,281 souls. A total freehold of 122,304 acres, a leasehold of 243,077 acres, cultivation, 884½ acres; cattle, 5,886; horses, 2,967; sheep, 924,087; and pigs, 633. All the surrounding runs are not included in these returns, and none from the river side of the district; but we claim that if a railway were constructed from Wagga Wagga to Tumberumba, all the Upper Murray country will be tapped. As far as the capabilities of that part of the district are concerned, you will be able to judge, as you have seen the country, but there is nothing suitable to a cold or temperate climate that cannot be grown to perfection along the route of this proposed railway. The district is most healthy and invigorating, and would make a great summer resort for invalids and others in search of fresh air. We would point out that those very men pretending to be in favour of a line from Adelong, have all, with the exception of a few new-comers, signed in favour of the Wagga Wagga route, and leave you to judge of their present action; but we claim that any evidence given here on the other side as to resources and population, &c., of this part of the district, is equally available for the Wagga Wagga line, we now sincerely hope that from what you have seen yourselves, and from the evidence which we hope to lay before you, you will be able to give such a favourable report as to ensure the early construction of the line, or at any rate that portion of it from Wagga Wagga to Humula.

ROBERT LEVIS,
As President of Wagga Wagga and Tumberumba Railway League.

(44.)

Sir,

Hely's Club House, Wagga Wagga.

Having but recently returned from Sydney, I was unable to give evidence in connection with the character of the country which lies between here and Tumberumba, and knowing that it is your desire to obtain all possible information, I beg to submit the following report:—

As travelling reporter for the *Wagga Wagga Advertiser*, I visited each farm and station along the proposed line, diverging several miles to the right and to the left, in order more fully to judge of the capabilities of the soil.

Articles have appeared from time to time in our columns, describing the principal holdings in that direction, with such agricultural items as might prove of interest.

Mr. G. P. Wilson's station, the Big Springs, although somewhat to the west of the country you are about to examine, contains several hills which are part of the same system that proceeds towards Tumberumba. The whole of these ranges are more or less auriferous, and, upon recent inquiry, I find that an assay from the top of a lease on Flakeney Range gave 13 oz. of silver to the ton; another 1 oz. of gold, and a ton of quartz is now on its way to Parramatta, to be further tested.

Proceeding

Proceeding to the south-east, the Messrs. Cox were visited at Livingstone Gully. Tin exists in these ranges, and two other minerals were noticed. Some of the quartz contained long prismatic crystals, not unlike tourmaline, while a dark carbonaceous clay shale, possesses many of the attributes of plumbago. *Acacia decurrens* is fully represented, and, as the bark is in demand, such of the many species which contain the most tannic acid would be readily planted, if necessary.

The question of valuable timbers, however, has been fully ventilated in your presence by those most competent to judge; but I may add that the valuable timber eurabie (a species, I believe, of the mountain ash) grows to an immense size beyond Tumberumba.

Among fodder plants which flourish in the locality referred to may be noticed the *trifolia vipens*; couch grass or Hindostan, the native herbages, with prairie, buffalo, burnet, Cape weed, meadow fescue and other valuable grasses. Lucerne does admirably well, particularly on the flats near the creeks were deposits of a rich black loam exist. These have been traced to a depth of 12 feet in the neighbourhood of Humula and up toward Carabost, Rosewood and Tumberumba. The lucerne, here, finds a soil congenial to its growth, and, as its roots penetrate many yards below the surface, the crop above ground becomes proportionately strong and may be cut, at least, once a month.

Leaving Alfred-town, several properties were examined, belonging, respectively, to Messrs. Chapman, White, Cruikshank, Wilson, Linblom and others. These holdings are situated on what is locally known as the Yellow Creek, and close to the proposed line of railway. Oranges grow luxuriantly and as high as 100 bags, or 400 bushels of oats have been reaped off 6 acres of land, on Mr. Shumark's farm.

On the Kyamba Station all kinds of fruit flourish, and in years gone by, good wine was manufactured here. Mr. Fitzgerald, about 3 miles to the west, cultivates the vine largely, and his nearest neighbour, Mr. L. Cox, on the Ti-Tree Creek, grows tobacco to advantage.

It may be worthy of note that the holders of land in this direction appear to be permanently settled thereon, a fact which is amply borne out by the substantial character of the improvements. At Mr. P. Nugent's, near Humula, I valued the fencing at £50 per mile, and the neighbouring properties of Sharon Vale, Opossum Plains and Shokaroo, not omitting those belonging to Messrs. Abbott, Cox, Tressilian, and a dozen others appear to be equally well cared for.

Around Humula the northern fruits flourish:—red, white, and black currants; strawberries and raspberries; gooseberries, apples, and pears attain great perfection, and the growth of potatoes is among the principal industries. Of these some were shown to me weighing 2 or 3 lb. each, and, cutting a large number of them, they proved to be hard and sound at the core. Considering that a scarcity of such vegetables frequently exist in the interior of the Colony, a very large export trade should eventually obtain from this centre.

Nearly everyone has a garden in this locality and the apples which I have tasted at Rosewood comprised some of the largest and best which I have eaten in Australia. The whole of the pippin family with the winter Pearmain, Irish peach and many others are represented, and the remarks having reference to the export of potatoes, apply with equal force to consignments of apples.

At Mr. Cobden's onions, turnips and potatoes are grown. The former attain great size, and turnips weighing from 15 to 20 lb. each were shown to me.

Before entering Tumberumba I visited Erlwood, Glynde, Bunloit, Hillside and the neighbouring properties belonging to Messrs. Williams, Lewis, Mott, Squire, Evans and others, and the information I obtained at each place strengthened the high estimate I had already formed of the quality of the district.

Your attention has been already drawn to the thousands of sheep which annually visit the tablelands and, it may be opportune for me to remark here that I am personally acquainted with several squatters who occupy mountain country at a very high rental, and are at a heavy yearly loss when their sheep are in transit through want of railway communication.

With reference to the natural features of the land, it is scarcely my province to refer to the engineering difficulties which may present themselves, but it struck me, during the many weeks I spent in the locality, that with but one exception the required cuttings would be neither numerous nor extensive.

The most useful members of the eucalyptus and acacia families are to be met with in the hills, while their formation is of slate, quartz, granite and its varieties, turning, as you approach Tumberumba, to basaltic rock.

I could have made this report more exhaustive; but from the consideration that you are about to make a careful survey of the line and obtain additional data, it remains for me to add, that

I remain, &c.,

A. CHAUFFOURIER,

Journalist.

Witness—Thos. Hammond, J.P.

[One map.]

Sydney: Charles Potter, Government Printer.—1882.

[2s. 6d.]

MAP

TO ACCOMPANY REPORT ON

PROPOSED RAILWAY FROM WAGGA TO TUMBARUMBA

Stanley Alexander
M. Inst C.E.



(Sig 41)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY FROM CULCAIRN TO GERMANTON.

(REPORT BY MR. STANLEY ALEXANDER, EXAMINER OF PUBLIC WORKS PROPOSALS, ON THE PROPOSED.)

Ordered by the Legislative Assembly to be printed, 31 August, 1892.

Sydney, 15 June, 1892.

THE district to be served by the proposed line of railway from Culcairn to Germanton comprises the area drained by the Billabong Creek on the east side of the main trunk railway. This area contains fourteen parishes. Eastwards and outside of this limit are also six parishes, through which flow tributaries of the Murray River, which are claimed as being interested in the proposed line. The statistics of these areas are given below in a form summarised from details supplied by Mr. John Ross, of Kinross, near Germanton.

2. It has been suggested to me in a letter on the subject of this proposal that it is to some extent in rivalry with the proposed line from Wagga Wagga to Tumbarumba, which, I assume, means that it is expected traffic to and from the mountains about Tumbarumba and the low land also would, if not diverted from its present course along the main south road by a railway to Wagga Wagga, pass through a railway station at Germanton.

3. This line is therefore promoted for the following objects in addition to development and service of the area immediately surrounding its location, viz., to act as a carrier over a portion of the road for supplies to and produce from extensive areas to the north and north-east of its terminus; to shorten by one-half the road carriage to producers in six parishes, county Selwyn, whose market is now in Albury or Wodonga; and to form a portion of a line which may eventually be extended to the Murray at Jingellic, with the object of diverting the Upper Murray traffic to Sydney.

4. A summary of the statistics which have been supplied relating to the areas immediately about the location of the proposed line is here given:—

Summary of Statistics.

Parish.	Population.	Total area of holdings.	Total area under crop.	Total number of sheep carried.
County Goulburn—		Acres.	Acres.	
Germanton	227	99,873	1,094	112,140
Carubobla	95	32,420	570	35,973
Billabong	30	4,000	370	2,300
Cookardinia	170	46 336	2,150	42,300
Woomargama	41	38,490	246	31,502
Back Creek	31	1,760	570	950
Little Billabong	61	12,790	400	15,080
Mountain Creek	24	36,000	240	41,914
Forest Creek	20	18,130	45	16,000
Yarra Yarra	120	80,000	250	75,000
Pullotop	6	4,500	20	3,500
Jerra Jerra	19	9,820	80	8,640
Jergylle, Mitchell	.....	No figures supplied.		
	844	384,119	6,095	385,299
County Selwyn—				
Glen Ken	30	4,636	23	1,250
Coppabella	56	54,712	56	44,500
Jingellic, Jingellic, East	96	68,281	65	33,400
Ournie	33	28,493	7	15,000
Yarara	48	33,000	140	27,000
Currajong	35	7,680	1,014	5,500
	298	196,802	1,305	126,650

5. The townships in the district are:—Cookardina, having a population of about 450; Morven and Woomargama, both unimportant, and Germanton. This place has a population of about 1,500 persons. It has not been incorporated. It is situated centrally for the district on the main south road, at a point where it is joined by the road from Jingellic.

6. These details make up a population of about 3,000 persons in occupation of the district passed through by the proposed line within the area drained by the Billabong Creek only. A considerable part of this area is within easy reach of the existing line, but the best part of the district, with by far the greater part of the population, is round about Germanton.

7. The chief roads traversing this country converge on Albury. One road from the Wagga Wagga district passes south through Cookardina and Morven. The main south road from Gundagai passes through Little Billabong, where it is joined by the road from Tumbarumba, then through Germanton and Woomargama. At Germanton this main road is joined by a partly-formed road from Jingellic on the Murray, a distance of 35 to 40 miles. Jingellic is 66 miles from Albury by the river road.

8. The following give several distances to principal points from Germanton as a centre:—

From Germanton to—

Wagga Wagga, *via* Little Billabong	58 miles.
Tumberumba...	56 ,,
Little Billabong	16 ,,
Cookardina	12 ,,
Culcairn	17 ,,
Albury	38 ,,
Jingellic	35 to 40 ,,
Woomargama	9 ,,

9. The length of the proposed line between Culcairn and Germanton would be 16 or 17 miles. Its course would pass over very level country throughout, and the cost of construction would be low—probably between £60,000 and £70,000. The point on it where it crosses the road from Morven is one at which it is perhaps expected that some traffic on the road to Albury would be intercepted. Such a hope must be unfounded since the distance to Culcairn is so short. Culcairn station is given in the Railway Commissioners' report as having sent away over 3,000 bales of wool in the year, a very fair quantity for a point so situated. Much of this would probably be taken at Morven Road, but none of the loading which passes that place on the through journey would be intercepted.

10. Taking Germanton as a centre, the boundary of the district along the main road to the north-east is seen to be at 20 miles distance, and to the east and south at 16 miles. The district about the township Cookardina, 12 miles from Germanton, and 8 or 9 miles from the proposed line, is already served well by the existing stations, Doodal Cooma and Culcairn, at 10 or 12 miles distance, and south and south-west from Germanton the lessening distance to Albury is all against the new line being used. It seems, therefore, that the extent of local area which can be influenced by the proposed line is but small.

11. That it is in possession of qualities giving it a very high value must be well known. The actual present carrying capacity of the whole area is over a sheep to the acre, and considerable tracts of it carry three sheep to the acre. For grazing purposes, in large blocks, land on it is rented at 3s. to 3s. 6d. per acre; and for cultivation in farms, up to 400 acres, there are several let at from 3s. to 6s. per acre. The wool produced here is said to bring the highest price in the market. The country is exceedingly well watered naturally throughout. The mean rainfall of six years has been 27·69 inches. The light character of the soil and its depth make it well suited for producing cereals, but its capacity in other crop has, perhaps, not been properly tested, partly because the class of settler by whom the country has become occupied was a pastoral rather than an agricultural one, and also owing to the value of the clips and the certainty in every respect of the pastoral business causing the land to be devoted to grazing.

12. The tracts on the east of this area in the six parishes of county Selwyn bordering on the Murray are all of a character entirely differing from that just described. While the whole of the basin of the Billabong is very level, and at a considerable elevation above the sea—from 700 to 1,000 feet—the ground east of its watershed falls rapidly to the Murray and is deeply scored by the water-courses, while the intervening ridges are rugged and show much outcropping rock. This country being all in the Eastern Division large areas have lately reverted to the Crown, and much has been selected, but owing to the right of occupation not having been given, the full population is not yet resident, nor has all the land been thrown open for selection. This part can, however, never become populous—the occupation must ever be largely for pastoral purposes, and perhaps for mining, as the rock formations are favourable to the occurrence of minerals.

13. Hitherto the communications of this country have been made to connect with the road along the Murray. The track from Germanton to Coppabella, *via* Four-mile Creek, cannot be called a road. An excellent road has been formed from Jingellic towards Tumberumba. Towards Germanton from Jingellic the route is very favourable, though little work has yet been done on it, but all other ways are tracks only. It must be some considerable time before such a country can yield any traffic for a railway, excepting in wool.

14. The traffic from the Upper Murray has been dealt with in another report. Jingellic would be a point common to lines from Albury and from Culcairn, and the distance would be about 66 miles to Albury or 56 to Yambla, and 55 miles to Culcairn, but the cost of construction would be much the least to Culcairn. This point being 21 miles north of Yambla would, to that extent, be more favourable for traffic going to Sydney. This route is in every point of view a great improvement on the proposed one along the Murray, and if a possibility existed of an extension to the Upper Murray being made in the future, or if it could be shown that the districts on the Murray could and would supply anything like a fair amount of traffic to a terminus at Germanton, then strong grounds would be found for constructing a railway so far now, but the fact is that these districts on the Upper Murray are, in addition to being ever so much nearer to Melbourne than they are to Sydney, peculiarly fitted in all respects for supplying the wants of Melbourne in stock for butchering, and in horses for export. The district is not good for sheep, but such wool as is produced must also always go to Melbourne. The natural

productiveness

productiveness of the soil on the river flats, which are extensive, and in some cases, as on the Tooma River and at Khancoban, of great richness, is modified by the climate, which, in proximity to the mountains, some covered with all but perpetual snow, is changeable, and subject to frost in summer. The products of such a country could be raised in much greater abundance on lands nearer to Sydney, and the conditions of the competition for the traffic of the district with the Victorian lines are ruinous.

15. As has been shown in the report on the proposed railway from Wagga Wagga to Tumberumba, the whole of the traffic inwards and outwards from the mountain district about Tumberumba passes through Germanton by the main road. An opinion was given in that report that the construction of a railway from Wagga Wagga to Humula would have the effect of diverting the whole of this traffic to that line, but it was also stated that the inward traffic to the districts below the mountains would not be diverted from its present course by road to and from Albury.

16. The nature of the rivalry between the line to Germanton and the one to Humula is thereby indicated. The hopes of Germanton of intercepting the traffic must be based solely on the assumption that the saving in cost by the use of the railway instead of the road between Germanton and Albury will be sufficient to bring about the change.

17. The cost of transport by road from Germanton to Albury or Wodonga is 25s. per ton and 20s. per ton for the return loads. The distance to Albury from Germanton, *via* Culcairn, being 46 miles, the charges by rail on general goods would be from 16s. 6d. to 27s. 6d. per ton, to which the junction charge of 2s. 6d. has to be added, bringing the cost up to from 19s. to 29s. 6d. per ton. Back from Albury to Germanton the high special rates of from 25s. to 40s. per ton, which, with the junction charge, amount to from 27s. 6d. to 42s. 6d per ton would be charged. The through traffic to and from distant places on which the incidence of the charge for the portion of the journey would be less felt, would have less inducement to change at Germanton. In competition these road charges may be modified, whereas those by railway are practically fixtures.

18. A change of location from Albury or Wodonga to Germanton for transfer of traffic between road and railway would necessitate that the agency by which this has been effected at Albury and Wodonga be also transferred to Germanton. But these agents are not engaged on the traffic of these districts alone, and the transfer of goods into New South Wales, whether in bond or otherwise, will need the presence of an agency on the border so long as customs duties are levied there.

19 The whole of the trade to and from Sydney will, of course, be carried by the railway to Germanton, and its construction will promote trade in the Germanton district to this extent, that carriage to it from Sydney will, according to the rules noticed in the next paragraph, be the same as for a distance of 305 miles, or the same as is now charged to Culcairn, though the actual distance from Sydney will be 343 miles. In fact to the extent that the present carting charges between Culcairn and Germanton will be saved altogether.

20. The railway charges from Sydney to Culcairn for general goods will be 100s. per ton if sent in truck loads, but in smaller parcels it will be 145s. per ton. The charges from Melbourne to Culcairn, including the junction charge, on general goods will amount to from 80s. 6d. to 108s. without any restriction as to size of consignment. On these rebates are allowable of from 20s. to 30s. per ton reducing the actual cost of carriage to from 66s. 6d. to 88s. per ton. On all broken parcels of dutiable goods the tariff will be leviable on the border. On all such duty will have already been paid on entrance into Victoria, and it is therefore most probable that the practice hitherto during freetrade in New South Wales has been to obtain them in Sydney. So far, then, no change of course or source will result. For all goods in bulk, however, whether imported from Europe or transferred from Sydney, there is a clear advantage in carriage across Victoria, and, as has been shown, in transport by road from Albury to Germanton.

21. In view of all these particulars I am bound to consider that the construction of a railway from Culcairn to Germanton will not produce an appreciable effect within a long time upon the pastoral or farming industries of the district within the basin of the Billabong creek that is immediately served, as but a portion of the requirements for the district in stores and general goods would be carried by it, and the carriage of their produce away from it is part, merely, of the benefit that should be derived from a railway. The district is favourably situated both with respect to the seaboard and through being the object of a very real competition for its trade by the railways of both Colonies, and in these it is greatly favoured in the general competitions of trade. It is difficult to see how revenue for a railway can be earned since the charges on a portion only of the supplies can be relied on. The produce of the district will certainly find markets within the Colony, but the charges for carriage on these classes is so low that a very great increase in production must be brought about before the carriage from such a small area can be felt. The quantity at present produced would be inappreciable to this short length of line, so expansion of cultivation must be looked to, and for this the area is altogether too limited for any hopes to be based upon it. It does not appear to be probable that the traffic now carried on the main south road will be intercepted or diverted, or that this line would ameliorate any of the conditions under which the settlements about Tumbarumba labour. It would not affect that district in the least degree in the direction of expansion. Some passenger traffic for the Upper Murray will find this a favourable route, but the industries in those regions will not be otherwise affected, and there is no probability of an extension of the line being contemplated to the Upper Murray.

STANLEY ALEXANDER,
M. Inst. C.E.

[One map.]

Sydney: Charles Potter, Government Printer—1892.

[9d.]

MAP

TO ACCOMPANY REPORT ON

PROPOSED RAILWAY FROM CULCAIRN TO GERMANTON

Stanley Alexander.
M. Inst C.E.

HUME

GOULBURN

WYNYARD

MITCHELL

NYMAGEE

Murrumbidgee River

Murray River

COLONY OF VICTORIA

Wagga Wagga
Oura
Wantabadgery
North Gundagai
South Gundagai
Brungle
Mundarlo
Minjary
Tumut
Adelong
Kingston
THE ROCK Rys.tn
Mangoplah
YERONG CREEK Rys.tn
HENTY Rys.tn
Glenrouth
URANQUINTY Rys.tn
BON ACCORD Rys.tn
Humula
Rosewood
Carryowen
CULCAIRN Rys.tn
Germanton
Tumbarumba
Woomargama
Huon
GEROGERY Rys.tn
Gerogery
Mullanjandra
Jindera
YAMBLA Rys.tn
Bowna
ETTAMOGAH Rys.tn
RACECOURSE Rys.tn
Albury
Welaregang

Trial Line of Railway
G.S. Railway to Sydney
Railway Constructed
Scale of Miles

NOTE- No statistics have been supplied for parishes Carabost - Murray - Coocook & Narra Narrawa

(Sig 45,)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PROPOSED BRANCH RAILWAY TO JAMBEROO.

(COPIES OF ALL REPORTS MADE DURING LAST TWELVE MONTHS ON.)

Ordered by the Legislative Assembly to be printed, 18 *October*, 1892.

RETURN to an *Order* of the Legislative Assembly of New South Wales, dated 6th October, 1892, That there be laid upon the Table of this House,—

"Copies of all Reports made during the last twelve months on the proposed "Branch Line of Railway to Jamberoo."

(*Mr. Fuller.*)

Mr. Supervising-Engineer Stuart to The Engineer-in-Chief for Railways.

Shellharbour to Jamberoo and Kiama to Jamberoo, *via* Terragong Swamp.

Sir, Railway Survey Office, 9 April, 1892.

I have the honor to report that I have examined the above routes to Jamberoo from the Main South Coast Line; the first starting about 67 miles from Sydney, and traversing the northern side of Terragong Swamp, and the second starting at 68 miles 55 chains, and skirting the southern side of the same swamp. The first of these routes as it is at present located cannot be materially decreased in cost, nor can the direction be altered if 12-chain curves are to be taken as a minimum, but if sharper curves may be used then the cutting at the commencement might be slightly lessened, and the most difficult portion of the line between 68¾ and 70 miles could, by skirting the edge of the swamp, be reduced to an easy line, with a continuous grade from 68½ to 70 miles, and thus bringing the limiting gradient from 1 in 50 to 1 in 132. The rest of the line, in order to proceed direct into Jamberoo, would remain unaltered, but it has the drawback that between 70½ and 71 miles there are 43 chains crossing diagonally the waters of the Minnamurra River and some important creeks. This portion is all under flood, the defined channels of the above watercourses losing themselves just above this point. To obviate the necessity of crossing so much flooded ground the line might be continued further up the north bank of the Minnamurra, and either end there close to the Shellharbour Road, or, crossing the river where the channel is well defined and the flooded ground much narrower, run with a reverse curve over to the proposed station site at Jamberoo. This would, however, considerably lengthen the line, and there is some very steep sidling ground at the point "A" (*see* parish map) which it would be as well not to interfere with. Between 70½ and 71 miles borings would be necessary.

The second route, *via* the south side of the swamp, can be greatly reduced in earthwork by lengthening out with sharper curves and skirting as closely as possible the edge of the flooded ground, as shown approximately by a blue line on the accompanying tracing of the plan. The worst feature on this route is that it has to cross a neck of the swamp at "B." This latter difficulty might be a good deal obviated by putting the bridging at each side of the neck on solid ground (there is no very great rush of water here) with a light bank between, or, by substituting sharper curves, cross further up the neck, where it is narrower and the ground sounder. I have made a list of the waterways on this route (*see* section), and with the data to hand a revised estimate has been made.

Both the above lines are sketched on the accompanying parish map.

Good stone suitable for ballast is plentiful along both routes.

Timber suitable for railway purposes will have to be imported.

C. McD. STUART.

336— Mr.

882 copies—Approximate Cost of Printing (labour and material), £28 5s. 8d.

Mr. Supervising-Engineer Burge to The Engineer-in-Chief for Railways.

Kiama Line to Jamberoo.

Railway Construction Branch, 13 April, 1892.

In forwarding Mr. Stuart's report on above, I append an estimate amended in accordance therewith of the line *viâ* the south side of Terragong Swamp, the northern line not being so capable of reduction. 8-chain curves are assumed, but the earthwork estimate must necessarily be a rough one without a revised survey. It is impossible to bring down the estimate to £4,000 a mile.

Though the earthwork by the new alignment may be nearly reduced one-half, the waterways must be provided, and the station works, even where consisting only of a junction and terminus of small extent, necessarily force up the cost per mile on such a short length of line. Fencing might, of course, be omitted, and existing boundary-fences carried across railway, with gates for latter, if only the slow and small amount of traffic had to be considered, but this being a very closely settled district gates in this case would have to be opened for trains at an average of about 22 chains apart, even if boundaries between occupiers alone had to be dealt with, not to speak of intermediate fences. However, a considerable length of fencing on one side, where the line adjoins the swamp, has been omitted in the estimate. If fencing were altogether left out, and boundary-gates only erected, about £280 a mile would be saved.

I have, since Mr. Stuart's return, plotted a line with 6-chain curves contouring as closely as possible just above the flood-line, as marked on plan, for the greater part of the length. The earthwork of this portion, allowing for lifts over the larger watercourses, might be thus reduced to about £700 a mile; adding a rough estimate of the remainder, the total for the whole line might possibly be brought down to £32,200, or a little over £6,000 a mile, if 6-chain curves are used, and if the accommodation provided on the estimate be enough. Plans, sections, diagram, plan, and estimate herewith with report.

C. O. BURGE.

[*Four Plans.*]

Sydney: Charles Potter, Government Printer.—1892.

[2s. 6d.]

N.S.W.G.R.

Shellharbour ~to~ Jamberoo.

Section of Trial Survey

scales

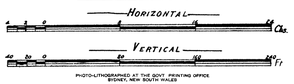

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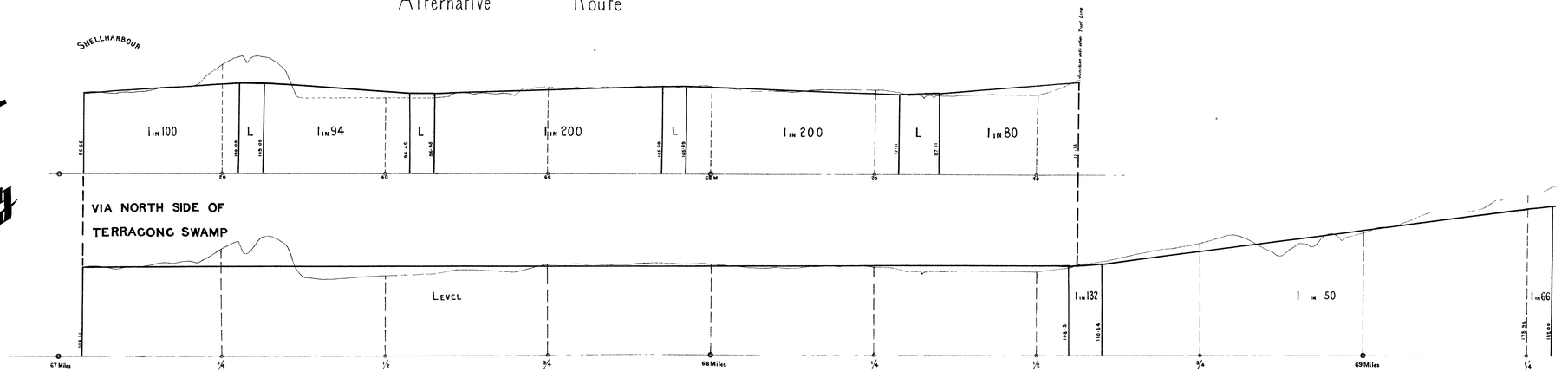
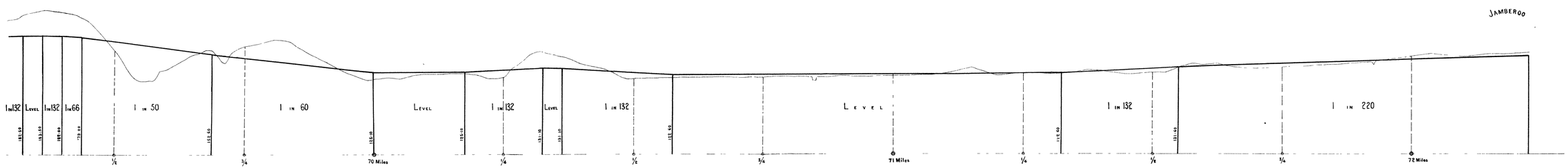
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE SYDNEY, NEW SOUTH WALES

Alternative Route





N.S.W.R.

Kiama ~to~ Jamberoo.

Section of Trial Survey

scales.

HORIZONTAL — Chs.

VERTICAL — Ft.

VIA SOUTH SIDE OF TERRAGONG SWAMP

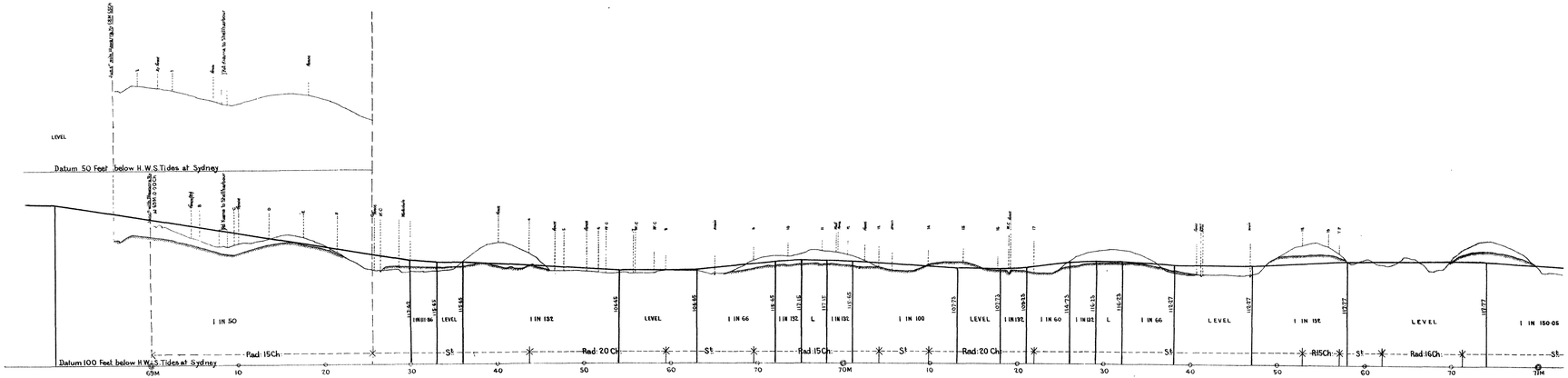


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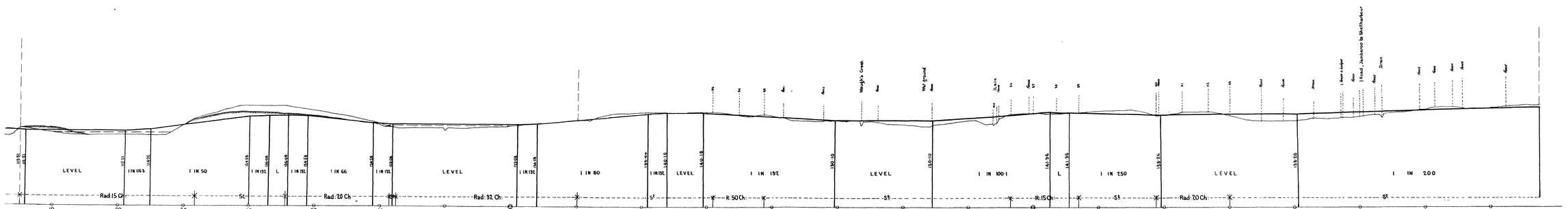
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE SYDNEY, NEW SOUTH WALES.

J A M B E R O O



2nd Edition

PARISH OF JAMBEROO
COUNTY OF CAMDEN
LAND DISTRICTS OF BERRIMA & KIAMA

SCALE

CHAINS 0 5 10 15 20 40 60 80 100 120 140 160 180 200 220 240 CHAINS

MILES 0 ¼ ½ ¾ 1 1¼ 1½ 1¾ 2 2¼ 2½ 2¾ 3 MILES

Reserves charted and examined

Chivers 7th Jany 85

NOTE

Portions are shewn on this map only as far as finally dealt with by the Charting Branch 19th Jan'y 85

PARISH OF CALDERWOOD

LAND DISTRICT OF BERRIMA

PARISH OF YARRAWA

PARISH OF WALLAYA

PARISH OF BROUGHTON

ILLAWARRA LAKE

SOUTH PACIFIC OCEAN

MACQUARIE RIVULET

Parish Boundary

Land District Boundary

Police District Boundary

COAST ROAD

MAIN SOUTH ROAD

RAILWAY LINE

Municipality of Shellharbour

Proclaimed RESERVE

Notified Permanent Common Dedicated 6th December 1867 795 ac

Public School JAMBEROO

Mount Terry

Stockyard Mountain

The Green Mountain

Bong Bong Mountain

Dhurdurdhin Mountain

Knapsack Hill

Broulee's Creek

Bendy's Creek

Jerrys Creek

Minnamurra Public School

Round Hill

Gooseberry Hill

Tapitallee

EUREKA

Kiama Harbour

Blow Hole

KIAMA

Windang Island

WOLLONGONG

RES. 12a Notified 9th Jany 87

Thomas Davey 2000 ac.

William 3800 ac.

George Johnston 1500 ac.

D. Johnston 600 ac.

A. Allan 1000 ac.

W.C. Wentworth 1200 ac.

John Horsley 1650 ac.

James Mileham 700 ac.

D. Wentworth 1650 ac.

PETERBOROUGH (Private)

Isaac D. Nichols 600 ac.

C.T. Smith 1280 ac.

Henry Osborne 2560 ac.

Samuel Terry 2000 ac.

Geo. Paul 1400 ac.

John T. Hughes 1200 ac.

D. Wentworth 1500 ac.

D. Wentworth 2000 ac.

I. Reddall 1280 ac

W. Ralph 1000 ac.

Thomas Farragher 408 ac.

John Mc Enarve 320 ac.

D. Wentworth 2000 ac.

Thomas Foster 2560 ac.

J. Ritchie 300 ac.

J. Callen 300 ac.

J. Ritchie 300 ac.

Michael Hyam 1280 ac.

G. H. Douglass 640 ac.

G. H. Douglass 720 ac.

G. H. Douglass 640 ac.

Alex. Brodie Spark 679 ac.

Alex. Brodie Spark 628 ac.

Hughes and Hosking 805 ac.

J. Collis 1280 ac.

James Farmer 1000 ac.

A. Byrne 500 ac.

T. Campbell 1280 ac.

Thomas Campbell 320 ac.

James Coles 120 ac.

Charles Grace 300 ac.

John Lewis Spencer 300 ac.

Robert Menzies 320 ac.

Thomas Baker 50 ac.

Edward Flood 100 ac.

Joseph King 100 ac.

James Wallace 100 ac.

Henry Osborne 72.2.0

Henry Osborne 720 ac.

Henry Osborne 640 ac.

Henry Osborne 230 ac. rd.

Henry Osborne 320 ac. rd.

Henry Osborne 320 ac. ex. rd.

Henry Osborne 72.2.0

Henry Osborne 1280 ac.

Henry Osborne 679 ac.

Henry Osborne 628 ac.

Henry Osborne 1000 ac.

Henry Osborne 1280 ac.

Henry Osborne 1000 ac.

Henry Osborne 1280 ac.

Henry Osborne 1280 ac.

Henry Osborne 1280

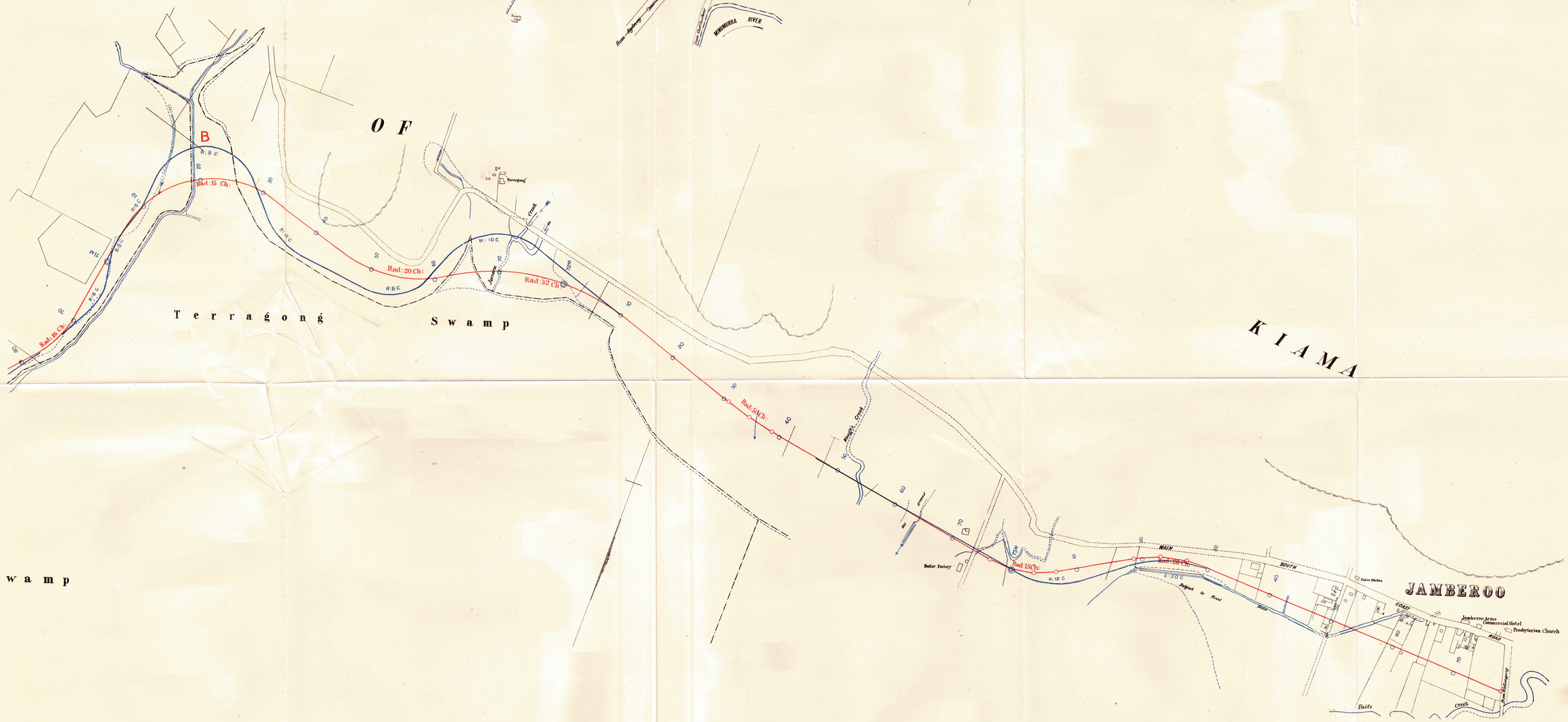
N.S.W.R^ys.

Kiama ~to~ Jamberoo

VIA SOUTH SIDE OF TERRAGONG SWAMP

Plan of Trial Survey

scale:



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1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(RETURN RESPECTING GOODS CONVEYED BETWEEN SYDNEY AND GLEN INNES AND GUYRA, AND *VICE VERSA*, DURING 1891.)

Ordered by the Legislative Assembly to be printed, 4 October, 1892.

[*Laid upon the Table of this House in answer to Question No.* 20, *of* 30 *March,* 1892.]

Question.

(20.) GOODS TRAFFIC, SYDNEY TO GLEN INNES AND GUYRA TO INVERELL:—MR. CRUICKSHANK *asked* THE COLONIAL TREASURER,—

(1.) Will he cause to be laid upon the Table of this House a Return showing the quantity of goods traffic carried on the Northern Railway Line from Sydney and stations north of Sydney to Glen Innes during the past twelve months?

(2.) The same with regard to Guyra Station?

(3.) The quantities of goods sent from these stations respectively to Inverell?

Answer.

RETURN showing the quantity of goods carried from Sydney and stations north of Sydney to Glen Innes and Guyra, also the quantity of goods sent from Glen Innes and Guyra respectively to Inverell, for the twelve months ending 31st December, 1891.

	Tons.
(1.) Sydney to Glen Innes	2,092
Stations north of Sydney to Glen Innes	5,212
(2.) Sydney to Guyra	160
Stations north of Sydney to Guyra	625
(3.) Glen Innes to Inverell	4,984
Guyra to Inverell	Nil.

1892–3.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(RETURN, SHOWING THE TRUCK RATES FOR GENERAL GOODS FROM SYDNEY AND NEWCASTLE TO ARMIDALE, GUYRA, GLEN INNES, GUNNEDAH AND NARRABRI, &c.)

Ordered by the Legislative Assembly to be printed, 18 *January*, 1893.

[*Laid upon the Table of the House in answer to Question No.* 2 *of* 14 *December*, 1892.]

Questions.

2. MR. LONSDALE *asked* THE COLONIAL TREASURER,—
   (1.) What are the truck rates for the various classes of goods carried upon the northern and north-western lines from Sydney to Armidale, Guyra, and Glen Innes?
   (2.) From Newcastle to Armidale, Guyra, and Glen Innes?
   (3.) From Sydney to Gunnedah and Narrabri?
   (4.) From Newcastle to Gunnedah and Narrabri?
   (5.) The distances between Sydney and Newcastle and each of these towns?
   (6.) The rates for wool from each of these towns to Sydney and to Newcastle?
   (7.) What is the loss upon the northern line, if any, and upon what portion?
   (8.) What is the loss upon the north-western line, if any?

Answers.

1. The maximum rate per truck for general goods from Sydney to Armidale and Guyra is £40; the average consignments would, however, be cheaper at class rates. The maximum truck rate for general goods from Sydney to Glen Innes is £30. For sugar, rice, unwrought (bar, rod, &c.) and galvanised iron, wire netting, and fencing wire, from Sydney to Glen Innes, the rate per 6-ton truck is £24.

2. The maximum rate per truck for general goods from Newcastle to Armidale and Guyra is £37, but the average consignments would be cheaper at class rates. From Newcastle to Glen Innes the maximum truck rate for general goods is £27. For sugar, rice, unwrought (bar, rod, &c.) and galvanised iron, wire netting, and fencing wire, from Newcastle to Glen Innes, the rate per 6-ton truck is £21.

3 and 4. The truck rates are not of any advantage to Gunnedah. From Sydney to Narrabri the maximum truck rate for general goods is £40, and from Newcastle to Narrabri £37, but the average consignments would be cheaper at class rates.

5.

Distance from Sydney to—		Distance from Newcastle to—	
Armidale	358	Armidale	260
Guyra	385	Guyra	287
Glen Innes	422	Glen Innes	324
Gunnedah	294	Gunnedah	196
Narrabri	350	Narrabri	252

6. WOOL RATES.

To Sydney.

	Unclumped Scoured, per ton. £ s. d.	Greasy, per ton. £ s. d.
Armidale	5 8 7	3 15 0
Guyra	5 10 0	3 15 0
Glen Innes	5 10 0	3 15 0
Gunnedah	4 14 10	3 18 5
Narrabri	5 6 11	4 7 1

To Newcastle.

Armidale	4 6 7	2 17 6
Guyra	4 8 0	2 17 6
Glen Innes	4 8 0	2 17 6
Gunnedah	3 12 10	2 16 5
Narrabri	4 4 11	3 5 1

7. The sectional earnings of the Northern Line as a whole are not kept separately, but separate accounts have been drawn up of the earnings on the section Armidale to Jennings, and of the North-Western Branch, as follows:—

	Length.	Capital Cost.		
Armidale to Jennings...	132	£1,533,018.	Loss on working expenses and interest...	£63,367
Werris Creek to Narrabri	97	£649,681.	Profit on working	£907

1892–3.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(RETURN SHOWING THE REVENUE AND EXPENDITURE OF THE NYNGAN TO COBAR RAILWAY, FOR DECEMBER, 1892.)

Ordered by the Legislative Assembly to be printed, 7 March, 1893.

[*Laid on the Table of the House in answer to Question No. 20, of 25 January, 1893.*]

Question.

(20.) REVENUE DERIVED FROM RAILWAY, NYNGAN TO COBAR:—DR. ROSS *asked* THE COLONIAL TREASURER,—

(1.) What was the gross revenue of the railway from Nyngan to Cobar during the month of December last?

(2.) What was the gross expenditure during the same period, including the expense of management and interest on the capital invested?

(3.) What is the balance for or against the enterprise?

Answer.

RETURN showing the revenue and expenditure of the Railway from Nyngan to Cobar, for the month of December, 1892:—

Revenue—
Coaching, £563 16s. 11d.; goods, £476 17s. Total, £1,040 13s. 11d.

Expenditure—
Locomotive and Traffic Expenses, £243 2s. 10d.; Maintenance of Permanent Way, £557 10s. 2d.; Interest on Capital, £799 8s. Total, £1,600 1s.

Difference—
Loss on working, £599 7s. 1d.

NOTE.—It may be added that the December earnings are high compared with other months.

[3d.] 744—

1892.

NEW SOUTH WALES.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

REPORT

TOGETHER WITH

MINUTES OF EVIDENCE, APPENDICES, AND PLANS,

RELATING TO THE

PROPOSED RAILWAY

FROM

GLEN INNES TO INVERELL.

Presented to Parliament in accordance with the provisions of the Public Works Act, 51 Vic. No. 37.

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

RAILWAY FROM GLEN INNES TO INVERELL.

REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, appointed during the last Session of Parliament, under the Public Works Act of 1888, 51 Vic. No. 37, the Public Works Act Amendment Act of 1889, 52 Vic. No. 26, and the Public Works (Committees' Remuneration) Act of 1889, 53 Vic. No. 11, to whom was referred the duty of considering and reporting upon "the expediency of constructing a line of railway from Glen Innes to Inverell," have, after due inquiry, resolved that it is not expedient the railway should be constructed, and in accordance with the provision of sub-section IV, of clause 13, of the Public Works Act, report their resolution to the Legislative Assembly :—

General statement of the proposed work.

1. The proposal to construct a railway from Inverell to the Great Northern Railway originated many years ago.

The idea of connecting Inverell with Glen Innes can be traced by means of the official papers relating to the railway, a *précis* of which is published with this Report as an Appendix, as far back as 1878, when an examination of the country between Glen Innes and Inverell was made by a railway surveyor. In 1881 resolutions were passed at a public meeting at Inverell in favour of a railway to Glen Innes, and thence to the Clarence River. The following year the matter was urged on the attention of the Government by a petition from a Railway Conference which sat at Glen Innes, and in 1883 by a deputation from that district. In 1884 the project was brought before Parliament, and £578,000 was voted for the construction of a line from Glen Innes to Inverell. A reference to *Hansard* shows that this vote was passed in the Legislative Assembly by a majority of 34 in a House consisting of 60 members, at an early hour in the morning, after repeated requests had been made for an adjournment, and without any explanation of the proposed work having been given by the Minister responsible for the proposal or by any other member of the Government. On the following day by a majority of 2 in a House of 56 members, a vote of £2,000,000 was passed for a line of railway from South Grafton to Glen Innes. These votes were passed in the Assembly in Committee of Supply as items on the Estimates, and in the Legislative Council as items in a Public Works Loan Bill. From that time nothing further of importance was done in the matter of connecting Inverell with Glen Innes by railway until September, 1886, when the plan, section, and book of reference for this line (laid upon the table as exhibits on 29th April, 1886) were approved by the Legislative Assembly, and forwarded to the Legislative Council. On that occasion a short explanation of the proposed line was made in the Assembly by the Minister for Works. In October, 1886, the Legislative Council referred the proposed work to a Select Committee, and Parliament being prorogued shortly afterwards the matter lapsed. The Guyra, Uralla, and Kentucky routes to Inverell, which had already been mentioned in the Assembly, were now advocated more strongly, and trial surveys of them were made.

In

In 1888 the Public Works Act was passed, and it became necessary to submit the proposed line of railway, if the Government still adhered to it, to the Public Works Committee. During July, 1889, the Acting Engineer-in-Chief (Mr. Deane) reported in favour of the Guyra route, and recommended its adoption. The conclusion at which he arrived,—as may be seen from the *précis* of the papers relating to the case,—was "that the advantages were all in favour of the Guyra line." It was rather longer than the line from Glen Innes to Inverell, and its ruling grade was 1 in 40, but it represented a shorter distance between Inverell and Sydney, it was very considerably less in estimated cost, and the ruling grade on none of the routes suggested was less than 1 in 40. The Minister for Works thereupon requested the Railway Commissioners to give him their opinion of the rival routes, "having regard to the fact that a railway from the main line to Grafton was urged upon the Government." The Government Land Valuer examined the routes and reported upon them, and on the 31st May, 1890, Messrs. Scarr and Price, Acting Examiners of Public Works Proposals, were also sent over the routes, and instructed to report upon them, having regard to the proposed construction of a railway from Tenterfield to Casino, a railway from Glen Innes to Grafton, and a railway from Guyra *via* Don Dorrigo to Grafton. This instruction had reference mainly to the idea of connecting Inverell by railway with the coast. Messrs. Scarr and Price submitted their report on 12th August, 1890, and they recommended the construction of the line from Glen Innes to Inverell, a line from Guyra *via* Don Dorrigo to Grafton, and, at a later date, a line from Tenterfield to Casino. They were of opinion that soon after the completion of the Guyra to Grafton line a railway from Tenterfield to Casino must be made, and "that the general interest of the whole country would be better served by the line from Glen Innes to Inverell than by the line from Guyra to Inverell, for the reason that Glen Innes is between the two points of connection with the coast." On 1st December, 1890, the Railway Commissioners reported upon the proposed railway from Glen Innes to Inverell, taking the estimated cost at £492,000, the amount having been reduced by £86,000 since it was passed by the Legislative Assembly, and their report represents an estimated annual loss upon the line of £15,740. It also condemns the severity of the grades, and suggests their improvement. Very shortly after the receipt of this report the line was referred to the Public Works Committee. This reference was made on 19th December, 1890, with a few words of explanation from the Minister for Works (including a statement that the estimated cost of the line was £492,000), and some remarks from members in favour of the route from Inverell to Guyra. The Public Works Committee commenced their inquiry respecting the proposed railway on 21st April, 1891, and they then learned from the Under Secretary for Public Works that a further examination of the route from Glen Innes to Inverell had been made by the Acting Engineer-in-Chief (Mr. Deane), with the result that he had been able to improve the line by making the ruling grade 1 in 60, and reducing the cost to £427,400, or £8,000 per mile. The length of the line would, however, be extended to 53 miles 34 chains. The Committee carried their inquiry as far as taking most of the evidence required from officers of the Government Departments, and by appointing a Sectional Committee for the purpose of inspecting the country between Glen Innes and Inverell and Inverell and Guyra, and collecting evidence in those districts and other places interested in the proposed route; and then, by reason of the Committee going out of office, the inquiry was for some time stopped. On 31st March, 1892, the present Committee were appointed, and the proposed railway being referred to them the inquiry was resumed at the point at which it was left by the previous Committee.

Description of the proposed railway.

2. As originally proposed to Parliament, and referred to the Committee, the railway would leave the Great Northern Railway at Glen Innes, at almost right angles, and going by the route coloured black on the plan, and known as Hogg's line, reach Inverell at a distance of 44 miles 37 chains and 12 links, with a ruling grade of 1 in 40. This route is said to be the shortest and most direct line that could be laid out

out between Glen Innes and Inverell, but as it had the disadvantages of steep grades and high cost efforts were made by further examination of the country to remove or modify those objections. These efforts resulted in the discovery of what, compared with Hogg's line, is practically a new route. It is, as already stated, about eight miles longer than Hogg's line, its total length being 53 miles 34 chains, but it has a ruling grade of 1 in 60, and would cost, as estimated, £65,000 less, or £427,400. This route is coloured purple on the plan. The line leaves the Great Northern Railway at the south end of Glen Innes station, at 323 miles 39·50 chains from Newcastle. Thence running in a westerly direction across Furrucabad Creek, it crosses through a low saddle of the Waterloo Range at 336 miles 64 chains. From that point it goes in a southerly direction, crossing Wellingrove or Waterloo Creek at 342 miles 65 chains, and then running up Maid's Valley it crosses the water-shed between the waters of Waterloo and Swanbrook Creeks at 346 miles. Taking then a westerly course down the valley of Swanbrook Creek it crosses the creek at 362 miles 24 chains, and thence, still going in a westerly direction, it reaches Brodie's Plains, crossing the divide between Swanbrook Creek and the Mackintyre River at 367 miles. Thence it skirts the northern side of the Mackintyre into the town of Inverell, terminating at 376 miles 73 chains from Newcastle. The main road to Inverell is crossed four times. The sharpest curve on this line is 12 chains radius. Other routes shown on the plan are one coloured red representing the original trial survey for the line *via* Swanbrook Creek, and another coloured brown showing a trial survey *via* King's Plains, with a deviation *via* Apple-Tree Gully. The line coloured purple on the plan is the line that has been definitely under the consideration of the Committee, and is known as that from Glen Innes to Inverell, *via* Maid's Valley, Swanbrook, and Brodie's Plains.

Railway Commissioners' Report.

3. The Railway Commissioners reported upon the line proposed to Parliament —Hogg's line, or that coloured black on the plan. The interest upon the capital expenditure, £492,400, they calculate at 3½ per cent., which makes £17,234. The working expenses of the railway they estimate at £6,296, and the revenue at £7,730. The estimated traffic, therefore, after paying working expenses, would leave a balance of £1,494 towards paying the interest on the capital expenditure. Recently, the Commissioners reported on the amended line, or that coloured purple on the plan. Taking the cost of construction, exclusive of land, at £427,400, they show the interest at 3½ per cent to be £14,959. The working expenses they estimate at £7,138, and the revenue at £8,200. These figures leave an estimated annual loss of £13,897, the estimate of traffic being £1,062 in excess of the working expenses, and therefore providing that amount towards paying the interest on the capital cost.

The Committee's method of inquiry.

4. The proposed railway was referred by the Legislative Assembly to the present Committee on 29th March, 1892, but it was referred by the Assembly to the previous Committee on 19th December, 1890. That Committee took evidence upon the subject in Sydney and, by means of a Sectional Committee, in the country districts interested in the proposal. The present Committee adopted the evidence taken by their predecessors, and supplemented it by further evidence taken in Sydney. In this manner inquiry was made into every part of the subject, and all evidence of importance available obtained. As many as 103 witnesses were examined—eighteen in Sydney, and eighty-five in the country. The Sectional Committee traversed a large part of the country which would be served by the railway, examining its nature, acquainting themselves with existing and probable settlement, and ascertaining as far as possible the traffic prospects of the proposed line. Sittings of the Sectional Committee, at which witnesses were examined, were held at Glen Innes, Swanvale, Inverell, Tingha, Wandsworth, and Guyra, and afterwards at Armidale, Uralla, and Tamworth. In this way the Sectional Committee made a careful investigation, not only respecting the proposed railway, but with reference to the suggested routes for connecting Inverell with Guyra, Uralla, and Kentucky. The Committee have, however, mainly directed their attention to the proposal to connect Inverell with Glen Innes, and to the suggested route from Inverell to Guyra, the latter being by far the most important of the three routes mentioned as more desirable than that in the reference made by the Assembly to the Committee.

Witnesses examined.

5. The witnesses examined by the Committee in Sydney comprise:—Mr. Joseph Barling, Under Secretary for Public Works, who, appearing as the representative of the Minister for Public Works, gave the Committee a general statement of the circumstances which led to the railway being proposed, the means taken to obtain

obtain information with regard to choice of route, improvement of grade, and prospects of traffic, and generally as to the policy of the Government in respect of the line; Mr. Percy Scarr and Mr. Edward B. Price, Acting Examiners of Public Works Proposals, who were commissioned by the Minister for Public Works to make an exhaustive inquiry respecting railway extension in the northern districts of the Colony, and particularly in relation to the question of connecting Inverell with the Great Northern Railway; Mr. C. J. Saunders, Chief Draftsman, Department of Lands, with reference to land in the districts between, and in the neighbourhood of, Glen Innes and Inverell; Mr. Hugh McLachlan, Secretary to the Railway Commissioners, as to the opinions of the Railway Commissioners with regard to the proposed railway; and Mr. John Harper, Railway Goods Superintendent, the officer upon whose report the Railway Commissioners based their estimates of traffic on the line; Mr. Henry Deane, Engineer-in-Chief, Railway Construction Branch, Department of Public Works, the officer of the Department responsible for the survey and final choice of route, the adoption of the grades upon the line, and the actual work in its construction; Mr. Charles M'Donnell Stuart, a railway engineer, who was engaged in the survey of the line as it was before the Committee; Mr. J. Jamieson, a railway surveyor, who was engaged upon the survey of a route for a railway between Inverell and Guyra; Mr. G. A. Cruickshank, M.P., Mr. A. Hutchison, M.P., Mr. F. A. Wright, M.P., Mr. J. Inglis, M.P., Hon. Henry Copeland, M.P., Mr. E. Lonsdale, M.P., and Mr. T. H. Hassall, M.P., members of the Legislative Assembly representing electorates interested in the question of the proposed railway; Mr. C. P. Turner, Hon. Secretary of the Coff's Harbour Railway and Harbour League; and Mr. J. F. Utz, general merchant, of Glen Innes. The witnesses examined by the Sectional Committee represented all classes in the districts interested in the railway.

Claims of Inverell to a railway.

6. Sufficient evidence has been produced before the Committee to convince them that Inverell has many claims to railway connection with the existing railway system, and if that were the only question for the Committee to decide there would be less difficulty in arriving at a decision favourable to Inverell.

The Sectional Committee found the district possessed of productive capabilities to an exceptional degree, and that it was in close relation with a large tract of valuable pastoral property to the west and north-west. The town is of a permanent character, with a steadily increasing population, and the surrounding land for many miles is suitable for agriculture. The total population of the town and district is said to be about 6,000, and the land enjoying a plentiful and well distributed rainfall, produces wool wheat, maize, fruit, and wine. The Sectional Committee in reporting that they had little difficulty in unanimously concluding that Inverell was deserving of railway communication, remark that on this point they found a general consensus of opinion in all the centres of population they visited.

Messrs. Scarr and Price, the Acting Examiners of Public Works Proposals, say no one who has travelled through the district can have any doubt of the necessity for connecting it with the railway system; that it requires neither figures nor statistics to prove this—it is self-evident.

But in the details of the inquiry made by the Committee there are to be found certain important facts not favourable to the construction of the railway, and these cannot be overlooked. They outweigh everything else. In the consideration of the line directly referred to the Committee, that to connect Inverell with Glen Innes, there has to be borne in mind the question of the direction in which the produce of Inverell sent away by rail will for probably many years find its market. There are the important matters—vital in their relation to the subject of the railway proving profitable or otherwise to the State—of settlement in the districts through which the railway would pass, and traffic upon the line. In close relation to these are the questions of first cost and subsequent working expenses. Then there are the difference of opinion and rivalry as to the proper route for a line from Inverell to the Great Northern Railway, and the point of connection with the main line; and, lastly, careful attention must be given to the contemplated connection of Inverell with not only the Great Northern Railway but also the coast. All these matters the Committee have been obliged to take into account and attach to them the importance which, in an inquiry of this nature, they appear to deserve.

7. The several matters just mentioned represent the principal points in the Committee's inquiry, and those to which the examination of witnesses was particularly directed. Clearly set forth they are as follows:— The principal matters considered in the inquiry.

(1) The claims of Inverell to be connected with the existing railway system.
(2) The markets, present and prospective, for the produce of Inverell.
(3) The amount of settlement in the districts to be served by the railway, and the probability or otherwise of it increasing.
(4) The cost of the proposed line, and the estimated working expenses and probable traffic returns.
(5) The question of route, and the place of connection with the Great Northern Railway suitable for Inverell, and best in the public interest.
(6) The contemplated connection of Inverell and the district beyond it to the north and west with not only the Great Northern Railway but some suitable harbour on the coast.

8. Admitting that Inverell has itself some strong claims to railway communication, the first question that arises is the direction in which by means of a railway Inverell could find the best markets for its produce. Markets for Inverell produce

The Minister for Works in the last Government, as was explained to the Committee by the Under Secretary, was of opinion that in the near future a produce trade to and from Queensland might be developed with Inverell, and that the construction of the contemplated breakwater at Byron Bay, and a railway connection between Lismore and Tenterfield *via* Casino, would open up a market for Inverell in the extensive districts of the Richmond and the Tweed, and provide a handy and commodious port for an export trade. There has been nothing before the Committee to show the opinion of the present Minister for Works on these points, but evidence has been given by some of the witnesses examined which to a certain extent supports the impression that the Richmond and Tweed districts might prove a useful market for some of the products of Inverell.

The idea of a large and profitable trade with Queensland is not entertained by those witnesses who may be considered competent to speak on the subject. There are on many articles of produce tariff restrictions which would interfere with Inverell sending her productions into Queensland, though in the course of time these may be removed. Wheat could be sent from Inverell into Queensland free of duty, but it is not certain that such wheat would be able to compete with that grown in Queensland or imported there by sea. With regard to Byron Bay it is not out of place to bear in mind the possibility that if Byron Bay were made a suitable port for shipping, the districts of the Richmond and Tweed might find water-borne wheat cheaper than wheat obtained from Inverell. But the strongest evidence before the Committee on the question of outlets for Inverell produce goes to show that Inverell's best market is, and must be for many years, in the direction of Newcastle and Sydney.

Mr. Scarr, Acting Examiner of Public Works Proposals, and Mr. Harper, Railway Goods Superintendent, are both convinced that Queensland will not offer a large market to Inverell, and that in the absence of a line to the coast Inverell products must come southward.

As these two witnesses are those upon whose investigations and reports the Government and the Railway Commissioners chiefly depended for information prior to the proposed railway being referred to the Committee their evidence cannot be lightly put aside.

9. Inverell itself is fairly settled, and there is an extensive area of good agricultural land in the neighbourhood, and along the route of the proposed line from Inverell to Glen Innes. But the unoccupied land is in the hands of a few large landholders, and there is nothing before the Committee to lead them to believe that if the railway were constructed this land would be subdivided and sold. There is very little settlement between Glen Innes and Inverell, and the country there is held in three or four large estates. Mr. Scarr informed the Committee that he and Mr. Price did not go into the question of probable increase of population in the district. "The whole thing," he said, "is so prospective that we did not think such an estimate would be of any value." The land if cut up and sold by the present proprietors Settlement in the district, present and prospective.

proprietors would be capable of settling a large population, and the agricultural prospects of the district depend upon the policy of the owners of the land. The Committee incline to the belief that the large landed estates along the route of the proposed railway would not be cut up and sold as a consequence of the railway being constructed, and that so far as settlement along the line is concerned the railway would probably prove similar to what has been experienced in the south-west. The Crown land within easy distance of the railway is in reserves, and may of course be available for settlement.

Cost, working expenses, and traffic.

10. The estimated cost of the railway is £8,000 a mile. This, bearing in mind that the railway is a branch line, is considerable. When first submitted to Parliament, and a vote of £578,000 for its construction passed, the estimated cost was £12,500 a mile. The passing of the Public Works Act and the operations of the Public Works Committee under the Act led to a more careful examination and survey of the country being made, with the result that the estimate of cost has been reduced by £4,500 a mile, and the ruling grade of the line materially improved. The reduction from £12,500 to £8,000 is in itself more favourable to the construction of the railway than otherwise, but £8,000 a mile is very much in excess of the cost at which branch lines in the Colony should now be laid down. Having at an enormous expenditure constructed the necessary main lines through the Colony, it is in the opinion of the Committee wise in the public interest to lay down branch lines, which shall be feeders to the main railways, at the lowest cost consistent with soundness of construction and effective working. If Inverell were to be connected not only with Glen Innes but by a railway from Glen Innes with the coast, the line between Inverell and Glen Innes might be regarded as somewhat of the nature of a main line, but as it is before the Committee, and in the evidence given in their inquiry, it is considered as a branch line. The annual interest at 3½ per cent. payable on the total estimated expenditure for construction would be £14,959, and it would take, the Railway Commissioners say, £7,138 to pay the annual working expenses. To meet this there would be a traffic, according to the estimate, amounting to £8,200. The estimated annual loss would therefore be nearly £14,000. This loss might be reduced to some extent by reason of the branch line bringing traffic to the main line, but even with that allowance it would be considerable, and would probably be incurred for many years. Moreover, it is not certain that it would not be greater than the figures indicate, for in making their estimate of traffic the Railway Commissioners allowed a large margin for probable or possible increase of settlement and production. Messrs. Scarr and Price made no inquiry as to probable traffic. "Did you make any estimate as to the probable returns from the railway if it were constructed?" Mr. Scarr was asked. "No," he replied, "we did not. The whole of the traffic is so prospective that we did not think an estimate of that kind would be of any value. I do not think so now." He and his colleague went over the district, and found a large quantity of good land fit for cultivation, an industrious though comparatively small population, and a willingness to cultivate more land if railway facilities were afforded. They came to the conclusion that in the course of some years the line would prove profitable, but they "did not go into the question as to the line paying," they "did not make any calculations as to the returns of the railway."

Question of route.

11. The question of route is one of several difficulties with which the Committee have been confronted.

No fewer than four routes for connecting Inverell with the Great Northern Railway have been proposed, and though under the Public Works Act the Government can and did only definitely refer one to the Committee, the Minister for Works, when moving that the proposed railway be referred to the present Committee for consideration and report, desired the Committee to clearly understand that it was the wish of the Government that the whole of the routes should be taken into consideration. A similar intimation was made, though not in Parliament, by the Minister for Works in the last Government to the Committee previous to the present.

Mr. J. Barling, Under Secretary for Public Works, and before the Committee the representative and mouthpiece of the Minister, in his evidence said:—"The Minister feels that it is a very complex question, and he is prepared to afford the Committee every information with regard to the other routes.

He

He hopes the Committee will inquire exhaustively into these routes, which of course, in so far as the inquiry points to their desirability, will be taken as negative evidence against the particular route before the Committee." Generally, the nature of Mr. Barling's evidence was to place the whole matter in respect of route before the Committee as an open question.

In all their inquiries respecting proposed railways it has been the practice of the Committee to take rival routes into consideration, for though these have not been directly referred to them they are in each case so closely associated with the question as a whole that it has not been possible, without discarding evidence very material to a right conclusion in the matter, to set them aside. In this case, however, the Committee were distinctly requested by the Minister for Works, speaking for the Government, to consider them, and, therefore, though not formally referred to the Committee, they must be regarded as matters connected with the policy of the Government in respect of this railway. The routes proposed in addition to that from Inverell to Glen Innes, are Inverell to Guyra, Inverell to Uralla, and Inverell to Kentucky. The Sectional Committee closely inquired into them all, and travelled over the Guyra as well as the Glen Innes route. The Committee, sitting in Sydney, also took evidence respecting all the routes. The conclusion to be arrived at from this investigation is that while the Committee were requested by the Minister for Works to consider the different routes so as to "obtain information which will guide the Government and the House in coming to a final decision," the evidence of the Government departmental officers regarding the rival routes is so incomplete that it is not possible for the Committee to properly judge their respective merits. The principal rival route is that to Guyra. A trial survey of it has been made, and this gives the length of line as 55 miles 10 chains, slightly longer than the amended route to Glen Innes, the ruling grade 1 in 40, and the estimated cost £390,900, or £7,090 per mile. But from a statement handed to the Committee by Mr. Deane, and sworn to, it will be seen that he considers a line by this route could be constructed with a grade as easy and at the same cost as the recommended line from Glen Innes to Inverell, though it would be a few miles longer. The survey already made is only a trial survey, but he has no doubt that what he says in his statement could be done. "The line for which the trial survey has been made," he states, "is one which is more capable of improvement in itself than the line from Glen Innes to Inverell."

The Railway Commissioners did not examine the Guyra route. They did not do so because in making an inquiry respecting a line proposed by the Government and, under the thirteenth section of the Public Works Act, submitted to them, they take no notice of any alternative line. Messrs. Scarr and Price travelled over the route, but they look upon it with less favour than upon the route from Glen Innes, because they regard Glen Innes as being between two probable points of connection with the coast, Tenterfield and Guyra, a railway being in their opinion probable from Tenterfield to Casino, and from Guyra, *via* Don Dorrigo, to Grafton. The Sectional Committee made inquiry respecting each of the routes suggested, and the information they obtained led them to dismiss from the question all but the routes from Glen Innes and Guyra. The result of their inquiry respecting these two routes may be seen by the following extract from their report:—

"As to the respective merits of the Glen Innes and Guyra routes, the Committee found a considerable conflict of opinion. Summarised from the evidence the arguments in favour of the former were these—that in view of a probable market for Inverell wheat in Queensland, and on the northern coast of New South Wales, it offered the more direct access to those markets; that Glen Innes was midway between Tenterfield and Guyra, the two probable points of junction with the coast; that the land through which the line would run was of a superior character, capable of carrying a large agricultural population; that the distance of Tingha (an important and somewhat populous mining centre) is only about 15 miles from Inverell; that the existing traffic from Tingha, Inverell, and further west goes to Glen Innes.

"On

"On behalf of Guyra it was contended that there was at present a considerable population along the route; that the mining township and district of Tingha would be better served by the line; that it would also take the Bundarra traffic, and accommodate the settlers of Wandsworth, Tenterden, and Ollera; and that this was the more direct route to Sydney, and also to the coast *via* Guyra. The quantity of unalienated Crown land (excepting reserves) within 20 miles on either side of the Glen Innes-Inverell route is 215,000 acres, and on the Guyra-Inverell route 191,000 acres. The reserves on the Glen Innes route comprise 125,000 acres, and on the Guyra route 290,000 acres."

Connection of Inverell with the coast.

12. Closely connected with the question of route to Inverell is that of the connection of Inverell with the coast. "The Minister thinks," said Mr. Barling, when the matter was before the Committee in office previous to the present Committee, "that the key to the whole position is the 'locus' for the outlet of the north-eastern part of the colony," and Messrs. Scarr and Price were instructed not merely to report upon the proposal for a railway from Glen Innes to Inverell, but "to deal with the question as a whole." The Committee, therefore, though having referred to them a definite proposal for the construction of a railway between two points, found themselves in the position of being specially requested to inquire into a very much larger subject which they were informed the Government regarded as part of their railway policy, and inseparable from the proposal referred by the Legislative Assembly to the Committee. In accordance with this request they have directed part of their inquiry into the larger subject, and they find that no very definite information respecting it is forthcoming. Though it is considered that the point of connection of Inverell with the Great Northern Railway should depend very much upon that at which a branch railway should be constructed from the main line to the coast, there is no evidence to show that any particular route to the coast ought to be adopted, or that any one of them has been properly examined, or that the Government have a particular route in view. The Minister for Works in the last Government appeared to favour a line from Tenterfield to Casino, but no intimation of any preference of route has been made to the Committee from the Minister for Works in the present Government. In the absence of this information, and as the connection of Inverell with the Great Northern Railway is in an important manner associated with an extension to the coast, it is not possible for the Committee to properly deal with this part of the question before them.

Resolution of the Committee.

13. The Committee have therefore decided that it is not expedient the proposed railway should be carried out. Shortly stated they have arrived at this decision chiefly for the following reasons:—

(1) The connection of Inverell with Glen Innes would not be the shortest route to the present markets for Inverell produce.

(2) The cost of constructing the line is, for a branch line, excessive, and the interest, working expenses, and estimate of traffic indicate an annual loss of about £14,000, calculating interest on the cost of construction at 3½ per cent., or about £17,000, calculating such interest at 4 per cent.

(3) While the question of connecting Inverell with the coast is intimately associated with a railway connection with the Great Northern Railway, there is no information before the Committee to enable them to decide as to which of the routes to the coast before them would be the best.

The resolution with regard to the railway, which the Committee arrived at after a due consideration of the evidence, and of all the circumstances of the case, was passed on Wednesday, 4 May, on a division of 7 votes to 6; the resolution and the division being recorded in the Minute Book of the Committee as follows:—

"Mr. McCourt having with the consent of the Committee amended his notice of motion, moved,—'That in the opinion of the Committee, it is not expedient the proposed railway from Glen Innes to Inverell, as referred to the Committee by the Legislative Assembly, be carried out.'

"Mr. Davies seconded the motion.

"Mr. O'Sullivan, with the consent of the Committee, withdrew his notice of an amendment on Mr. McCourt's notice of motion, and moved as an amendment on Mr. McCourt's motion now before the Committee,—

'That all the words after the word 'is' be omitted, with a view to insert the following words: 'expedient that the line of railway surveyed from Glen Innes to Inverell, *via* Maid's Valley, Swanbrook, and Brodie's Plains, be carried out.'

"Mr. Wall seconded the amendment.

"The

"The Committee divided on the question,—'That the words proposed to be omitted stand part of the question,' with the following result:—

Ayes, 7.	Noes, 6.
Mr. Suttor,	Mr. Garrard,
Mr. Hoskins,	Mr. Ewing,
Mr. Humphery,	Mr. Wall,
Dr. Garran,	Mr. O'Sullivan,
Mr. Davies,	Mr. Collins,
Mr. McCourt,	Mr. Dawson,
Mr. Neild.	

"The amendment was therefore negatived.

"The motion was passed on the following division:—

Ayes, 7.	Noes, 6.
Mr. Suttor,	Mr. Garrard,
Mr. Hoskins,	Mr. Ewing,
Mr. Humphery,	Mr. Wall,
Dr. Garran,	Mr. O'Sullivan,
Mr. Davies,	Mr. Collins,
Mr. McCourt,	Mr. Dawson."
Mr. Neild.	

J. GARRARD,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Sydney, 27 May, 1892.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

RAILWAY FROM GLEN INNES TO INVERELL.

TUESDAY, 21 *APRIL*, 1891.

Present:—

THE HONORABLE JOHN LACKEY (CHAIRMAN).

The Hon. ANDREW GARRAN.	JAMES EBENEZER TONKIN, ESQ.
The Hon. FREDERICK THOMAS HUMPHERY.	WILLIAM SPRINGTHORPE DOWEL, ESQ.
The Hon. WILLIAM JOSEPH TRICKETT.	EDWARD WILLIAM O'SULLIVAN, ESQ.
JACOB GARRARD, ESQ.	CHARLES ALFRED LEE, ESQ.
HENRY COPELAND, ESQ.	WILLIAM McCOURT, ESQ.

JAMES PATRICK GARVAN, ESQ.

The Committee proceeded to consider the proposed Railway from Glen Innes to Inverell.

Joseph Barling, Esq., Under Secretary for Public Works, sworn, and examined:—

J. Barling, Esq. 21 April, 1891.

1. *Chairman.*] You are Under Secretary for Public Works? Yes.
2. Will you state the circumstances under which this work is being initiated? Yes.

As the Committee is aware, the question of the connection of Inverell with the main line has been the subject of investigation for many years past, as far back as 1884 the sum of £578,000 having been actually voted for the construction of a line from Glen Innes to Inverell. On the 29th April, 1886, the Plan and Book of Reference for this line were laid upon the table of the House, and were approved on the 15th September following. They were forwarded to the Legislative Council on the 16th September, and by that Chamber referred to a Select Committee on the 14th October. Parliament was prorogued on the 25th October, and the matter then lapsed, and remained in abeyance, so far as the Legislature was concerned, until referred for the consideration of this honorable Committee in December last.

Considerable agitation has taken place during the past few years in regard to the question of connecting Inverell with the main line. As the Committee is aware, four points of connection have been proposed, viz.: (1) Glen Innes, (2) Guyra, (3) Uralla, and (4) Kentucky, each of which has had its supporters. To determine the merits of these various proposals, the Minister for Works, on the 31st May last, remitted the matter for investigation to Messrs. Scarr and Price, who were temporarily employed as Examiners of Public Works proposals under a commission of the most comprehensive and exhaustive character. After carefully going into the whole question, these officers presented their report to the Minister in August last, and I have now the honour to lay a copy thereof before you, and to ask that it be taken as part of my evidence. Messrs. Scarr and Price will also be prepared to appear before you and give evidence on the subject. The conclusion which they came to was that the point of connection between Inverell and the main line should be Glen Innes. I need not go over the arguments which they advance in favour of this conclusion, they being fully set forth in the report. Their conclusion, however, was adopted by the Government, and a motion that the proposal be referred to this Committee was submitted to Parliament on the 19th December last and duly passed.

The Minister is aware that a very complex question is presented to the Committee in regard to this matter. He is conscious that there is a great deal to be said in regard to the other three points of connection that have been before the Department, viz., Guyra, Uralla, and Kentucky, and will be glad to place before the Committee all the information in the possession of the Department bearing upon those proposals. The Minister thinks that the key to the whole position is the "locus" for the outlet of the north-eastern part of the colony.

The route from Inverell to Glen Innes strikes the main line at right angles. The traffic from Inverell, if it finds its outlet to the south, would doubtless follow a shorter route, if the connection adopted were either of the southern townships mentioned; but it should be borne in mind that in the near future a produce trade to and from Queensland may be developed from Inverell over the northern line, and by the adoption of the Glen Innes extension, the northern as well as the southern outlet will have due consideration. Moreover, it has been a factor in the determination to adopt the Glen Innes connection, that a port at Byron Bay may yet be constructed, and in that case it is not improbable that a connection will be made between Lismore and Tenterfield, *via* Casino, thus giving a commodious ocean outlet, quite irrespective of the direct Queensland route by rail. Since the plan, sections, and estimate were laid upon the table of the House, in December last, further surveys have been made with the view of improving the line, and, as a result, a considerably better line has been obtained. The ruling grade of the line submitted to

J. Barling, Esq. 21 April, 1891.

Parliament was 1 in 40, but a route has been found giving a ruling grade of 1 in 60. The estimate given to Parliament was £492,400, the length being 44 miles 37 chains 12 links, the route being known as the Wellingrove route. I will presently read a report on the subject by Mr. Deane, which shows that the new line has been lengthened 7 miles, in order to obtain an easier grade, but the estimate is still below that submitted to Parliament by the sum of £65,000. I am unable to give an accurate description of the route now proposed, but the plan now before the Committee will give its general direction.

With the permission of the Committee, I will read a minute on the subject which has been received from the Acting Engineer-in-Chief for Railway Construction, together with a telegram which came to hand from that gentleman yesterday.

The Department would have waited until Mr. Deane's return before placing the matter before the Committee, but that they understood the Committee were desirous of entering upon the matter early to enable them to appoint a Sectional Committee to visit the locality before the meeting of Parliament. Upon the return of Mr. Deane further information will be placed before the Committee.

The Commissioners' Report is as follows:—

"Office of the Railway Commissioners of New South Wales,
"Sydney, 1 December, 1890.

"Proposed Line of Railway from Glen Innes to Inverell, *via* Wellingrove—44 miles 37 chains.

"In accordance with section 13 of the 'Public Works Act, 1888,' we beg to report as under:—

Cost of Construction—

The Engineer-in-Chief estimates the cost of constructing the line (exclusive of land and compensation) at	£492,400
Annual Cost—	
Capital expenditure, at 3½ per cent.	17,234
The working expenses are estimated as under—	
Traffic Branch	£1,756
Locomotive Branch	1,500
Permanent way Branch	3,040
	6,296
Total annual cost	£23,530
Estimated Revenue—	
Coaching	£3,000
Mails	500
Goods	4,290
	£7,790

It will be observed that the estimated traffic, after paying working expenses, leaves a balance of £1,494 towards paying interest on the capital outlay.

The gradients on portions of this line as at present surveyed are severe, there being some 19 miles of from 1 in 40 to 1 in 50, and it is therefore suggested that a special examination of the route, and the country in the vicinity of it, should be made for the purpose of securing, if possible, better grades.

In September, 1889, when we inspected the route, we were asked to mention that Mr. George Arthur, who, it is understood, represents the owners of property through which the proposed line passes for a distance of about 17 miles, offered to convey to the Government any land required in connection with the construction of the line for a consideration of £1 per acre.

The Common Seal of the Railway Commissioners of New South Wales was hereunto affixed this 5th day of December, in the year of our Lord one thousand eight hundred and ninety, in the presence of—
H. McLachlan.

E. M. G. EDDY,
Chief Commissioner.
W. M. FEHON,
Commissioner.
CHARLES OLIVER,
Commissioner."

The following is the minute of the Acting Engineer-in-Chief:—

"The question of gradients on this line has not been overlooked by me. I had instructed Mr. Hutchinson to carefully examine the line some months ago, but I have had to retain him in Sydney for other work. The surveyors have all been so busily engaged with work of an urgent character that I have not been able to spare one of them for the job. Next month, at latest, I will have the route examined.—H.D., 17/12/90."

I will now read the following minute from Mr. Deane:—

"Department of Public Works, Glen Innes, 10 April, 1891.

"Minute Paper:—Glen Innes to Inverell Railway.

"I have the honor to report that I have examined the proposed new line to Inverell, from Glen Innes past Wellingrove and up to the point where it enters Maid's Valley—a length of about 19 miles. This portion of the line was entirely new, and therefore deserving of special attention. The rest of the line to Inverell consists of a compilation of old surveys revised and improved.

"There has been some difficulty in connecting the levels of the new work with its continuation mentioned above; but I have satisfied myself that the line is a good one, and that a ruling grade of 1 in 60 has been obtained. It is, however, 52 miles in length, being thus 7 miles longer than the staked line, which goes by the name of "Hogg's line," and which was submitted to Parliament.

"Hogg's line has a ruling grade of 1 in 40. It is the shortest and most direct line that could be laid out between Glen Innes and Inverell, and every credit must be given to the surveyor who marked it out, but it has the disadvantage of steep grades and high cost.

"The new line which, as before said, will be 7 miles longer, would probably cost less to construct, in spite of its length, but it is impossible at the present moment to say what the saving would be, as there

there is a length of 9½ miles on it where the earthworks will be extremely heavy—the cuttings and banks being necessarily deep and high, and the ground having a steep sidelong slope. The waterways, too, along the whole length of 52 miles will be much more costly than on "Hogg's line." J. Barling, Esq. 21 April, 1891.

"I would recommend, therefore, that this new line be submitted to the Public Works Committee, and before that body meet for its consideration, I have no doubt that I shall be in a position to telegraph to you the amount of the estimate, as I have instructed Mr. Burge to forward his estimate to me for approval at Casino not later than Wednesday next.

"It should, of course, be understood that the survey which has now been made is not a final one, and that it is subject to deviations of more or less importance.

"To the Under Secretary for Public Works." "H. DEANE."

Subsequently I received the following telegram from Mr. Deane, dated 20th April:—

"Have carefully examined estimate of revised line, Glen Innes to Inverell. Length, 53 miles 34 chains; cost, £8,000 per mile; total, £427,400. Ruling grade, 1 in 60. Estimate of line submitted to Parliament can be considerably reduced, but not to above amount, and ruling grades remain 1 in 40.—H. DEANE, 'Best's Hotel,' 9·45."

3. *Mr. Copeland.*] Can you say what the idea is as to the future extension of this railway beyond Inverell? I can only tell you what I have read. No determination has been arrived at.

4. You do not know whether the line is likely to be extended to Warialda? I am unable to say, no determination having been come to on that point.

5. *Mr. Garrard.*] Does this amended line necessitate the construction of a bridge which the old line did not? I have no doubt Mr. Deane has taken that into consideration.

6. *Mr. Copeland.*] You have not had a more recent survey of the line from Guyra to Inverell? No; I think not.

7. Do you know whether any of the engineers have made recommendations as to where the line should be extended to? I cannot say that I know of any engineers having done so; but we have the report of Messrs. Scarr and Price, in which they recommend that it should go to Bingera.

8. Can you tell the Committee what the working expenses per train mile were for last year? I cannot, but no doubt the Secretary for Railways will give it.

9. You mentioned in your statement that you are of opinion, or the Minister is of opinion, that a great deal of the traffic on the line would be traffic to and from Queensland? What I said was, that in the possibility of a traffic springing up between that district and Queensland the line would be utilised.

10. I should like to know whether you have taken into consideration in connection with this matter the import duties that are imposed in Queensland on all kinds of produce that is likely to be sent from Inverell. For instance, there is a duty on bacon. If the people of Inverell send bacon to Queensland they will have to pay 3d. a lb. duty on it. The difference between our import duty on bacon and the Queensland import duty on the same article is 1d. per lb., which would amount to £9 6s. 8d. per ton. The duty which the Inverell people would have to pay in sending their bacon to Queensland would be about £28 a ton;—do you think it is likely that the people of Inverell would make use of the markets of Queensland and pay 3d. a lb. duty when they can sell their bacon in New South Wales without paying any duty at all? In answering that question I speak simply on my own responsibility. I think that in considering the construction of a line like this, which settles the direction for all time, we must take into account the possibility of future developments, and the tendency of things seems to indicate that all intercolonial duties will be abolished.

11. There are a number of articles in the Queensland tariff to which I would draw your attention, and in doing that I am drawing the attention of the Government to them. In looking over the Queensland tariff, I find that on nearly every article that the people of Inverell would be likely to send into the Queensland market there is a heavy duty. For instance, there is a duty of 15 per cent. on bark for tanning; on barley, 9d. a bushel; on malting barley, 1s. 6d. per bushel; on beans and peas, 1s. a bushel; on beef and mutton, 15 per cent.; on bran and pollard, 4d. per bushel; on boots and shoes, which, I think, they make at Inverell, 8s. to 22s. per dozen pairs; on butter, 3d. a lb.; on cheese, 3d. a lb. I want to know from you, as representing the Minister, whether you think the Inverell people could possibly make use of the Queensland market when they have to pay these duties, and when they can sell in the New South Wales markets without paying any duty at all. Then there are other things on which duties are imposed. There is a duty on hay and chaff of 15s. per ton; on corn flour, 2d. a lb.; on eggs, 15 per cent. on their value; on hops, 6d. a lb.; on maize, 8d. a lb. I ask again whether it is likely that the Inverell people can afford to pay 3d. a lb. duty on their cheese, and to pay the other duties which I have mentioned, when they can send goods south into the markets of this colony without paying any duty whatever. I wish to draw your attention to these facts, and to get them into print so that you can consider them. Inverell people could send ham and tongue to Queensland; but if they did they would have to pay 3d. a lb. on it. There is a duty of 3d. a lb. on honey. Could the Inverell people afford to send honey and hops to Queensland and pay the duty. They would have to pay 15 per cent. on their hides. Do you think that they could afford to pay that when they can sell their hides in the markets of this colony duty free. The Queensland Government charge 1½d. a lb. on lard; on malt, 3s. per bushel; on corn flour, maize flour, and maizena, 3d. a lb.; on fresh mutton, 15 per cent., and 4d. a lb. on preserved mutton; on preserved milk, 2d. a lb.; on oats, 8d. a bushel; on onions, 20s. a ton. This is an important question. I want to know whether the Inverell people will be able to send these articles into Queensland if they have those duties to pay. Inverell people grow onions to a considerable extent, and if they made use of this line to send onions into Queensland they would have to pay 20s. a ton duty; but if the other route were adopted, and a railway was made to Guyra, they could send their onions to the south and sell them, without having to pay any duty. Then there are potatoes. If the Inverell people send potatoes to Queensland they will have to pay a duty of 15s. per ton. I should like to know whether they would be able to pay that duty, or whether they would prefer to send their potatoes to the south. If they send their wool by railway into Queensland they will have to pay a duty of 15 per cent., and on tallow, 1½d. per lb. Would they be likely to send those articles into Queensland. I understand that one reason why the Government have submitted this proposal to the Committee is that the Inverell people are likely to send their produce, or a great portion of it, into Queensland. Well, has the Minister, or have you, considered the fact that as soon as the articles crossed the border, the duties which I have referred to will have to be paid. Would it not pay the people of Inverell better to pay the cost of carriage a few miles further, and send

J. Barling, Esq. 21 April, 1891.

send their goods to our southern markets, than to pay duty to send them into Queensland? I should be obliged if I may be allowed to consult the Minister before I answer the question, but I think there is no doubt these things have been considered. I wish to point out that I did not say that one of the chief reasons for constructing this line was to facilitate the traffic between this colony and Queensland. One of the reasons which are pointed out was a reason to which I think your question will not apply, viz., that we may, by-and-bye, have a connection between Tenterfield, Casino, Lismore, and Byron Bay.

12. Would you consider it desirable to build this railway on the possibility of having that railway from Tenterfield to Byron Bay in the future;—supposing the Queensland market were cut off altogether, would you recommend the building of this line, or of the line to Guyra? I think that in case of a breakwater being made at Byron Bay there would most decidedly be a good reason for extending the line from Inverell to Glen Innes, rather than to Guyra.

13. Would it not be safer to wait till the breakwater is built? To put it off till that question is settled?

14. No; would it not be better to build a railway in the meantime to suit all the people beyond Inverell, as well as most of the Inverell people? According to the Minister's view, taking everything into consideration, the best solution is to have a railway between Inverell and Glen Innes; but, as I pointed out, the Minister feels that it is a very complex question, and he is prepared to afford the Committee every information with regard to the other routes I have mentioned. He hopes the Committee will inquire exhaustively into those routes, which, of course, in so far as the inquiry points to their desirability, will be taken as negative evidence against the particular route before the Committee.

15. Are you aware whether any persons outside Inverell have petitioned the Minister and moved in the direction of getting this Glen Innes route carried out? I cannot give an answer to that directly. I have not had a *précis* made of the papers, as they are all in use, but all the information on the subject will be before the Committee when they need it.

16. Will you ascertain, before you come to the Committee again, what the working expenses per train mile were, according to the last yearly report? With pleasure.

17. I want to show what the additional working expenses will be for the 35 additional miles of railway over which everyone will have to travel, and over which every ton of goods will have to be taken? I will see that the information is obtained.

WEDNESDAY, 22 APRIL, 1891.

Present:—

JACOB GARRARD, Esq., (VICE-CHAIRMAN).

The Hon. ANDREW GARRAN.	JAMES EBENEZER TONKIN, Esq.
The Hon. FREDERICK THOMAS HUMPHERY.	EDWARD WILLIAM O'SULLIVAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	CHARLES ALFRED LEE, Esq.
HENRY COPELAND, Esq.	WILLIAM MCCOURT, Esq.

JAMES PATRICK GARVAN, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Joseph Barling, Esq., Under Secretary for Public Works, sworn, and further examined:—

J. Barling, Esq. 22 April, 1891.

18. *Mr. Copeland.*] I asked you a number of questions yesterday with reference to the possibility or probability of a trade being established between Inverell and Queensland, with a view of showing that the import duties would be a bar to New South Wales people establishing a trade with Queensland in agricultural produce. That being the case, we should be constructing a line from Inverell to Glen Innes, which would, for all time to come, impose an additional 35 miles' journey on people coming southwards. What I want to show is, that for all time, the people of Inverell and west of Inverell will be saddled with 35 miles' additional railway travelling by reason of the construction of this line, instead of taking the short and more direct route from Inverell to Guyra. I want your opinion, and the opinion of the Minister, as to whether it is desirable to saddle all these people with this extra distance of 35 miles, rather than take the shorter route, which would give them access to the only market that will be likely to be available, viz., our own markets, instead of constructing the extra 35 miles to take the people to Queensland, where the markets will be virtually closed against them? Since appearing before the Committee yesterday, I have had a further consultation with the Minister, who desires me to say that he does not wish to enter into a detailed statement to the Committee, through me, of the voluminous data upon which his recommendations to the Cabinet and Parliament have been based. The Minister has depended, as he must do, upon the evidence of others in arriving at his conclusions; and he desires me to say, on his behalf, that he considers it much more valuable to the Committee to have that evidence placed before them at first hand than in a hearsay form, and he therefore desires me to supply to the Committee all the written information he has from time to time received on the subject. I am, however, to say, that in recommending the route from Inverell to Glen Innes, in preference to those to a more southerly point, the following considerations have weighed with the Minister and the Government:—1st. That it is the shortest route to the main line. 2nd. That though there may be present impediments in the way of produce passing from the Inverell district into Queensland, it is thought highly probable that before many years have passed, all such artificial restrictions to commercial interchange will be removed, and that as the railway is to be constructed for all time, it is preferable to adopt a route which in the future will most economically and readily admit of traffic being directed both north and south, so as to give the people of the district, for whose benefit it is principally to be constructed, equal facilities to reach all markets.

19. You stated that it would be the shortest route to the main line. Can you say how much shorter it would be than the other. Will the distance not be 52 miles by the one, and 55 miles by the other route? The Guyra route is 55 miles.

20. So that this proposed line *via* Glen Innes will only be 2 miles 46 chains shorter than the line *via* Guyra, and it will entail 35 miles additional haulage to get to the southern ports from Inverell? It must be remembered that the length which I have given now is that of the revised line. It has been

revised

revised to get better gradients, and if we applied the same rule to the Guyra line it is probable that the result would be but little altered. J. Barling, Esq. 22 April, 1891.

21. Have you read Mr. Hogg's report with reference to the Guyra line? I have not.

22. He is the surveyor who explored the line from Guyra to Glen Innes? Yes.

23. And I believe the Department have every confidence in him? Certainly.

24. Here is what he states. I am quoting from the official report of Mr. C. E. Hogg, in the papers which were submitted to the Minister, and laid before Parliament:—"For 13 miles it runs from the level to 1 in 100, then for 18 miles from 1 in 100 to 1 in 50, then for 20 miles from 1 in 50 to 1 in 40. That makes a total of 51 miles." That is the length which he gives the line from Inverell to Guyra—51 miles, not 55 miles. You perceive that there is only 20 miles of a gradient of 1 in 50 to 1 in 40, and all the remainder is above 1 in 50. Do you think you are justified, or that Messrs. Scarr and Price are justified, in designating this line from Guyra to Inverell as a line with a gradient of 1 in 40, seeing that there is only a very small proportion of it that is 1 in 40? That would be the ruling gradient which would have to be surmounted.

25. But is it not possible, seeing that you have improved the Wellingrove line, to get a better grade on this line if a further survey were made? Of course, I cannot say; it may be so, but it would be an expensive length of line.

26. The proposed line, according to this survey, is 51 miles, which would allow a difference of 4 miles? I am unable to explain the discrepancy between the two—that is a matter for Mr. Deane to deal with. Eventually there may be a traffic with Queensland, and we may also have communication with Byron Bay, in which case we should have a long way round to go if the connection were to the south of Glen Innes.

27. Have you read over the report of Messrs. Scarr and Price? Yes.

28. The report states, with reference to the probability of a wheat trade with Queensland:—"It has been stated that with the construction of the Inverell-Glen Innes line, a considerable trade in breadstuffs would spring up between Inverell and Queensland, in supplying the country west of Toowoomba. It does not, however, appear that such is likely to occur at present, as the following will show. The distance Inverell to Wallangarra, *via* Glen Innes, is 112 miles, and the freight upon wheat would be 9s. per ton, or 2·92 pence per bushel. Wallangarra to Toowoomba is 132 miles, and the cost of carriage, at Queensland rates, 11s. 9d. per ton, or 3·81 pence per bushel. Total, 6·73 pence per bushel, Inverell to Toowoomba. Brisbane to Toowoomba is 101 miles, and the cost of carriage, 10s. 5d. per ton=3·38 pence per bushel, leaving a difference in favour of Brisbane of 3·35 pence per bushel, to cover the cost of landing sea-borne wheat at Brisbane." The report intimates that wheat would be more likely to be taken round from Adelaide to Brisbane, and up the line, than from this colony over the border. Then the report goes on to say:—"Inverell to Sydney, *via* Glen Innes, would be 466 miles, and the cost of freight, 17s. 4d. per ton=5·62 pence per bushel to land the wheat in a large market, as against 6·73 pence to land it in a limited one at Toowoomba." I wish to ask if these figures have been brought under your notice—that the distance from Inverell to the five largest towns in Queensland, situated on this railway between Wallangarra and Brisbane, is as follows:—Inverell to Stanthorpe, 147 miles, population 897; Inverell to Warwick, 185 miles, the population of which is 3,073; Inverell to Toowoomba, 253 miles, the population of which is 6,270; Inverell to Ipswich, 330 miles, population 7,576; Inverell to Brisbane, 354 miles, population 87,000—giving a total population for these five largest towns on the railway, including the metropolis, of 104,816. Of course there are small intermediate places, which I do not mention. Now, let us compare the figures I have given with the following figures. Coming southward, so that the people could come to their own legitimate markets by way of Guyra, the populations of the towns, and the distances, are as follows:—From Inverell to Armidale, *via* Guyra, is only 82 miles; the population of Guyra is 2,187; but your proposal would make that distance 117 miles instead of 82 miles. Then from Inverell to Tamworth is 159 miles, and the population is 4,096, but your proposal would make the distance 194 miles. From Inverell to Maitland, the population of which is 9,250, the distance is 318 miles, but your proposal would make it 353 miles. From Inverell to Newcastle the distance is 328 miles, but your proposal would make it 373 miles. The population of Newcastle is 27,750. From Inverell to Sydney, the population of which is 381,730, the distance is 440 miles, but your proposal will make it 475 miles. The total population of the five largest towns on the New South Wales side amounts to 425,013, as against a population of the five largest towns on the Queensland side of 104,816; so that there would be four times the traffic to the five largest towns on our own railways that there would be to the five largest towns on the Queensland side, yet for all time the Government propose to saddle this 425,000 people with 35 miles of additional haulage so as to enable the Inverell people to get to a contingent market with a population of 104,000. Have these figures been brought under the notice of the Minister? I think these figures have been considered. Of course, you are basing your calculation entirely on the wheat traffic. As far as the towns you are referring to are concerned, near Inverell, I suppose, there would be very little traffic in wheat, because those towns are all in splendid wheat-growing districts.

29. Are you aware that import duties are imposed in Queensland? I am; but the Minister has pointed out the possibility of those duties being abolished not many years hence, and you have rested your argument entirely on one commodity—wheat. You have insisted upon that one phase of the argument—the traffic between this colony and Queensland, but that is only one factor in the consideration which has been given to the subject. A large factor is the opening up of a port of our own, say at Byron Bay, by the construction of a railway from Tenterfield to Lismore, *via* Casino. I merely mention that as being, to me, the greater argument in favour of the construction of the line from Glen Innes to Inverell.

30. But do you not, as Under Secretary, think that if we succeed in getting one railway from the tableland to the sea coast that will be as much as we can manage for many years to come, as we are doing it out of borrowed money, and there is at present a difficulty in borrowing money? Our expenditure in the future will no doubt be very much guided by the facilities with which we can borrow money. But nothing is determined yet as to our connection between the main line and the coast. I merely foreshadowed, by the Minister's directions, that there may be that connection between Tenterfield and Byron Bay.

31. You think it is safe that, on the possibility of there being such a line at some future time, we should now expend public money in constructing a line which, at least for very many years to come, will saddle all who use it to come to Sydney with 35 miles additional travelling? As I pointed out, the barrier to traffic between Queensland and this colony is an artificial one, which may at any time in the future be removed, and

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and it would seem to be almost a certainty that in the near future we shall have a connection with the coast—probably by Byron Bay. I am speaking now on my own responsibility. It would seem a great pity to construct a line that would be for all time, which did not give the nearest route to our outport.

32. Suppose the railway were constructed, and Byron Bay made a harbour, do you think it at all reasonable that the passenger traffic should ever be diverted along that route;—would any proportion of the people travel by sea when they can travel by rail? I should hardly think it would affect the southern passenger traffic; it would affect the goods traffic.

33. I suppose you know how many travel by steamer to Newcastle now, and the number that have travelled since the railway was constructed? I have not that before me, but if Byron Bay answers all the expectations formed of it, and our engineers speak in the most positive terms as to its being a success, and seeing that it will be an outlet for trade from one of the richest districts in the colony, I think that it may reasonably be supposed that there will not only be a very large goods traffic, but also a very large passenger traffic to the coast.

34. What do you base your argument upon—a passenger or a goods traffic? I do not know that we have divided it—we consider the traffic as a whole.

35. You admit that if a railway were taken from Tenterfield to Byron Bay the whole of the passenger traffic would still go by rail? I think it could not be denied that the passenger traffic of Sydney would go by rail. But I contend that there would be a very large passenger traffic between that line and Byron Bay. Byron Bay would, in that case, probably become a large city, and the commercial interest of that part of the country would probably be centred in Byron Bay, supposing that the harbour proposed to be constructed there is a success. Our engineers, as I said before, speak of it as an absolute certainty.

36. Do you not think you are looking very far forward in speaking of the time when Byron Bay will compete with Sydney in business houses and for traffic of all kinds, so as to induce passengers to go there instead of to Sydney? Not when we consider the rapid increase of some of our towns where commercial interests have arisen. I may mention Broken Hill as an example. I do not think it is very unreasonable to suppose that if facilities are given for large ocean steamers to call at Byron Bay, in a very short time we should have a large settlement there.

37. Which will be the headquarters, in your opinion, for Byron Bay—London, or Sydney? I should think that a very large number of ocean going vessels will take loading direct from Byron Bay.

38. And what would they bring from Europe? If a large population settles at Byron Bay they would bring the ordinary merchandise which vessels bring to Sydney.

39. Then it would quite give Sydney the go-by, I suppose? I do not say that it would give Sydney the go-by, but it would become an important place as far as the commercial interests of that part of the country are concerned

40. Let us consider the few remaining passengers who would still come to the metropolis. Do you think it a fair thing to saddle these people with 35 miles of additional travelling, which would lengthen the journey each way by an hour and a half? I think the interests of the smaller number must always give way to those of the larger.

41. You think there would be a larger number of passengers to Byron Bay? I do not say that. Taking it as a whole, I think there would be a very large traffic with Byron Bay.

42. At what would you fix the average rate—I suppose about 2d. a mile? I cannot go into that. It is for the Railway Commissioners to say.

43. Do you think it a fair thing to impose upon all the passengers going to Sydney, or intermediate towns, an additional length of journey of an hour and a half, and to charge 5s. 10d. extra, assuming that the passenger rate will be 2d. a mile? I do not see how anomalies of that kind are to be avoided until we have sufficient resources and commercial interests to construct direct lines everywhere.

44. Can you say what kind of goods you anticipate would go by Byron Bay? I must speak with caution, because I do not consider myself an expert in the matter. I should think that there would be a large wool traffic.

45. Is there a very large wool traffic between Newcastle and Sydney? I am not able to answer that question.

46. According to the report of Messrs. Scarr and Price, the distance from Tingha to Inverell is 15 miles? Yes.

47. Thence to Glen Innes 53 miles, and thence to Guyra 37 miles; so that if the railway is constructed as proposed, the distance from Tingha to Guyra will be 105 miles, whereas the direct route from Tingha to Guyra would be only 40 miles. Therefore you would be imposing an additional 65 miles of haulage, as well as additional passenger rates, on the people of Tingha. But I find that last year Tingha sent away 1,200 tons of tin. Is it a fair thing to impose this 65 miles additional haulage on that 1,200 tons of tin sent from Tingha to Sydney? We could only take a question of that sort in connection with the traffic of the whole of the district, and we could not legislate for a small place like Tingha alone. We must take the general bearings of the whole problem.

48. You are aware that in connection with the submission of the proposed railway, the question is also referred to in this report of a railway from Guyra to Grafton? Yes.

49. Is it not desirable in constructing this railway to bear in mind that this railway from Guyra to Grafton is virtually under consideration;—you might almost say that it is submitted with this railway? No; it is not submitted with this railway.

50. It was submitted to Messrs. Scarr and Price? Yes; but the survey has not been completed yet.

51. Did they base their recommendation, in recommending this line to the Minister, to a great extent on their advice to construct a railway to Grafton, and from Grafton to Guyra? I would rather you would ask those gentlemen themselves as to how they base their recommendations.

52. Are you aware that if this line, Glen Innes to Inverell, is constructed it will impose an additional haulage, even on the Inverell people, of 21 miles to get to Grafton, 21 miles more than it would be if the railway were constructed from Inverell to Guyra? If the Inverell–Guyra–Grafton line were used for the transport of the produce of that district, of course they would have a longer length to run; but I am suggesting that if Byron Bay breakwater is carried out, and the line to Byron Bay is constructed, it would be better for them to go to Byron Bay, because when they get to Grafton they are 60 miles from the sea, still. I may say that if the Clarence River works are carried out as recommended by Sir John Coode, there would be 18 feet in depth at low water, whereas at Byron Bay there is an area of 46 acres having a depth of 30 feet at low water, and a vessel drawing 32 feet will be able to go behind the breakwater and have ample shelter.

53.

53. But you know that the money has been voted, and the work is being proceeded with at Grafton, but the money has not been voted for the Byron Bay breakwater? No; but it has been passed—first by this Committee, and afterwards by the Legislative Assembly. J. Darling, Esq. 22 April, 1891.

54. Are the Committee to understand that the Ministerial policy will be to construct that line, because that may influence us in voting on the question of the construction of a railway from Guyra to Grafton? That certainly must not be considered, because the Cabinet has not decided that matter.

55. You are aware that Messrs. Scarr and Price distinctly recommended that a railway should be made from Guyra to Grafton? I am.

56. And they recommend that sometime in the future this line should be constructed, but that the Guyra line should be constructed first? I have given no Ministerial decision whatever on either of these lines. I am pointing out what may be in the future a connection between Tenterfield and Casino, and on to Byron Bay; but I have no directions from the Minister to say that there has been any conclusion come to as to any other line than the one before the Committee.

57. I asked yesterday if you could inform the Committee what were the working expenses per train mile? I communicated with the Secretary for Railways this morning on the subject, and received this reply:—

"Sir,

"With reference to your verbal request for information as to the working expenses per train mile for last year, according to last report, I have to inform you that for our financial year ending 30th June, 1890, the expenditure for 1889 was 49·91d.

"I have, &c.,

"H. McLACHLAN,

"Secretary."

58. *Mr. Lee.*] In submitting this railway route question to the Public Works Examiners, was it not a part of their instructions that they were to deal with the question as a whole? Undoubtedly.

59. That is to say, that they were to consider the question of communication with the coast in other ways, as well as by a line from Inverell to the main northern line? Yes.

60. Are the Committee to assume from that that the Minister had in view the question of decentralisation? I should not like to answer that question without consulting the Minister again.

61. Had the Minister in view the question of dragging for all time the trade of the north to the port of Sydney? I have no doubt he had that in view.

62. Dragging the trade of the north to the port of Sydney? I have no doubt that the question of decentralisation must have been in his mind. I am sure that his idea is not to centralise all the trade in Sydney.

63. Was it a part of his scheme that a branch from the main northern line should be so connected as to divert the traffic to Sydney? I do not think for a moment that it was.

64. Did the larger question enter into his views—that is, that the people to the north required some outlets for their produce, other than coming into Sydney? I think so. I think the Minister's idea was to give the people facilities for reaching that port which nature intended them to have.

65. Consequently, the Examiners' instructions would be to examine into, and report upon, the whole question? Into the question as a whole, in its most comprehensive and national bearing.

66. Therefore, connection with the coast from the northern portion of the colony is closely connected with this contemplated connection between Inverell and Glen Innes? I think so.

67. And must be viewed as a whole? It is certainly viewed as a whole by the Minister.

68. You were asked a few questions yesterday by Mr. Copeland, in reference to the existing Queensland tariff, and he quoted a great many items, amongst others those of preserved milk, ox tongues, and articles of that character;—do you happen to know whether these articles are produced in any quantities in the Inverell district? I cannot answer that question.

69. Do you know anything of the agricultural products of the district? No.

70. Do you know anything of the staple agricultural products of the district? I suppose that wheat and wool will be largely produced there.

71. Do you know whether in Queensland they impose a duty on wheat? I believe there is no duty on wheat.

72. Consequently, there is no barrier against the exportation of wheat from this colony into Queensland? As far as tariff charges are concerned, there would not be.

73. Has there been any recent survey of the route between Guyra and Inverell? There has been a recent survey, and I believe it is complete; but I cannot tell you how long ago. The Acting Engineer-in-Chief will give you better information on that point.

74. You are not in possession of plans and books of reference of the route between Guyra and Inverell? No; but I am aware that all those routes have been carefully considered.

75. Has your Department had any particular tendency to bring the Inverell line as far south as possible? There have been a great many representations made as to the desirableness of connecting Inverell with one of the southern towns.

76. If it had been a prominent feature of the railway policy to connect it as far south as possible, do you not think that Uralla or Kentucky would have been considered? All these have been considered.

77. Can this Committee take it, then, that the decision of the Works Department is based to a large extent upon the report submitted by Messrs. Scarr and Price? Yes.

78. They have inquired into the whole question? Yes; into all the bearings of the question.

79. You have spoken about making a harbour at Byron Bay;—why was that question brought forward so prominently? Because it is one of the reasons that has weighed with the Minister in determining the route of this railway. I think that in my evidence yesterday I indicated that. These are the words which, by the direction of the Minister, I used:—"Moreover, it has been a factor in the determination to adopt the Glen Innes connection, that a port at Byron Bay may yet be constructed; and in that case it is not improbable that a connection will be made between Lismore and Tenterfield, *via* Casino, thus giving a commodious ocean outlet, quite irrespective of the direct Queensland route by rail." I am not able to go a word beyond that.

80. Why have you set a value upon Byron Bay greater than upon the Clarence or the Richmond? The reason why I put a much greater value on Byron Bay is this: At Byron Bay we shall have 32 feet of water

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water at low tide, whereas in the Clarence River we shall have only 18 feet, and in the Richmond 12 or 14 feet, and, also, there is the further reason that our engineers state, in the most emphatic terms, their belief in the certainty of the success of the breakwater at Byron Bay. I may say that I asked Mr. Darley a question on this subject only a day or two ago, and he speaks in the most positive language as to the certainty of the Department being able to carry out this work successfully, and at the estimated cost.

81. If the Byron Bay harbour is constructed, will that be a natural port for the northern portion of the country? I think so, most undoubtedly.

82. Would it be the port most likely to attract a large amount of trade to the ships? Most unquestionably, always premising, of course, that the breakwater is a success.

83. But would Byron Bay be a central outport for the Inverell country? I think it would be.

84. Would it be likely to gather any traffic from the south of the Inverell country? I think it very likely would. It would then become a question of mileage between the nearest port and Byron Bay.

85. Do I understand you correctly that it is a necessity to have a proper and dependable port for the shipment of New England products? I think it would be, most certainly—that is, if the inhabitants are to have fair play as regards an outport for their products.

86. Do you think that if the people residing in that part of the country, and to the north and north-west, are compelled to send their produce, such as wheat and maize, to Sydney, for all time to come;—the country is likely to develop as quickly as it would if they had a nearer, cheaper, and better port? I should think that that goes without any argument. If you give the people a near port, it will develop the country much more quickly than if you impose upon them for all time a much longer trainage.

87. During the time you have been in the Works Department, have you received from the various districts of the north and north-east applications for railway communication to be established between the table-land and the coast? I think there must be plenty, but I have not collected the papers yet.

88. Do you happen to know that an agitation has been going on for over twenty years? I have no doubt of it.

89. And is still going on? It is still going on.

90. Has that had any influence with the Minister? All these have been factors in regard to the Minister's determination.

91. Therefore, that part of the question cannot be shirked any longer? The Minister has considered everything in the most comprehensive manner possible.

92. And in dealing with the Inverell line, he believes that the question of communication with the coast must also be dealt with? I think that is clearly indicated by the answers which I have already given. The Minister has risen above all mere local considerations whatever; he has tried to deal with the matter in a national and most comprehensive way.

93. *Dr. Garran.*] Do you know anything about the land reserved on any of these three routes? No; I think you will find evidence as to that in Mr. Price's report.

94. What officer in the Lands Department would be able to give it? I think the Chief Draftsman.

95. *Mr. O'Sullivan.*] When Messrs. Scarr and Price reported in favour of the line, it was what is marked on the map as the permanent survey *via* Wellingrove? Yes.

96. Who laid out this new route? I forget the name of the surveyor; I think it was Mr. Hutchinson.

97. Can you say that the recommendation made by Messrs. Scarr and Price in favour of the permanent survey will apply equally to the line marked purple on the map? I think it will apply with greater force, because we have a better grade, and I am under the impression that it opens up more good land there, too.

98. Can you say whether the Department contemplate carrying out the proposed line from Guyra to Grafton? I cannot; I have no direction to say anything on that point.

99. I notice that in their report they lay great stress on that proposal? The survey is not complete. I believe there is about 20 miles yet to finish.

100. You have laid stress on the fact that the proposed route will be the nearest line to Byron Bay, which will become a great seaport? Yes.

101. Does the Department contemplate re-introducing this Byron Bay proposal? That I cannot say.

102. Suppose they do not, what becomes of the main portion of your evidence? I can only ask you to take the inference from my evidence as to the intentions of the Minister. I am not able to say anything further than I have already said on that point.

103. I gather from your evidence that the Minister is guided mainly by the report of Messrs. Scarr and Price? Yes; as representing the gathered up information which we have in the Department.

104. *Mr. Tonkin.*] I take it that one of the chief arguments in favour of the construction of this line is the fact that Byron Bay is to become a port of shipment? I have indicated that in my evidence.

105. That is one of the chief arguments in its favour? Certainly one of them.

106. Do you know whether the Minister, in giving instructions to Messrs. Scarr and Price, particularised Byron Bay? Instructions were given to Messrs. Scarr and Price, and they are here on the first page of the report:—"The second branch of the inquiry will embrace the consideration of the question as to the best means of connecting the Great Northern Railway with the proposed coast line. For this purpose the following routes have been suggested, viz.:—Tenterfield to Casino, Glen Innes to Grafton, and Guyra, *via* the Don Dorrigo Scrub, to Grafton."

107. The line from Tenterfield to Casino is the one to connect with Byron Bay? Certainly.

108. Do you know that there is a great difference of opinion as to the necessity for constructing the proposed breakwater at Byron Bay at the present time? Yes.

109. You know that although it was passed by a majority it was only a bare majority? I believe so.

110. You know that it gave rise to a great deal of discussion in Parliament? Yes.

111. Taking that into consideration, do you think the construction of this railway from Glen Innes to Inverell would lead to the necessity for the construction of the Byron Bay breakwater? I do not know that I could say that exactly.

112. But would it not be a good argument in favour of the construction of the Byron Bay breakwater if it were shown that this was the most direct route? Yes.

113. Then if this railway is constructed it will be an argument in favour of the construction of the Byron Bay breakwater? Yes, certainly. The two questions are inter-dependent.

114. Then if it is doubtful in the minds of a very large number of people, if not of a majority, whether it would be advisable to construct the Byron Bay breakwater, do you not think that that should be put entirely

entirely out of the question in considering this railway? I hardly think that, because it has been a factor in the Minister's mind in determining this question, and no doubt he thought that when further evidence was obtained, and the public have become familiarised with the advantages to be derived from the construction of a breakwater, it will eventually be approved of.
115. Do you know that the Minister himself has been one of the greatest supporters of the Byron Bay breakwater? Yes.
116. Then if he instructed Messrs. Scarr and Price to report in favour of the railway to show the necessity for the Byron Bay breakwater, do you not think that that ought to be taken into consideration? The Minister did not instruct these gentlemen to report in favour of any railway.
117. I should not like this railway to be constructed for the purpose of forcing the acceptance of the Byron Bay breakwater scheme? I am sure that that is not the Minister's intention.
118. There is something pointing in that direction, is there not, in the recommendation? The Minister merely said it was a factor in the consideration of the matter.
119. *Mr. Garvan.*] In reply to Mr. Tonkin, you said the Minister was one of the strongest advocates of the Byron Bay breakwater? He strongly advocated it.
120. Was that from personal knowledge of the place, or from official reports submitted to him by officers of the Department? He has since visited Byron Bay, but when the proposal was placed before Parliament he had not been there, so he must have been guided by official reports.
121. His advocacy of the scheme was entirely based upon the recommendations of the public officers? At that time.
122. Since that, are you aware that he has visited the place? Yes.
123. Have you visited it yourself? I have.
124. From your personal knowledge of it, do you think the arguments in favour of it have been strengthened or weakened? A personal inspection has largely strengthened the arguments in its favour in my own mind.
125. In your evidence of yesterday you attached special importance to the fact that Byron Bay may become a port? Yes.
126. Is there any probability of the additional inducement of a large population being settled there? I should think so, most certainly.
127. From the character of the soil and all the conditions, you think it probable that in the near future there will be a large population? I should think so, decidedly. I was astonished when I saw the place, and when I saw the enormous quantity of good land. It does not extend quite to the Bay, but there is a most admirable site for a township.
128. Some of the opponents of the proposal to make a harbour at Byron Bay have stated that the country was not a fertile country, but a barren country. From your inspection of it, what is your opinion? It is one of the most fertile countries that I have ever seen. It is true that the fertile land does not extend to the water's edge, but to a distance of from 1½ to 3 miles.
129. The good land, I understand, is not confined to any narrow strip? No; that is one of the distinguishing features of the district. I have seen, on the Manning River, as rich land as it is possible to find, but that was skirting the bank of a river, or of a creek, but at Byron Bay you find an immense area of country composed of splendid volcanic soil. I saw in one place that the soil extended to a depth of 25 feet.
130. Have you seen in any other part of the colony superior land to it? Certainly not.
131. Have you seen any other portion of New South Wales with so large an extent of good land? No; it is unique in that respect.
132. Are the conditions of climate and rainfall capable of sustaining a population there? The rainfall is remarkable. At Ballina, I believe, they have the largest registered rainfall in the colony.
133. So that as regards rainfall and climate it is exceedingly favourable? Yes.
134. Are not the products of that country such as would be likely to be interchanged with those of the table-land of New England? I should think so, most certainly.
135. The products of the table-land being those of a temperate climate, and those from the neighbourhood of Byron Bay sub-tropical? Yes.
136. And you think it reasonable to suppose that a large interchange of those products would take place if a railway were made? Yes; and supposing intercolonial tariffs are done away with.
137. Even distinct altogether from a railway coming from Tenterfield, is it your opinion that the character of the soil, and the extent of the good soil at Byron Bay, would justify the construction of the proposed breakwater? Most decidedly.
138. So that the advocacy of the making of a harbour at Byron Bay is due to the ability of the district to sustain population, as well as to the probability of its being made a terminal port? Quite so.
139. *Mr. Copeland.*] You were asked by Mr. Lee whether there has not been an agitation going on for the last twenty years to get this particular railway? I do not think Mr. Lee said this particular railway, but to get a railway from Inverell.
140. And that was one reason why the thing should be definitely settled now? Yes.
141. Were you Under Secretary when the money for the railway from Glen Innes to Grafton was voted? No, I was not.
142. You know, of course, that that proposal was carried? I believe so.
143. And it was to cost £1,999,000? The amount was voted—I am not certain that that indicated the final estimate.
144. Do you not know that the Assembly voted the line and the Council threw it out? Yes.
145. Have you read the report of Messrs. Scarr and Price on that railway? I have.
146. Does not their report condemn that proposal in no unmeasured terms as being utterly impracticable? Yes.
147. And they say that the £1,999,000 would have been wasted had it been spent? I do not think they say it would be wasted, but they show that the line would have been constructed at an enormous cost.
148. It would have been an unjustifiable expenditure? Yes; considering the great cost.
149. And yet there was a great agitation by the Glen Innes people for that very line? That I am not quite certain about.

Percy Scarr, Esq., Acting Examiner of Public Works, sworn, and examined:—

P. Scarr, Esq. 22 April, 1891.

150. *Vice-Chairman.*] What position do you occupy in the public service? I am Supervising Engineer in the Roads and Bridges Department.
151. How long have you held your present position? About twelve months. I have been twenty-four years in the Department.
152. Were you not one of the Examiners of Public Works? I was, temporarily only.
153. And now you have returned to your original position? Yes.
154. You have an extensive knowledge of the whole country? I have.
155. You were commissioned, in company with Mr. Price, to make an exhaustive inquiry as to the extension of the railway in the north and north-eastern portions of the colony? Yes.
156. And you drew up a report and submitted it to the Minister? Yes.
157. Did Mr. Price and yourself agree on every point of that report? Yes.
158. With every word of that report you agreed? Yes; we were perfectly unanimous.
159. How much time did you spend in the district obtaining information necessary to draw up the report? I was there the greater part of three months. Mr. Price was with me a little over two months. At first I went up there alone.
160. Where did you begin your operations? At Guyra.
161. Will you just sketch out the course you took. Did you go from Guyra to Inverell? We went from Guyra to Inverell, then from Inverell to Glen Innes, by Swanbrook, and back by the Wellingrove line, then we went from Inverell to Uralla, by way of Bundarra. We then, in consequence of the weather being bad, left the table-land and went down to the coast by the Don Dorrigo line. We started from Guyra and followed the line through, as far as the survey had been carried, to Guy Fawkes. Then we went to Perrott's station on the Armidale and Grafton-road, and from there through the Don Dorrigo scrub to the Bellinger River. From the Bellinger we followed the coast, *via* Coff's Harbour and the valley of the Orara, to Grafton. From there we went up the Newton-Boyd line to Glen Innes and back to Uralla. From Uralla we went by the Yarrowick line back to Inverell, from Inverell to Bingera, from Bingera to Barraba, Manilla, and Tamworth. We also went from Uralla to Kentucky.
162. You went from Uralla to Inverell? Yes, after we had been down to the coast.
163. You did not go exactly over the Kentucky line, but over the Uralla and Inverell line, which runs parallel with the Kentucky line? No; we followed the Kentucky line through Bundarra as far as we could get, then we were within a few miles of Uralla. Then we went from Uralla to the line at Kentucky.
164. What about the other portion of the inquiry—Tenterfield to Casino? I omitted to state that before going over the Don Dorrigo line, we went from Tenterfield to Casino.
165. And returned the same way? Yes.
166. How did you set about obtaining local evidence and the statistics which you gathered. Did you submit written or printed statements to the inhabitants to fill in? No; we usually saw the Mayor of the town and informed him that we were ready to take any evidence, and we invited the people to make statements. We saw a number of people in each town. We were at Inverell for some time, and saw a large number of people who came in as it suited their convenience, and we went out and saw people.
167. Were the public admitted to the room where you took their statements? Yes.
168. No one was shut out? No.
169. Did the public attend? Yes; very largely, especially at Inverell.
170. How did you test the value of the information so gathered? By our own observation of the country. We found, as we stated in our report, that some of the statements made were not very reliable.
171. Do you think you have sifted the chaff out of the statements which were made, and kept the wheat? I think so; I am very confident that we did.
172. Your recommendation is that the line should go from Inverell to the northern line, tapping it at Glen Innes. Do you make that recommendation because of the probability of a traffic springing up quickly? That was one reason—another was that we considered it would only be a matter of time, when the Tenterfield and Casino line would be made to join with the line from Lismore to the Tweed.
173. By your report you do not anticipate much traffic between the Inverell district and Queensland? Not under present conditions.
174. By that do you mean tariff conditions? Yes.
175. You do not anticipate much traffic, because the same products are grown on the table-lands of Queensland as are grown at Inverell? Exactly.
176. Therefore you dismiss any weight attached to the project as affording a means for the interchange of goods? Yes; goods in the way of grain.
177. What influenced you most in recommending it then, was it the probability of the traffic of the north-east coast going to Byron Bay? We apply to that line the same argument that has been used by the people of Grafton, and all along the coast, that there would be an interchange of products there.
178. And you think there would be? Undoubtedly; if there would be from any part of the coast at all. We went carefully through the evidence given in connection with the Grafton and Tweed, and Byron Bay inquiries, and ascertained the nature of the district about the Tweed and Richmond, and seeing that wheat cannot be grown there, there must be an exchange of products.
179. Did you take into consideration how cheaply products are carried by sea? Yes; and also the fact that there are no very good harbours along the coast.
180. Did you ascertain where the people of the Inverell district now find an outlet for their produce? Yes, we ascertained that their chief outlet was to the westward.
181. Then if this line is to pay, it will not be because of the existing traffic to the main line, but because of the traffic that may be created in future? A traffic could not exist at present, because carriage by road is too dear.
182. But what is produced now is chiefly sent westward? Yes; as far as we could ascertain, the people of that district have a limited market westward.
183. Then what would feed this line if it were constructed? We anticipate that the increase in grain about Inverell would be so very large that it would form an important item in the traffic.
184. Where would it go to? To Sydney and other markets.
185. Then if it would come to Sydney, why should you tap the line so far away from Sydney when you could tap it lower down? If Sydney traffic is to be considered, doubtless a point more to the south would be better.

186.

P. Scarr, Esq. 22 April, 1891.

186. As a matter of fact, the population of the colony is south of Glen Innes, and there is very little population in the Richmond River district? But the population of the Richmond River district is increasing very rapidly.
187. What products are sent to Sydney from the Inverell district? None, practically.
188. Can you call Tingha in the Inverell district? Tin is the principal product that comes from the Inverell district to the metropolis.
189. And that finds its way to the northern line at what point? Out of 1,200 tons produced at Tingha in 1889, about 700 tons went to Glen Innes, and the remainder went to Guyra.
190. And where did it go to on reaching those two points of the railway? To Morpeth and Sydney, I understand.
191. Then can you say that the people prefer going to Glen Innes and paying some 30 miles more carriage instead of going to Guyra, when the distance by road is similar? Yes; the road to Glen Innes is better than the road to Guyra, and a number of carriers live at Inverell, and they would rather do the extra 16 miles from Tingha into Inverell than go to Guyra, where the roads are bad.
192. What about the unfortunate person who sends his tin and has to pay 30 miles extra carriage? The carriage by road, I understood, is the same,—there is not any extra charge for it.
193. You recommended this Wellingrove line;—were you of opinion that the grades could be improved? We did not examine the line from an engineering point of view, but looking at it in a general way, we thought it could be improved.
194. Have you seen the map? Yes.
195. You recognise that it is said that they have found an easier grade, 1 in 60, shown by the violet line on the map? Yes.
196. Knowing the country there, do you think it is probable that that is a good direction to take? It is just where I should look for a line.
197. As far as the nature of the country is concerned, there is very little difference between the two lines, I suppose? I should say that there was more good land on the Wellingrove line, as a whole.
198. Do you know a Mr. George Arthur, a property owner on that line? I did not meet him at Inverell.
199. The Commissioners say in their Report:—"In September, 1889, when we inspected the route, we were asked to mention that Mr. George Arthur, who, it is understood, represents the owners of property through which the proposed line passes for a distance of about 17 miles, offered to convey to the Government any land required in connection with the construction of the line for a consideration of £1 per acre." The line marked violet on the map will not pass through his land? No.
200. So that whatever benefit there will be in getting the land at £1 an acre falls to the ground? Yes, so far as Mr. Arthur's land is concerned.
201. We are told that the deviation, which will give a grade of 1 in 60, will lengthen the line by 9 miles, but reduce the total cost—have you any knowledge as to the working expenses per mile of running over these lines? No.
202. How do you think the Tingha people would be benefited by the making of a line from Inverell to Glen Innes? They would have a line within 16 miles of them, instead of within 40 miles.
203. They would have a line 16 miles north, instead of 40 miles to the east? Yes.
204. But that would mean some 70 or 80 miles greater length of railway in coming to Sydney, would it not? I think over 60 additional miles.
205. And do you think they would go north 16 miles, under those circumstances, in preference to going to the main line, 40 miles east? I take it that it would be a question of cost of carriage.
206. Of road as against railway carriage? Yes.
207. Did you find any trade going from Glen Innes to Grafton? Very little.
208. No station supplies brought by steamer to Grafton, and then brought up to Glen Innes? There appeared to be very little at that time, and there is very little wool traffic in that direction since the truck rates have been established, and wool carried from Glen Innes to Sydney at £3 15s. per ton.
209. *Mr. Copeland.*] Did you ever read Mr. Surveyor Hogg's report on these routes? No, I never saw it.
210. In his report, dated the 13th September, 1883, he states that "the present cartage from Armidale to Inverell, *via* Mother of Ducks, Tingha, and Uralla, is 90 per cent., *via* Glen Innes, 10 per cent.; a coach from Inverell to Mother of Ducks, *via* Tingha, on to Armidale, and also to Moonbi, *via* Bundarra; none to Glen Innes." That being the case in 1883, how would you account for the traffic having changed, for it undoubtedly has. There is more traffic between Glen Innes and Inverell than between Guyra and Inverell. I suppose it is on account of the bad roads between Guyra and Inverell? Yes; but I should like to correct what I said just now. I understood you to ask if I had read Mr. Hogg's report on the Glen Innes to Inverell line. I have read his report on the Guyra line.
211. I suppose the bad state of the roads between Inverell and Guyra will account for the change in the traffic? Very largely, I think.
212. I suppose that carriers with heavy loads prefer a long distance over a good road to a short distance over a bad road? Yes, as a general rule.
213. I suppose that in winter time portions of the Guyra road are very soft? Yes, nearly the whole of it.
214. You stated just now, that the difference between the length of road on the Glen Innes line and the Guyra line would not affect the railway line in sending the tin from Tingha to Sydney—is that so. Do they take tin or other goods long distances at the same rates as they carry goods short distances on the railway? I could not say at present what the rates are.
215. You would not expect the Commissioners to bring goods from Cobar at the same rate as they would bring them from Nyngan, would you? As a matter of fact they do bring goods long distances at the same price as they charge for short distances.
216. Do you not know that that is because of the competition with steamers? Yes.
217. Do you think the Commissioners will not charge extra railway rates in taking passengers from Glen Innes to Inverell? I can hardly answer a question of that kind.
218. Have you considered the fact that by recommending this route you are rendering necessary 35 miles of additional haulage for all the goods that go to Inverell? Yes, I am aware that we are.
219. You are imposing for all time to come 35 miles' additional travelling on the passengers? That is the Sydney passengers.

220.

P. Scarr, Esq. 22 April, 1891.

220. For all south of Guyra. If they are only going to Armidale they will have to travel 117 miles by this line, whereas the distance would be 82 miles by the Guyra line? I know it is about 35 miles further.
221. Armidale is a large flourishing town, is it not? Yes.
222. The Cathedral city of New England? Yes.
223. And at the present time a great deal of correspondence and traffic goes on between Guyra and Armidale, and Glen Innes and Armidale, and Inverell? Yes.
224. Do you not think the people will still wish to do business with Armidale to the same extent? Possibly they will.
225. Then you will be raising the distance to Armidale from 82 miles to 117 miles? The extra distance is not 35 but 29 miles.
226. The route now under consideration is 53 miles from Glen Innes to Inverell, therefore the distance will be 35 miles further to Guyra? Yes, I see that.
227. Did you consider that nearly the whole, if not the whole of the passenger traffic, not only from Tingha, Bundarra, and Inverell, but from all the country west and north-west of Inverell, will continue to come to the metropolis as it does now? I do not think you would get the Bundarra traffic to Inverell under any circumstances.
228. Suppose a railway were made by the Guyra route, would you not then be within 20 miles of the railway at Bundarra? Yes, 18 miles, I think, would be the distance.
229. And Bundarra would be within 40 miles of Guyra if the Guyra route were adopted? Yes, providing you can get a fairly good road from Bundarra across to that line, which, I think, is very doubtful. There is some very bad country between Bundarra and Tingha, and the Guyra line.
230. What kind of country? High granite country, north of the Bundarra River.
231. But there is no impassable country between Bundarra and Tingha? No, but you are speaking of a point nearer to Guyra.
232. Yes, 10 miles nearer? There is some bad country near Bundarra at that point—those high granite ranges.
233. So bad that you could not take a road over it? I do not say that, but I doubt whether you would get a very good road.

THURSDAY, 30 *APRIL*, 1891.

Present:—

THE HONORABLE JOHN LACKEY (CHAIRMAN).

The Hon. ANDREW GARRAN.	HENRY COPELAND, Esq.
The Hon. FREDERICK THOMAS HUMPHERY.	WILLIAM SPRINGTHORPE DOWEL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	EDWARD WILLIAM O'SULLIVAN, Esq.
The Hon. GEORGE HENRY COX.	CHARLES ALFRED LEE, Esq.
JACOB GARRARD, Esq.	WILLIAM MCCOURT, Esq.

JAMES PATRICK GARVAN, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Charles James Saunders, Esq., Chief Draftsman, Department of Lands, sworn, and examined:—

Mr. C. J. Saunders. 30 April, 1891.

234. *Mr. Garrard.*] You are Chief Draftsman in the Lands Office? Yes.
235. You produce a plan of the lands to the west of the main northern line, between Kentucky on the south and Glen Innes on the north, showing the lands alienated and the lands reserved? Yes.
236. This is approximately correct? Yes.
237. Can you give us any approximate idea of the acreage of these different lands? I have made a rough estimate. I reckon that there are about 700,000 acres of Crown lands, and about 500,000 acres of reserves.
238. Will you amend this plan by entering those figures upon it? Yes; the balance of the area, which is about 1,300,000 acres, has been alienated.
239. You know nothing of the ground itself? No; I refer the Committee to the District Surveyor at Armidale, who can furnish all particulars.
240. *Dr. Garran.*] Is there more Crown land on one of these surveyed lines than on the other—the original black line and the new route marked on that map behind you? I do not think there is very much choice between the two. I think most of the land is alienated along both those routes.
241. Is the reserved land good land? I am not in a position to state.
242. *Mr. Copeland.*] Can you tell the Committee what area of reserves and what area of Crown lands there are on the route now surveyed north of the Wellingrove route? No; I have not taken out any particulars with regard to individual lines. The District Surveyor, I think, would be the better man to give you that information, for a large amount of alienation has taken place which is not recorded on our maps—recent selections not yet measured, which we would not be in a position to give particulars of.
243. You have not computed the reserves on the Guyra-Inverell route either? No; I have not.

Hugh McLachlan, Esq., Secretary to the Railway Commissioners, sworn, and examined:—

H. McLachlan, Esq. 30 April, 1891.

244. *Mr. Garrard.*] You are Secretary to the Railway Commissioners? Yes.
245. Are you prepared to lay before the Committee a statement from the Railway Commissioners on the proposed alteration of the line between Inverell and Glen Innes, viz., 9 miles longer than that on which their Report was based before, with a grade of 1 in 60? Yes; the matter has been brought before the Railway Commissioners, and, in view of the information that has been given to them, they would recommend the adoption of the altered route. For instance, they are told that the grade will be reduced from 1 in 40 to 1 in 60, and while it will lengthen the line the cost will be decreased, so that while we have less interest to pay, we shall get a line that will take 50 per cent. more goods, for our engineers tell us that the alteration of the grade will make a difference in the load equal to about 55 per cent. increase.

H. McLachlan, Esq. 30 April, 1891.

246. But you will have 9 miles more running? Yes; it will add a little expense for maintenance, but at the same time we shall get 9 miles increased freight, so that the one will balance the other pretty well.
247. Mr. Barling furnished us with a statement from the Railway Commissioners on the proposal then before them, showing the cost of construction (£492,400), the annual cost, and their estimate of traffic; you have a fresh statement to take the place of that, in view of the fact that a project is put before us to extend the line 9 miles, but at reduced grades and at reduced cost;—have you it in that form? I can give it to you in that form. I will send it to the Secretary.
248. *Mr. Copeland.*] Has Mr. Deane returned from his trip? I think he is to return to-morrow.
249. Of course, you know that the first report was that the length of the line was 44 miles, so many chains? Yes.
250. Then, by Mr. Deane's report on the 10th April, it is made 52 miles in length? About 53, I think.
251. Then, by his telegram on the 20th April, it is made 53 miles 34 chains? That is the distance we have.
252. What do you say is the exact length, then, to-day? Of course, that is a matter for Mr. Deane. We take his figures—53 miles 34 chains.
253. Do you think there is any possibility of his having got to 55 or 56, because you say it is 9 miles longer? 53 miles 34 chains are the figures that we took in the matter.
254. You do not know whether it has extended since the telegram of the 20th April? No; I do not. Those are the figures with which we have been furnished.
255. There has not been any survey made by direction of the Commissioners or engineers with the view of improving the Guyra-Inverell route? Not that I am aware of.
256. *Mr. Dowel.*] Have the Commissioners in any way considered the proposed extension from Guyra to Inverell? No.
257. No information has been brought before them in this matter? No. I think you understand the policy of the Commissioners. A line approved by the Government is submitted to them, and they take no notice of any alternative line. They are simply asked to deal with the traffic of the line submitted to them, and they do not go outside those particulars.

[*TAKEN BEFORE FOURTH COMMITTEE.*]

WEDNESDAY, 6 APRIL, 1892.

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. JAMES HOSKINS.	WILLIAM CHANDOS WALL, Esq.
The Hon. FREDERICK THOMAS HUMPHERY.	WILLIAM McCOURT, Esq.
The Hon. ANDREW GARRAN, LL.D.	JOHN CASH NEILD, Esq.
The Hon. JOHN DAVIES, C.M.G.	EDWARD WILLIAM O'SULLIVAN, Esq.
THOMAS THOMSON EWING, Esq.	HENRY DAWSON, Esq.

The Committee proceeded to consider the proposed Railway from Glen Innes to Inverell, in continuation of the previous Committee's inquiry.

Joseph Barling, Esq., Under Secretary for Public Works, sworn, and further examined:—

J. Barling, Esq. 6 April, 1892.

258. *Chairman.*] You are Under Secretary for Public Works? Yes.
259. You gave evidence before the previous Committee on this subject? Yes; I think I have given very full evidence on the subject.
260. Have you anything further to add? Nothing further than that I wish to add the following to my evidence, as a note to question 26:—Mr. Deane explains that the distance, 51 miles, is that estimated by Mr. Hogg, from Guyra to Inverell, after his exploration. Actual survey made it 55 miles. If the grades are altered to 1 in 60, add 3 miles, making in all 58 miles.
261. Are you aware whether the surveyors who have been engaged on the line are available? I think so.
262. *Mr. Wall.*] I should like to ask whether you could furnish a report as to the probable cost of construction and revenue in connection with other lines that have been constructed? We can give the cost of construction.
263. Can you show the estimated cost and the estimated revenue? Yes; the estimated revenue was got from the Commissioners, and has already been furnished.
264. I mean also the cost of the entire construction? I dare say I can get that.
265. *Mr. Neild.*] Have you any information to put before the Committee as to any increase in the population or the trade of Inverell? I have given all the information that I have on the subject.
266. *Chairman.*] Why has there been an alteration in the name of the proposed line;—when it was before the last Committee it was described as a proposed railway from Glen Innes to Inverell, now it is called a railway from Inverell to Glen Innes? I think that is purely accidental. There was no object in it whatever.

Henry Deane, Esq., Engineer-in-Chief, Railway Construction Branch, Department of Public Works, sworn, and examined:—

H. Deane, Esq. 6 April, 1892.

267. *Chairman.*] You are Engineer-in-Chief for Railways? Yes; for Railway Construction.
268. The line submitted to Parliament from Glen Innes to Inverell is the line *via* Wellingrove? The black line on the map is the one submitted.
269. Then what is the line marked pink or red, *via* Swanbrook? The red line shows the line first surveyed, *via* Swanbrook Creek.
270. And since further investigations have taken place, the Department propose to deviate the Wellingrove line, and to make it really the Wellingrove-Swanbrook line, as shown by the pace line on the map? Yes. That had already been suggested when the work was submitted to Parliament, but it had not been tested.
271. What increase in length is there in the proposed alteration of the line actually submitted to Parliament? About 8 miles.

272.

H. Deane, Esq. 6 April, 1892.

272. What is the length of the line submitted by Parliament to the Committee? Forty-four miles 37 chains.
273. What is the length by the puce line on the map? Fifty-three miles 34 chains. I may say that if the Committee will refer to the third page of the evidence already taken, they will see a letter which was handed in by the Under Secretary, on the 21st April last. The probable length is given in that letter as 52 miles, but on working the line out it was found necessary to increase it still further, and part of the increase is due to the alterations near Inverell, which were necessary in order to get rid of the steep grade on the approach to Inverell.
274. So the length of the line now stands at 53 miles 34 chains? Yes.
275. There has been no alteration then since that telegram was sent to the Under Secretary, in April of last year? No; it is, of course, merely a flying survey. Before finally staking it possibly may be improved; in fact a small deviation has already been suggested which might knock half a mile out of the length.
276. The estimated cost was £492,400, was it not? Yes. The first estimate was £492,400.
277. And although the length of the line was increased, the total cost has decreased? Yes.
278. To what extent? The amount, as originally estimated, of the black line was £492,400. The new estimate is £427,400. The estimate now submitted is £65,000 below the original estimate.
279. You do not think that any material alteration will be made on your present survey that will increase or decrease the cost? Any improvements that are made will be in the direction of decreasing the cost, I am quite sure.
280. Have you been over these routes yourself? Yes.
281. Have you been over the one now proposed? I can tell the Committee what I did. When I first went over that district, some years ago, I traversed the black line and returned over the red line. Last April I went up to Glen Innes and went over the first portion of the purple line, as marked on the map, and then returned to Glen Innes.
282. The portion running north and south is the Maid's Valley route, is it not? Yes.
283. What is the grade upon that Wellingrove route—the black line? One in 40.
284. And the grade of the present route? One in 60.
285. So that, although you have increased the length, you have decreased the grades and the total cost by your proposed deviation? Yes.
286. *Mr. Dawson.*] Will the time occupied in travelling be the same or less? Over easier grades you can travel at a greater speed. The time would not differ very much. The puce line is the longer line.
287. I understand that you have not been over any portion further west of the purple line? Yes; I travelled over the red line, which coincides with the purple line.
288. Except where it goes into Inverell? I have not been over that portion.
289. Have you any of your staff at present in Sydney who have actually been over the whole of that line? Yes; Mr. Stuart.
290. Is he in Sydney? Yes.
291. From your knowledge of the country, do you think that the proposed deviation will serve a greater number of people than the original survey? Yes; I think it would be a better line than the original survey.
292. Can you approximately trace along there the present macadamised road;—that is, the main road, in brown, on the map? The main road is marked brown on the map. I should like to say that a further flying survey was made along the brown line, *viâ* King's Plains, but that line is a little longer than the purple line. It was thought at first that it might be shorter, but to get the grades coming down Apple Tree Valley you have to put in a length which makes it about 3 miles longer than the other.
293. Having thoroughly explored the country, you do not think it likely that a further deviation will take place? I do not think so.
294. *Mr. O'Sullivan.*] Have you travelled the King's Plains route? I have been across on the black line, but not on the brown line.
295. By the deviation which you now propose there are about 7 miles of very heavy cuttings, are there not? Yes.
296. And notwithstanding all that, it can be constructed at a cost of £65,000 less than the line submitted to Parliament? Yes.
297. And the grade on the line, with the deviation, will be 1 in 60? Yes.
298. Have you travelled on the Tingha route, from Guyra to Inverell? No; I have not been on that route.
299. From an engineering standpoint, do you consider that you have obtained the best possible line from Glen Innes to Inverell? Yes.
300. And though this line is some miles longer, you recommend it in preference to the other? Yes. I am quite sure that no line can be found materially shorter than that. As I said before, the improvements that are made in the final staking of the line may tend to shorten it or to reduce the cost; but it would not make the line worse either in length or cost.
301. The probability is that it may be half a mile shorter, and the cost will be so much less? Yes.
302. *Mr. Humphery.*] Two or three years ago you were asked to report in reference to an article that appeared in a newspaper, and you expressed the opinion that the cheapest and best means of communication between Inverell and the Great Northern Railway was by a connection at Guyra; will you give your reasons for that? The reason why I gave that opinion was that at the time that was the cheapest line.
303. Have you altered that opinion since? The estimate of the Guyra to Inverell line still appears to be cheaper than that of the Glen Innes to Inverell line. The Guyra to Inverell line is 55 miles 10 chains in length, and the cost is £390,813. The ruling gradient on that line, as surveyed, is 1 in 40. If the ruling grade is made the same as on the proposed line from Glen Innes to Inverell, it will be necessary to lengthen it by about 3 miles. Most of the grades can be obtained by simply cutting down—by lowering or raising—the road, as the case may be. But there would be some deviations necessary which would lengthen the line by about 3 miles, and that extra mileage would certainly cost £21,000. But the cutting down of the grades in places where no deviation was made would have the effect of increasing the earthworks, so that, without making a further survey and going carefully into the estimate, I should say that the cost would be very nearly the same as that given for the Glen Innes to Inverell line.
304. Did you examine the proposed new route from Glen Innes as far as Swanbrook? From Glen Innes to the head of Maid's Valley.

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305. Is there not a great number of curves in the purple line? Yes; but not more than there would be in any other line that you could get. The roughest bit of country is the part opposite Wellingrove.
306. You estimate the cost of construction to be about £8,000 a mile? Yes.
307. Have you taken into consideration every contingency in the construction of that line? Yes. I am sure it will not cost more than that.
308. The route by the black line was estimated to cost £11,000 per mile? Yes.
309. You notice where the purple line crosses the black line on the plan? Yes.
310. What distance would that be from Glen Innes? About 17 miles.
311. What is the character of the country from Glen Innes to the purple line, where it crosses the black line and junctions with the red;—that would be within a radius of 17 miles, would it not? Yes; it is all good country, mostly basaltic, with black soil on the flats.
312. Has much settlement taken place there? There is some settlement in parts. It is not a very populous district.
313. Has the land been taken up by selectors, or does it form part of a large estate used for agriculture or grazing purposes? There are parts where agriculture is carried on, but the bulk of it is used for grazing purposes.
314. Is the land within 10 miles west of Glen Innes all used for grazing purposes? No; there are a good many patches of cultivated land, but the bulk of it is used for grazing purposes.
315. Would the Glen Innes railway serve the population within 10 miles of the station at the present time? Yes. I would not make a railway for 10 miles.
316. The population would be served for 10 miles by the existing railway? Yes.
317. Can you say how many selectors there are there? No; I have no returns. My object in going over the line was to look into the engineering aspect of the question.
318. You did not observe whether there is much settlement round Glen Innes to the west? All I know is that there is a good deal of settlement, but it is more particularly along the direction of the main road.
319. What distance west of Glen Innes towards Inverell did you travel? I suppose I looked at about 20 or 25 miles of line.
320. Was the whole of the soil over which you travelled suitable for agriculture? It was all good, but not every bit of it suitable for agriculture, because there was too much stone lying about. Of course, where the stones occur the soil is very rich between, but you cannot put a plough into it.
321. Is there any granite country there? I do not think so.
322. What is the greatest elevation upon the purple line between Glen Innes and Inverell? The greatest elevation that you have to rise in order to get to Inverell is 545 feet above Glen Innes.*
323. *Mr. Ewing.*] Four thousand feet above the level of the sea? Yes.†
324. *Mr. Humphery.*] What is the greatest elevation by the black line? By that it is more.
325. *Dr. Garran.*] When this subject was before the last Committee you were the Acting Engineer-in-Chief? Yes.
326. You are now the permanent Engineer-in-Chief? Yes.
327. And in that capacity you are adviser of the Government in railway engineering matters? Yes.
328. And your advice is to adopt that purple line? Yes.
329. Do you give that advice merely as between the rival routes from Glen Innes to Inverell, or also as against a line from Guyra or elsewhere? No. My advice simply is as between the rival routes to Inverell.
330. Then you do not take into consideration whether or not it would be better in the interests of the country to have a line from Guyra? No; I have not been asked to report upon that question.
331. Then we are to understand your advice is confined strictly to the line we see? Yes. The line which is under consideration.
332. The Committee have a general power to look at the rival lines, and the evidence taken by the Sectional Committee related very largely to a line between Guyra and Inverell;—are you prepared to give an opinion upon that line? I cannot give information from a personal inspection; but surveys have been made, and I have examined them carefully, and also the estimates. I have gone into the question of deviations. I had some deviations of that line looked at, and I have made myself acquainted with what could be done.
333. You have had reports on the Guyra line? Yes.
334. You told us that to go to Inverell, *viâ* Glen Innes, it would be necessary to climb 4,000 feet? Perhaps I did not put it clearly. I answered a suggestion in a way which gave an incorrect idea. What I mean to say is that the total rise of various grades is 545 feet, not that it means 545 feet above Glen Innes, but 545 feet in rising the grades in crossing small ranges.
335. What is the maximum summit level that you have to go over? Perhaps it would be convenient for the Committee if I described the way in which the line goes, with the falls and rises. Starting from Glen Innes, the level is 3,617 feet above the datum, or 3,517 above high-water mark at Newcastle. There is a slight fall of a few feet, and then the line rises again for about a couple of miles. The level there is 23 feet above Glen Innes. At 7 miles out the level is 3,506 feet; at 11 miles out it is 3,300 feet; a spur of the Wellingrove Range is crossed at about 3,400 feet. Then the level along Wellingrove Creek is about 3,150 feet, more or less. The next summit is crossing over from Maid's Valley into Swanbrook Creek, where the line meets the road, that is 3,287 feet, and then there is a general descent all the way to Inverell.
336. Then you do not rise much higher than Glen Innes itself? No you do not. What I meant to convey was that the total rise, putting all the rising grades together was 545 feet. The level at Inverell is 2,011 feet.
337. Then it was a misunderstanding when 4,000 feet was mentioned? Yes.
338. Can you give the elevation of Guyra? Above the same datum it is 4,375 feet.
339. Then is there not much rise and fall between Guyra and Glen Innes? 800 feet.
340. To get to Guyra we have to conquer the maximum incline on the Great Northern Line? Yes.
341. So that whichever way we go from Inverell we have to take all the direct traffic between Sydney and Inverell over the Ben Lomond Range? Yes.
342. You cannot escape that? No.

343.

* NOTE *(on revision)*:—The accumulated rises amount to 545 feet.

† NOTE *(on revision)*:—No. [The answers to questions 322 and 323 were at first given inadvertently. For explanation, see questions 334 and following.]

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343. I want to understand whether we have to climb the Ben Lomond Range before we get to Guyra, or after, going north? It is after.*
344. Then Guyra is lower than Ben Lomond? Yes, of course.
345. Your previous answer was the result of a misunderstanding. You said whether we go to Inverell by Guyra or Glen Innes we have still to get over the maximum elevation on the northern line? That was a mistake.†
346. How much do we save in elevation by starting from Guyra? I will send for the plan and get the actual measurements.
347. I am not particular to a foot or two? The height of Ben Lomond is 4,471 feet.
348. And of Guyra? 4,328 feet is given in the table—that is about 150 feet lower.
349. *Mr. Dawson.*] What is the distance between them? Fifteen miles.
350. *Dr. Garran.*] There is not much to choose, then, between a line from Guyra and a line from Glen Innes in respect to the height to be climbed? No. It is the same, starting from Newcastle.
351. The advantage, then, of the Guyra line is reduced to the advantage of distance only? Yes; a shorter route.
352. But it would make it a longer route if the produce of Inverell is destined to go either to Byron Bay or Queensland? Yes, it would.
353. The evidence taken before the Sectional Committee goes to show that one of the very strongest arguments in favour of a line from Glen Innes is that the destination from Inverell of wheat, wool, or mineral produce, is northwards, not southwards;—do you know whether that is so? I am not in a position to say.
354. You have seen something of the surveys of the line up the Richmond Valley to Casino, from the Great Northern Line? Yes.
355. Would that line touch the northern line at Tenterfield? It would.
356. Then supposing that the commerce from Inverell were to go mainly northward, either to Byron Bay or Queensland, could we get to Inverell from Tenterfield by a shorter route than the one by way of Glen Innes? Yes.
357. Suppose we wanted the best connection between Inverell and Byron Bay, could we go by a better route than this by Glen Innes? A more direct route.
358. Would the grades be better? I doubt it.
359. There would be the same ranges to cross? A great deal of that country.
360. Do you think you would gain in distance? No; I think that the gain in distance would not be so great as might be apparent at first.
361. You do not think there is anything to be considered in that point? No; but I know nothing about that country. I have not examined it.
362. Suppose the market for Inverell produce is in the north, do you think that a line from Glen Innes would be as good a line as we could have to suit that distribution of the traffic? Yes.
363. It will suit the trade to Sydney, although it is a little longer, and also the trade from the north better than a line from Guyra? Yes. I believe it is a recognised principle that branch lines should, as a rule, go off the main line at right angles to have the shortest connection.
364. One object in starting from Glen Innes, originally, was to make a connection for the line from Grafton to Glen Innes, was it not? I do not know about its being one of the objects, it seems to me a natural thing.
365. Was there not an idea that it would make the shortest route to the seaboard? Yes; I believe that came into consideration, too.
366. I suppose you have read what Mr. Scarr and Mr. Price say about the line from Grafton to Glen Innes? Yes.
367. And you have had surveys before you? Yes.
368. Do you concur in Mr. Scarr's opinion that the line would cost £2,000,000? I have no estimate—it may be so.
369. Do you think it at all a practicable line at present? It would be a very rough line. It can be made. A survey that was made last year has improved it wonderfully.
370. So far as the surveys which have come under your notice have gone, does it strike you that either by way of Casino to Tenterfield, or Guyra to Grafton, a better means of connecting the mainland with the coast could be obtained than the Grafton to Glen Innes line? I am not sure of that at present. I could scarcely give an opinion. The survey from Tenterfield to Casino shows a practicable line, and the survey from Guyra to Grafton shows a practicable line. There are advantages in each. On the line from Guyra to Grafton there is a lot of very fine country, and between Tenterfield and Casino there is a lot of very fair, and some very good, country. Between Glen Innes and Grafton there is a lot of very poor country.
371. Between Tenterfield and Casino it is a mineral country? Yes, partly.
372. Is it more likely that the country will make a line from Casino to Tenterfield, or a line from Grafton to Guyra, than a line from Grafton to Glen Innes? That is a question of railway policy.
373. But if a line from Inverell to Glen Innes is partially dependent upon the necessity of getting down to the coast, is it not affected by that? I should think that, generally speaking, it would be wiser to make the two junctions east and west of the main line, near the same spot.
374. Suppose we made the line from Guyra to Grafton, would not that be in favour of making it from Guyra to Inverell? I think it would.
375. On the other hand, if you make the line from Casino to Tenterfield, that would rather be in favour of making the line from Glen Innes to Inverell? Yes.
376. Because you cannot make a direct line from Inverell to Tenterfield to any advantage? No.
377. Then the relative merits of the stations we are to start from depend, to some extent, upon what connection we are going to have with the coast? Yes.
378. And that at present is an undetermined point? Yes.
379. And you cannot, as Chief Engineer, say at all what the probability in the future will be in that respect? It is scarcely an engineering question, I think. I can, of course, when the surveys are complete, report on the difference of cost between the lines, and give an opinion on engineering considerations.

380.

* Note (*on revision*):—Before.
† Note (*on revision*):—Yes.

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380. Have the surveys gone so far as to enable you to say which is the best way down from the Great Northern Line to the coast, by Tenterfield to Casino, by Glen Innes to Grafton, or by Guyra to Grafton? The information is not complete. The line from Tenterfield to Casino will be the easiest to construct.
381. As far as cheapness goes that would stand first on the list? Yes. There are very great difficulties on that route. But I believe the difficulties would be somewhat less there than on the other routes. The Guyra to Grafton route is a very long line—150 miles, but it goes through some splendid country.
382. As an engineer, you think that of the three, the Richmond Valley line would be the easiest? I think so.
383. That would be an argument in favour of connecting Inverell with Glen Innes? Yes.
384. Supposing the destination of the produce was towards the north, and not to Sydney? Yes.
385. You think that as far as we can see our way with regard to getting from Inverell to the nearest coast point, that we should look forward rather to getting down by way of the Richmond Valley than by the other route? I would not say that.
386. Suppose we make a line from Glen Innes to Inverell, and then find that the best way down to the coast is from Guyra to Grafton, then we should say that we made the wrong line, that we ought to have gone to Guyra? Yes.
387. Of the two alternative lines which will give the shortest way to the coast for the Inverell people, by way of Tenterfield or Don Dorrigo? I really do not see how I can give an answer to that question.
388. You have not materials sufficient before you to say, as an engineer? You put it in the way of connecting with Inverell. Comparing the two lines—Tenterfield to Casino, and Guyra to Grafton—I should say that the line from Tenterfield to Casino would be much less costly than the other.
389. The people say that they do not want to send their produce to Sydney—it is too expensive; but they want to get to the coast to ship their produce. Which is the best way to the coast from Inverell of the three routes proposed? If they would be satisfied to go to Lismore, the line to Casino would be preferable.
390. There is to be a line to Byron Bay, and if they get a line to Grafton they will have the port of the Clarence River. I ask you, on engineering grounds, have you formed any opinion as to which is the best way for the western commerce to reach the coast? Looking upon Byron Bay as a future port, I should say go by Tenterfield.
391. And that would be an argument in favour of the proposed route from Glen Innes? Yes.
392. Do you think that the best route would be from Inverell to Lismore? Certainly.
393. *Mr. McCourt.*] Do you look upon this line to Inverell as partly a branch line? A branch line at present.
394. Partly a branch line, is it not? Yes; it would never be a main trunk line. It may become part of a long cross-country line some day.
395. Do you not think £8,000 a mile rather a high sum for a branch line? No, not if the traffic is sufficient to support it. I should not reckon the desirability of constructing a line by the cost so much as by what it is going to do.
396. Would not two or three trains a day be sufficient for the traffic of this line if constructed? I think that very likely.
397. Would it be necessary to make a branch line of the permanent character of the main line? If you could cheapen it in any way it may be desirable to do so—if you could cheapen it and make it a satisfactory line. The Commissioners want to use heavy locomotives, and to save expense by having longer trains.
398. Then it does not matter whether there are many or few trains, the line should be of the same permanent character? No, I do not mean to infer that. I might point out that there is a large amount of difference between the lines near Sydney and those in the country. The Commissioners are now using 80-lb. rails for lines where there is heavy traffic, but for the lines further out west we are using only 60-lb. rails.
399. Do you say, as an engineer, that we cannot make our branch lines any cheaper than they were made under the old system? Except by putting in steep grades, which I would not recommend, and by careful surveying.
400. That is the only way in which they would be cheapened? That is the only way.
401. Which do you consider a proper point of connection for a line to Inverell—Guyra or Glen Innes? As a general principle, I would strike for the nearest point in connecting a place which is off the main line.
402. But that is only a principle as to a branch line, is it not? Yes.
403. Have you been over both lines? I have not been over the proposed Guyra to Inverell line.
404. Suppose that most of the traffic from Inverell had to come to Sydney, where do you think would be the proper place to strike the line? I think that Guyra should have fair consideration, because that line is no more costly than the one now proposed.
405. Therefore, in case the traffic from Inverell should come to Sydney, Guyra would be the proper place at which to strike the main line? Yes, supposing that it is merely to bring the Inverell traffic to Sydney.
406. Guyra would be the proper place? Of course. The country through which the line passes, and its suitability for settlement, must be taken into consideration.
407. Are you aware of any population along the Guyra line—does it touch any town? It serves Tingha.
408. What is the population of Tingha? I do not remember.
409. Is it not considerable? I have no recollection of the population.
410. Are you aware that on the proposed line from Glen Innes to Inverell the properties through which the line will pass are in the hands of private people, in three or four large estates? Yes; nearly the whole of it.
411. Is there any officer in Sydney who has surveyed both lines? I do not think there is anyone who has had anything to do with the Guyra to Inverell line.
412. Where is the officer who surveyed the line? Mr. Jamieson and Mr. Edwards were the surveyors of that line. Mr. Jamieson is working on a survey between the Monaro district and the coast, and Mr. Edwards is on the north coast, between the Macleay and the Hastings.
413. There has only been a flying survey made of the Guyra line? There has been a proper trial survey.
414. What about Moore's explored route? That was a line suggested by Mr. Moore as an improvement on this; but the result showed that it would be 5 miles longer.
415. And that would leave out Tingha? Yes, it would. But he said the line might be deviated so as to come within a short distance of Tingha; but I do not think that that is desirable. It would be far better to adopt the red line. Another objection to the route, is that there is a summit which we would have to rise to.

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416. But the Guyra line would be as cheap as the other line, would it not? Yes; as the estimates stand.
417. Do you think it desirable to have a line from Inverell junctioning at the point which it would be the best to start from for the coast? If possible.
418. Which do you think would be the best starting point for the coast;—do you believe in Messrs. Scarr and Price's report? It all depends upon where the traffic is to go to. If a good line can be got from Glen Innes to Grafton, that is what I believe would be the best one to adopt. For the reasons given, and on the assumptions made by Dr. Garran just now, I consider the Tenterfield to Casino line would be a proper one.
419. But, on the whole, you are inclined to the opinion that a connection at Guyra would be the best to Inverell? You put a different set of conditions. Assuming that the traffic is to go to the north, Glen Innes will be the best; assuming that the traffic is to go to the south, Guyra certainly deserves consideration. There is also the consideration of possible settlement along the line.
420. Coming back to the cost of construction, you can see no way of constructing these branch lines at a cheaper rate? Not where they go through rough country.
421. And supposing there is a loss of of £17,000 a year on this line, would you recommend its construction? I think that is scarcely for me to say.
422. *Mr. Wall.*] Are you in a position to offer an opinion upon the commercial aspect of the line? Only on the engineering aspect of it.
423. Can you inform the Committee what is the relative difference in haulage power on a grade of 1 in 40, and a grade of 1 in 60? Roughly speaking, about 50 per cent.
424. What would be the annual saving on the estimated haulage if the lesser grade were adopted—would that be 50 per cent., taking the estimate of traffic as submitted to the Committee? I think that is a matter which might be left to the Commissioners. If you can carry half as much again, and the produce is there to be carried, it must reduce the cost of haulage to very nearly two-thirds.
425. What are the grades of these respective lines? The ruling grade on the black line is 1 in 40, and on the other the ruling grade is 1 in 60.
426. And these are the only two lines under consideration? I can furnish particulars of the brown line on the plan—the King's Plains line, but it is longer than the other line—the line that I would recommend. The King's Plains route is three miles longer than the line marked purple on the plan.
427. What is the grade of that line? 1 in 60.
428. You think that the relative difference of haulage power would be about 50 per cent.? Yes.
429. You state that the distance would possibly be lessened in construction;—do you think there will be any tendency to lessen the grade? I do not think it is possible to reduce the grade any further—that would mean the lengthening of the line.
430. I understand that the experience of the Department was that there was a tendency to lessen the gradients? I am quite sure that it would be a very troublesome matter to reduce the grades any further.
431. In estimating the traffic in connection with this proposed line, do you take into consideration the haulage of the goods along the main line;—do the earnings, as submitted to us in connection with the branch line, include the additional haulage on the main line to Sydney? I should think it is only the haulage on that particular line.
432. Then it would still tend to increase the haulage on the main line, for which, I take it, no estimate is given? I am not prepared to give any opinion as to how the traffic estimate is worked out.
433. In recommending this line, you recommend it from an engineering point of view, not from a commercial point of view? I have had no instructions to look into the commercial question.
434. *Mr. Neild.*] Which of these lines is the original line surveyed by Mr. Hogg? The black line is Mr. Hogg's line.
435. Is he in Sydney now? Not that I am aware of.
436. I do not think you have given the distance from Guyra to Tenterfield? It is 55 miles, with a grade of 1 in 40. It would be 58 miles with a grade of 1 in 60.
437. And the cost would be relatively about the same? About the same.
438. *Mr. Ewing.*] You said that Glen Innes is 3,500 feet above the level of the sea, Guyra 4,300 feet, and Inverell 2,000 feet? Yes, that is above the datum.
439. Therefore a line going from Inverell to Glen Innes would rise 1,500 feet? Yes.
440. A line from Inverell to Guyra would rise 2,300 feet, therefore the connection between Inverell and Glen Innes, from an engineering standpoint, is better than the line from Inverell to Guyra? Yes, if it were a mere question of seeking a market for produce.
441. You could travel more quickly? Yes.
442. Any stuff going north sent from Inverell, *via* Guyra, goes 800 feet higher than there is any necessity to take it? Yes.
443. *Mr. Davies.*] I understood you to say that you traversed the line from Swanbrook along Maid's Valley? Yes.
444. What is the character of the country along Maid's Valley and up to Swanbrook? From my recollection of the western portion, which I traversed some years ago, the hills there are very similar in character.
445. Is there much settlement on the portion which you traversed? There was more settlement, I think, down in the Swanbrook Valley and on the southern side, especially as you get towards Inverell, at Brodie's Plains, than on the other routes.
446. Is it difficult country for the construction of a railway? There is no difficulty about it. It is rather costly. £8,000 a mile seems rather a high estimate, but the estimate shows the kind of country it is.
447. What is the heaviest cutting you would have to pass through from the part you would traverse to Glen Innes? I should think about 40 feet; but some are on sideling ground.
448. Do you propose to continue that purple line to Wellingrove, or to take a direct line to Glen Innes? The purple line throughout.
449. What is the reason you take the purple line, instead of the straight and more direct line from the top of Maid's Valley? The purple line goes round the hill, but the black line goes over the top.
450. Would there be much difference in the cost, taking a direct line? Yes, the works on the black line are heavier, and besides that the grades are not so good. The grades on the black line are 1 in 40.

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At the Wellingrove Creek, towards Glen Innes, there is a sharp ascent of 1 in 40; but that is got over by the purple line, by going round and crossing the spur at a lower elevation.
451. Would it not be much shorter to go from the top of Maid's Valley to the Glen Innes Station? Yes; but you have a difference in the grade. To bring that black line to the same condition as the other you would have to lengthen it and to make it nearly the same length as the purple line.
452. In order to get a good grade, is it not simply a matter of cutting? Yes; but you can have too much cutting.
453. Would not the difference in the cuttings make up for the difference in the distance? No; it would be very much more costly to lower the grades. The section shows the line running down and crossing the range in the direction of Wellingrove Valley—it contains a grade varying from 1 in 40 to 1 in 50—the bulk of it is 1 in 40.
454. Is there more settlement on the original survey than there is on the proposed survey now submitted? No; I do not think there is so much, because the original survey goes across King's Plains, which is all in the hands of one owner.
455. What quantity of Crown lands will the proposed line from Glen Innes to Inverell pass through? I could not say, but I shall be glad to get the information.*
456. *Mr. Haskins.*] I understood you to say, in reply to a question asked by Mr. Wall, that if the line were taken by King's Plains, it would be only 3 miles further than by the proposed deviation? Yes.
457 And the grades would be about the same, 1 in 60? Yes.
458. Have you been at King's Plains? Yes.
459. Are there any great engineering difficulties in the way of making a line there? No.
460. Is it not a fact that the land is very valuable there and suitable for agricultural purposes? Yes.
461. *Chairman.*] Who surveyed the King's Plains route? I think there were three surveyors engaged in the work, but it was done chiefly by Mr. Carver.
462. Has Mr. Stuart an intimate knowledge of that particular route? I think he knows sufficient to give some information about it, he has been over it. It was finished by Mr. Little.

Percy Scarr, Esq., Acting Examiner of Public Works, sworn, and further examined:—

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463. *Chairman.*] You are an engineer in the public service? I am Supervising Engineer in the Roads and Bridges Department.
464. For a time you were Examiner of Public Works? Yes.
465. I understand that you made an exhaustive inquiry into the proposal to construct this line? Yes.
466. *Mr. Humphery.*] When did you investigate the proposed line from Glen Innes to Inverell, by way of Wellingrove? In June, 1890.
467. Did you go over the new proposed line, marked purple? We did not. That line was not laid out at the time.
468. Have you been over that part? Not over the purple line.
469. You cannot say anything about the settlement on that line or the nature of the soil? Not much. We went along the black line and the red line.
470. Will you state where you started from, and how you travelled? First of all we started from Guyra, and followed the red line to Inverell. We went then from Inverell along the Swanbrook line to Glen Innes. Then we went from Glen Innes along the black line back to Inverell, *via* Wellingrove. The purple line was not laid out at the time. We examined a piece of line, of which a trial survey had been made somewhere in that position, but I could not say that it was exactly in the position of the purple line.
471. Did you cross from the black line to the red line, where the purple line meets it? No; we did not.
472. Did you examine the country between the red and black lines? Yes; we came down from Glen Innes along the main road to Maid's Valley, and then we went back from there to Glen Innes. We saw the piece of country along the purple line from the road.
473. What is the distance between the purple line and the black line? I could not say exactly.
474. Did you report on the black line? Yes.
475. And you have not seen the route now proposed? Not the purple line.
476. Can you speak as to the settlement along the black line. What settlement was there within 7 or 10 miles of Glen Innes, to the west? There was not very much settlement along that line. There is not much along either the red or the black line.
477. The settlers to the west of Glen Innes to a distance of from 7 to 10 miles would be served by the existing line? Yes.
478. Notwithstanding the railway being at Glen Innes, you say that there is very little settlement to the west of the railway, on the road to Inverell, on the black line? There is very little settlement between Glen Innes and Inverell.
479. Can you explain why there is so little settlement? The country is held in three or four large estates.
480. The whole of the country between Glen Innes and Inverell? I think there are only about four estates between the two towns.
481. Are there no selectors? There are a few—some at Wellingrove and some at King's Plains.
482. Is there an estate known as Furrucabad? Yes; there is some settlement there.
483. Has not there been a general subdivision of land between Glen Innes and Inverell? Not that I am aware of.
484. Did you recommend that the line be constructed to Glen Innes by way of Wellingrove? Yes.
485. What was your reason for selecting that route in preference to a line from Inverell to Guyra, *via* Tingha? Our instructions directed us to take the question as a whole, and to take it in connection with a line to join the proposed North Coast line, and we came to the conclusion that that line was the best to connect the western country with the main line and also with the proposed North Coast line.
486. Having in view the probable connection between the main line and the coast? Exactly.
487. And did you take the character of the soil into consideration? Yes.
488. Is the country better between Inverell and Guyra than between Inverell and Glen Innes? No, it is better between Inverell and Glen Innes.
489. Is it very suitable for agriculture? A large portion of it is.

490.

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* NOTE (*on revision*):—The information has been furnished elsewhere.

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490. For what is it used at present? For grazing purposes, except a few selections.
491. Was there much cultivation about Inverell? Yes, a good deal.
492. What products were grown? Wheat, maize, vines, and the usual agricultural products.
493. Did you examine the country 20 miles to the west of Inverell? No, we did not.
494. How far towards the west did you go? We went to Bingera, but we did not go to the north-west.
495. Did you report upon the character of the soil between Bingera and Inverell? Yes, that is stated in our report.
496. What do you say as to that? It is exceedingly good soil.
497. Is it suitable for agricultural purposes? Yes.
498. What is the rainfall? I understand that it is about 32 inches.
499. Is it fairly distributed throughout the year? I understand so.
500. Do you know whether the crops frequently fail there through drought? They do not fail there very frequently.
501. One of the witnesses examined by the Sectional Committee at Glen Innes stated that two or three years out of every five there was a failure of the crops about Glen Innes, owing to the intense heat or to drought? He must have taken five very bad years.
502. From your inquiries at Inverell, have you reason to believe that that portion of the district suffers more than ordinary from drought? I certainly do not think it does.
503. Is there anything to prevent the maximum produce of wheat there from being obtained as compared with other wheat-growing districts? I think that if you took a long period—say twenty years—you would find that Inverell was favoured with more rain than many other parts of the country.
504. Did you ascertain the average return per acre? Yes; the average return for a period of years was about 17 bushels of wheat to the acre. A number of the farmers say that their average return is up to 20 bushels to the acre.
505. I suppose at present their market is Glen Innes, or between there and Inverell? No; their market is to the westward, I understand. That is their only market for their flour. It would be too far for them to cart their wheat to Glen Innes.
506. Did you form any estimate as to the population that would probably settle in the vicinity of Glen Innes in the event of railway communication being established? No; we did not go into that. The whole thing is so prospective that we did not think such an estimate would be of any value.
507. You did not estimate the population which the country would comfortably sustain? It would support a very large population. I should say that no part of New South Wales would support a larger population than the Inverell district could support.
508. Do you know anything about the Crown lands close to Inverell? There appears to be very little Crown land left. We did not succeed in getting returns which we asked for from the Lands Office at Armidale, so we were unable to ascertain the quantity of land still unalienated.
509. Did you make inquiries, and ascertain whether the owners of land between Inverell and Glen Innes would be willing to give the lands necessary for railway purposes? It was stated that the land would be given at £1 an acre.
510. In making the statement that the land is in the hands of a few persons between Inverell and Glen Innes, you are not speaking as to the purple line, but only as to the black line? I was speaking as to the black line, but it does not appear to make much difference.
511. Would that ownership apply to the purple line? Yes; it runs through the same estate.
512. That you know? In a general way I know it.
513. Did you make any estimate as to the probable returns from the railway if it were constructed? No; we did not. As I said before, the whole of the traffic is so prospective that we did not think an estimate of that kind would be of any value. I do not think so now.
514. The whole of the country between Glen Innes and Inverell, and within 20 miles to the west, is so suitable for agricultural purposes and settlement that a railway there would probably develop a great traffic? Yes.
515. There is no probability of immediate traffic, but in future years there would probably be a very large traffic? Yes; that is the conclusion that we came to.

TUESDAY, 7 APRIL, 1892.

Present:—

JACOB GARRARD, Esq. (Chairman).

The Hon. James Hoskins.	William Chandos Wall, Esq.
The Hon. Frederick Thomas Humphery.	William McCourt, Esq.
The Hon. Andrew Garran, LL.D.	John Cash Neild, Esq.
The Hon. John Davies, C.M.G.	Edward William O'Sullivan, Esq.
Thomas Thomson Ewing, Esq.	Henry Dawson, Esq.

The Committee proceeded to further consider the proposed Railway from Glen Innes to Inverell.

Percy Scarr, Esq., Acting Examiner of Public Works, sworn, and further examined:—

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516. *Dr. Garran.*] I understand that in making this inquiry you were instructed to do it in a comprehensive way? Yes.
517. On behalf of the Minister? Yes.
518. So as to get all the information that he, as Minister, desires to be in possession of to determine a question of public policy? Yes.
519. So that you look not only at the engineering part of the question, but also at the traffic part of the question, and of the probability of there being the settlement of a permanent population? Yes. I may say that we did not go into the engineering question except in a very general sort of way. We stated in our report that we thought it better to leave that to the Railway Construction Branch.
520. You gave your attention to the commercial side of the question? Yes; more than to any other.
521. You have no doubt at all about the value of the Inverell district? None at all.

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522. Is Inverell about the centre of the good land there? Scarcely. The good land is more to the north and west of Inverell, than to the east and south.
523. In your report you say that you get into good land as you approach Inverell from 15 miles on the eastern side? Yes, coming from Glen Innes, but not from Guyra.
524. If the good land extends 15 miles to the east, how far does it extend towards the north? As regards the line from Glen Innes to Inverell, one may say that it is good land all the way, but on the Guyra line the good land ceases before you get to Tingha, and only recommences again about 5 miles from Inverell.
525. I am asking how far to the north of Inverell the good land goes? It extends a very long way to the north.
526. Would the produce of all that good land drain to Inverell if the railway were made? Yes, it must, necessarily.
527. For how far? About 40 miles—as far as the Dumaresque River.
528. There would be a drainage of the traffic over an area extending 40 miles to the north? Yes, I think so.
529. How far west does the rich land go? An unlimited distance, you may say. It extends right out to the Barwon.
530. Is Inverell well posted as the centre of a rich district, capable of large settlement? Yes.
531. So there can be no dispute about the fact that it has a great future before it? No question about that, if they only have railway communication?
532. Is it a district well deserving of railway communication? I think so.
533. The only question is as to the way to get the railway to Inverell? Yes, to my mind.
534. And I gather from your report that, after sifting all possible schemes, you reduce the alternative to two lines—one from Guyra, and one from Glen Innes? Exactly.
535. So that we need not take any other lines, practically, into account at all? I think not.
536. I judge, too, from your report that you consider it a very important matter to determine what is the real outlet for the produce of the Inverell district? Yes.
537. Which do you consider will be the best outlet? I think a very large portion of the traffic would come to Sydney.
538. Do you mean the larger proportion? I think so. I look upon it that Sydney must be to a great extent the wheat market for this colony, at all events.
539. But supposing that the wheat was intended for export to Europe, do you think it better for the Inverell people to pay railway carriage to Sydney, or to get their wheat to the coast, or even to send it coastwise to Sydney? I think it better to bring it to the coast, if there were a port.
540. If there were a port, and the produce was mainly wheat, cheapness of carriage is all important, is it not? Certainly; but the rate for the carriage of grain is very low on the railways.
541. That constitutes one of the difficulties, does it not, of making a profit on the line? That is a matter for the Railway Commissioners. It is to be presumed that their rates are profitable.
542. We have had it in evidence that the rates are so low that they barely leave a margin of profit? Yes, I suppose so.
543. It hardly matters how we add to the traffic on the line in wheat, they still will only get a small profit? No doubt.
544. If the whole district were covered with wheat they could not, I suppose, make a great profit by carrying it? No.
545. It has been stated in evidence that the charge is 6d. or 7d. on the main line? They are running at a lower rate than that now. I think, supposing the railway to be extended to Inverell, making a distance of 475 miles, they would carry the wheat at a little over 5½d. per bushel, or 17s. 5d. a ton.
546. When we talk about getting this increased traffic, the profit would not be in proportion to the extent of the business? No, I suppose not.
547. If they carried it so cheaply down to Sydney, and can afford to do it, would there be much saving in taking wheat to the coast? Not a very great deal. Assuming that there is a port at Byron Bay, about 200 miles from Inverell, the rate to that place would be about 12s. 4d. a ton, and the rate for 400 miles is only 16s. 2d., so that there would only be a saving of about 1d. a bushel.
548. And if you have not large vessels for shipping wheat you would lose the difference? That would depend upon circumstances.
549. At Sydney you would have larger vessels for shipping wheat than at Byron Bay? Yes.
550. Unless you have equally large vessels at the coastal ports you would lose in the shipping rates what you would gain in the land carriage? Yes.
551. Are not these points to be taken into consideration? Yes; but at the same time very little wheat is exported from New South Wales.
552. Suppose we did export wheat, where could we send it to? To Europe, I suppose.
553. I suppose England is the only market? Yes.
554. Is the export of wheat from South Australia, New Zealand, and Victoria a very paying business. I am not aware whether it is or not.
555. Is there a great increase of production for export in those colonies? That I cannot say.
556. You know that there have been three lines surveyed to the coast—one down the Richmond Valley, another by the Newton Boyd road, and another by Don Dorrigo to Grafton? Yes.
557. You have seen the description of those lines, and you have traversed two of them? I have traversed them all.
558. In the national interest, which of the three do you think deserves first consideration? As our instructions went, taking a comprehensive view of it, and looking at it as a connection with the proposed North Coast line, we considered that the Don Dorrigo line should be constructed first.
559. Suppose the Guyra line is the best, would that be an argument in favour of connecting Inverell with Guyra? If you take that line it would.
560. If you give a preference to the Casino line, would that not be a reason for connecting further north with Glen Innes? Yes.
561. Are we in a position to decide the point of the connection before we know which is to be the way to the coast? I think so, for this reason: The conclusion we came to was that if the Don Dorrigo line was constructed

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constructed now, that the Tenterfield to Casino line must be constructed at a not very distant date. We were well satisfied on that point, because of the great extent of exceedingly rich land there is about the Richmond and the Tweed.

562. A line from Casino to Glen Innes would afford an outlet to the rich land on the coast? It would afford an outlet for what is produced there, and an inlet for breadstuffs.

563. You are looking to that railway giving a market for the butter and cheese produce of the Big Scrub, and sending their stuff to the highlands? Yes; out to the west.

564. You think that line to Casino is wanted to give a market for the Big Scrub produce? Yes.

565. Looking at our present financial position, do you think it probable that we shall be able to make two lines to the coast before very long? That is a difficult question for me to answer.

566. In the concluding part of your report, though you were asked which is the best line, you say both are the best? Not quite.

567. You say that one ought to be made, and the other ought to be made, too? Before very long I think it will have to be made. You must remember that in our instructions this proposed North Coast line was taken for granted. We were to look upon that as taken for granted. If that line is not to be constructed, I should not say that the Don Dorrigo line should be made first. We say that it should be constructed first in connection with the proposed North Coast line.

568. But the Don Dorrigo line does not come into the North Coast line till it gets near Grafton? It comes in about 40 miles from Grafton. It is proposed to connect with it at Glenreagh, a little to the north of Coff's Harbour.

569. Then you recommend the connection at Glen Innes, because you feel so sure that the Richmond Valley line will be made? That is one reason, and another is that it will afford easy access to Queensland.

570. Suppose it turns out that the Don Dorrigo is first to be made, that the Inverell route to Grafton will be more circuitous, having to go round by Glen Innes? Yes.

571. Your report favours the idea that Glen Innes will be suitable, whether the Inverell traffic goes to the north or to the south? Yes.

572. Did you form any opinion whether the market for Inverell wheat is likely to be in Queensland? Yes, and under all the circumstances we could not say that there would be a market there, because of the cost of carriage.

573. Do you think from what you have seen that the Inverell people could undersell the people of Warwick in supplying the people of Brisbane with wheat? No, I think not.

574. Is there a better rainfall in that district? The yield at Warwick and Toowoomba is about the same as the yield at Inverell, but those places are much nearer to Brisbane than Inverell, so that the Inverell people would be greatly handicapped in competing with them.

575. Then you do not attach much weight to the argument, used so much in the evidence given before the Sectional Committee, that one great reason for going to Glen Innes is the prospect of obtaining a market for wheat in Queensland? No, not under the present conditions of the railway charges and the tariff.

576. *Mr. Hoskins.*] Is the railway tariff for wheat in Queensland much higher than it is in New South Wales? I do not think it is much higher.

577. *Dr. Garran.*] We are told that the price of wheat in Brisbane is 5s. per bushel;—do you think the Inverell people could compete at that price? We had it in evidence from the farmers that they could compete at 5s. per bushel. It was stated that they could compete at 3s. a bushel, and make a good profit.

578. They could send it to the border, but at what price could they get it imported into Queensland? They could put it on the trucks at Inverell at 3s. a bushel. Then the cost from Inverell to Toowoomba would be 6¾d. (the exact figures are 6·73d.), and the cost from Brisbane to Toowoomba is about 3½d.

579. That is assuming that the Queensland Government will carry imported produce as cheaply as their own? Yes.

580. In South Australia the Railway Commissioners charge much more for produce grown out of the colony than for the produce of their own people, to give their own people the advantage? Yes.

581. Could not the Queensland Government do the same? They could, but it is not possible in making one's calculations to go into contingencies of that kind.

582. Are your calculations based on the assumption that the Queensland rate will be the same as our own? On the rates in force at the time when we made our inquiries. The charge from Inverell to Toowoomba is 6¾d., from Toowoomba to Brisbane 3½d., and that amounts to something less than 1s.

583. Is the charge the same from Toowoomba to Brisbane for wheat as it is from Brisbane to Toowoomba? We did not go into that.

584. The best market for Inverell wheat at present is the western country, is it not? Yes.

585. That will be an increasing market, will it not? Yes.

586. But the railway will not stimulate that market, it is only the surplus that is not wanted for the pastoral country at the back that will find its way to the coast? Yes.

587. Their pastoral customers are their best customers? They are at present.

588. They will always get better prices from their pastoral customers than by shipping the wheat at a port? Yes, I understand so.

589. Do you think that the prospect of a market at a port will be sufficient to stimulate any great increase in agriculture? Do you mean at the port of Sydney?

590. Yes? I think if a railway is constructed to Inverell the production of wheat there will increase very much indeed.

591. Has it been found in this colony that the making of a railway to a wheat-growing district has greatly stimulated the growth of wheat? I can give you one instance. We have a railway extending to Jerilderie, 442 miles from Sydney, and you will find a settlement of farmers 25 miles beyond Jerilderie who have 10,000 acres under grain. If the railway was not there they could not grow it, because they cannot send it into Victoria.

592. Is there not a great deal of agricultural land on each side of the Great Northern Line, which is not devoted to agriculture, beyond Tamworth? Very little wheat is grown beyond Armidale.

593. That line has not stimulated the growth of wheat? Not much—the climate is not suitable. It is too wet.

594. We have it in evidence that 15 miles west of Glen Innes the soil is as good as you could wish to have, but it is not used for growing wheat? I suppose it is because the climate is so wet. They grow oats there.

595.

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595. Then our northern line does not run to a wheat-growing district? Not beyond Armidale or Uralla.
596. You want to go to the west and the drier country for good wheat land? Yes.
597. We cannot judge from the non-production of wheat along the northern line that the same experience would follow if we went more to the west? No.
598. Is there reason to hope for better results? I think so.
599. From your description of the route, I should gather that after passing 15 miles to the west of Glen Innes you get into rough country on the Wellingrove line? There is not a very great deal of rough country. As far as railway making is concerned the grades are heavy, but there is a great deal of land for cultivation.
600. If the land was cut up by the present proprietors would it be capable of settling a large population? Yes.
601. And the agricultural prospects of the district depend upon the policy of the owners of the land? Yes.
602. The line will go through big estates, similar to those on the line from Narrandera to Hay? Yes.
603. And would be as unproductive? Perhaps not to such an extent as the Narrandera to Hay line.
604. When you get to Inverell is there any difficulty in the way of forming small farms? Already there is a number of small holdings.
605. Are there large estates also? Not so large as some along the line.
606. Is it private property? The whole of the country seemed to be in private hands—in a great number of hands.
607. Still it is private property? Yes.
608. For how far round Inverell? The whole of the land around Inverell, except reserves? The only Crown land is in the reserves.
609. Then the agricultural prospects are entirely dependent upon the policy of the present holders of the land? Yes. The present owners, as a rule, are farmers or small holders. There are a great many small farmers, averaging from 600 to 700 acres each.
610. The present holders, being small farmers, they would become agriculturists on their own land? Yes, some have said that.
611. Without any change of ownership there would be a change from grazing to tillage? Yes. They would keep sheep, and they would go into agriculture.
612. They would carry on a mixed system? Yes.
613. You made some remark about the line from Grafton to Glen Innes, by the Newton-Boyd road. Are you still of opinion that that is an impracticable route? Yes.
614. You do not fix upon Glen Innes with the idea of making a straight line from Inverell to Grafton? No.
615. Quite irrespective of that, and looking upon other lines, you take Glen Innes as a point of connection? Yes.
616. Is Glen Innes well posted as a central town in the district? Yes.
617. If there were a railway connection at Guyra would that cut out Glen Innes? It would, very largely. It would take the Inverell traffic away, I should say, almost entirely.
618. But Glen Innes would remain the centre of an important district? Yes; but it would affect the prosperity of Glen Innes very much.
619. Is it not a matter of importance to connect the inland towns with each other, as well as to connect them with the metropolis? That depends very much upon the towns themselves. I think that in many places throughout the colony too much importance has been placed upon the towns. Railways have been run out of their proper direction to get to the towns.
620. Then in making a railway to Inverell you do not attach much weight to going through Glen Innes? No.
621. Or any other township? No.
622. It is to the interests of the Inverell people to get their produce to market? Yes.
623. Whether the trade of Inverell is to go north or south, or to the seaboard, you think that the line to Glen Innes is, and will be, the best? Yes, under all the circumstances.
624. *Mr. Davies.*] I understand that you have traversed both the surveys of the proposed railway from Glen Innes to Inverell? Yes.
625. Do you consider the line under consideration an expensive one for construction? As I said yesterday, I do not know. We did not go over that line because it was not proposed at the time. We went along the main road until we could see almost from one to the other.
626. If the railway is constructed what amount of trade will be developed? It is impossible to make an estimate of the traffic.
627. The prospective traffic? I do not think it is in anyone's power to make an estimate that could be relied upon.
628. Do you think that if a railway is constructed it would pay the interest on the course of construction within ten years? Ten years is a long time, but I do not think that the line would pay at present.
629. Do you think that it would pay in ten years? I think it probably would; but I speak with a great deal of diffidence upon that point. I am certain that it would develop a large traffic. The present traffic would be very much increased.
630. In what way would it be possible to increase the traffic if the land is held by private individuals? If the line is made a number of private individuals about Inverell intend to go largely into wheat-growing, and I believe that, contingent on that, there would be other traffic. Although the wheat traffic might not be a very paying traffic, it would increase other kinds of traffic. It would increase the coaching traffic.
631. What would be the annual clip of wool from that district? We estimated that a clip of 750,000 sheep would be carried by the railway from Inverell to Glen Innes.
632. Is that the character of the produce that would go to the Sydney market besides the wheat? There is a good deal of tin from Tingha. In 1889 there were 1,200 tons of tin produced there, 700 tons of which went to Glen Innes. I believe that nearly the whole of that would come to Glen Innes by rail.
633. Does it come by the ordinary main road now? Part of it comes through Inverell, then by the main road to Glen Innes.

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634. How far is Tingha from Inverell? Sixteen miles.
635. Then it has to go by road to Inverell, and then to Glen Innes, to get to Sydney? Yes; it now goes by road to Inverell, then by road to Glen Innes. That is the proportion which I have mentioned.
636. The only elements of production would be wheat, tin, and wool? No. I do not say that. They grow very good potatoes in that district, but I do not think there would be a very large traffic in potatoes.
637. Would it pay to send potatoes to Sydney? I do not think so.
638. What other products would there be? They produce wine there, and the complaint is that it does not pay because of the cost for the carriage of the casks.
639. How many acres are there under vines in that locality? I have forgotten that.
640. *Mr. Wall.*] Does the estimate submitted to us of the annual earnings of this line cover the conveyance of goods along the main line, or merely to the point of convergence? I could not say; the Railway Commissioners supplied that. I fancy that they calculate only for the line itself.
641. In calculating the prospects of this line, have you considered what the cost of the production of wheat in that country would be as compared with the cost in other parts? We did this way. We ascertained from the farmers at what price they could afford to produce wheat, and put it on the trucks. They informed us, after a consultation amongst themselves, that they could put the wheat on the trucks at 3s. a bushel; but I was told by a farmer, privately, that he would put any quantity of wheat on the trucks at 2s. 6d. a bushel.
642. Do you know what the mean average per acre is? Seventeen bushels.
643. And in other parts of the colony it is 13? Yes; I think in some districts it is over 13 bushels.
644. In reporting on this railway, I suppose you were guided in a great measure by the probability of the line paying? Yes.
645. Not by the fact that it would benefit the district, or tend to promote settlement? No; by the fact that it would pay eventually.
646. Is there any maximum time within which you may expect this line to pay? That is a very difficult question to answer.
647. We should like to know what policy is pursued by the Construction Branch in authorising railways—whether there is any maximum term within which they expect a line to pay? That I could not say.
648. You have reported on several other lines? Yes.
649. In estimating the annual earnings of this line, and the settlement that would be promoted by its construction, and comparing it with other lines, do you think you would be justified in recommending it? I think we were; but we did not make any estimate of the earnings of the line. The Railway Commissioners do that. We did not do it, because I do not think the present railway traffic is a guide. I do not think any man could make a reliable estimate as to what the traffic will be in the future.
650. Then you have merely reported to the Commissioners on generalities, and they have recommended the line? We reported to the Minister.
651. You have not taken the responsibility of recommending the line? We practically did.
652. There is a main road traversing this proposed line, I think? There is a main road close to it.
653. Could you inform the Committee of the annual expenditure on that road? I could not, but it can be ascertained from the Department.
654. It is a classified road? Yes.
655. I suppose the expenditure on that road would be considerably decreased in the event of the line being made? No doubt it would. That is the case with all principal roads.
656. Have you any estimate of the value of the land for agricultural purposes along that line? We did not go into that very closely, but I should say, speaking at hazard, that the value is from £2 10s. to £3 an acre.
657. It is the custom of the Department to make special areas, and that very often tends to prevent settlement? Judging from the prices paid for land in other parts of the colony, I should say the value would be from £2 10s. to £3 an acre.
658. To promote settlement would you recommend that a special price be put upon the land, or that it be thrown open? I scarcely think that the land would sell as special areas, unless it was really determined that the railway should be constructed.
659. It is the custom, is it not, to shut up land and put special prices on it? I have heard it said that the prices put on special areas are, as a rule, too high.
660. Is it not a usual thing to lock up land on each side of the line? I cannot say that. I cannot say what the intentions of the Lands Department may be.
661. I am asking what is the custom—has it not been the custom where a railway has been made to make reserves along the line? I believe that land within certain distances has been reserved.
662. You cannot form an idea as to when the line would pay? No; but I think it will develop a large traffic within a reasonable time.
663. Have you any idea as to the amount of wheat that is grown at Glen Innes during the year? We did get some figures on the subject, but it is so long ago that I do not remember what they were.
664. *Mr. McCourt.*] Would Bingera traffic be served by this line? No.
665. Would it be served by a line from Guyra to Inverell? No, not any more than by this.
666. Then if the Bingera people say that they would use the line, it is not true? I do not see how they could use it for carrying goods to Sydney, where most of their traffic goes.
667. You have said that most of the tin from Tingha goes by way of Inverell to Glen Innes? More than half of it—700 tons out of the 1,200 produced in 1889 went that way.
668. Has that always been the case? I do not think so.
669. Is it not on account of the road being better between Inverell and Glen Innes than the road from Tingha to Guyra? That is one reason, but another explanation given was that the carriers could always get back loading from Glen Innes to Inverell, but if they went to Guyra they could not.
670. The traffic would go by Guyra if the facilities for it were the same? Yes; it is a much shorter distance.
671. Did you find that the Inverell market for wheat lay west of Inverell principally? Yes; almost entirely.
672. After supplying the west, would they have much for Sydney or elsewhere? They have now, I understand. They can only get rid of it by taking out the value in goods at the stores. The price is very low.

673.

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673. Do you think that Sydney would be the best market for Inverell wheat? Sydney is the great market for all the wheat.
674. Would it be better than Queensland? Yes.
675. Would the wool traffic from the west come to Sydney? Yes.
676. Therefore, if the wheat market in Sydney was the best, and the Sydney wool market was the best, would it not be better to connect Inverell through Guyra if all the traffic came to Sydney? That is, looking upon Sydney as the point to be reached.
677. Yes? Of course; but there is the question of the production of the coast and the supply of the coast.
678. Suppose Sydney is the best market for Inverell wool and wheat, would it not be better to connect *via* Guyra? Undoubtedly; if you look upon Sydney as the only point to be reached.
679. Suppose that Sydney is the best market for Inverell wheat and wool. In that case would Guyra be the best place at which to connect the railway? Yes.
680. *Mr. Dawson.*] You told us that there were wool, wheat, and tin produced in that district, and that there were 750,000 sheep there. Did you make any estimate as to the number of the fat stock? No.
681. Can you give any idea of the number of fat stock in that district? That would be difficult to arrive at. A great number of the fat stock go to Sydney. I think it very unlikely that fat stock would go to Inverell to be trucked.
682. Did you meet Mr. Cadell, who gave evidence before the Sectional Committee? No.
683. You have not taken into consideration the fat sheep and lambs, and fat cattle? No. I do not think there would be a very large traffic in them.
684. If the line were taken to Inverell from either Guyra or Glen Innes, would many fat stock be brought from Inverell to Sydney? I think not.
685. Would they send them to Brisbane? I think they would send them to Tamworth, and if they truck them at all truck them there.
686. If the wool came to Inverell would not the fat stock come there also? That does not follow. Fat stock carry themselves, but wool does not.
687. I think it would be the best place for fat stock, too? I do not think so. There would be 475 miles of railway travelling to get to Sydney.
688. As against how many miles by the road to Tamworth? Take Bingera, from Bingera to Inverell is 45 miles, and then there are 475 miles to Sydney. By driving from Bingera to Tamworth, 100 miles, there would be 200 miles less of railway carriage.
689. Would not a man rather send cattle 45 miles by road and 400 by train, than 100 miles by road and 200 by railway? I do not think so.
690. At what rate do they travel sheep? Seven miles a day.
691. Then would you not save a week by going to Inverell and have only about ten hours extra railway travelling? I do not know the exact distance from Tamworth to Inverell, but I know that it is little short of 200 miles.
692. *Mr. Wall.*] Could you give the Committee any information as to the cost of carrying timber. What would it cost to bring timber from that district to Sydney? That I could not say.
693. *Mr. Neild.*] Can you tell us the price of wheat at Inverell? A trifle below 3s. was the price when we were there—there was not much sale for it. The farmers complained that they had to take the price out in goods at the stores.
694. Would it not be more convenient for pastoralists to the west of Inverell to get their grain supplies and breadstuffs from Inverell? They do now.
695. Is it not more convenient, I say? Yes.
696. Then is the lowness of the price to be accounted for by the smallness of the demand? Yes.
697. You spoke about the northern line not going through a good wheat country—what about Tenterfield? I was speaking about the section from Uralla to Glen Innes.
698. Your remarks did not apply to Tenterfield? No.
699. I suppose you know that the yield is higher at Tenterfield than at any other part of the colony? I was not aware that it was higher than at any other part of the colony, but I know that the yield there is very good.
700. When you were taking evidence, did you take it on oath? No.
701. So that the information you obtained is just the *ipse dixit* of any person you examined? Yes.
702. Do you find that, as a rule, the statements made to you by settlers are reliable? In many cases we take them with a good deal of qualification.
703. You did not inquire into the engineering aspect of the question? No, we only inquired into it in a general sort of way.
704. And you did not inquire into the question of traffic? We did not go into calculations as to the line paying. We did not make any calculations as to the returns of the railway.
705. What particular aspect of the matter did you investigate? We went over the district, and we saw that the Inverell district had almost an unlimited quantity of good land, and we found an industrious population who stated their willingness to cultivate more land than they are now cultivating if railway facilities were afforded.
706. I suppose that any number of persons in all parts of the colony would allege their willingness to go into the cultivation of land if there was a prospect of getting a railway? Yes; but these people proved their willingness because they had more wheat on hand at the time than they could find a market for, and they were people who were living upon the land.
707. I think you said, yesterday, that the puce coloured line on the map went through the same property as the black line? Not through the same property.
708. Your investigation really amounted to this; that you considered whether there was a large area of good soil likely to be more largely cultivated if a railway were constructed? Yes, that is the substance of it.
709. Then you appeared to have considered a number of points of an engineering character, and also of a national character in connection with the carrying of a line towards the coast? Yes, it was part of our instructions to do so.
710. You looked at this matter from the standpoint of the proposed construction of a coast railway? Yes. That coast railway was to be taken for granted.

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711. You gave evidence with reference to the Byron Bay line. Would the opening of a port at Byron Bay provide the means of exporting grain to the old country? I gave no evidence with regard to Byron Bay.
712. Would Byron Bay be likely to be a port for international shipping? I have never seen it.
713. With reference to the difference of cost for railway carriage between Inverell and Sydney, and Byron Bay, I think you said that one was a matter of 200 miles, and the other of 400 miles—the charge in one case being 16s. 2d. a ton, and in the other 12s. 4d. But if the grain were taken to the coast, it would have to pay the cost of freight before it could reach the international shipping port? It is said that Byron Bay is to be a port for ocean-going ships.
714. Would the traffic that could be centred at Byron Bay ever be likely to bring a class of shipping there that would compete with the class of shipping that is attracted to a port like Sydney? I am not in a position to say that, but that seems to be the idea of constructing a port at Byron Bay.
715. That would be a remote idea, from what you have seen of settlement in the northern parts of the country? I have not seen the best part of the country to the north of the Richmond.
716. *Mr. Ewing.*] You have already said that you believe that the railway should be made to Inverell, and the question resolved itself into the question of the best way to get to Inverell? Yes.
717. You have said, too, that you thought that eventually there would be a larger population along the line from Inverell to Glen Innes, than from Inverell to Guyra, because it is better soil? There is the question as to the land being locked up.
718. I am dealing with the possibility of the land carrying a large population? It is capable of carrying a larger population.
719. And you state that it goes between two good towns—Inverell and Glen Innes—and it will get the incidental traffic which springs from population? Yes.
720. Where do the Inverell people want to go, as a rule? The larger portion of the traffic will, for some years, come to Sydney.
721. Where do the Inverell people want to reach the main line? They are almost unanimous in wishing to reach it at Glen Innes.
722. You have also stated that this line will be a cheaper one to work than the proposed line from Inverell to Guyra? I do not think I said that.
723. You know that the line from Guyra will ascend 800 feet higher than the line from Glen Innes? Yes.
724. And is it not reasonable to suppose that the line with the higher gradient will be the more expensive to work? Yes.
725. You do not think that the market at Sydney will take all the wheat that can be produced in the colony? No.
726. If we are to have farming on anything like a large scale we must send the wheat out of the colony? Of course, if we have more wheat than we can use, but it is not so at present. It is highly probable that in a few years there will be wheat for export.
727. The surplus supplies must go out of the country? Yes; but at present we have no wheat for exportation.
728. If the lands about Inverell and other parts of the country are cut up, so as to yield large quantities of agricultural products, the surplus must go out of the country? Yes.
729. Therefore, if you have to get to the coast, it will be better to have to go only 200 miles than to have to travel 400 miles? Yes, supposing a proper port is provided.
730. Do you know anything of the line from Guyra to Grafton? I have been over it.
731. How far is it? We estimated it at 145 miles; but I saw it stated in a paper the other day, that the result of the survey was to make it 150 miles.
732. That is, 150 miles if you want to get to the Clarence from Guyra? Yes.
733. Do you know what a line of that length would cost? No.
734. It would not be under £10,000 a mile? Yes, very much under that. From Guyra for 65 miles it is almost a surface line, and from Glenreagh to Grafton, about 30 miles, it will not be an expensive line.
735. Will you put it at £8,000 a mile? No. I should not like to say anything more than I have said. I am not aware of the nature of the survey on a part of the line.
736. It will cost £1,000,000 to make a railway from Guyra to the Clarence? Yes.
737. How far is it from Casino to Tenterfield? Eighty-six miles, I think, is the distance.
738. The question of connection with the coast having been brought in, I want to show that the distance from Tenterfield to Casino is only half the distance from Guyra to South Grafton—the one being 86 miles, and the other 156? The distance in round numbers from Guyra to Grafton is 150 miles.
739. Therefore, to join the coast railway from Tenterfield would be only half the distance that you have to go from Guyra? Yes, thereabouts.
740. Therefore, the construction of that line will save £500,000? I do not say that. The cost of a line from Tenterfield to Casino was estimated at the very high rate of £15,000 a mile.
741. You know something about the places on the coast rivers? Not very much, except from reading.
742. Is it not your opinion that a vessel trading on the coast rivers could never be a deep-sea boat? I would not give an opinion on that.
743. Could a deep-sea boat go up to Grafton? I have seen it stated that there would be 18 feet in depth at low water when the improvements are made at the entrance to the Clarence river.
744. If a line were made from Guyra to South Grafton, on the bank of the Clarence River, do you know what depth of water there would be there? I do not.
745. *Mr. O'Sullivan.*] In replying to a question asked by Dr. Garran, you seem to think that there was not much chance of obtaining a market for Inverell wheat in Queensland? Not in the present condition as to railway charges.
746. Have you seen the wheat returns in the *Queensland Statistical Register*? Not for the last two years.
747. Do you recollect those for 1889? Yes; in a general way.
748. Are you aware that there were only 2,300 tons of home-grown wheat produced in Queensland in that year, whilst the quantity imported was 41,000 tons? I know it was very large.
749. Eighteen eighty-nine was considered a good year for wheat in Queensland, yet they had only 2,300 tons of home-grown wheat, whilst they imported 41,000 tons? That may include the crops only up to the middle of the year, and that will make a difference. Eighteen eighty-eight was a very bad year, the crops failed in that year.

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750. I conclude that the figures I have mentioned are for the whole of the year 1889;—do not those figures show that there is a very good chance of a market for Inverell wheat in Queensland? I consider that they could probably import wheat to Toowoomba cheaper than the people could send it from Inverell.
751. You think they could bring it from Victoria, New Zealand, and South Australia, land it at Brisbane and take it to Toowoomba, cheaper than the Inverell people could send it to Toowoomba by rail? Yes.
752. Why do you think that? Because of the rate of carriage.
753. Would there not be an equal distance to carry the wheat from Brisbane to Toowoomba? It is 101 miles from Brisbane to Toowoomba, and 182 from Toowoomba to Wallangarra. Inverell would not serve the Toowoomba district; it would serve the districts along the border, but the consumption there would be very small. I do not think that the consumption about Stanthorpe, and places immediately on the border, is worth considering. Those places are within a few miles of Warwick.
754. Is it not apparent that the whole of the Toowoomba wheat is sent from Brisbane, and that there is a better market in the district at the back of Toowoomba? I think that Brisbane is supplied from the sea chiefly.
755. You know the Richmond and Tweed districts pretty well? I cannot say that I do. I have not been further than Casino.
756. You know that they are progressive districts, and that there will be a large population there shortly? Yes.
757. They do not grow wheat in those districts? No.
758. Do you think they are more likely to be supplied by sea than from Inverell if there is a line from Tenterfield to Casino? No; I do not think so. That has been a point in our report right through.
759. How far towards Sydney do you think Inverell would find a market for wheat? Not further than Armidale, I should say.
760. Do you think that places like Maitland, Singleton, and Murrurundi would be supplied with wheat from Newcastle? All the wheat from Newcastle would have to be produced elsewhere. It must come by sea; it is not produced in the district.
761. You said you did not think that Inverell wheat will go much beyond Armidale? You misunderstood me. I think that the Inverell wheat will find its principal market in Sydney, but it would not supply districts about Armidale and Tamworth. Those districts supply themselves; but Inverell wheat will pass through those districts to the Sydney market.
762. Would there not be a better prospect of finding a market on the coast than in Sydney? Yes.
763. Then it is towards the coast that Inverell must look for a market? Not altogether, because it would be a limited market.
764. Did you inquire at Inverell as to the traffic likely to be drawn into that town if a railway went there? Yes.
765. Was it made clear that there would be a large traffic from the Queensland border, and from Warialda and Bingera? No; I do not think you would get a traffic from Warialda and Bingera. I think it would go to Tamworth from Bingera.
766. In the absence of a line from Narrabri to Moree, would not the traffic go to Inverell from Warialda and Bingera? I think that is an open question. Moree is about the same distance from Inverell as it is from Narrabri, and the traffic going to Sydney would probably go by Narrabri.
767. Are you aware that at present a good deal of the traffic from Bingera and Warialda goes into Inverell? I am surprised to hear it if it is so.
768. You said that some carriers were carrying from Bingera to Inverell? No; from Tingha.
769. It is over twelve months since you drew up your report? Yes.
770. Then you reported in favour of the line from Glen Innes to Inverell? Yes.
771. *Mr. Hoskins.*] You stated that if a railway were constructed from Inverell, by Don Dorrigo, to Grafton, the charge would be 12s. 3d. a ton? No; I said the Railway Commissioners were now carrying wheat 200 miles for 12s. 2d. a ton.
772. Therefore, did you say that the carriage to Grafton was 12s. 2d. a ton? No; I was speaking of Byron Bay.
773. Did you travel over the line from Don Dorrigo to Grafton? Yes.
774. Is it not a very rugged country? No.
775. Not between Guy Fawkes and Blick's River? No; it keeps to the south of Blick's River.
776. Would not the work be very heavy and the gradients very severe? No; for 65 miles from Guyra it would be a surface line, with very easy grades and flat curves. It is a very easy line to Guy Fawkes. From there the line was not surveyed for about 40 miles, down to near Glenreagh; but from the report of Mr. Simpson, and from what we could see of the nature of the country, we did not think that there would be any great difficulty until they got within 12 or 14 miles of Glenreagh; then the difficulties commence. That is where they have a difficulty in getting from the coast on to the table-land; but for 65 miles at one end, and 35 miles at the Grafton end, the line would be a very easy one.
777. But are not the difficulties of one part of the line extremely severe? I think not.
778. Is not the drop very sudden? It is very sudden.
779. Are there not a number of rivers to cross? No. There are a number of creeks, but not very large ones.
780. Do you think that wheat should be carried on branch lines, where they are very difficult to construct, and the cost of which is very great, at the same rate as it is carried on through lines? I am not an expert as regards railway traffic.
781. You have stated that several persons told you, when you were examining the district, that if the railway was constructed they would grow more wheat than they have been growing, and that these were persons occupying 600 or 700 acres of land. Is it not a fact that nearly all the land between Glen Innes and Inverell is held in three or four large estates? That is so, but the people to whom I referred are living round Inverell.
782. You are aware, then, that nearly all the land between Glen Innes and Inverell is private property? Yes; held in three or four large estates.
783. Have you ever given consideration to the betterment system? No.
784. Do you think in the abstract, that when the Government construct a railway, paying a high price for the land which they require for it, they should not make some charge for enhancing the value of the land through which the railway passes? You mean the Government should not pay anything for the land?

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785. If the Government have to pay a large sum for the land through which they take the railway, ought they not to be allowed as a set-off to charge for the enhanced value which the railway gives to the neighbouring land? Yes; I think so. I have always thought so.
786. Do you think that that principle should be made applicable, not only to the land through which the railway passes, but also to all the land within a radius of say five or ten miles? It does seem a reasonable thing.
787. *Mr. McCourt.*] On your tour of inspection did you visit Bundarra? Yes.
788. Is there a settlement immediately around Bundarra? There is.
789. Which line would suit the people there? The Guyra line. The Glen Innes line would not suit them at all.
790. Would they use it if it were constructed? I think not.
791. Did the evidence you took tend to show that people had given up growing wheat around Glen Innes and Inverell, and were going in for sheep-farming? Yes, there seemed to be a tendency in that direction.
792. Was that on account of sheep paying better than wheat? I suppose so.
793. That was the tendency of the district? Yes.

Edward Bellingham Price, Esq., Acting Examiner of Public Works, sworn, and examined:—

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794. *Chairman.*] What position do you occupy in the service? I am Supervising Engineer in the Harbours and Rivers Department.
795. You were acting as Examiner of Public Works some time ago? I was.
796. You reported, jointly with Mr. Scarr, on various routes for a railway to connect Inverell with the Great Northern Line? I did.
797. And you sent in the report that has been furnished to the Committee? Yes.
798. Recommending that the connection be made at Glen Innes? Yes.
799. That report was furnished some time since? Yes; a year and a half ago.
800. Have you seen any reason to alter or modify your views on the question since sending in that report? No; I believe the line has been altered since.
801. Do you know anything of the proposed deviation? I was looking at it this morning.
802. As far as the connecting point is concerned, have you had reason to alter your opinion as to the desirability of connecting at Glen Innes? No; I still think it is the best point.
803. *Dr. Garran.*] What opinion did you form as to the best outlet for the produce of the Inverell district;—where could the traffic go to the greatest advantage of the Inverell people? At present, if the line was made to Glen Innes, the traffic would go to either Newcastle or Sydney.
804. It could not go anywhere else, could it? It might go westward.
805. The pastoral district which draws its produce from Inverell will continue to do so whether there is a railway or not;—suppose that the railway is made, do you think the produce will come down to Sydney or go to Queensland? It depends upon the sort of crops they have in Queensland. Some years it will pay to send the produce to Queensland and some years it will not.
806. You think that Queensland's adversity is Inverell's opportunity? Yes. If they cannot sell their wheat in Queensland, they must take what they can get.
807. What they can get in Sydney? Yes.
808. Supposing that a railway were made from Tenterfield down to the Richmond River, do you think that the wheat would go out to the world's market through that route in preference to going to Sydney? I think so. If there is a good port, and they got ocean-going vessels to call; but I do not think that coasting vessels would be sufficient.
809. Supposing that a harbour is constructed at Byron Bay, do you think that it would be as cheap to get out that way? No. I think that there would be too much expense in transhipment, owing to the small vessels employed.
810. The advantage to the Inverell people from that route will entirely depend upon whether large vessels can be loaded in Byron Bay? Not entirely. I believe there would be a good market about the Richmond itself.
811. I mean, that if they have to ship wheat for the world's market, they cannot do it without a port which great ships can come into? I think not.
812. Then, unless they get that big port, there will be no advantage in sending wheat down to the Richmond? Not for shipment; but there would be a good market in that district.
813. Such a line would cause an interchange of traffic between the scrub country and the Inverell district? Yes. They grow maize on the sea coast, and* send it to Inverell.† They get 80 bushels an acre on the coast, and only 25 or 30 at Inverell.
814. Would that be sufficient to constitute a paying traffic for the railway? In a few years it would.
815. Is it fair to consider mere distance from Tenterfield, or would you take into account the fact that they can afford to carry more cheaply on the trunk line than on a cross-country line? It depends upon the line which they get from Tenterfield, and whether it has good grades.
816. Can you get a grade of 1 in 60? We were of opinion that they could get a grade of 1 in 60. They had a grade of 1 in 40.
817. And the cost of working the line greatly depends upon the grades? If it was made 1 in 60 that would reduce it considerably.
818. With a grade of 1 in 40, would they be able to carry wheat on that line as cheaply as they carry it on the main line now? Certainly; the grade is 1 in 40 on the main trunk.
819. Do not cheap rates depend upon the amount of the traffic? Yes; and keeping the trains full.
820. Would there be a possibility of having the trains on that line full? I thing that Inverell should fill a good many. It would certainly fill two trains a day.
821. You think it is fair to give that route all the credit for its greater shortness? I could hardly give it all the credit. There are better appliances about Sydney than at Byron Bay for dealing with traffic.
822. That would account for a good deal of mileage? For some.
823. Considering that the charge to Sydney is 5·62d. per bushel, do you think that every extra disability would count pretty high? Yes. 5·62d. is a very low rate. They would hardly carry it at as low a mileage rate.

* Note (*on revision*): Would.
† Note (*on revision*): And get back maize.

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824. Do you think it likely that the Inverell people would get their wheat to market more cheaply by any other route than to Sydney? I think so. I would not think it fair that the people should have to pay an extraordinarily stiff rate to Byron Bay.
825. Would you think 5d. a bushel a fair rate? No, I should think it should be less. It is a much shorter distance.
826. How much? I should say that it ought to be 4d.
827. You think that if they can afford to carry wheat to Sydney for 5d. they can afford to carry it to Byron Bay for 4d.? I should think so—it is not much more than half the distance.
828. Did you form the same opinion as Mr. Scarr about the impracticability of the Newton-Boyd route? Yes.
829. And your recommendation to connect Inverell with Glen Innes, was it quite disconnected with the idea of going by the Newton-Boyd route? No.
830. Do you agree with Mr. Scarr, that of the two lines to the coast, the line by Don Dorrigo and the line from Tenterfield to Casino, the Don Dorrigo line has slightly the advantage? Yes; it is better land on that line.
831. It is a very much longer line? Yes; but it opens up a great deal of good country.
832. Then you give it the preference, not as a through line, but as a line for opening up good intermediate country? Yes; it would improve Grafton.
833. Thinking as you do of the Guyra to Grafton route, do you think that should influence the connection at Inverell? It influences it to a certain extent, but I think there would be a good deal of traffic going north as well as south. That is why we thought the connection should be at Glen Innes.
834. If the mere object was to go to the port, and the best way was by Don Dorrigo, that would be an argument in favour of the Guyra line? It would.
835. But as the traffic may go north you think the junction should be at Glen Innes? Yes. That avoids the Ben Lomond Mountain. Wheat would go from Inverell to Tenterfield without going over that great rise.
836. Is the summit level between Guyra and Inverell higher than Glen Innes and Inverell? Guyra itself is considerably higher.
837. In carrying traffic from Sydney you would not have a greater climb between Guyra and Inverell than between Glen Innes and Inverell? Glen Innes is about 1,000 feet lower than Guyra. The return traffic would have to go up that hill.
838. I am talking of the gradients on the two lines. The climb is greater between Glen Innes and Inverell than between Guyra and Inverell? I think it is less—they have reduced the grade to 1 in 60.
839. You do not have to go over a greater elevation? No.
840. The gradients are equal? I believe that the grades on the Guyra line are 1 in 40. They can be improved, as the other ones have been.
841. From what you saw you see no difficulty about the Guyra line? No, it is through rather easier country than the other. We were rather impressed with it as being easier than the Glen Innes line.
842. You found settlement rather around Inverell than on the line from Glen Innes to Inverell? We went over the lines on foot and on horseback, and there was not much settlement, except at Tingha.
843. It is rather around Inverell than on the route? Yes, around Inverell and further out to the west.
844. It is not likely that there would be much wayside traffic on the road between Glen Innes and Inverell? Not at present unless the large estates on the line are cut up. There will then be a large amount of settlement as it is splendid land.
845. Why is it that the people keep the land for pastoral purposes? I cannot tell. I think they are waiting for a railway, to get a better price.
846. Do you think the land is producing more under sheep than it would if it were under tillage? No, it would pay well to cut it up. But if they grew wheat now they would have a long cartage, which would take away the profit.
847. Supposing that the Government put in force the betterment principle, and sent a surveyor to estimate the area on either side of the line that would be improved by the construction of the railway, so as to tax the land in proportion, could they make the line for half the proposed cost without injuring the land owners? They would consider that they were injured.
848. Do you consider that they would be? I do not think so.
849. Do you think that the land on either side of that line could bear a tax to half the extent of the improvements, and by that means reduce half the cost of the line? We saw land which was on offer at £2 an acre, and if a railway was made through it that would send it up to £4 an acre.
850. It would develop the value of it? Yes.
851. Would it not be the same on the line from Glen Innes to Inverell? It should be.
852. You think there is a fine field for the application of the betterment principe? I think that about Inverell there would be, but not about Glen Innes. They are so close to the main line that they can pay for cartage.
853. After you had left Glen Innes, 15 miles on the road to Inverell, the fact of there being a railway would begin to be apparent? It would, very much so.
854. And for 10 miles on each side of the railway it would have the same effect? Yes.
855. It was stated to the last Committee that the fact of a railway being made in an agricultural district affected the value of the land for 15 miles on each side of the railway;—is that your opinion? Yes.
856. It pays a man to cultivate land within 15 miles of the railway? Yes; if he can send his dray to the railway and back in one day.
857. So we may look upon the effect of a railway being constructed to improve the value of land and increase tillage within a radius of 15 miles? Yes.
858. That is a fair calculation? Yes. It will be more as you get further away from existing lines.
859. Then it would follow from that that the whole of the land would be benefited, more or less, to an extent of 15 miles? You can hardly say 15 miles there, because there are some mountains on the route.
860. Take an average of 10 miles, then there is a belt of 20 miles of land to which the betterment principle could be applied? Yes.

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861. *Mr. McCourt.*] When making inquiries, did you go into the question of whether or not the line would pay? We did not go into statistics. We thought statistics as to the probable traffic would be worthless.
862. You did not go into the question as to whether it would pay? We did. We saw that there was a vast deal of land lying idle, and it was obvious that if the land was cultivated it would pay.
863. Do you think that the line would pay? I think it would within three years. They would require three years to start proper tillage.
864. Is the land between Inverell and Glen Innes suitable for wheat growing? Yes; a great deal of it.
865. Is there any wheat growing between Glen Innes and Inverell? I did not see any.
866. How is it that wheat is not grown there? They say they cannot pay the cartage. They grow maize on the flats.
867. It would not pay to cart wheat 20 miles? Not at the then prevailing price.
868. Within 20 miles of Glen Innes, towards Inverell, although the land is suitable for wheat growing, no wheat is grown? I will not say that no wheat is grown, but not much is grown. There is very little settlement there.
869. Do you know what the freight would be for wheat from Inverell to Brisbane, supposing the line was constructed? We calculated at the time, and it came to 11·38d.
870. What is the freight of wheat from Inverell to Sydney? About 5d. per bushel.
871. Therefore there would be about 6d. a bushel in favour of the Sydney market as compared with Brisbane? Yes.
872. *Mr. Wall.*] Was your attention directed to the minute of the Commissioners in 1891, in regard to the betterment principle? No.
873. Did the Minister direct your attention to a proposal that pioneer lines should be constructed at £1,750 a mile? No.
874. Have you any knowledge of any other wheat-growing district in New South Wales? I have. In the Riverina district they are growing wheat.
875. What would be the difference between the cost of cultivation in some of those districts? I know it would be much cheaper in the southern districts than anywhere else. It is cheap on those plains where you can use the steam plough.
876. You think Orange is the principal wheat-growing district? Yes; though Riverina will be the principal wheat-growing district. Wagga Wagga is a good wheat-growing district.
877. Have you been in the Orange district? Yes; some time since.
878. Do you think it would be more difficult to cultivate land in the vicinity of Inverell than at Orange? No; there are some very large plains beyond Inverell.
879. Then the cost of the carriage from Inverell to Sydney is 5d. a bushel? Yes.
880. And from Orange to Sydney I believe it is about 1½d. per bushel? I do not know.
881. The yield in the Inverell district being 3 bushels per acre in excess of that of the Orange district, the cost of cultivation will be about equal, therefore, would not Inverell be able to compete? I do not know about the sending of the grain to Sydney. Much depends upon the seasons. In some years they have a good season at Inverell, and some years at Orange.
882. I am taking an average for nine years, which shows that there are 3 bushels to the acre at Inverell in excess of the production at Orange. The cost of carriage from Inverell is 5d. a bushel, and from Orange 1½d., leaving a difference of 3½d. Do you think that under the circumstances Inverell could compete with Orange? They could very nearly, with good prices. They can make it pay if they get 2s. 6d. cash per bushel in Inverell.
883. What is the character of the country through which the line extends? It is a series of plains with rocky ridges. You have a long plain and then a ridge, then another plain, and so on.
884. Have you had your attention drawn by the Commissioners to the idea of constructing pioneer lines at a cost of £1,700 per mile? I drew attention to it in one of my reports. I thought that a certain branch line should be a pioneer line.
885. Do you think that this line should be made at less than the proposed cost? I do not think so. The grades are very heavy, and if they are left in it would be very expensive to work the line.
886. Have you had any details submitted to you in reference to the cost of cutting? We saw the plans and the amount of the earthworks and embankments, but since then the line has been improved.
887. I understand that one of the land owners offered the land at £1 an acre? There were no offers of that kind made to us.
888. *Mr. Neild.*] Have you taken into consideration the possibility of international shipping at Byron Bay? Yes; we considered that. Mr. Scarr was not at Byron Bay, but I was there, and the conclusion I came to was that there must be a big port there some time or other, and that then Inverell would send its produce to Byron Bay.
889. By what route? By Tenterfield, Casino, and Lismore, and that way.
890. Then by the line to the Tweed you would get the shortest route to Brisbane? Yes. If a connecting link were made from Southport to the Tweed.
891. Do you remember what would be the relative distance from Inverell, *via* Tenterfield, to Casino, and, thence by Southport to Brisbane, as compared with the present route? The distance by the present route is 244 miles, as against 228 miles, *via* Casino and Southport.
892. Would the rate of speed on the broad gauge to the coast line be any element worthy of consideration? It would. If the Southport people did not widen their gauge there would have to be a transhipment there also. If they widened their gauge there would, of course, be no transhipment. There would be only about 50 miles of line to widen.
893. *Mr. Dawson.*] What is the estimated cost of the construction of the line from Glen Innes to Inverell? I do not know, as it has been altered. The original amount stated to us was £492,400.
894. The line goes through very difficult country with heavy cuttings? Yes, as shown by the black line on the map it goes through very difficult country.
895. Taking into account the cost since they reduced it by £60,000, are you of opinion that the line will pay, if constructed? Yes, in the course of a few years.
896. What character of traffic will be developed by the construction of the line? Wheat, principally. They will send wheat from Inverell and get back maize.
897. Suppose that most of the wheat land is under cultivation, and the whole produce comes by rail, will it pay the working expenses and interest on the capital? Yes. One of the largest farmers in the district has 3,500 acres of land, and he could grow wheat on the whole of it if there was a railway; but at present

he

he has only 300 acres under crop, and he told us that unless a railway is made soon he will have to throw it all into grass. E. B. Price, Esq. 7 April, 1892.

898. *Chairman.*] What is his name? Mr. Eddy.

899. *Mr. Davies.*] Besides the wheat, what other products would find their way to the Sydney market from Inverell? A great deal of wool from the back country.

900. Do you know the tonnage? I cannot say exactly. The number of sheep in the Inverell district was 500,000 when we were there.

901. What would be the probable clip from 500,000 sheep? It was estimated that 2,000 tons of wool annually would come that way.

902. That would not increase if the land is used for growing wheat? No, it would probably decrease.

903. What other products would the railway carry? I think a great deal of live stock would be carried backwards and forwards.

903½. Cattle? Yes, cattle and sheep.

904. You are of opinion that if the line is constructed at a cost of £427,000, it will pay? Yes, in a few years.

905. How many years? It would certainly give a return after three years, I think. It is a remarkably rich country, and the land only wants ploughing in order to produce crops. There are a good many settlers on it.

906. Do you think the passenger traffic will be much? Yes, I think there will be a very good passenger traffic.

907. What is the total population of Inverell? Only about 1,500; but there are a great many farms in the vicinity.

908. Taking the line from Glen Innes to Inverell, what would be the total population to be served by the railway? Not more than about 2,000 on the line.

909. *Mr. Neild.*] You seem to rely largely on the growth of wheat in the district—are you not aware that the poorest countries in the world are devoted to wheat production? But they generally have a good red soil.

910. If the production of wheat gives only a small profit, is it likely that the growth of wheat in that locality will produce the monetary result necessary to make this line pay? I think it is the best paying crop they can grow there.

911. *Mr. Humphery.*] In reply to Mr. Davies, you said you thought the return from the railway will cover the interest on the cost of its construction, and also the working expenses? Yes, after a few years.

912. Are you aware of the figures given by the Railway Commissioners? I saw them.

913. Are you aware that they estimate that they will have a loss of £14,000 or £15,000 a year on the line? With all due respect to the Commissioners, I do not put any faith in their estimate.

914. Why? They send a man who sees how much stock and how much produce there is, and makes his estimate accordingly.

915. And in what way do you arrive at your estimate? I simply say that it is a good country, and such as will make a railway pay when developed.

916. You are generalising in the same way as you say the Commissioners did. Are you aware that the Commissioners' present estimate is less than the estimate furnished some years ago? No. I saw, about a year ago, an estimate prepared by their traffic taker, of what the line is likely to produce.

917. I suppose it is impossible to form anything like an accurate estimate? It is. I have known estimates of the traffic of a proposed line to be made, and the line has afterwards produced three times as much as was anticipated.

918. You recommend the construction of the railway on the assumption that it will create a traffic? Yes.

919. Which will produce a revenue that will cover the working expenses and the interest on the outlay? Yes.

920. Within three years? I would not say that it will pay the interest within three years—it will pay something in three years.

921. *Mr. Dawson.*] Have you been long in the colony? Seven years.

922. You have had considerable experience in the colony? I have been all over the colony.

923. What yield per acre of wheat do you think we should get, with the use of all modern appliances? In some districts the yield ought to be over 30 bushels an acre. I should say that the average ought to be 25 bushels an acre.

TUESDAY, 12 APRIL, 1892.

Present:—

JACOB GARRARD, Esq. (Chairman).

The Hon. William Henry Sutton.	William Chandos Wall, Esq.
The Hon. James Hoskins.	William McCourt, Esq.
The Hon. Frederick Thomas Humphery.	John Cash Neild, Esq.
The Hon. Andrew Garran, LL.D.	Edward William O'Sullivan, Esq.
The Hon. John Davies, C.M.G.	Charles Collins, Esq.
Thomas Thomson Ewing, Esq.	Henry Dawson, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Charles M'Donnell Stuart, Supervising Engineer, Railway Construction Branch, Department of Public Works, sworn, and examined:—

924. *Chairman.*] What position in the railway service do you hold? Supervising Engineer in the Railway Construction Branch. Mr. C. M'D. Stuart. 12 April, 1892.

925. You were examined on this proposal by a Sectional Committee of a previous Public Works Committee? Yes; at Glen Innes.

926. You have been engaged in permanently surveying what is known as the Wellingrove-Swanbrook line? Not in permanently surveying it; but in making a flying survey.

927. That which is now put before us, and which it is proposed to adopt? Yes.

928. Have you recently returned to Sydney from the field? Yes.

Mr. C. M'D. Stuart. 12 April, 1892.

929. Have you been engaged on that work ever since the Sectional Committee saw you there? No; I left there about three weeks after the Sectional Committee were there.
930. And you have not been back? No.
931. You have very little more to add to the evidence you gave then? No, except that I have been over the Glen Innes section of the line since the Sectional Committee were there.
932. Had you not been over it before? No; there was a short piece which I had not been over, between Wellingrove and Glen Innes.
933. Have you been over what is known as the Wellingrove route—Mr. Hogg's line? No.
934. Only as far as it runs in connection with the present survey? Yes, that is all, across it.
935. Do you know where Mr. Hogg is now? I do not.
936. Do you know who surveyed the Guyra to Inverell line? The Engineer-in-Chief stated that it was done by Mr. Jamieson and Mr. Edwards.
937. You do not know whether Mr. Hogg had anything to do with it? No, I do not think he had.
938. You have been engaged on this particular line which we see on the map marked in a puce tint? Yes.
939. And from your knowledge of the country, do you think that that is the best route that can be obtained? Yes.
940. It follows very largely, after it comes down Maid's Valley, the old Swanbrook line? Yes, for some distance.
941. Until it branches off to Brodie's Plains? Yes.
942. And what was your object in going south rather than keeping to the old northern entrance? To tap the Brodie's Plains district.
943. Do you get a better grade? No; we get the same grade.
944. You get a grade of 1 in 60? Yes.
945. How do you know that, if you have not been on it? Mr. Little, a surveyor, has been on this portion of the old line and got that grade.
946. Then your main object in making the southern deviation near Inverell is to tap the traffic at Brodie's Plains? Yes.
947. That also brings the line nearer to Tingha? Yes.
948. What would be the distance between your nearest point on the proposed deviation to Tingha, and what is the distance between Tingha and Inverell? I do not know; it would bring Tingha about 3 miles nearer to Inverell than the other route.
949. Where is the most difficult portion of the proposed line, from an engineering point of view? Crossing the Waterloo Range.
950. Will you show the Committee, on the map, the most difficult portion? The most difficult portion is over the Waterloo Range—the crooked part, from Red Rock Creek to Waterloo Creek.
951. Is that the most difficult? There is a small portion equally difficult, from the head of Maid's Valley for about 5 miles down Swanvale.
952. Then the remainder of the route, is it at all difficult? It is fairly rough down Swanbrook Creek, but it is not so difficult.
953. Is there any difficulty in getting into Inverell from Brodie's Plains? Just at the end where the curves are shown on the map, for about 3 miles, it is pretty rough on the banks of the M'Intyre River.
954. Is that particular portion of the line liable to be flooded at all? No; it is above the flood-level.
955. Is there any land for selection there? I do not think so; it is all sold.
956. Is the line immediately on the side of the hills overlooking the river? Yes.
957. That is always dangerous, is it not? The hills are not very steep—they are flat at the top.
958. You do not anticipate any landslips, such as have occurred on the Illawarra line? No.
959. You know nothing about the surveys from Guyra to Inverell? No.
960. In the course of your investigations, I suppose you have come across a number of people residing in and about Inverell. What is the general opinion as to the point at which they would tap the Great Northern Line? They all seem to wish to tap it at Glen Innes.
961. What reasons do they give? The reason is that they have got a market at Glen Innes. Of course I do not know anything about that.
962. You look at it from an engineering point of view? Yes.
963. The Committee are to understand that although this line is lengthened, it is decreased in cost? Yes.
964. It is therefore a less difficult line than the old Wellingrove line? Yes.
965. If the Waterloo Range is one of your greatest difficulties, and having overcome that difficulty at that point, why is there any difficulty on the Wellingrove route? Because there you have to cross the King's Plains Range.
966. There are difficulties in what is marked on the map as the King's Plains route? Yes.
967. The Committee are not to take it that it is all a plain? It is a plain on the top and there are ranges all round. You have to cross a range to get on to the plain.
968. That accounts for a decrease in the cost, although the line is lengthened? Yes.
969. *Mr. Davies.*] Do I understand you to say that you have had nothing to do with any other portion of the survey except the flying survey? Yes.
970. You have not traversed the other surveys? No.
971. Further than the portion on the red line which goes into Inverell? I have been over it.
972. What is the difference in length of the route marked red, from Glen Innes to Inverell, and the line marked black? The red line is between 8 and 9 miles longer than the black line.
973. You have stated that it is easier to construct a line along the puce survey than on the route marked black? Yes.
974. Which is the most difficult portion of the line? Going through the Waterloo Range and the head of the Swanbrook Creek, after you cross Maid's Valley.
975. Do you cross that valley, or come down the valley? You go up the valley from Glen Innes.
976. Looking at the map of the two surveys, would it not be possible to use the route marked in black, as being a more direct route than the puce line? You could not reduce the cost, or get as good a gradient.
977. You could not get so good a gradient? Not without making the line 3 miles longer than the puce line.

978.

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978. Is it not actually a shorter distance from Glen Innes to Inverell, along the black line? Yes; but there is a ruling grade of 1 in 40, and to make it 1 in 60 we should have to make the black line 3 miles longer than the puce one.
979. What other portions of the line are heavy in cost of construction—nearer to Inverell, or that portion at Wellingrove? The Wellingrove part is the most expensive part of the line.
980. Does the country look better as you get towards Inverell? Yes.
981. And the line will not be of costly construction? No.
982. What is the character of the settlement along the line as surveyed? There is not a great deal of settlement till you get within 10 or 12 miles of Inverell. One of the principal settlements is Brodie's Plains, on the M'Intyre River.
983. What is the population? I do not know the population.
984. During the time that you were making your survey was there much traffic along the main road? Yes; a good deal of traffic.
985. What was the nature of the traffic? That is a thing that I have not gone into.
986. Whilst you were camped there you could not help seeing the traffic? It was principally farm produce, and some tin.
987. Any wood? Yes; there was some.
988. How long were you there? The last time I was there about three months.
989. Do you think that the traffic you saw during that three months would warrant an expenditure of £427,000 in the construction of this railway? That I cannot say. I was only for a short time camped on the main road.
990. How far were you from the main road? Part of the time I was camped on King's Plains, 15 miles from the main road.
991. Are you of opinion that if the line were constructed at a cost of £427,000 it would pay interest on the cost of construction and working expenses? I should not like to say that it would pay the interest straight away—the country would have to be more developed.
992. In how many years would it pay? I could not say at all.
993. Have you a knowledge of what the probable cost per mile would be for the construction of the line? I believe the Engineer-in-Chief stated that it would be £8,000 a mile.
994. You have not gone into the matter yourself? No.
995. That is not part of your duty? Sometimes it is, but in this case I was not in the office at the time when the estimate was made.
996. And you could not tell the Committee whether or not there is a probability of this line paying at an early date? No.
997. You do not know the character of the traffic that would be carried? No; it is very hard to say. The population of the district would have to increase considerably before the line would pay. They would have to produce a great deal more than they are producing at present.
998. Do you know that the land is in the hands of only a few holders? Yes.
999. Are you aware of any large portion of Crown lands in the district? No.
1000. *Dr. Garran.*] Did you stay at Inverell any length of time? I was encamped in the neighbourhood five or six weeks.
1001. Did you go to the north or to the west? I have been north, on King's Plains.
1002. It has been given in evidence here that the district which this line is to serve is rather richer country to the north and west of Inverell than the township, and that the area of good land is to the north and the west? I have never been up that way myself.
1003. If there is a great deal of rich land to the north, and if this line is to be made to develop production, it is more important that we should hit the district than that we should hit the township? Yes.
1004. Do you know sufficient of the country to the north of the line to say whether, if we went a few miles further northward, we could get across by an easier route? I could not say. If you go a few miles to the north of the present line the country gets worse.
1005. You say that the Waterloo Range is the greatest trouble that you have to deal with? Yes.
1006. Does it dip to the north? Yes.
1007. How far north would you have to go to get round more easily? About 2 miles further to the north than the present line.
1008. But could you hit the main line at a point further north? That I cannot say.
1009. You do not know any point between Glen Innes and Deepwater where we could branch off? No.
1010. But you do not know that we could not branch off at any point between Deepwater and Glen Innes? No.
1011. Do you know anything of a private line which it is proposed to construct between Deepwater and Galena? No.
1012. You cannot tell whether we can adopt an easier route? No.
1013. You have only examined the line we have before us? Yes.
1014. It is not an easy country in which to make a railway? No.
1015. And it is impossible to get through that country with a cheap railway? It is.
1016. And you think the country has been sufficiently examined to make it clear that we have got the best line that can be got? Yes, the best line with the shortest distance.
1017. And you say that though King's Plains are level at the top it is necessary to climb to them and to descend from them? Yes.
1018. So we have some summit levels to get? Yes.
1019. Some ascents and descents? Yes.
1020. But we gain nothing there in gradients? No.
1021. If anything it is a question whether there is better land there? That is all.
1022. There is no sufficient justification in your mind for a detour by King's Plains? No.
1023. You are satisfied, as an engineer, that the puce-coloured line on the map is really the best? Yes.
1024. It is very circuitous? Yes; but if you work out a line on the King's Plains at 1 in 60, it will be a very crooked line, and it will be 3 miles longer than the puce line.
1025. Did you go over the Guyra line? No.
1026. Have you been over the Tenterfield to Casino line? No.

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1027. Have you been over the part known as the Newton-Boyd line? Yes.
1028. Do you know anything of the Don Dorrigo route? No.
1029. *Mr. McCourt.*] Is this line easy of access along the route? Not very.
1030. Would it be easy of access for settlers at the intermediate parts? It is easy for the first 10 miles out of Glen Innes, and for the last 12 or 14 miles before reaching Inverell; but between those parts you are going down a mountain gorge.
1031. *Mr. Neild.*] I think you said that this was the best line? Yes.
1032. Would it be possible to obtain a less expensive line per mile if the length were increased? I could not answer that question unless it was worked up for a permanent survey.
1033. Your evidence is that, as far as the investigations which have been fairly completed go, this is the best line? Yes.
1034. Have you considered whether this line might be extended at any future date beyond Inverell? No. I presume that it is very likely that it will be.
1035. Are you acquainted with the proposed line of tramway from Deepwater to Galena? No.
1036. Are you aware that a Bill was recently passed to authorise the construction of this tramway? I was not.
1037. Then you cannot say whether the construction of that line would affect the working of the proposed line from Glen Innes to Inverell? No.
1038. *Mr. Collins.*] Did you say that all the land between Inverell and Glen Innes has been alienated? The greater part of it.
1039. Do you know anything about the land between Inverell and the west, towards Moree? I believe it is very good country.
1040. Is it mountainous? It gets flatter towards the west.
1041. Then if it were extended in that direction they would get a cheaper line? Yes.
1042. *Mr. Ewing.*] You said that the line for the first 10 miles from Glen Innes was fairly accessible, and that the last 12 miles was fairly accessible, but that the rest of the line was unapproachable? Not unapproachable, but difficult of access. You have to cross a mountain range to get to it.
1043. The line is as approachable as the main road, which has served the people for many years? Yes.
1044. You told us that King's Plains were practically a plateau? Yes; when you are on the top.
1045. You do not mean us to understand that the railway will not be accessible? No.

George Alexander Cruickshank, Esq., M.P., sworn, and examined:—

G. A. Cruikshank, Esq., M.P. 12 April, 1892.

1046. *Chairman.*] You represent the district of Inverell in the Legislative Assembly? Yes.
1047. How long have you represented that district? About three years.
1048. Have you been a resident of the district for a longer time than that? Yes; for about fourteen years.
1049. *Dr. Garran.*] You have been so long resident there that you know the district thoroughly? Yes.
1050. You have heard it stated in evidence that the best country is to the north and west of Inverell? Yes.
1051. Is Inverell well posted, considering that the good country is so much to the north and west, for a good commercial centre? Yes.
1052. You do not think it likely to be cut out by any town further to the north? No.
1053. Is Inverell likely to be the permanent business centre of that district? I think so.
1054. In making a railway to a town, is it not necessary to keep our eyes open to the probable future of the traffic? Quite so.
1055. You do not think that the commercial centre is likely to be shifted? No.
1056. Not even further north? No.
1057. Do you know the country north of the line, between Glen Innes and Inverell, to the boundary of Queensland? Yes.
1058. Could we get a line into that rich country to the west by a better route than the Glen Innes line? I think not.
1059. It is all rough country? It is.
1060. Start where you will, you have some difficulty to contend with? I think so. I do not say you would not get quite as good a route, but there are ranges of mountains running up north from Glen Innes.
1061. If we tried any starting-point further north than Glen Innes we should not be able to get any route with less difficulties than this? I do not say that.
1062. You do not know that we could? I do not.
1063. You think we shall have difficulties to contend with wherever we start from? For a number of years I have taken a very active part in working up this railway question. The desire in the Inverell district has always been to go to Glen Innes. Inverell is a very rich district, having a great deal of agricultural land, and there is a good deal of settlement. The land has been chiefly selected, but a great deal has been bought at auction by station-owners, and a lot of the land has passed from the selectors into the hands of the station-owners, a good deal still remaining in the hands of the settlers. I refer to such land as Bukkulla and Brodie's Plains.
1064. How far from Inverell are Brodie's Plains? Brodie's Plains are in a very rich valley of the M'Intyre. This portion is about 12 miles in length, and a little south of the line. Then there is Goomoorah, that is about 14 miles down the river to the north-west, and there is Nullamanna, north again from Inverell. Elsmore is up at the head of Brodie's Plains—that is about 14 miles from Inverell, and within 3 miles of the proposed line. Swamp Oak is about 20 miles north, and there is Bannockburn where there are large agricultural plains, which extend about 20 miles from Inverell.
1065. *Chairman.*] A return was furnished to the Sectional Committee giving the distance as 14 miles? That would be at the Bannockburn head station. I am speaking more as to the parts where the farmers are. It is a good sized run, and the settlers are scattered over it. There are also Rob Roy and Little Plains. When we were canvassing on the railway question, meetings were held by the farmers in all those districts, and resolutions were passed almost unanimously in favour of making a line from Glen Innes to Inverell.

G. A. Cruickshank, Esq., M.P.
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1066. *Dr. Garran.*] Of all those places, which is farthest to the north? Swamp Oak, about 20 miles north of Inverell township.
1067. How far west of the nearest point on the Great Northern Line? I should say probably from 32 to 35 miles.
1068. Too far to make it profitable to carry wheat? They could not carry it.
1069. You said that the large selectors had sold out to the station-owners? Yes.
1070. What proportion? On most of the runs land was bought by auction, and a great deal is held as conditional purchases—very likely half. Of an estate of 20,000 acres probably 10,000 is freehold, and the other 10,000 is in conditional purchases.
1071. That is not exactly an answer to my question;—what proportion of selected land has been transferred to the station-owners? My run was originally 110,000 acres, of which I have now 15,000 acres, the rest being in the hands of selectors.
1072. Have you any idea what the price of the land has been? From £1 to £3 per acre.
1073. And what has been the money inducement to the selectors to sell out? I used to let some farms, and when we had a very good season the town became blocked with produce. At that time the road was impassable from Glen Innes to Inverell, and we only depended on the local market, and when we overgrew the local consumption the wheat could not be disposed of at any price.
1074. Could you not sell it to the squatters out west? Some of it went out west.
1075. Is there a market there? Yes.
1076. Would not the small quantity at present grown at Inverell find a market there? There are only certain requirements in the district. If the local consumption is overgrown then it makes a glut.
1077. Are there any flour mills there? Yes; three.
1078. Is the flour of first-class quality? It is very good.
1079. Is the flour from Inverell appreciated in Sydney by the bakers? I do not know.
1080. Is there at present a good road between Glen Innes and Inverell? It is very much improved of late.
1081. Is it macadamised? A great part of it.
1082. How long does it take a team to travel from Inverell to Glen Innes? Two days and a half.
1083. What do they charge? Two pounds a ton.
1084. And what for back carriage? Thirty shillings to £2 a ton. Since the roads have become better we have found a market at Glen Innes. One miller this year bought 25,000 bushels, and he was trying to arrange for another 20,000 bushels when I was there.
1085. As far as you know, the freehold farmers all round that district are anxious for this particular line of railway? They are all in favour of it.
1086. Do you think they will go extensively into agriculture if it is made? I think so. Several farmers have bought about 2,000 acres each with the intention of going very largely into agriculture, and they are very strongly in favour of a line to Glen Innes.
1087. To what use are they putting the land now? They practise mixed husbandry—farming and running a few sheep, horses, and cattle.
1088. You have grown wheat yourself? Yes.
1089. And you have had sheep and cattle? Yes.
1090. Which paid the best? I should think up to the present time, sheep.
1091. Would it pay better to turn the sheep off and to till the land? It might if I could get a market.
1092. With hired labour? I should not go in entirely for hired labour. I have been letting my farms on terms, taking so much of the produce—about one-third—by way of rental, and supplying ploughs and horses.
1093. Does that pay you better than keeping sheep? I think so.
1094. Would it pay the small graziers better? I think the best agricultural land would be put to the purpose for which it is best adapted.
1095. We have been told that 3s. a bushel is what they must expect to get for wheat;—will it pay the farmers better to grow wheat at 3s. a bushel than to keep sheep? It will pay them better to till the land if they can get 3s. per bushel for the wheat.
1096. Is that the opinion of practical men? Yes.
1097. And they have had sufficient experience to come to a reliable conclusion? Yes.
1098. What is the lowest price you have ever known wheat to be sold at? 1s. 6d. a bushel.
1099. You have known men part with their wheat at 1s. 6d. a bushel? Yes.
1100. That would not pay? Oh, no.
1101. Have you any idea of the extent to which agriculture would be gone into in that district if the railway were made? It would go on progressing gradually. We produce at present about 70,000 bushels per annum. In working the matter out we have this difficulty, that if we went to Armidale we find that Armidale grows its own requirements. Tamworth grows its own requirements, and if we go down towards the south we come into competition with the sea-borne wheat from Adelaide. There are always varying seasons. When we have a good season, on the Downs they may have a bad season. Then there is a rush for our wheat. One year we go to Glen Innes, another year we go further south, and another year we go further north, but whenever we come south we have to compete with the wheat-producing districts between us and the point that we want to reach. In going north we have not got that difficulty.
1102. But between Glen Innes and Tenterfield is there not a very large market for wheat? No. Emmaville takes a good deal of flour, and we have supplied wheat to Glen Innes.
1103. You do not know what becomes of the wheat after it has gone to Glen Innes? No.
1104. The men who buy it there are the people to tell us? Yes.
1105. You have said that the view of the Inverell people has always been in favour of Glen Innes from the very first—was it with the idea that there would be a line from Glen Innes to Grafton? From Glen Innes to the coast. We are not tied to Grafton. There is a wider extent of good land to the north. We have always thought that the great centre of population will be at Grafton, or north of Grafton.
1106. Between Coff's Harbour and the Tweed? Yes.
1107. You want to reach a population near the coast? Yes.
1108. And you want to exchange your wheat for their maize? Yes. They produce many things that we do not produce. We have supplied Grafton with sheep. They are cattle breeders, and they grow sugar whilst we grow wheat.

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1109. Inverell is not at all wedded to the Glen Innes and Grafton line? No, not particularly. I have heard it over and over again said that we must go either to Grafton or to a point further north.
1110. They do not care about the Don Dorrigo line? We want to get to the north. If we go by the Don Dorrigo route to Grafton we have the river between us, and the district to the north would be what we would wish to reach. There are 622,000 acres of Crown lands on the coast between Grafton and the Tweed, along the proposed railway line, and there will be a large population between Grafton and the Tweed. But if we go to South Grafton we shall have the river between us and the part we shall want to get to.
1111. Would you prefer the Tenterfield to Casino line? A line anywhere from Glen Innes to the coast and to the north. There may be such a thing as a line from Deepwater to Casino, or there may be a line from Grafton to Casino, and a line from a point between Glen Innes and Tenterfield to reach that line.
1112. The Engineer-in-Chief says that as far as he knows the line would touch Tenterfield, not Deepwater, but it might turn out that Deepwater would be the better point? It might.
1113. But that does not matter to the Inverell people? No. We are not in a hurry. We think of gradually increasing our agricultural supplies, and as we begin to overgrow our market we shall have to send the produce to the coast or elsewhere.
1114. We have had it in evidence that there is rich land on the Clarence, and that on the Richmond there is an immense area of scrub land? Yes.
1115. And the Richmond will supply a larger population than the Clarence district? Yes.
1116. Then you would rather make for the Richmond than for the Clarence? Personally, I am in favour of the Richmond.
1117. Could you make a shorter cut from Inverell to Deepwater than going by way of Glen Innes? I think so.
1118. Suppose Deepwater is the point you are driving at, could we make a railway from the Inverell district to Deepwater or Tenterfield by a shorter route than by Glen Innes? I think so.
1119. The country is not too difficult? I think not.
1120. Well, then, if the railway of the future, and if the produce of the future are to take the Richmond Valley route, we ought to connect the Richmond Valley with the best line? We do not want to lose sight of the Sydney market. Our great object in going to Glen Innes is that at present there is a large district with which we exchange products. More than that, there will be a great deal of wool, and a great deal of produce wherever the line is made, which will always come to Sydney. We wish to go to Glen Innes, that being a more direct line; and when we get to that point, we shall distribute our goods to the most suitable markets.
1121. You think that by going to Glen Innes you get the advantage of being able both to go to the north and to the south? Yes, and eventually we shall get an eastern line.
1122. If this great extension of agriculture is going to take place, the Richmond people will not eat all your wheat, you will have to ship some of it? Yes.
1123. Do you think you will ship with more advantage at the Clarence, or the Richmond, or at Byron Bay than at Sydney? We shall have a great deal shorter railway carriage to Byron Bay.
1124. Do you think the cost of a cross-country line will be as low as on the main line? We shall have the advantage of supplying the coast country in the first place, then we can ship the surplus.
1125. Supposing that you supply your customers and have thousands of bushels to spare, you must ship the surplus to the world's markets? Yes.
1126. That will go out of some big harbour on the coast, or *viâ* Sydney? Yes.
1127. Which is the best shipping place? If big ships came to Byron Bay, I should say Byron Bay.
1128. Do you think you will ever get such cheap wharfage at Byron Bay as at Sydney? That I could not tell you.
1129. Your agents and dealers have formed no definite opinion on that point as yet? No.
1130. There is a great advantage in having a big port like Sydney? Yes.
1131. You are sure to be able to get ships? Yes.
1132. And to get cheap freight? Yes.
1133. And you think that that would be more than counterbalanced by the short route to the coast? There is something to be said with regard to Brisbane and other northern points.
1134. You do not expect to ship wheat to Brisbane? We have done a great deal with stock there. One year we sent 40,000 sheep to Brisbane.
1135. Has Glen Innes ever sent wheat to Brisbane? I could not tell. I should hardly think we have used the Queensland markets. It must cost about 9d. a bushel to get it to the railway station. Wheat could be brought from Orange and Cootamundra to Glen Innes, to start from there cheaper than we could take it to the station.
1136. Do you know the nearest wheat farm to Glen Innes on the western side? No; there is a number of farms about Clairvaux.
1137. How far is that? About 6 or 7 miles.
1138. So when you get 7 miles away from Glen Innes you can grow wheat at a profit? It is too wet generally to do much.
1139. Where does it cease to be too wet? As soon as you get over the Waterloo Range.
1140. On the eastern side of the Waterloo Range it is too wet? Yes.
1141. Then that is a distance of 13 miles? I should say 15 or 16 miles.
1142. From that point to the westward the climate is good for wheat? There is agricultural land nearly all the way to Warialda—magnificent land.
1143. Are there any farmers on the western side of the Waterloo Range who would send wheat to Glen Innes? I have seen very fine wheat growing on King's Plains.
1144. On the top of the table-land? I have seen it growing 1,200 feet above Inverell.
1145. The wheat-growing district begins 15 miles west of Glen Innes and extends away indefinitely to the west? Yes.
1146. The only reason why there is no good farming along the line of route is that the land is locked up? A great deal of it is locked up. Some of it is locked up in reserves.
1147. I mean in private estates? Within 1 mile of the line there are reserves of 8,000 acres—by Mr. Hogarth's return. 1148.

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1148. Do you know enough of the owners of land between the termini of this line to say whether, when the railway is made, they will break up their estates? Mr. Wyndham said he intended to cut up his land and to sell it.
1149. Do you think they are likely to break up their estates? I think so.
1150. *Mr. McCourt.*] I suppose you have gone into the question as to the revenue likely to be derived from the line? Yes.
1151. Have you read the Commissioners' estimate of the revenue likely to be derived from it? Yes; I have their report.
1152. They estimate that the coaching traffic would bring in £3,200 a year? I do not know what they mean by coaching traffic.
1153. I presume that that is the passenger traffic—do you think that that is a fair estimate? I think that the traffic would be considerably increased. I think that the estimate given by the Commissioners is a very low one. There are from twenty-five to thirty carriers constantly carrying on the road, who do nothing else. I think they carry about 4 tons a load, and there are a great many selectors who carry their own stuff.
1154. I am speaking about the passenger traffic. The Commissioners estimate that the revenue from the passenger traffic would be £3,200 a year. That would be about £10 per day. Do you think that that would pay? I think that the amount would be very much increased.
1155. How much? I think it would be trebled at least.
1156. Then instead of the revenue from the coaching traffic being £10 a day, it would be £30 a day? Yes. I used to travel by the coach from Glen Innes to Armidale before there was a railway, and at that time there was very little traffic at all; but two months after the trains began to run it was difficult to get a seat in the railway carriages.
1157. Supposing the line were constructed, what fare would they charge? I should think about 10s.
1158. Supposing it were 10s.; the Commissioners only estimate that twenty people would travel each day on the line? I should say that there are that number travelling now. There are two coaches each way every day, and it is a usual thing not to be able to get a seat in the coach.
1159. I suppose the coaches carry more than that number now? Yes; and we have buggies and horsemen constantly travelling.
1160. You do not think the Commissioners' estimate a reliable one? I think they have under-estimated the traffic.
1161. As one living in the district you think the estimate much too small? I certainly do think so.
1162. In making up this estimate does the line to be constructed get the credit of bringing additional traffic to the main line? I could not say whether it does or not.
1163. You have been over the line to Guyra? I have been to Guyra, Tingha, Wandsworth, and Armidale.
1164. Why are the people unanimously in favour of a line to Glen Innes—would they not as readily have a line to Guyra? One difficulty is that to go to Guyra we should have to go some hundreds of feet higher, then we should have to go another 150 to 200 feet over the Ben Lomond Range to come back to Glen Innes to start from there for the north.
1165. Is there a large number of acres of Crown lands on the Guyra line? Yes.
1166. And there is the Tingha reserve? Yes; 640 square miles of Crown lands.
1167. Do you think the tin-fields of Tingha are permanent? They are on the wane now; they are not as good as they were.
1168. Is there any chance of deep sinking improving them? That is more a question of testing the deep mines. Some of the mines about Cope's Creek have disappeared altogether.
1169. It has been stated here that the tin from Tingha goes *via* Glen Innes, instead of to Guyra, why is that? There is no population at Guyra, consequently there is no return loading. Nearly all the traffic goes *via* Glen Innes and Inverell.
1170. Is not that caused by the differential rates? That has a great deal to do with it.
1171. That is the sole cause, is it not? No; there is a better road to Glen Innes and it is shorter.
1172. Is it not a fact that you can get a truck of merchandise to Glen Innes cheaper by £10? Yes.
1173. And is not that the reason why they have left off going by Guyra? We must give all credit to the Guyra line. We have no wish to take anything that goes between Tingha and Guyra. There is certain traffic which should go there which belongs to that part.
1174. Had not Wright, Heaton, and Co. at one time an office at Guyra? Yes.
1175. And none at Glen Innes? They have had an office at Glen Innes for a number of years.
1176. When the differential rates came into force they removed from Guyra? Yes; they shut up their office at Guyra.
1177. *Mr. Wall.*] Have you ever forwarded any grain from Glen Innes to Sydney? Not to Sydney.
1178. Have you any idea what the cost is, covering commission? About 6d. a bushel by rail all the way.
1179. Does that include the cost of bags? No; that is only the railway freight.
1180. I want to know the cost of sending wheat from Glen Innes to Sydney? About 5d.; that does not cover the bags.
1181. *Mr. Neild.*] You spoke about future communication with the Richmond River district, and you referred to the possibility of there being a more direct line between Inverell and Deepwater. As a matter of fact, could not a very fair line be found, say, from Wellingrove to Emmaville, and so on to Deepwater. The country is fairly level, is it not? Yes. There is a lot of mining country about there.
1182. But there would be no engineering difficulties, would there, along the route from Wellingrove to Emmaville and Deepwater? Nothing very great.
1183. You talk about the number of coaches—how many passengers do they carry? I cannot tell; sometimes they are very crowded.
1184. I suppose they are licensed coaches—how many are they supposed to carry? There are coaches of different sizes, some carry as many as eleven passengers. I think they have a large coach with three seats inside, and there is what may be called a buggy coach which only takes about six people.
1185. *Mr. Dawson.*] How many acres more do you think will be put under cultivation if the railway is made? I should think that the area under cultivation would go on increasing very rapidly. In our district there is something like 14,000 acres of land under cultivation; and when we found that we were getting a market we should go on putting more and more land under cultivation, so that in a few years, instead of producing 70,000 bushels of wheat, I think we should be producing 200,000 bushels.
1186. Would that be within five years? We should begin almost at once putting more land under cultivation.

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1187. What would be a fair average yield in that district. According to the statistics it is 17 bushels to the acre? We generally consider it about 20 bushels.
1188. Is farming carried on scientifically, or would the yield be increased by more scientific farming? I should think it could be increased by better farming.
1189. What number of fat stock could be sent out of the district? I think that one year we sent 40,000 to Queensland. We have bought sheep down as far as Moree.
1190. It was an exceptional year when you sent that 40,000 to Queensland? Yes.
1191. What would be the output in fat sheep and lambs in the year? The fat sheep ought to be 30 per cent. of the year's lambs. I have made out a list of all the sheep within about 70 miles that would use the railway—I have taken the returns as collected by the Chief Inspector of Stock.
1192. What is the total number? The total is 976,908.
1193. Would it be a fair percentage to take 90,000 as fat sheep? Yes.
1194. Would that 90,000 make use of this line? Yes; I should take out some of those runs, and there would be about 800,000 sheep.
1195. Would it be fair to say that if the line were constructed about 80,000 sheep would be sent every year by it? There would be 80,000 available.
1196. And fat sheep, as a rule, are sold? Yes.
1197. Do you, amongst that 80,000, include those of the small holders, because the farmers, if farming properly, must have a few sheep? You are taking a very small percentage in all. I should probably send away 40 per cent. from my place. At Reedy Creek, out of 37,000, they send away 4,000 fats.
1198. Would there be any sheepskins or other produce? Yes.
1199. What number of sheepskins? A great deal would depend upon the seasons. In working up the statistics, we put down hides, tallow, &c., at 100 tons.
1200. How much of the wool of that 1,000,000 sheep would be taken from Inverell? Nearly all. This year Myall Creek, one of the south-west stations, produced over 1,000 bales, which they sent to Glen Innes.
1201. Would that come to Inverell? It all came to Inverell.
1202. Take the sheep at 1,000,000, what would be the average clip of each? Five and a half pounds.
1203. That would be 5,500,00 lb.? I should think there ought to be 8,000 bales of wool. Five and a half pounds is not a big average.
1204. Would there be any demand for oats and back cargo? What oats we require we get from Glen Innes.
1205. *Mr. Suttor.*] Would there be any other agricultural products, besides wheat and grain, in the district? Yes, we grow a great deal of maize.
1206. What is about the average yield per acre of maize? About 40 bushels.
1207. Do you grow any oats? Not much.
1208. Can you give any idea of the cost of harvesting, per acre? Many of the farmers do the work themselves. They work with their sons on the farms. Farming men get £1 and 25s. a week, and their food. Some, who only work for a short time, get from 6s. to 8s. a day.
1209. *Mr. Collins.*] Do you know the country to the west of Glen Innes? Yes.
1210. What is the distance from Inverell to Warialda? Forty-two miles. I would like to tell Mr. Suttor that I have here a list of the products of the Inverell district, which includes wheat, maize, barley, oats, rye, millet, lucerne grasses, potatoes, and tobacco.
1211. What is the distance between Warialda and Moree? I should think about 55 miles.
1212. What is the character of the country between Inverell and Moree? For some distance it is falling—Warialda is much lower than Inverell. It is very easy country for railway-making, and towards Moree it becomes more level.
1213. Then the distance between Moree and Glen Innes would be about 150 miles? Yes.
1214. Do you know how many travelling stock are sent from that district in time of drought? One year 300,000 passed through Inverell.
1215. Do you know the distance from Moree round by Werris Creek to Glen Innes, to get to New England in time of drought? That is very much further.
1216. It has been stated that it is 325 miles by that route from Moree to Glen Innes? That is probably the distance.
1217. Then if a railway were constructed to Inverell, and afterwards extended out on to the plains, stock would be sent that way to New England, instead of round by Werris Creek? Yes.
1218. There is a good deal of land between Inverell and Moree that is not alienated? There is a great deal of land vacant.
1219. What is that principally used for? I have a list of areas at some of those places. For some distance west of Inverell some of the land is used for farming, some for grazing, and in the Central Division you have 2,500-acre blocks—they are small grazing areas.
1220. They do not grow agricultural produce? Very little.
1221. They get their produce from Inverell? Yes.
1222. Has it been a good season this year at Inverell for maize? Not very good.
1223. Do you know that there has been a tremendous quantity of maize sent from Warwick into New South Wales? Yes. They had a very heavy maize crop this year on the Downs.
1224. And it has been so cheap, although there is a duty of 6d. on it, that it has been sold cheaper than New England produce would be sold? I believe so.
1225. You do not know the number of starving stock that is sent into the New England district in time of drought? I believe that the number is over 750,000.
1226. Do you think that most of these would come by railway if the railway were carried out to the west? Yes, a great many of them would.
1227. *Mr. Ewing.*] Dr. Garran asked you whether you could get fairly easily from Inverell to Deepwater, and you said you believed it was possible that there might be a shorter way? There might be, but we hope such a thing is not probable.
1228. How far is it from Inverell to Deepwater? I should think about 70 miles.
1229. From the map I see that immediately the line leaves Glen Innes it trends away to the eastward. Therefore, a line from Inverell to Deepwater must be the hypotenuse of an obtuse angled triangle, so that you would have to make 70 or 80 miles of railway at least? I have not looked at it from that point of view.

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1230. It trends away towards the eastward, therefore the hypotenuse of the triangle would be a very lengthy line—70 or 80 miles in length? Very likely.
1231. Therefore, to get to Deepwater you would probably have to make 70 instead of 50 miles of railway? I should think so.
1232. *Mr. Collins.*] Suppose freezing works are established in the country districts and people on the plains wish to send their meat to Europe, and there were a harbour at Byron Bay, might they not send it from there? I have spoken about this before, in the House. I believe that if there were a good shipping port at Byron Bay that would be a port for exporting very large shipments of frozen meat.
1233. Being 200 miles nearer than Sydney? Yes.
1234. *Mr. O'Sullivan.*] You said it was probable that 700,000 sheep would be driven into the New England district in time of drought? Yes.
1235. Is it likely that the railway to Glen Innes would be utilised to carry forage to those sheep? Yes.
1236. Probably, then, a trade in forage would be developed? A very large trade would spring up.
1237. The centres which are likely to afford a market for the produce of Inverell lie to the north and north-east, do they not? Yes.
1238. Therefore, they would be served by a line from Glen Innes to Inverell? Yes.
1239. Dr. Garran asked whether Inverell was a business centre for the district at the back—is it a business centre for Goondiwindi, Warialda, and a number of other places? Yes, there are coaches running to Bingera, Moree, Goondiwindi, Ashford and other places, and they all come into Inverell.
1240. Do you know if the business people of Inverell do any trade around Goondiwindi? They do.
1241. Is much wine produced in the Inverell district? Yes; I think something over 40,000 gallons a year.
1242. At the present time there is a considerable trade direct between Glen Innes and Grafton, is there not? Yes. We did a great deal there until the differential rates were made. Nearly all the wool for a distance of 80 miles round Inverell went to Grafton, and we got our loading direct from Grafton, in sugar, wire-netting, fencing, and other articles.
1243. Glen Innes serves as an entrepôt for that trade? Yes; I think I arranged for about 20 tons of sugar myself, when I sent the wool down.
1244. *Mr. Humphery.*] When would the harvesting commence? About the end of November.
1245. How many months would the wheat and wool traffic spread over? The wheat traffic goes on through the winter. The wool traffic mostly from the beginning of October till the middle of January.
1246. During the winter months, what traffic would the railway get? It would get a share of the general exports from the district.
1247. Would it get much live stock? We sell a great deal of our stock up there in the winter months.
1248. Mr. Scarr expressed the opinion that no fat stock would go by the railway from Inverell. He thought it would go by Tamworth, because that place is 200 miles nearer to Sydney. Is that your opinion? A great deal depends on what sort of country you have to travel through.
1249. What is the distance from Bingera to Inverell? Forty-five miles; it is 100 miles to Tamworth.
1250. Would fat stock go by Tamworth or by Inverell to Sydney, the distance from Inverell being nearly 500 miles? The Myall Creek sheep have mostly gone to Queensland. I have known them to come through Inverell. In some cases they would very likely go to Tamworth along the road.
1251. *Mr. Hoskins.*] Has the number of farmers in the Inverell district increased during the last ten years? I should think very little.
1252. The population has increased from 1,000 to 1,700, but you say the farmers have not increased? Many of them are running sheep.
1253. Has the number of farmers in the district increased? I should think they must be increasing.
1254. I suppose that many of them devote their time to agricultural pursuits as well as to running stock? Yes.
1255. Where do they find a market for their agricultural produce? They have had to depend upon the local market. Glen Innes sometimes buys our stocks right out.
1256. Are there not markets at Bingera, Warialda, and other places? Yes; we send to those places.
1257. Still the greater portion of the wheat and produce raised in the Inverell district has been sent to the west. Has it been sent to Glen Innes? As a rule, we send more to the westward. When they get short of wheat at Glen Innes, they will come and buy 20,000 bushels at a time. That would be more than would be sent to the west.
1258. Are not the markets that you have in the west extending markets? We have sent flour to Goondiwindi, but the settlers there also deal with Warwick, so that we only get a share of the trade.
1259. You get the Warialda trade? Yes.
1260. Are you familiar with the betterment system? I have heard about it.
1261. Do you approve of it? I cannot say that I do.
1262. Do you consider it right that the debt of the colony should be increased, and that the property of private individuals should be enhanced in value by 300 or 400 per cent., and the public reap no advantage? A person who has an estate, and who undertakes to make agricultural farms, does a great deal with the estate. He has to find capital to make improvements, to build outhouses and barns, and if he has bad seasons he may come to grief.
1263. I suppose he would not enter into those extensive improvements if it were not that a railway would afford additional facilities for getting rid of the produce of the land? There have been instances of railways going through stations and the land being afterwards cheaper than before the railway was made. At Milkengowrie land sold for 27s. after the railway was made, which before that fetched £2 10s. an acre.
1264. Do you believe that if a railway were made from Glen Innes to Inverell it would cause the value of land to depreciate? No; it would increase the value of a lot of it.
1265. It has been stated in evidence that people living within 10 miles of a railway experience the advantage of railway construction, because they can take their produce to market and return the same day;—do you think that is correct? I think that people more than 10 miles away are fully served by a railway.
1266. Do you not think, as a matter of justice to the colony, that if people have advantages afforded which cause property to be greatly increased in value, they ought to pay some tax to make up the difference between

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between the amount of the profit made in working the railway and the amount of the interest on the outlay? What we are talking about is entirely experimental. If we can get a market for the produce of a farm, and we can sell wheat at 3s. 6d. a bushel, the farmer does not care whether he pays 5s. or 10s. an acre rental, and the taxation of the land would not injure the owner.

1267. Do you think that the making of this railway would cause the land to become more valuable? If it ensured the selling of the produce for a good price, it would, most decidedly.

1268. If a railway increases the value of land, is it not fair to the people that the owners of the land should be taxed to make up the difference between the earnings of the railway and the interest on the capital expended? If the railway is made, and it is shown that the land brings in a better rental, the owners will have no objection to pay a tax to the State for the benefits they derive.

1269. *Mr. Davies.*] I understand that you have a knowledge of the district between Glen Innes and Inverell where a survey has been made of the Swanbrook line? I know a good part of it.

1270. Is it a very rough country? In places it is—about the Waterloo Range.

1271. At King's Plains? At King's Plains there is a lot of magnificent country; but there is some rough country there, too.

1272. The cost of the construction of the line is to be about £8,000 a mile? Yes.

1273. Do you think that any traffic that may be developed within the next 10 years will be sufficient to pay for the expenditure? I feel sure that the traffic will increase, and that it will become a paying line.

1274. Within the next 10 years? I should think so.

1275. What is your present holding? 15,000 acres.

1276. Freehold? Yes.

1277. It originally cost from £1 to £3 an acre? Yes.

1278. Supposing this line is constructed at £8,000 a mile, what additional value would it give to your holding? A great deal will depend on what sort of tenants I should have;—I could not say what amount.

1279. Would the increased value amount to £3 an acre? I should not think so.

1280. You say you contemplated subdividing your portion of the estate in the event of the line being made; is that so? I do not know that I said that. In all probability we shall let some of our land for farms.

1281. What rent per acre would you expect? I have had as much as 27s. an acre rent for land there, but that is an exceptional case. I should think we should get for the best farming land from 5s. to 10s. an acre.

1282. After the railway is made you would not get more than 5s. or 10s. an acre? I should think not. If a farmer takes a farm from me at 5s. or 10s. an acre and at the end of the season there is no market, I have to take the grain and I cannot do anything with it, consequently I get no rent. If there is a chance of getting a fair rent it would be better to pick good tenants and let them have the land at from 5s. to 10s. an acre.

1283. You are of opinion that the line from Glen Innes to Inverell will make a great difference in the value of the land? I think it will increase the value of the land in the district.

1284. Then would it not be fair to adopt the betterment principle, and let the State have the benefit of the increased value instead of giving it all to the private owners? If the land is shown to have improved in value the owners could be fairly called upon to pay a land-tax—some tax to the State for the benefit they have derived.

1285. That could only be applied in a general way, but the betterment principle could be applied to those whose land was increased in value? I do not see how you could put it into force. If you called a meeting of all the landholders and said "We are going to give you a railway," they would say, "We have no guarantee that it will increase the value of our land," and if they had to pay towards it, the probability is they would say, "We will go without the railway." The railway is demanded by the commercial people. It does not benefit the landowners alone.

1286. Have you not shown that it is the producers and landowners who profit by the railway? Decidedly the landowners will.

1287. And the producers? Yes, and the public generally.

1288. But the landed proprietor benefits more directly because the railway gives additional value to his land? In many districts into which railways have gone, they have not given to the land the value that was anticipated.

1289. In what districts? Take the Goulburn district—I believe you can buy estates in that district now as cheap as you could before the railway went to Goulburn. I would also refer to the land between Werris Creek and Gunnedah. Estates there have sold as cheaply as they would have sold before the railway was made.

1290. Take the puce line on the map—I understood you to say that for 20 miles on each side the land would be greatly enhanced in value? I believe it would be. It would be cut up into farms, and if they got a market for their produce the farmers would be able to pay rent.

1291. Supposing that these large estates were cut up into farms for the production of grain, wheat, or maize; would they carry the same number of sheep that they do now? Not if the land were turned into farms.

1292. Then the increase in traffic from one source would be lost in another direction? The landowners now running sheep are making so much an acre; they have a certain income under a fairly secure system. They may turn their sheep into agricultural farms to get a better return; but if you say to them, "By the betterment system whatever difference there is between the return from sheep farming and the returns from agriculture is to go to the State," they will prefer to run sheep to carrying on agriculture.

1293. Owing to rust and to other causes, the people have had to abandon wheat growing and to carry on sheep farming? Yes—mostly other causes. There is a lot of excellent agricultural land in the colony through which railways have gone without actually increasing its value. There are large estates having lots of heavy timber in the New England district, near Armidale, and it costs from £5 to £7 an acre to clear the land.

1294. The land on each side of the proposed line is very good land, I believe? Yes; very good farming land.

1295. And it would be very cheap at £3 an acre? A lot of it would.

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1296. What do you think is a fair value per acre? I have got some of the best and I would take £3 an acre, I think.
1297. With the prospect of a railway? With or without it.
1298. You cannot tell the Committee what would be the value of it if the railway were constructed? I would chance that.
1299. Have you any idea what would be the value of the land if you let it to the farmers and got your rent? If the rent of the land was much increased, it would give an increased value to all the land in the district; but it would be very difficult to tell what the increase would be.
1300. Would it be £1 an acre? Probably it would be.
1301. Have you any idea of any other products that would increase the freights on the railway? There are mining places. They work the diamond mines at Cope's Creek; there are tin and silver fields, and a great deal of wine is produced.
1302. You get the tin from Tingha, *via* Inverell? Yes; it goes that way.
1303. You have no knowledge of the Guyra line? Yes; I have been over it.
1304. Is there much good country there? There is some good country about Guyra, and good land at Ollera. From Tenterden to within a few miles of Inverell it is rotten granite, and not even fitted for grazing.
1305. Is it a shorter line than the proposed line from Inverell to Glen Innes? No; it is a longer line.
1306. What is the difference? The original line from Inverell to Glen Innes was 44 miles. The last survey from Glen Innes to Inverell increased that line to 53 miles, and reduced the grade from 1 in 40 to 1 in 60, and reduced the cost by £65,000. The cost of the present Inverell and the proposed Guyra line are very much the same; but the grade on the Guyra line is still 1 in 40.
1307. I understand that you prefer the Wellingrove and Swanbrook line to any other? Yes.
1308. And you are of opinion that a line, to cost £427,000, between Glen Innes and Inverell would pay? I think it would.
1309. You think the Government would be justified in constructing it? I think so.
1310. *Mr. Wall.*] You said that you had purchased 15,000 acres of your holding of 110,000 acres, is any of that land open for settlement? No; it has all been taken up by settlers.
1311. Is the Crown land in the district still available for settlement? It is.
1312. What is the cost per acre to clear land for cultivation? I should think from £3 to £5 an acre.
1313. If you got only 5s. an acre rent, that would be only 5 per cent. on your investment? Exactly.
1314. You do think it would pay to clear the land at £5 an acre, and let it at 5s. an acre? No; the rent should be 10s. an acre.
1315. The principal product of the district is wheat, is it not? Wheat and wine.
1316. You said that there are about 14,000 acres under cultivation? Yes.
1317. I find that the average yield of wheat is 17 bushels to the acre? Yes; in some Government returns it is 19 bushels to the acre.
1318. Assuming that half of that land was under cultivation, it would give 119,000 bushels of wheat? Yes; but there is a lot of it under lucerne and maize.
1319. *Mr. Neild.*] Can you tell the difference in length between the proposed line from Glen Innes to Inverell and the existing line from Glen Innes to Tenterfield? It is about 3½ miles.
1320. If the line is constructed, there will be a large increase in the growth of wheat? Yes.
1321. Can you give any explanation of the fact that there is already a much larger growth of wheat at Inverell, without railway communication, than there is at Tenterfield, with railway communication? Because there is a very much larger area of agricultural land at Inverell, and Inverell is more favourably adapted for wheat growing.
1322. Is not the yield per acre at Tenterfield higher than the yield per acre at Inverell? I think not.
1323. You will see from the statistics that the Inverell yield is 12 bushels per acre, and the Tenterfield yield is 15 bushels? It depends upon what year the statistics were compiled.
1324. You will see that 1,726 acres at Tenterfield produced 25,775 bushels? Yes.
1325. If you calculate that, you will find that the Tenterfield yield is 15 bushels to the acre, whilst the return shows that the Inverell yield is only 12 bushels to the acre? Yes.
1326. If, with their higher yield per acre at Tenterfield and with railway communication, they do not grow as much wheat as they do at Inverell, is not that a plain proof that the people of Inverell have a better market to the west than they possibly can get to the east, even with a railway? No; because it costs 9d. a bushel to take our wheat to Glen Innes at present, and they will buy it all.
1327. What do you get for it delivered? Something over 4s. a bushel.
1328. Then you pay the carriage yourselves? Yes. They cannot get wheat at Tenterfield; they come to us for it. I think that the statement that the average at Inverell is 12 bushels to the acre is wrong. Other returns give it as 19 bushels.
1329. Is there any great difference between the rainfall at Inverell and at Tenterfield? I think they get more at Tenterfield than at Inverell.
1330. No so much as to prejudicially affect the yield? We get about 28 inches.
1331. Is that sufficient? Yes.
1332. Is the rainfall at Tenterfield unduly heavy for wheat-growing? I do not know much about it at Tenterfield. I know that it is at Glen Innes.
1333. You say that there is a much larger area of good land at Inverell than at Tenterfield? Very much larger.
1334. I suppose there would be more than 1,700 acres of good wheat land at Tenterfield? There is very little good wheat land at Tenterfield.
1335. I suppose that 1,700 acres would not be the limit of the wheat-growing area there? I should think not.
1336. But the fact remains that, with railway communication, Tenterfield does not grow as much wheat as Inverell grows without railway communication? Yes.
1337. *Mr. Collins.*] Have they not imported a lot of Adelaide flour into Inverell. What is the reason that they imported it from Adelaide, if they have such good flour of their own? One reason is that it came from Adelaide to Newcastle as ballast, and came to Glen Innes at the cheap rates, and the carriers, wanting back loading, brought it from Glen Innes.
1338. Does the Inverell flour compare favourably with the Adelaide flour? It is very good flour.

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1339. As a station holder, have you imported any Adelaide flour? No.
1340. *Mr. Humphery.*] Will you say for how many years land may be profitably used for the production of wheat in the Inverell district? The land at Inverell is very rich, strong land, some of it being from 15 to 20 feet deep in black soil. It need never be used for anything but cultivation, though some of the farmers have crops of corn after growing wheat, and afterwards grow wheat again.
1341. *Mr. Dawson.*] Mr. Scarr said he thought that there would be very little fat stock traffic on the proposed line, and, in answer to a question, he said he thought a man would rather send cattle 100 miles by road and 200 by railway, than 45 miles by road and 400 by railway;—Which would you do? I would rather send them by the train.

WEDNESDAY, 13 *APRIL*, 1892.

Present:—

JACOB GARRARD, Esq. (Chairman).

The Hon. William Henry Suttor.	William Chandos Wall, Esq.
The Hon. James Hoskins.	William McCourt, Esq.
The Hon. Frederick Thomas Humphery.	John Cash Neild, Esq.
The Hon. Andrew Garran, LL.D.	Edward William O'Sullivan, Esq.
The Hon. John Davies, C.M.G.	Charles Collins, Esq.
Thomas Thomson Ewing, Esq.	Henry Dawson, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Alexander Hutchison, Esq., M.P., made an affirmation, and was examined:—

A. Hutchison, Esq., M.P. 13 April, 1892.

1342. *Mr. McCourt.*] You are one of the Members for Glen Innes? Yes; Junior Member for Glen Innes.
1343. Do you know the line under consideration? Yes.
1344. Have you read the evidence given before the Sectional Committee? I have seen some of it.
1345. Have you read it? Part of it. I saw reports of it in the papers at the time when the evidence was taken.
1346. I suppose you are prepared to advance a few facts as to where the railway should be constructed? I am prepared to say what, in my judgment, ought to be done.
1347. Have you prepared a statement? I have not prepared any particular statement; but I have a general knowledge of the district, having lived five years at Glen Innes.
1348. Perhaps it would be better for you to make a statement as to your opinion on the subject? I went up to Glen Innes some nine years ago, and lived there five years, following my avocation as a builder and contractor. Having built several banks in the town of Glen Innes, and being somewhat observant of the requirements of that district, as well as of the district of Inverell, I think that I can form a pretty fair opinion as to what the wants of the place are. I made myself acquainted with the farming industry there in particular, and I found that the great difficulty which they had to contend with, not only at Glen Innes but also at Inverell, was the want of a market. I might state that I was some ten months occupied in the construction of a new dwelling at Inverell, and, consequently, I went some twelve or thirteen times to and from Inverell by coach, and I have been over a large portion of the Glen Innes electorate. I might point out that the difficulty which the farmers generally have had to contend against was the fact that the imported produce went up there and competed with that which they locally produced. That added to the difficulties which they had to contend against with a limited market at their command. I may say that Glen Innes is able to produce potatoes and oats in abundance. I can speak from personal knowledge of the matter. They might be able to produce other products if a market could be found. As to Inverell, I know for a certainty that it is a splendid district for growing wheat and maize, but the difficulty at Inverell has always been how to find a market, and to my mind the people there have been greatly handicapped, and the district has been kept back because of the want of a market. I might point out that to my certain knowledge some of the farmers of Glen Innes, and even of Guyra, attempted to find a market at Newcastle for some of their products. But, unfortunately for them, they had to pay a certain amount in before they could square their accounts with their agents, thus proving that it was perfectly useless for them to attempt to compete with the producers of Tamworth, Maitland, and other places. The land that this railway is supposed to go through is of first-class quality. I have been over a large portion of it in a buggy as well as by coach, and I can say, being somewhat of a judge of the matter, having been on the land in the old country, that I feel confident that it is as productive as any other land that I have seen in the colony. It will grow all kinds of farm products, and will grow fruit of superior quality. I am aware that it has been stated in evidence that large estates lie along the route of the proposed line to Inverell; but I am also aware that the gentlemen who own the estates simply availed themselves of the law which existed for the purpose of the alienation of the land, and though some may think it is not wise to carry out a railway of that kind to connect Inverell with the Great Northern Railway, I may state that many of our railways would not have been constructed if that rule had been adopted in all cases. I notice, also, that gentlemen have been asked their opinion whether the owners of the land would be willing to break up their estates, and to lease or sell their land in small farms, so as to permit settlement. I cannot say whether the gentlemen who own the land would be prepared to adopt such a course, knowing as I do how anxious people are to acquire large estates and to retain them. But I think we might induce these gentlemen who hold those estates to part with them by imposing a land tax. A substantial land tax, I think, would meet every purpose. If a railway were constructed to connect Inverell with the Great Northern Railway at Glen Innes, the district of Inverell would have a great future before it, as well as the district of Glen Innes. I have stated that the farmers cannot find a market further south because of the competition of other districts, and because of the districts further south supplying their own wants. It seems to me that the proper course would be to connect Inverell with the Great Northern Railway at Glen Innes, because I have a presentiment that in time a considerable market for the products of those districts will be found in Queensland, and on the north-east coast. I am aware that a line has been surveyed to Grafton, and I am also aware that it has been stated to be impracticable. If a line could have been constructed from Glen Innes to Inverell as direct as possible at a reasonable cost, I should have favoured the direct route from Inverell to Grafton.

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Grafton. But in the absence of that direct route, it would be greatly to the advantage of the people of Inverell to have the means of interchanging products with the land lying north of Grafton. As one place produces one thing, and the other district produces other things, I believe a considerable trade would spring up. Although I have no personal knowledge of the land west of Inverell, I have been informed that it is beautiful country, superior to anything that I have seen on the other side. The difference of climate enables one district to grow one class of products and the other to grow another kind. In reference to the town of Glen Innes itself, it has advanced very considerably during the time I have known it. When I went to Glen Innes they were constructing that section of the Great Northern Railway extending from Armidale to Glen Innes. I was there when that section was completed, and the town has progressed considerably since then. I have put up a number of buildings there myself, and other gentlemen have done the same. The town has maintained its own, and is not likely, in my opinion, to go backwards. I might say the same of Inverell. Banks and other buildings have been erected there during recent years, giving satisfactory proof that the condition of the district is sound. I would take the liberty of drawing attention to certain statistics which I hold in my hand. I have a return which I wish to put in as evidence. It is a return of all goods traffic, inwards and outwards, for the past five years from Guyra and Glen Innes to Inverell and other places in the district to the west:—

Guyra.

RETURN showing traffic from Guyra to Inverell and district to the West, and *vice versa*, for the five years ending December, 1890.

Year.	Passengers outwards.		Goods inwards.		Goods sent West.		Goods outwards.		Goods out from West.		Wool outwards.		Total Revenue.
	No.	Revenue.	Tons.	Revenue.	Tons.	Revenue.	Tons.	Revenue.	Tons.	Revenue.	Bales.	Revenue.	
		£		£		£		£		£		£	£
1886 ...	3,698	1,183	1,445	5,961	1,080	5,311	1,518	3,015	1,001	2,018	995	543	18,031
1887 ...	3,079	1,356	987	2,674	611	2,310	1,148	1,960	671	1,463	949	520	10,283
1888 ...	2,977	1,504	1,100	3,017	531	2,336	1,769	2,137	610	1,005	1,251	743	10,742
1889 ...	3,147	1,493	1,589	5,292	700	3,063	2,946	4,062	781	1,617	1,194	958	16,485
1890 ...	2,705	1,663	1,526	5,001	472	1,856	2,732	2,768	636	1,354	1,096	586	13,228
Totals	15,606	7,199	6,646	21,945	3,394	14,876	10,113	13,942	3,699	7,457	5,485	3,350	68,769

Glen Innes.

RETURN showing traffic from Glen Innes to Inverell and district to the West, and *vice versa*, for the five ending December, 1890.

Year.	Passengers outwards.		Goods inwards.		Goods sent West.		Goods outwards.		Goods out from West.		Wool outwards.		Total Revenue.
	No.	Revenue.	Tons.	Revenue.	Tons.	Revenue.	Tons.	Revenue.	Tons.	Revenue.	Bales.	Revenue.	
		£		£		£		£		£		£	£
1886 ...	8,512	8,610	10,026	31,764	4,633	11,074	4,072	10,109	3,064	4,817	5,448	3,160	69,534
1887 ...	6,852	5,975	7,248	23,044	4,385	12,382	3,948	7,649	2,986	4,983	5,260	2,939	57,632
1888 ...	6,269	6,224	5,501	14,633	4,830	13,065	3,320	5,331	3,071	4,278	3,195	1,899	45,430
1889 ...	5,940	6,374	7,068	15,078	4,253	9,832	3,775	6,685	2,572	4,794	6,203	3,989	47,652
1890 ...	5,914	6,322	6,608	17,097	3,908	10,055	4,930	7,988	2,832	4,751	6,969	4,181	50,304
Totals	33,487	33,505	36,521	103,116	22,011	56,408	20,045	37,762	14,525	23,623	27,075	16,228	270,642

I would point out that the total number of passengers from Guyra, going towards the west, during the five years from 1885 to 1890 was 15,606. The total number for the five years, from Glen Innes to Inverell, and the district to the west, was 33,487. The revenue from the passenger traffic from Guyra was £7,199, and the revenue from the passenger traffic from Glen Innes to Inverell and the west, was £33,505. The goods carried from Guyra were 6,646 tons, and from Glen Innes, 36,521 tons. The revenue from the goods traffic from Guyra was £21,945, and the revenue from the traffic from Glen Innes to Inverell was £103,116. These figures show that the natural trend of the traffic is to Glen Innes, and not to Guyra. The total revenue received from this traffic to Guyra, going west, during the five years was £68,769.

1349. At the time of that return, was Glen Innes the terminal station to the north? No; this return is up to the year 1890.

1350. During a portion of the time for which the return was made out, was Glen Innes the terminal station? I am not aware that it was. It might or it might not have been—I could not say at present. The return goes back to the year 1885.

1351. Were you at Glen Innes in 1885? Yes.

1352. Was it then a terminal station? No; the railway was beyond that station. The work was commenced and finished right away to the border during the time that I lived in Glen Innes. The total revenue from Glen Innes, on account of goods received from and despatched towards Inverell and westward during that five years, was £270,640, as against £68,769, the amount of the receipts at Guyra. This is evidence that the natural trend of the traffic is to Glen Innes. I may point out, also, that I put a question to the Colonial Treasurer (who is the Minister for Railways) in the month of January last, asking for the total tonnage of the traffic of Glen Innes and Guyra for two years—1890 and 1891. Mr. See then stated that the tonnage at Glen Innes in 1890 was 11,770.

1353. *Chairman.*] Inwards and outwards? Yes; in 1891 it was 12,051 tons. The tonnage at Guyra in 1890 was 4,207, and in 1891, 2,799, showing a considerable decrease at Guyra, and an increase at Glen Innes.

1354. *Mr. McCourt.*] Was that increase caused by the differential rates? No; I believe not. I do not know what alterations may have been made on account of the differential rates.

A. Hutchison, Esq., M.P. 13 April, 1892.

1355. How long have the differential rates been extended to Glen Innes? I suppose eighteen months or two years.

1356. That would embrace a portion of the period of that term? This return is for the five years ending with 1890 inclusive. On the 8th May, 1890, my honorable colleague, Mr. Wright, asked the following questions of the Colonial Treasurer:—

(1.) The number of tons of goods carried by rail to Glen Innes for the year 1889?

(2.) The number of tons of goods (exclusive of wool) despatched by rail from Glen Innes for the year 1889?

(3.) The number of bales of wool (and weight of same) sent from Glen Innes during the year 1889?

(4.) The like information regarding Guyra station?

In answer to those questions he received the following comparative statement:—

Description.	Glen Innes.	Guyra.
Number of tons carried by rail	7,090 tons.	1,587 tons.
Number of tons of goods (exclusive of wool) despatched by rail	2,992 "	2,395 "
Number of bales of wool sent by rail	6,191 bales.	1,060 bales.
Weight of bales of wool sent by rail	1,288 tons.	225 tons.
Total	17,561	5,267

1357. You stated that the farmers of Glen Innes have no market for their produce? A very limited market.

1358. They cannot send it away and find a market;—is that so? Yes.

1359. And they have at present railway communication north and south? They have.

1360. If the people of Glen Innes cannot find a market, how are the people at Inverell to find a market for their produce? By the ultimate construction of a railway from some point towards the coast—that is to say, either to Grafton or Byron Bay, or some such place.

1361. Unless a railway is constructed to the coast, this railway to Inverell will be of no use? I certainly do not say that. It will be the life of Inverell; it will give an outlet for the produce.

1362. Without a railway to the coast it will be of no use to the farmers? Not exactly that. It would not be so useful in the absence of a railway to the coast as it would be with a railway to the coast.

1363. Since the construction of a railway to Glen Innes, has agriculture in that district increased or decreased? I think it is much about the same. Perhaps in some cases it has decreased round about Glen Innes, because of the cheap freights allowing the produce to be imported.

1364. Will not produce be imported into Queensland? There has been a duty on farm produce for a considerable time in Queensland. Consequently there is a barrier there against the people of Inverell.

1365. Is Queensland not supplying the district with corn? I believe that a quantity came down there this season; that was owing to the abundance of the crops about Warwick.

1366. They had a good crop at Warwick? A splendid crop.

1367. According to what you say, farming does not pay in the Inverell and Glen Innes districts? It does not pay as I should like it to pay if I were a farmer. Many of the farmers have a life of drudgery.

1368. The Commissioners say there would be a loss of £17,000 a year on this railway;—if that is so would you advocate its construction? I believe it would be the correct thing to construct a railway from Inverell to Glen Innes even though that were so, because, as an observant man, I have seen in every direction that after a railway has been constructed the traffic materially increased, as regards both goods and passengers. I have no reason to believe that anything to the contrary would take place at Inverell. On the contrary, I believe that where one passenger travels now, there would be ten if the railway was made. That would hold good in regard to farm products also if a market was found.

1369. You are not in favour of the Guyra line? I am not prejudiced against any route, but I think from a national standpoint a line from Glen Innes to Inverell is preferable. The land is superior along the Glen Innes route, except in very small patches. My knowledge of the district extends as far as Wandsworth. The country there is very good. After that it is a kind of rotten granite formation, and is not productive.

Francis Augustus Wright, Esq., M.P., sworn, and examined:—

F. A. Wright, Esq., M.P. 13 April, 1892.

1370. *Chairman.*] You are one of the Members for Glen Innes? Yes.

1371. *Mr. Wall.*] Can you give the Committee any information with regard to the traffic in the Inverell district;—we have been informed that some twenty-four teams are constantly employed carrying goods to Inverell? Yes, there is about that number, and also occasional teams from Guyra.

1372. Have you a Parliamentary return bearing on the question? I have.

1373. Can you speak as to its correctness? No; it has been compiled by the Railway Department.

1374. Have you been over the country between Inverell and Glen Innes? Yes, several times.

1375. Can you speak of the character of the country there for agricultural purposes? The country between Inverell and Glen Innes, except the Waterloo Range, is nearly every inch of it first-class soil. There are one or two intervening belts of bad country; but as a whole it is really magnificent country. Even on the table-land of the Waterloo Range agriculture is successfully prosecuted. It is said that as much as 50 bushels to the acre has been grown there. I do not swear to that, but I am told that it is a fact.

1376. With regard to the land at Glen Innes, can you tell us the cost of bringing it under cultivation? It is not difficult to clear—it is timbered with box and other native trees, but the cost of clearing it will not average more than that of ordinary forest country.

1377. What would be the cost per acre? I think about £4 an acre would be the cost of clearing it for crops. There is clearing and clearing. If you clear land as an Englishman understands clearing, taking out all the stumps, it would cost much more than that; but I am speaking of the way in which land is cleared in Australia in the early stages of cultivation.

1378. You think it could be cleared, fenced, and let in farms for an expenditure of £5 an acre? Yes, I think that that would quite cover it.

1379.

F. A. Wright, Esq., M.P. 18 April, 1892.

1379. We are informed that a great portion of this land is locked up. Could you inform us as to the probability of its being devoted to agriculture in the event of the railway being made? A large portion of it is locked up. It is in the hands of big owners; but if they saw an opportunity of selling it or leasing it for agricultural purposes, I take it they would do that in preference to keeping it for sheep. The whole of the land between Inverell and Glen Innes is really good, except two or three intervening strips. I am told that there is a considerable amount of land in public reserves in that country. I believe that all the land which is ordinarily open for selection is gone—it is either locked up in freehold estates or in reserves.

1380. Would the construction of this line considerably improve the value of those estates? It would, very considerably.

1381. Have you considered whether what is known as the betterment principle should be applied in this case? I think it should be applied in every case, and much more extensively than it has been. I hold that the betterment principle should be applied not only to the land through which the railway runs, but to all the land that is really benefited by the railway, to a distance of 10 or 12 miles back from the line. Even lands at a distance of 15 miles are increased in value by the construction of a railway.

1382. Have you considered how this betterment principle may be applied in connection with it? I should think there is only one way in which it can be done—to estimate the benefit likely to accrue and make a calculation, the land to bear a *pro rata* proportion of the charge. The land through which the railway immediately runs would be more benefited than the land 3 miles distant, and the land 3 miles distant would be more benefited than land 10 miles back. It is a question for an actuary. I am not prepared to go into figures.

1383. Do you think that in the event of this railway being constructed it would pay the present owners of the land, who, I understand, are engaged in wool-growing, to give up pastoral pursuits and go into agriculture? I think that a great deal of land would be so utilised in a very short time.

1384. Something has been said about timber on the line; is there any market where it could be disposed of? I have seen no marketable timber on the route. There may be timber a short distance off the route. I have been five or six times between Inverell and Glen Innes, on two different routes, but on neither route have I seen marketable timber.

1385. There was some promise by an owner of land on one of these rival routes to dispose of land required for the railway at a nominal rate? I heard it said that the Trustee of the King's Plains Estate would give the whole of the land free. The line would run 13 or 14 miles through that estate.

1386. Do you know the proposed line from Guyra to Inverell? I know the line that was proposed originally.

1387. Have you any particular knowledge of that line? I have been through that country twice.

1388. As a practical man, which do you think would be the most suitable—a line starting from the northern line, nearer to Sydney, and creating a feeder to the northern line? As one of the Members for Glen Innes, I shall be considered prejudiced if I express an opinion. Before I was a Member for Glen Innes, when I was Minister for Works, I suggested that a line should be made from Inverell to Glen Innes, and I do so now, not in the interests of Glen Innes. It appears to me of little importance to Glen Innes whether the line is made to that place or not; but as far as Inverell is concerned, it is of the greatest importance as to where that line joins the main line. I think that a junction at Glen Innes would be the best for many reasons. There is a considerable population at Glen Innes, and a considerable interchange of commodities between the two places. Glen Innes does not grow wheat to any extent, and cannot—it has a wet climate. At Glen Innes they grow potatoes and other root crops very luxuriantly. There is a large demand for wheat at Glen Innes, and the supply is drawn, when available, from Inverell, and is being drawn from there this year, notwithstanding that they are handicapped by a rate of carriage amounting to 35s. a ton. Considerable quantities of potatoes are sent from Glen Innes to Inverell, and other products are sent which are grown about Glen Innes and not at Inverell. Apart from that, Inverell will ultimately become a great wheat-growing country, and the question is, where can they get a market. Is it to be north, south, or east. I think anyone who examines the question will admit that the market must be on the eastern coast land, in the northern portion of New South Wales, and in the southern portion of Queensland. If they attempt to send wheat to the south they have to send it to very fine wheat-growing districts, such as Armidale and Tamworth; and if they send it to Sydney they have to pay a very heavy rate of carriage. I think the great market for the districts round Inverell would be on the north coast land, and in the southern portion of Queensland, down as far as Warwick. The country between Glen Innes and Warwick is of a sterile description; it contains a large population, but produces very little grain. The market for Inverell is east and north of Inverell, not south.

1389. The evidence here has been rather to lead us to infer that there is a good deal of cultivation about Warwick? There is a little maize grown at Warwick, but no wheat. The only portion of Queensland that produces wheat is the Darling Downs—Warwick is not on the Downs.

1390. Having been Minister for Works, I suppose you have considered the desirability of building lines for feeders, and whether it is desirable that branch lines should be constructed at right angles to the main line? As Minister, I considered two things; what was best for the country as a whole, and what was best for the district concerned.

1391. In considering the line are you assuming that the terminal point will be at Inverell, or whether there would be a further extension. We would like to know your opinion of the line from Glen Innes to Inverell, without regard to any further extension? I am not dealing with the coast line. I look upon that as something in the dim future. It will not be constructed for many years. I am dealing with the line from Glen Innes to Inverell. I know the objection has been raised that if a railway is constructed *via* Guyra the carriage of goods to Inverell will be cheaper. It will be nothing of the kind. It will be exactly the same as it is now. Goods are carried now to Glen Innes on the truck system. Goods are carried to Wallangarra at the same rate, and if a railway is constructed to Inverell they would be carried at exactly the same rate. At the ordinary mileage rate they could not compete with the coast. To prove that I will read a few figures which I wish to give as evidence. Second and third-class goods would be the same price by each route in truck loads, the manner in which these classes of goods must be carried to secure the traffic. If they were sent by the ordinary rate, second-class goods by rail to Inverell, *via* Guyra, would cost £6 18s. 9d. per ton; third-class goods, £9 13s. 3d. per ton. The bulk of the storekeepers' goods are second-class goods; but rice, tea, drapery, groceries, spirits, and wine are third-class goods.

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goods. The carriage by steamer to Grafton and by road is:—Freight, 15s.; road carriage, £4 10s. to £5 10s.; making, £5 5s. or £6 5s. To that I add 10s. for marine insurance, a liberal allowance, bringing up the charge to £5 15s. or £6 15s. It is absolutely necessary, therefore, whether the line is constructed by Glen Innes or Guyra, to carry at truck rates, or the railway must lose the traffic. That contention, therefore, about the Guyra line giving any advantage in the way of cheapness falls to the ground.

1392. Is there any advantage in that route as regards expedition? That is an advantage, but it is not sufficient to cover the difference between a charge of from £5 15s. to £6 15s, and a charge of £9 per ton. I want to point out that by the A rate, the carriage between Sydney and Inverell, *via* Glen Innes, 475 miles, will be £1 10s. 8d. a ton; and the carriage between Sydney and Inverell, *via* Guyra, 443 miles, would be £1 9s. 1d., giving an advantage in favour of the Guyra route of 1s. 7d. per ton. But for the miscellaneous class of goods (6-ton trucks), the difference in favour of Guyra is 10d., the rates being, *via* Glen Innes, £1 2s. 4½d. per ton, and *via* Guyra £1 1s. 6½d per ton. The special rates for goods on the up journey in trucks of 6 tons (1st October, to 31st December) are:—*via* Glen Innes, £1 0s. 1d.; *via* Guyra, 19s. 7d.; giving a difference in favour of Guyra of 6d. The special rates (from January 1st to September 30th) are:—*via* Glen Innes, 17s. 5d. a ton; *via* Guyra, 16s. 11d. per ton; giving 6d. in favour of Guyra. The charges for goods going north to the Queensland border, according to the A rates, are:—Inverell, to and from Wallangarra, *via* Guyra (163 miles), 14s. 5d.; *via* Glen Innes (121 miles), 11s. 5d. a ton—the difference in favour of the Glen Innes route being 3s. By the miscellaneous rates, the charges *via* Guyra to the Queensland border are 13s. 4d. a ton, and *via* Glen Innes 10s. 1d., giving a difference in favour of the Glen Innes route of 3s. 3d. By the special rates (1st October to 31st December), *via* Guyra, 11s. 9d.; *via* Glen Innes, 10s. 3d.; difference in favour of the Glen Innes route, 1s. 6d. By the special rates (1st January to 30th September) *via* Guyra, 10s. 6d.; *via* Glen Innes, 9s. 4d.; the difference in favour of the Glen Innes route being 1s. 2d. From Inverell to Warwick the A rates are:—*via* Guyra, £1 3s. 8d. per ton; *via* Glen Innes, £1 0s. 8d.; a difference in favour of the Glen Innes route of 3s. Special rates *via* Guyra, 17s. 6d.; *via* Glen Innes, 16s.; difference in favour of Glen Innes route 1s. 6d. The rates of carriage of wheat, maize, and other grain in Queensland are:—From Wallangarra to Brisbane, 232 miles (A rates), £1 4s. 2d.; from Wallangarra to Warwick (64 miles), 9s. 3d.; from Brisbane to Warwick (168 miles), 19s. 5d.; total charge *via* Warwick, £1 8s. 8d.; giving a difference in favour of the direct route to Brisbane of 4s. 7d. If my contention is right, and the traffic has to go north to a considerable extent, there will be a clear gain in favour of the Glen Innes route. If the goods are to come south from Inverell, there is a very slight gain in favour of the Guyra route: if they have to go north there is a substantial gain in favour of the Glen Innes route. I put these facts before the Committee, because they are facts with which I am perfectly familiar. An ordinary person looking over the rate-sheet would find it a difficult job to work the thing out; but I have been able to do it on account of my experience in the carrying business. As regards the cost of the railway, I have made an estimate of my own, which I think will be found pretty nearly correct. I may say that I have had a longer experience of railway matters than any man in Australia, outside the Department. I will give the Committee the benefit of my calculations as to the probable cost of this line and its receipts. I have allowed £400,000 for the construction of the line, which I think ample. My figures are as follows:—Cost of 53 miles at £7,000 per mile, £371,000, or, say £400,000; annual cost for interest on £400,000 at 3½ per cent., £14,000; working expenses, traffic branch, £1,800; locomotive branch, £1,600; permanent way, &c., £3,000; making £6,400 a year for working expenses, which, added to the £14,000 a year for interest, gives a total of £20,400 a year.

1393. I should like to ask how you arrived at these figures? By calculations which I have been in the habit of making for years as to the cost of working railways.

1394. It has been stated by experts that the grades could not be altered, and that no alteration could be made in the cost. It has been pointed out that in one line there is a grade of 1 in 40, and in the other of 1 in 60. If you base your calculations as to the cost of construction on reliable data, the Committee would like to know how you arrived at it? I have arrived at the opinion that the line should not cost more than about £7,000 a mile. If it costs more than £7,000 or £8,000 a mile, the money will not have been judiciously expended. I think it ought to be constructed for less than £8,000 a mile, as there are no works upon it of any great importance.

1395. *Mr. Hoskins.*] You are aware that in addition to the cost of making the railway there are stations to be provided, siding accommodation and rolling stock? I include all that.

1396. But the Railway Commissioners do not? Rolling stock is not included in the cost of railway construction, and I am not attempting to deal with the cost of rolling stock. Neither is the land included, though I think it should be taken into consideration in estimating the cost of a railway. I will now refer to the revenue. My figures are based upon the Departmental estimate. The inwards goods sent west £10,055, outwards goods from the west £4,751; wool (about 15,000 bales) £4,181. I estimate the passengers and mails at £4,000—a very low estimate—and £3,500 per annum would be the amount of the additional revenue for the work now actually done by teams going between Glen Innes and Inverell, carrying from 35 to 40 tons a week. That makes a total of £26,487, giving a surplus of £6,087. Of course, I shall be met with the statement that the £10,000 for the goods sent west, the £4,700 for the goods from the west, and the £4,181 for wool is all charged for the goods from the port of termination—Sydney, or at Newcastle. I am aware of that. But the traffic that now exists will be very largely augmented from two sources—first, the construction of the railway will bring into Inverell from 10,000 to 12,000 bales of wool per annum more than go there now.

1397. *Mr. Collins.*] It goes to other parts? A great deal of it goes to Queensland now. Then the line will induce a very large traffic in grain which does not exist now. The land round Inverell is some of the most fertile in Australia. You can go 120 miles straight west, and the land is of the same rich description. A great deal of the traffic from that district will gravitate to the railway. The present traffic is no criterion as to what the traffic will be when the line is constructed. I do not think £4,000 at all a high estimate; but a very low estimate of the passenger traffic, and I think that the £3,500 per annum for the traffic now actually carried would be largely augmented by the facilities for transit provided by a railway.

1398. *Mr. Wall.*] You are taking credit for the traffic from one terminal point to another? That is the only way you can get at it.

1399. The main line will get the advantage of the haulage of that traffic? Yes.

1400. Any additional traffic that springs up will add to the traffic on the main line? Yes.

1401. Having considerable business transactions in connection with the traffic in that district, do you think you can place reliance on your figures? I am positive that I can.

1402.

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1402. Does your business connection with the district convince you that this is a fair estimate? I am satisfied from my own knowledge that the estimates which I have given are very considerably under what will actually be realised.
1403. *Mr. Neild.*] I think you said that there was any quantity of wheat produced on the Darling Downs, in the vicinity of Warwick? Warwick is not on the Darling Downs. There is a considerable quantity of wheat produced on the Darling Downs.
1404. It is in evidence before the Committee that this wheat finds its way to the New England districts? I have never heard of it.
1405. Then you think that the Queensland production of wheat would not interfere with the Inverell wheat finding a market in Queensland? No. I think so for this reason, that Queensland does not produce one-eighth of the wheat that she consumes.
1406. That is Queensland as a whole? Even the southern districts of Queensland do not produce a quarter of what they consume.
1407. Then with reference to the goods carried west, are you under the impression that if the line is constructed the whole of the goods now characterised as western goods will go over the line? Every pound. I believe the traffic will be quadrupled in a very short time.
1408. You are of opinion that the Inverell farmers must look for a market for their wheat in Queensland and in the northern part of New South Wales? Yes, in the northern districts of the colony.
1409. Is Tenterfield a wheat-growing district? It is, to a small extent.
1410. The production per acre is equal to the production in the Inverell district, is it not? Well, if it is, it is only the result of good cultivation in one place and bad cultivation in the other. The soil round Tenterfield is of a second-class character, but the soil at Inverell is of a first-class character. Tenterfield, is granite country, it lasts a few years and then is worn out; the Inverell soil will last for ages.
1411. If the market for northern grown wheat is in the district you state, can you give any explanation of the very small area that is under wheat cultivation about Tenterfield? I say that Tenterfield is not adapted for wheat producing. With the exception of a very small area immediately around Tenterfield, the country is of the poorest description. It is fit for nothing but grazing sheep.
1412. Would you be surprised to hear that the last return shows 3 bushels to the acre more at Tenterfield than for Inverell? No; I should not be surprised. I will tell you why. I could produce a greater yield on a quarter of an acre on the Parramatta River than would be produced on an average in a more suitable district. Tenterfield may grow more to the acre on river flats and other patches of good soil, but it cannot be compared to Inverell for extensive fertile soil. You can at any time produce a large yield on a very small patch. Mr. Mechie grew 72 bushels to the acre on Tiptree Common, but he did it by high class cultivation and the use of manure.
1413. You would not call 2,000 acres a very small patch? Yes, I should, when speaking of the hundreds of thousands of acres of fertile land at Inverell.
1414. My question had relation to existing facts, not as to future possibilities? You cannot compare the products of a little patch of a district with those of a place like Inverell.
1415. Do you consider that the people in the north coast districts will be large consumers of Inverell wheat? I think so.
1416. That would be dependent upon the construction of the railway? To a certain extent it would; but I think they could be supplied by teams.
1417. By teams from Glen Innes? Yes; they could send flour from Glen Innes to Grafton at less than £2 a ton in the wool season.
1418. Would it not be possible to send flour from Sydney at a very much lower rate than that? Yes.
1419. Then would not competition by steamer be greater in the northern coast districts than the existing competition by rail in the New England district? I do not quite catch your question.
1420. We have it in evidence, and I think you have given similar evidence, that there is no market for wheat or flour south of Glen Innes? No, I do not think there is.
1421. Do you think there would be a profitable market in the coast districts? Yes.
1422. But would not competition by steamer to the coast districts be greater than the competition by rail to the districts south of Glen Innes? That altogether depends upon the price of commodities. It is governed by the price.
1423. Is it not a fact that the increase of transit accommodation tends to equalise prices? Yes, no doubt; but in that case it would not.
1424. Why? To the north you may have a prolific harvest, when in Victoria and South Australia you have a drought. Through one particular belt of country having a good rainfall, you may have an abundant harvest.
1425. But if there was a dearth, there would be a market to the south by rail? Not necessarily. Armidale and Tamworth might have the same downfall of rain.
1426. That is cutting it very fine? It is all dependent upon the cost of the article. If wheat was 1s. a bushel more at Inverell, it would prevent competition at Grafton.
1427. You have seen the estimate of the Railway Commissioners as to the expected earnings of the proposed line? No, I have not.
1428. The figures which you have given to the Committee are the result of your careful consideration of the whole matter? Yes.
1429. And are based largely upon the knowledge that you have gained in the extensive business of your firm? Yes.
1430. *Mr. Dawson.*] You say that about Tenterfield the good land is in patches;—I take it that you cannot get the same area there that could be ploughed and worked as you can get at Inverell? Nothing like it. At Tenterfield there are only a few patches on the creeks.
1431. Where it will grow good crops; but it would not pay as a commercial commodity? No.
1432. *Mr. Sutter.*] Have you any idea of the population of your electorate? I think it would be about 13,000 or 14,000.
1433. How many electors are there in that electorate? Two thousand three hundred. It is an extensive electorate.
1434. Are not a great many of your electors at Glen Innes as well served by the northern line as they can be served? It is not Glen Innes but Inverell that is to be considered.

1435.

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1435. Have you any idea of the population of the Inverell electorate? Not of the electorate. I think that the population of Inverell and the immediate neighbourhood would be about 2,500. There is a large population between the two towns, and considerable trade is done between the two places independently of any outside place.

1436. *Mr. Collins.*] Do you know the nature of the country between Inverell and the west? Yes; it is a basaltic description of country, 100 miles to the west.

1437. Do you know the quantity of forage that has been sent out to the west in time of drought? I do not know. I should be ashamed to mention it if I did; it must have been so enormous.

1438. Do you think that if the railway were constructed to Inverell forage could be supplied? It could from Glen Innes. Glen Innes grows good maize and good hay.

1439. From Inverell? Inverell could send forage, and Glen Innes could send forage.

1440. Then, if the line stopped at Inverell, would you believe in the construction of it? No; I think the ultimate termination of the line will be away to the west.

1441. Do you know the country round about Moree? Yes.

1442. Would you advocate the construction of a line to Moree? Yes; but I think it should go more to the north than Moree. Moree should be connected with Narrabri, and that would intercept a large amount of trade on the Queensland border. In view of a line being constructed from Glen Innes to Byron Bay, it would bring Moree 250 miles nearer to the coast? It would open up all that country, and give it a port of shipment.

1443. With regard to sending stock from the western plains to New England, would it be advisable to have a line constructed from Moree to Inverell to give a shorter route than by Werris Creek? I think the line should go a little bit north of west. Moree may be the place for it, but it should go a little bit north.

1444. The distance from Moree to Glen Innes, *via* Werris Creek, is 350 miles? Yes.

1445. That is the way that they have to send stock at present? Yes.

1446. You think that the line should go from Inverell to the west? Clearly so. I do not look upon Inverell as the terminal point. I think that the line to the west from Inverell should be constructed at from £2,000 to £3,000 a mile, as the country is level.

1447. Do they produce maize at Glen Innes? Yes, a good deal of maize.

1448. Has this been a good season for maize? I do not know. I think it has been.

1449. You do not know whether there is a quantity of maize coming from Warwick to Glen Innes? No; I am not in a position to say whether it is so or not.

1450. Do you know whether Warwick is a good wheat-producing country? Warwick will not grow wheat. It will produce good maize.

1451. Do you know that Warwick obtained several special prizes for flour? That may be so, but it does not alter my view.

1452. They must have good wheat if they produce good flour? Yes; but they have not the scope to grow it to any large extent.

1453. *Mr. Ewing.*] You say that Queensland does not grow more than a quarter of the wheat she consumes? Yes.

1454. Therefore she must get it from somewhere? Yes.

1455. It has been suggested that possibly wheat might be got from Tenterfield? Yes.

1456. I suppose the difference between Tenterfield and Glen Innes is the difference between a granite country and a basaltic country? It is the difference between a sterile country and a fertile country.

1457. Then it has been made pretty plain that there are times when Warwick grows a large quantity of wheat, but that would only be in good seasons? That would be in very exceptional seasons.

1458. Do you know what is the rainfall at Warwick? I do not.

1459. It is supposed to be very dry? Yes.

1460. Do you know the rainfall at Inverell? I think it is about 19 inches.

1461. Do you think the Darling Downs has that rainfall? No.

1462. You said you thought that the Inverell people should look either to the north or the east for a market? Both north and east.

1463. In speaking of the east, you refer, of course, to the Clarence and the Richmond districts? Yes.

1464. What is the population of those districts? I could not tell—it is very large.

1465. Something approaching 60,000, I suppose? Yes; I should think so.

1466. A population of 60,000 on the coast, who cannot grow wheat, must want wheat? Yes.

1467. What is the loading from Glen Innes to Grafton? I think from £3 10s. to £3 15s. a ton.

1468. What is the ordinary railway rate from Glen Innes to Sydney? The first-class rate is, £4 19s. 10d.; the second, £6 4s. 3d.; the third, £8 12s. 11d.

1469. What would be the rate for wheat? That is carried at a low rate, about £1 a ton.

1470. You spoke about the betterment principle, and you said that you were under the impression that people 12 miles back from a line should pay? I think everybody who is benefited by the making of a railway should pay *pro rata*.

1471. Anyone who is benefited not only personally, but who lives 12 miles away? I do not think there would be any immediate benefit 12 or 15 miles from the line. For any appreciable benefit we could not go beyond 15 miles.

1472. But if we are going to levy for this purpose, it must be done on a correct principle? Yes; it ought to be.

1473. First of all, the farmers get the benefit? Yes.

1474. Then a town like Glen Innes? Yes, and the landowner gets benefits of every description.

1475. A terminal place, such as Sydney, gets the benefit? No.

1476. It gets some benefit? You can only calculate what the benefit is to the land in the vicinity of the railway.

1477. I only asked these questions to elicit your opinion. The occupants of the district ought not to be called upon, under the betterment principle, to pay for the whole increased value of the land? Not the whole. I would not ask the people along a particular line of railway to pay the whole of the cost, but to pay on the betterment principle, according to the benefit received from the construction of the line.

1478. You see no reason why the people on this line should have this principle applied to them if it is not applied anywhere else? I should like to see it applied everywhere.

1479.

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1479. But it is not a matter connected specially with this line? No.
1480. *Mr. O'Sullivan.*] You had a branch of your business at Guyra? We had.
1481. And you shifted it to Glen Innes? We closed it altogether.
1482. Why? Because there was no business to be done. We had a branch of our business at each place after the line was open to Glen Innes, and we kept the Guyra branch going until twelve months ago, when the want of trade compelled us to shut it up.
1483. Are we to understand from that that you closed your branch at Guyra because, instead of being at Guyra, the natural outlet is at Glen Innes? Exactly so; because there was no trade there.
1484. It has been stated, I think, that you closed the office on account of the differential rates? No.; that is one of those questions which can be answered either "yes" or "no," and the answer still be true. Originally the truck rates extended only to Guyra; Glen Innes received no benefit from them. Some time after the Commissioners altered the distance to Glen Innes, thereby shutting Guyra out. Though Guyra was for a long time within the truck rate arrangements the trade down there was of a very limited character, about one-sixth of the trade that is done at Glen Innes. But when Guyra was shut out from the benefit of the truck rates it absolutely ceased. With the advantage of the truck rates the trade at Guyra was very small compared with that at Glen Innes.
1485. Do you know the proposed route between Guyra and Inverell? I have been along that route on two occasions.
1486. Do you think it is a route that is likely to carry a large population? If you go 10 miles north-west of Guyra you then get into wretched country consisting of granite and pipeclay, which will carry nothing and is fit for nothing.
1487. Do you know the route between Glen Innes and Inverell? Yes.
1488. Is that likely to carry a large population? It could; it is good soil nearly the whole of the way.
1489. Why is it not doing so now? Because the land is locked up in the hands of a few big people, and in Government reserves. All the land that is available is utilised at present by a farming population.
1490. Do you know the proprietors of these large estates? Yes.
1491. Can you speak as to their intention to cut up and sell or lease the lands? No; but if I held a property that gave me 1s. an acre return for grazing, and it would give me 2s. an acre return if utilised in another way, I should utilise it in that way. That land can be better utilised for growing cereals than for running sheep.
1492. You believe it would be much to their pecuniary benefit to cut up and sell or lease the land for agricultural purposes? I do.
1493. Therefore, there is a probability of those large estates being cut up? Yes. I might point out that between Guyra and Inverell the bulk of the land is Crown land and unoccupied. I think that that of itself speaks strongly as to the relative quality of the two blocks of country.
1494. Does not that arise from the fact of it consisting of mineral reservations on the Guyra route? Only a portion of it is—not the whole.
1495. Do you know the mines at Tingha? I have been through Tingha.
1496. Are you sufficiently acquainted with the mines to be able to express an opinion as to their permanence? All I have to guide me is the yield of tin, which is decreasing month by month, and has been for three years.
1497. Do you think it likely that there will be any further discovery of tin there? Not alluvial, and I do not think there is much chance of their finding reef tin. Tingha has been going down steadily for the last three or four years. The population is decreasing.
1498. You were asked a question as to the wheat trade in Queensland,—where is the wheat produced on the Darling Downs sold? In Brisbane, principally.
1499. Do you say that from your business knowledge? Some years ago it was; I cannot say how it is now.
1500. If that should be the case there must be a good opening in the southern portion of Queensland for the sale of wheat from Inverell? I am certain there is a fine opening. Stanthorpe, the mining townships, and the country down to Warwick, and down to the southern border of Queensland is all country open to the productions of New South Wales.
1501. Do you know what is the population of Warwick? I do not.
1502. The population of Stanthorpe—is it 800? The town of Stanthorpe has a small population because the mines are scattered all around Stanthorpe.
1503. Around Glen Innes there are various mining centres? Yes; around Glen Innes there are Emmaville, Vegetable Creek, and not far from Glen Innes there are the Deepwater mines; then, east of Glen Innes are the gold-fields, Dalmorton and Aberfoyle; then there are the Mann River Reef, Kookabookra, Bear Hill, and several other small places.
1504. Each of those places has a certain number of people? Yes.
1505. And they would afford a market for the sale of produce from the district of Inverell? Yes.
1506. Then to serve those little local markets it must be preferable that the line should go to Glen Innes? I think it is preferable on every ground.
1507. Have you any faith in the Byron Bay proposal? In Byron Bay as a port—yes. It would be a good shipping port; but as a harbour of refuge it is an absurdity. A harbour of refuge is a very distinct thing from a shipping port.
1508. In the event of the projected Byron Bay harbour works being carried out, and that becoming a shipping port, would not that have a material bearing upon the construction of this line? It would have a bearing upon it as it involves the question of connecting the northern line with the coast.
1509. Do you know the coast district well? Fairly well.
1510. There is room there for a very large population? Yes; I think the valley of the Richmond will support 2,000,000 or 3,000,000 people.
1511. And the population must obtain wheat and flour from other parts? Yes.
1512. Then there must be a good market there for the sale of Inverell wheat? There must be a good market there.
1513. We have been told that the population between Grafton and the Tweed is about 60,000? I believe it is.
1514. Do you think that that would be doubled in 10 years? I should not be at all surprised if it is quadrupled in 10 years.

1515.

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1515. Then the prospect is that there will be an increasing market there? Yes. Owing to the wonderful fertility of that part of the country, and its marvellous climate, the population there must rapidly increase.
1516. With regard to the western trade from Inverell, do you carry on business in that direction? Yes.
1517. Do you draw the produce of any portion of Queensland *via* Inverell? No, we do not; but I think that the construction of a railway to Inverell would enable us to do so.
1518. You think it would influence the trade to the other side of Goondiwindi? I am sure, from information in my possession, that it would more than double the quantity of wool sent annually from Glen Innes to Sydney if the railway is made to Inverell.
1519. I presume that just as the trade is drawn into Glen Innes so the trade further out will be drawn to Inverell? Exactly so.
1520. What are the resources of the Inverell district besides wheat and wine? Its principal resources are wheat, wool, and wine. It is a fine country for the production of wine. There are one or two large vineyards, and Mr. Mather, one of the residents there, makes a large quantity of wine. The soil and climate are well adapted for the cultivation of the vine.
1521. Do you know much about the soil at Inverell? I have been through Inverell several times.
1522. The good soil has the reputation of being very deep, has it not? Yes; it is a rich basaltic formation, nearly all trap formation.
1523. Therefore it is a soil likely to last? Yes, for ages.
1524. We may then regard settlement around Inverell as likely to be of a permanent character? Yes, I think so.
1525. *Mr. Humphery.*] I did not quite grasp your figures. I think you said the earnings between Glen Innes and Inverell would be £26,000? Yes, £26,000 odd.
1526. Do you mean that that would represent the earnings from Inverell to Sydney, or only from Inverell to Glen Innes? The earnings from Inverell Station, outwards and inwards.
1527. That would be between Sydney and Inverell? Between Inverell and the terminal point of the line at Sydney.
1528. Supposing you deduct the earnings of the line up to Glen Innes, what would you have left? That would be a very considerable reduction. I should have to calculate the earnings of the 53 miles. If you take the actual earnings off you reduce the estimate by £14,800. There is a sum of £4,000 for passengers and maize, and £3,500 for traffic now carried by team between Glen Innes and Inverell, making £7,500.
1529. That would be your estimate of the traffic between Glen Innes and Inverell? No; you have to add on to that estimate all the other work. The inwards traffic from the west, and the traffic going west from Glen Innes, represent £10,055. The outwards traffic from the west £4,751, the wool £4,181.
1530. Will you give the probable earnings between Inverell and Glen Innes? I should approximate the traffic between the two places at from £13,000 to £15,000 a year.
1531. How would you divide it? Passengers £4,000, and the balance in goods.
1532. There is a discrepancy between your estimate and that of the Commissioners. The Commissioners estimate the goods traffic at £4,500? Have they no item for wool?
1533. They say "goods"? All I can say is that the Commissioners are not in possession of so much information on this subject as I am. They have not the means of acquiring it which I have. No man in Australia has the means of getting information on the subject that I have, unless at great cost and from long experience. I think I may say that I know more about the traffic on the New South Wales railways than any living man. I can give that information from a carefully compiled record which has been kept in my office for nearly thirty years, a record showing every variation that has taken place in the traffic.
1534. I should like some information with regard to the possible trade with the south of Queensland? I spoke of the south-west of Queensland.
1535. What direction would that traffic take; would it go between Jennings and Toowoomba? West of the line from Jennings.
1536. Between Jennings and Toowoomba? No; you would not get the Toowoomba traffic; you would get all the traffic east of St. George round towards Yetman.
1537. Would not St. George be supplied, as at the present time, from Toowoomba with wheat? It might be; I do not know. I think that St. George is at present largely supplied from Bourke. I happen to be sending 80 tons of flour from Bourke to near St. George just now.
1538. Warwick and Inverell are almost the same distance from the coast in the same belt of country, are they not? Yes.
1539. Would not Warwick be very much nearer the district which you think would be supplied from Inverell? You lose sight of the fact that on the Queensland railways, owing to the narrow gauge, the charge for freight is three times what it is in this colony.
1540. I could not understand why wheat should go from Inverell to those parts so much nearer to Queensland? They charge £15 3s. a ton for flour from Brisbane.
1541. I think you mentioned that wheat is sent to Brisbane from Toowoomba? Yes; years ago all the wheat used to go to Warwick from there.
1542. That would be 350 miles from Inverell? It is 353 miles from Inverell to Brisbane.
1543. You could hardly compete in Brisbane against Queensland wheat? You could hardly compete in Brisbane, because of the long distance to carry, and the cheap freights from the other colonies by sea. I was speaking of the inland portion.
1544. The higher rate for railway carriage in Queensland would be an obstacle to sending wheat over 232 miles of Queensland line? We could not supply Brisbane from Inverell, but we could supply all the country to Toowoomba, and the country to the west.
1545. The evidence given before the Sectional Committee appears to indicate that the wheat grown round Inverell must find a market in Queensland, and you think that there is sufficient consumption in Queensland, if supplied from Inverell, to take the whole of the produce of that district? Of course. Inverell could not supply half or a quarter of the requirements of that district. All the wheat grown there at present would not supply one-fourth of the demand of the south-western portion of Queensland.
1546. Not the present supplies, but the anticipated increased production? That is practically unlimited. The possibilities of the place are very great.

1547.

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1547. I want to know where the market will be for the future productions of Inverell, assuming that the railway is constructed. Is there a large area of land suitable for agriculture to be brought under cultivation? I have endeavoured to show that I thought that the market which Inverell would seek would be the south-western portion of Queensland, and the north-eastern portion of New South Wales down to the coast.
1548. And that would, of course, depend upon a connection of the northern railway with the coast? Yes; to make it continuously a certain market, there would have to be railway communication.
1549. Communicating between the existing northern line and the coast? Yes.
1550. In the absence of that communication, what would be the cost of sending wheat from Glen Innes to the coast? It would probably be 1s. a bushel.
1551. Would that not render it impossible to compete with the water-borne wheat? At times it would. When wheat was produced largely in the other colonies probably Inverell would not have a continuous market with the coast district, but it would when the supplies were short in Victoria and South Australia.
1552. There is a little doubt created by the evidence of the two Examiners with regard to the carriage of fat stock. Mr. Scarr is of opinion that very little fat stock would be sent by the line, and Mr. Price thought that the quantity would be considerable? I think there would be a considerable quantity of stock carried by that line.
1553. Would it come from Inverell? Yes, and west of Inverell. The high table-land of New England is not fattening country.
1554. Do you think that stock would be sent from Inverell, from Bingera, and about there, in preference to sending it from Tamworth? Bingera people would have to drive their cattle north. I do not think that the cattle from Bingera would come to Inverell.
1555. They would go by way of Tamworth? Yes.
1556. Notwithstanding that, you believe that a very large quantity of stock would come by this line? There would be a considerable stock traffic—I would not say a very large traffic.
1557. In forming your estimate of the probable earnings of the line, have you taken into consideration the profits on the carriage of wool and wheat. The profit on those goods would not be very great, would it? The traffic ought to pay well; it is charged for at a high rate.
1558. Is there a considerable profit on the carriage of wool? Yes.
1559. But not so much on the carriage of wheat? Yes; it is carried at a cheap rate, but it must be borne in mind that unless you are carrying wheat you have to bring a dead weight back. You fill the trucks with wheat, and though there is apparently no gain, it pays, because you use trucks that would otherwise be returned empty.
1560. Would not that imply that the object of the railway was for the carriage of goods to Inverell, instead of bringing away the produce of the district? No, I take it that the object is to carry both ways. The haulage of the rolling stock has to take place, and the extra haulage caused by filling the trucks with wheat is so small that it cannot be reckoned that the wheat is carried very cheaply. It will be carried at a profit.
1561. There would be a profit, whether it is earned by carrying the produce of Inverell or carrying goods for distribution in the centres of population? There would be a profit both ways.
1562. I think you have expressed the opinion that the line should be constructed from Inverell to Glen Innes in preference to any other connecting-point hitherto suggested? The wonder is that anyone can think otherwise.
1563. I suppose that several points have been suggested? Yes, four or five.
1564. Of all the routes you think that the one now proposed is the best? I have no doubt about it.
1565. *Mr. Hoskins.*] Nearly all the land about Glen Innes is good, is it not? Nearly all of it is very good.
1566. Are there many farmers about Glen Innes? Yes, there are.
1567. What does the land principally produce? That is rather a hard question. I do not know how farmers live. I think the bulk of the produce is potatoes, oats, and maize. Immediately around Glen Innes the country is unsuitable for the growth of wheat, it is wet, and cold, but it grows tubers, potatoes, mangold wurtzels, and other things of that kind.
1568. There has been a good deal of wheat taken by dray from Inverell to Glen Innes? Yes, large quantities.
1569. What is the charge per ton for wheat in a 6-ton truck from Glen Innes to Sydney? There are various rates, according to the various times of the year.
1570. In the wheat season? It is 16s. 6d. a ton.
1571. The conveyance of wheat from Glen Innes to Sydney? Yes.
1572. Have you heard that South Australian and Victorian flour has been taken by railway and sold in Glen Innes? Yes; I believe it has. I know it has been sold in Armidale and Tamworth; it is quite possible that it may have been sold in Glen Innes.
1573. It has been stated in evidence before the Committee that the farmers of Glen Innes and that district have sent wheat to Sydney and that it did not pay them. They could not compete with the imported wheat—have you heard of that? I have.
1574. You say that if the proposed railway were made from Glen Innes to Inverell you do not anticipate, even with a low rate of charge from Glen Innes, that any large quantity of wheat would be sent from Inverell to Newcastle or Sydney? I do not.
1575. But you believe that the market for Inverell wheat, if the railway is constructed, will be in the northern coast district, on the Clarence, the Richmond, and the Tweed, and in the south-western part of Queensland? Exactly so.
1576. You say that a railway from Glen Innes to the coast is a thing of the future. What is the usual rate of carriage by dray from Glen Innes to either Grafton or Richmond? There is no trade between the Richmond and Glen Innes. To Grafton the rate varies from £2 10s. to £3 15s. per ton, and is as low as 35s. It is £2 10s. from Grafton because they have to come up a big hill.
1577. Do you believe that the people in the coast districts could be supplied with wheat from Glen Innes, at an average cost of £3 a ton for carriage, as cheaply as they could be supplied with flour from South Australia and Victoria? It is governed by the price.
1578. I understood you to say it was the seasons? Bad seasons affect the prices.

1579.

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1579. I suppose large quantities of wheat come here from New Zealand when there is a failure of the crops in this colony? I know that wheat does come from New Zealand.
1580. Do you believe that the people of Inverell could send flour from Inverell by railway to Glen Innes and from there by carriers as cheaply as it can be brought even from New Zealand? No, but they could send a first-class article as against an article that is rubbish.
1581. That may be a matter of opinion? I am speaking from personal knowledge.
1582. Do you believe the people of Inverell can produce flour and convey it to the inhabitants of the coast districts as cheaply as it can be carried by water from New Zealand, Victoria, and South Australia? No; of course not. Any wheat grown in Australia brings from 6d. to 9d. a bushel more than New Zealand wheat. That is a fact.
1583. Even during droughts and for numbers of years has not this colony being supplied with wheat and flour from South Australia and Victoria? Yes.
1584. Therefore Inverell would be cut out as regards supplying flour to the Clarence district by flour coming from the southern colony? Not always; it would depend on the seasons.
1585. They have had droughts in Victoria and South Australia, yet have they not supplied us for years from those places? Yes; no doubt. We are always liable to competition.
1586. That disposes of one market? No, I do not think so.
1587. But on your own showing South Australia and Victoria can land wheat and flour on the north coast cheaper than it can be sent from Inverell? At the present time I think we can compete with South Australia at Grafton.
1588. I think the price of wheat in Melbourne is 3s. 11d. per bushel? You cannot buy wheat in Melbourne at 4s. 6d. a bushel.
1589. As regards other articles produced in agricultural districts, such as potatoes, and butter, do you think there are districts that would compete favourably with Inverell in supplying the Clarence and the Richmond districts? The Inverell district does not produce potatoes, but the Glen Innes district does.
1590. You say that if a railway were made to Inverell there would be a large market for Inverell produce in southern Queensland? Yes.
1591. Are you aware that there is an agitation for, and that a promise has been made by a late Government to make, a railway to Moree from Narrabri? Yes.
1592. If a railway were made to Moree would not that be more suitable for supplying south-western Queensland than a railway to Inverell? But the Narrabri country does not produce wheat.
1593. Is not Moree nearer to Inverell than Yetman, Goondiwindi, and other parts where they get supplies from the coast? I suggest that the railway from Inverell should go to the north of Moree, nearer to Queensland.
1594. I am glad to hear that you are in favour of the betterment principle; but I should like you to explain your views upon it. Do you think it advisable, if peoples' land is intersected by a railway and greatly enhanced in value thereby, to charge those people so much per acre as a capital sum to be paid to the Railway Department for the advantages derived, or would you propose to impose a moderate tax, to be paid yearly until the receipts from the railway pay the interest on the cost? As far as my knowledge of the thing goes, I think the proper way would be to fix a capital sum and to arrange for it to be paid during a series of years. The terms of payment could be arranged.
1595. By an annual tax? By annual instalments extending over a number of years.
1596. *Mr. Davies.*] In your estimate of the probable earnings of the coaching traffic, which I think you said was £60,000, did you take the 52 miles between Glen Innes and Inverell? I said £50,000 or £60,000 was the amount of the earnings from Glen Innes to Sydney, not from Inverell.
1597. What do you estimate will be the earnings of the line, supposing it is constructed from Inverell to Glen Innes? I think it ought to be from £12,000 to £15,000 per annum.
1598. How do you make that out? The coaching is upwards of £4,000 and the rest would be goods and wool. I reckon that the wool carriage would be increased three-fold. I think the tonnage now carried between Inverell and Sydney, *via* Glen Innes, would, at all events, be doubled, and there would be the large trade now done between the two towns.
1599. What is the number of sheep in the Inverell district? 800,000 or 900,000.
1600. What is the tonnage of the fleeces of 1,000,000 sheep? There are ten bales per 1,000 sheep. I am not referring to sheep in the Inverell district, but away to the north-west of our colony and in the south-west of Queensland.
1601. Does any of that wool come *via* Glen Innes? No, the road carriage is too costly; but if you extend the railway 50 miles nearer you will secure a large quantity of it. I estimate that the carriage of wool will be increased nearly three-fold.
1602. If your theories are adopted, instead of producing wool should we not be reducing the production of wool? The employment of 5,000 or 6,000 more people in agriculture in that district would not reduce the wool returns by 1,000 bales per annum.
1603. I gathered from your answer to a question that you are of opinion that it would not pay to send wheat to Sydney from Inverell? I do not think Sydney is the proper market. I have no doubt that at odd times a great deal of wheat would come to Sydney, and I do not see why it should not pay; but the proper market for Inverell is to the north and east. I do not see why a charge of 9d. a bushel should prohibit them from bringing it to Sydney. It will be governed by supply and demand. If a good price can be got in Sydney it will pay to bring the wheat.
1604. What do you consider the cost would be from Glen Innes? About 7d. a bushel.
1605. It would not pay at that? Not in the face of the fierce competition that we have from other colonies.
1606. In view of the duty, will it not pay? It is more likely to pay than it was a few months ago; the present policy would help; another 6d. a bushel would be a greater help.
1607. The only produce you speak of as being a feeder of the main line would be wool? Wool and other products that grow in the district. There is a necessity for a large amount of through traffic. That is caused by the wool. All the return supplies follow the road by which the wool comes.
1608. What is the population in the Inverell district? I suppose that in the Inverell electorate there are about 8,000 or 9,000 people. In the town of Inverell and its immediate surroundings there are between 2,000 and 3,000.

1609.

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1609. What is the character of the settlement along the proposed Swanbrook line? There are a good many farms about Wellingrove. The rest is in the hands of capitalists.
1610. Is there any settlement along the Swanbrook line? There is a certain amount of population about Clairvaux and Wellingrove. Beyond that there is not much settlement, for the simple reason that the land is composed of Government reserves and sheep stations.
1611. Is there much traffic on the Waterloo road? Yes; there is a considerable traffic along that road.
1612. What number of teams traverses it? Between twenty and thirty every week.
1613. Especially in the wool season? All the year round there is a large traffic.
1614. At what do you value the land between Glen Innes and Inverell per acre? From £2 to £2 10s.
1615. What would you value it at within a radius of 20 miles? Twenty miles south of it, it is not worth 5s. an acre.
1616. How would the betterment principle apply to that? It is Crown land. It is valueless for anything but mining purposes; but to the north of that, at Bannockburn, there is magnificent land.
1617. What is the value of the good land that would be served by the railway within a radius of 20 miles? You could buy the best land in the Inverell district for £3 10s. an acre—Bannockburn property.
1618. Would it not be greatly enhanced in value if the line were made? I think so.
1619. To what extent? That would be very hard to say. I dare say it would be increased in value by £1 or 25s. an acre.
1620. You have been over the different routes that have been surveyed from time to time? No; I have not.
1621. I understood you to state that you had been over them? I never followed the pegged lines.
1622. You favour the line now under consideration? Most distinctly so.
1623. As being the easiest of construction and the best? As being the one that would suit the requirements of the district much better than the other in every respect.
1624. And do you think that Parliament would be warranted in spending £400,000 in constructing it? I know no part of New South Wales that is more deserving of a line than the district round Inverell.
1625. Do you think that it would warrant it? I do.
1626. Do you think the line would pay? I believe it would in a very short time.
1627. How long would it be before it would pay? I should think that within three years it would pay the interest on the cost. I believe it would pay more than that.
1628. *Chairman.*] Interest and working expenses? Yes; when I say working expenses, they would, of course, have to be deducted.
1629. *Mr. Davies.*] What do you think of the estimate of the Commissioners as to the returns from this line? I have only heard just now what it is.
1630. They estimate the cost of construction at £427,000, and interest at 3½ per cent., £14,000? That is what I base my estimate on.
1631. The Commissioners put down the working expenses for the traffic branch at £2,000; of the locomotive branch, at £1,500; and the permanent way branch, £3,638; making a total of £7,138? As an amateur, I estimate the working expenses at £6,400.
1632. They estimate that they would receive from coaching £3,200? That is an under-estimate—the present traffic comes to more than that.
1633. They estimate the revenue for the carriage of maize at £500, and for the carriage of goods, £4,500, making a total of £8,200; do you think that is correct? I think they have under-estimated the revenue by 50 per cent. all round, and I would not mind betting a round sum that my estimate will come out better than theirs.
1634. Do you know how the Commissioners have made up this estimate? I know the way they generally do. They send an officer into the district to make inquiries, and they are guided by that officer's report. I have in my possession information which I have been gathering for the last thirty years.
1635. Would not the evidence of the coach proprietors in the district be reliable? The Department discount the evidence which they get, on the supposition that people give them over-estimates.
1636. They take it that people in the district will exaggerate the returns? They largely discount the statements that they receive, but occasionally they meet honest men who give them true returns.
1637. The proprietors of the coaches would not under-estimate their business? Suppose that Mr. Alcock gave a true report, the Commissioners, naturally thinking that he was exaggerating, would knock off 25 per cent.
1638. *Chairman.*] But if the Commissioners did not obtain the information from Mr. Alcock, but the Sectional Committee obtained it, how then? The same thing would apply to the Sectional Committee. No doubt Mr. Alcock's statements would be truthful.
1639. *Mr. McCourt.*] Do you look upon this as a branch line? I do not call it a branch line. I think it will be a portion of the main line to the west eventually.
1640. Do you think it a proper thing to charge through rates upon it? Yes.
1641. Do you not think that until the line is known to pay, extra charges might be made on the line between Glen Innes and Inverell? That is a matter for the Commissioners to determine. There is a great deal of force in it,
1642. What do you think of it? If you are going to apply the principle generally, it is a sound principle. I should object to its being applied in this case if it is not applied in every other case.
1643. Do you think people would be agreeable to pay the extra charges? Yes, but I do not think that the people should be consulted. They should be compelled to pay them.
1644. Until the line is made to pay? I think it is a fair thing. It should apply to all branch lines.
1645. *Mr. Wall.*] Do you not think that the adoption of that principle would check agriculture? No.
1646. *Mr. McCourt.*] You think that the principle ought to be applied to all branch lines? Yes, until the returns approximate the working expenses and the interest on the outlay.
1647. I suppose that wool is the principal and best paying product in that district? There is a large traffic in general goods.
1648. Wool is the principal traffic from Inverell? Yes; it is the great feature. I anticipate a very large increase in the wool traffic.
1649. It is the most profitable? Yes.
1650. Does not all that wool come to Sydney? No, a great deal of the wool which this line would collect goes to Brisbane, and to Grafton.
1651. If the line were constructed would the wool come to Sydney? Yes.

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1652. If that is so, would it not be better to send it by way of Guyra? That would save a little cost in haulage.
1653. Is 3½ per cent. a fair charge for interest; does not the money cost us nearly 4 per cent.? No.
1654. We do not get money at 3½ per cent., do we? We have got it at 3½ per cent., and a good premium at the same time.
1655. Does it not come nearer to 4 per cent. with all charges? The last loan was only 3½ per cent., and I think at a slight premium.
1656. No, at a discount? If there was a discount that would make it 4 per cent.
1657. Then it is fair to charge 4 per cent.? Yes.
1658. *Mr. Collins.*] Are you aware, as a carrier, whether a large quantity of flour goes into Inverell from other districts? I am not aware of it.
1659. Some has gone there when there was a drought at Inverell. Does not Adelaide flour find its way to Glen Innes? I am not certain about that; I have never heard of it, though I have heard of its being sold at Armidale and Tamworth.

THURSDAY, 14 *APRIL*, 1892.

Present:—

JACOB GARRARD, Esq. (Chairman).

The Hon. William Henry Suttor.	William Chandos Wall, Esq.
The Hon. James Hoskins.	William McCourt, Esq.
The Hon. Frederick Thomas Humphery.	John Cash Neild, Esq.
The Hon Andrew Garran, LL.D.	Edward William O'Sullivan, Esq.
The Hon. John Davies, C.M.G.	Charles Collins, Esq.
Thomas Thomson Ewing, Esq.	Henry Dawson, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Charles P. Turner, Esq., Hon. Secretary of the Coff's Harbour Railway and Harbour League, sworn, and examined:—

C. P. Turner, Esq. 14 April, 1892.

1660. *Chairman.*] You are Honorary Secretary of the Coff's Harbour Railway and Harbour League? Yes.
1661. Do you reside at Coff's Harbour? I am a selector there.
1662. *Mr. Dawson.*] I believe you are here with regard to some evidence given by Mr. Deane. You wish to make a statement? Yes.
1663. Do you know the lines between Glen Innes and Inverell, and between Guyra and Inverell? I do not know anything about those lines at all. The only parts that I am acquainted with are those between Guyra and Coff's Harbour, and Guyra and South Grafton.
1664. You are here simply with reference to the connection between Coff's Harbour and Inverell? Yes.
1665. I believe that Coff's Harbour is the natural harbour for the northern district? Yes. There is no other port on the northern coast equal to Coff's Harbour. It is almost a port now. It only requires a little artificial improvement to make it a splendid harbour.
1666. Do you think it necessary that the line should be connected with Glen Innes, or Guyra? It should be connected with Guyra, because unless it is there will be 37 miles' extra haulage from Inverell to Coff's Harbour.
1667. You think it should be made *via* Guyra to save 37 miles of haulage? Yes.
1668. Presuming that this line is to be made from Guyra to Coff's Harbour? From Guyra to South Grafton and Coff's Harbour—it may be both those places. There are surveys now from Guyra to Glenreagh, and Glenreagh to South Grafton, and Glenreagh to Coff's Harbour. Glenreagh is 30 miles from both Coff's Harbour and South Grafton, and that portion will be a section of the North Coast Railway.
1669. It will connect, then, simply with the line from Guyra to Inverell? Yes.
1670. Then, living in the neighbourhood of Coff's Harbour, you think it would be better to have a line from Inverell to Guyra than to have one from Inverell to Glen Innes? Yes, it would save us 37 miles of haulage.
1671. What is the land like on the route? The first 30 miles from Guyra I do not know much about. After that the line will run through open hardwood country. It is of volcanic formation and splendid land for root crops, such as potatoes and mangold wurtzels. It is a great country for wheat as well. I believe that some of the settlers have grown as many as 12 tons of potatoes to the acre. A portion of the land was only thrown open for selection a short time ago. It is not very hard to clear, being lightly-timbered country.
1672. Do you know the Nymboida River? Yes; the line would just skirt it.
1673. Has this line been surveyed from Guyra to Coff's Harbour? It has been surveyed from Guyra to Glenreagh, and the surveyors are hard at work surveying it from Glenreagh to Coff's Harbour.
1674. Can you tell us anything as to the probable cost of the line? It will be a very easy line from Guyra to the Nymboida River; but coming down from the table-land there is some rough country. It is roughest from Glenreagh for the first 15 miles towards Guyra.
1675. If the line were made from Glen Innes to Inverell, would not that serve the north coast? It would, but it would be a longer route, and instead of having the main trunk line from the coast to Inverell there would be a right angle at Guyra. I think that Coff's Harbour is the natural port for the country on the Gwydir and the M'Intyre, and for the south-west of Queensland.
1676. What about Byron Bay? It is not to be compared with Coff's Harbour as a port.
1677. Is there not splendid country round there? Yes; all that Big Scrub country is splendid land. The Don Dorrigo country is just the same sort of land. There are only two parts of the country with land of that character—they are unique in that respect. The Don Dorrigo district is better than the Byron Bay country, because it has a better climate.
1678. A line from Guyra to Coff's Harbour would go through the Don Dorrigo scrub? Yes; right through it. It is 3,000 feet above the level of the sea, and the average distance is 14 to 25 miles from the sea.

1679.

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1679. Do you know the depth of the water at Coff's Harbour? Yes. According to Captain Howard's report with regard to the breakwater connecting the two islands, the harbour will shelter 174 acres of water from 5 to 9 fathoms deep, and if the breakwater is made, from 20 to 40 acres more can be dredged out.
1680. Do you know the country, from Tenterfield to Casino? No; I do not.
1681. You have been all over the Don Dorrigo country, and you say it is very good country? Yes.
1682. Very rich? The best country that I have seen in the colony, and I am a surveyor, and was at one time employed surveying Crown lands in the northern part of the country.
1683. You are a selector, living at Coff's Harbour? Yes.
1684. Have you any land close to the Harbour? It is 10 miles off.
1685. Would the railway go near to it? No nearer than Coff's Harbour.
1686. Then you cannot be accused of wanting to bring the line up to your own door? No.
1687. *Mr. Collins.*] Have you been over the country between Guyra and Inverell? No; I have not been in that country.
1688. *Mr. Ewing.*] The only evidence you wish to give to the Committee is as to the advisability of bringing the railway to Coff's Harbour as a seaport to Inverell? Yes.
1689. That is your only object? Yes.
1690. Is there much settlement in the vicinity of Coff's Harbour? Not at present; but there are people on the Orara River.
1691. And is it good country up to Coff's Harbour? Yes.
1692. Can you see the route of the line on the map? Yes.
1693. Coff's Harbour is a little north of the Bellinger? Yes; 14 miles.
1694. Do you see the line from Guyra to Grafton? Yes.
1695. Do you see a point pretty well west of Coff's Harbour? Yes.
1696. Can you tell us what elevation there is from that point to the west of Coff's Harbour down to Coff's Harbour? Four thousand feet.
1697. Do you mean to say that in the last 14 miles of the descent to the sea coast there is a fall of 4,000 feet? No; you would be off the table-land altogether in the last 10 miles, at (say) 15 miles from Coff's Harbour.
1698. What height would it be? About 15 miles distant, at Don Dorrigo, it would be 2,500 feet.
1699. Therefore, in 15 miles of railway coming down to Coff's Harbour, you would have a fall of 2,500 feet? Yes; but you could strike further off from the sea and have a longer fall to the coast.
1700. Has a railway been surveyed to Coff's Harbour? They are at work on it now. The survey is being connected with Guyra and Glenreagh, on the Orara River.
1701. I suppose that you can give no evidence with regard to the cost of the line until the survey is complete? No.
1702. You can only give your impressions? Yes; one part of it, in coming down from the table-land, will be rough country; but in any part of that country it would be bad. I suppose that to the west of Byron Bay it will be the same.
1703. In your opinion, Coff's Harbour can be made a very good port indeed? Yes; Captain Howard recommends the construction of a breakwater 3,000 feet long, to cost £170,000.
1704. Will that reach to the island? Towards it; but he does not intend it to reach to the island. He proposes to leave an opening between the head of the breakwater and the island—an entrance 7 fathoms deep.
1705. What depth of water have you to the present jetty at Coff's Harbour? Eighteen feet at low-water springs.
1706. It would be a great advantage to that part of the colony to have a harbour there? Yes.
1707. *Mr. O'Sullivan.*] The proposed line appears in the form of an amphitheatre? Yes.
1708. It is suggested that it should touch the proposed North Coast Railway, and run into Grafton? Yes.
1709. That will not go direct to Coff's Harbour? No; it will not; but it will have a back shunt from Glenreagh to South Grafton and Coff's Harbour. That is what my League is in favour of.
1710. Presuming that the North Coast Railway will be constructed? Yes.
1711. Would not the North Coast Railway serve Coff's Harbour much better than the proposed line to Guyra? No. The inland trade would come in from the Guyra line. We should be able to ship to any part of the world from Coff's Harbour, without going to Sydney.
1712. Would not the North Coast Railway be a shorter and more direct route to Sydney than the Guyra line? I think it would be about the same distance.
1713. As marked on the map? It is a long way to Sydney, along the coast from Coff's Harbour.
1714. But the North Coast Railway runs directly at the back of Coff's Harbour. As the Guyra route is marked, it goes in the form of a semi-circle till it touches the Great Northern Line. Then there is another great bend from the Great Northern Line down to Newcastle;—do you not think it must be shorter? I do not suppose that it is more than 100 miles shorter. I think it is 400 miles to Armidale. Coff's Harbour is 400 miles to Sydney by road.
1715. Do you think you are likely to have the line constructed at any time within the next ten years? I think so.
1716. If you get one, do you think you are likely to have both? Yes.
1717. You depend upon the two being constructed to make the Guyra line available for Coff's Harbour? Yes. From Glenreagh to South Grafton and Coff's Harbour will be a section of the North Coast Railway, as well as an inland railway. It will serve two purposes.
1718. Glenreagh is the point for the junction of the proposed Guyra line and the proposed North Coast Railway, is it not? Yes.
1719. There is no settlement round the Don Dorrigo scrub, is there? A little; but the Don Dorrigo scrub is locked up in reserves. That is one reason why a railway should come in that direction in preference to going to Byron Bay. The Byron Bay scrub has all been dummied by speculators.
1720. You seem to think that this Guyra line would give you access to the markets of the west? Yes, and to south-western Queensland.
1721. Supposing you have that line and a line running, as there may be some day, by the time you get the North Coast Railway, from Lismore to Casino and Tenterfield, could you compete with that line, which would be a shorter route to the M'Intyre district? Yes. Byron Bay can never be made a port of in our lifetime.

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1722. I am thinking of the produce of the Richmond and Tweed districts, which would go to Lismore and Tenterfield, and then to Inverell;—that would be a much shorter route than from Coff's Harbour, *via* Guyra? No, from Inverell to Coff's Harbour, *via* Guyra, will be shorter than the route from Inverell to Byron Bay, *via* Glen Innes.
1723. You do not require a port to send maize and sugar to Inverell? No.
1724. The chances are that you would have to compete at a disadvantage with the Richmond River district? I do not think so, because we are nearer Inverell from Coff's Harbour than any part of the Richmond is, and the Upper Orara River district is a great maize-growing country, and that would be nearer than Coff's Harbour, by 30 miles, to Inverell.
1725. Your argument is, not that you want to carry produce to Sydney when you cannot send by water, but that you want to get access to the back district? Yes; I think Coff's Harbour has been made by Providence as a port for all that north-western country.
1726. Is settlement progressing around Coff's Harbour? Yes, very much.
1727. Is it *bona fide* settlement? Oh, yes, it is all *bona fide*.
1728. Where do you find your market for produce now? In Sydney.
1729. You do not ship in all weather produce in small craft from Coff's Harbour? No, we cannot ship in a gale of wind.
1730. Do you wait till the gale subsides? Yes, at present.
1731. *Mr. Humphery.*] How far is Coff's Harbour from Trial Bay? About 40 miles, I think.
1732. It will be necessary to have a breakwater at Coff's Harbour? Yes.
1733. You are aware that Trial Bay at the present time is likely to become a harbour of refuge? Yes; but if they go on at the same pace as they are going at now it will not be a harbour within the next 100 years.
1734. That will be within 40 miles of Coff's Harbour? Yes.
1735. Do you think it is desirable that there should be a large expenditure at Coff's Harbour, so close to Trial Bay, when Trial Bay will be an excellent port? Coff's Harbour can be made right away, but we cannot speak of Trial Bay, as its completion will be so far in the future.
1736. Do you know what would be the cost of making Coff's Harbour a safe port? Captain Howard says that Coff's Harbour can be made a splendid port by an expenditure of £170,000.
1737. What would be the distance of the line, allowing for the necessary deviation between Coff's Harbour and Inverell, *via* Guyra? I can say what it is to Guyra. Guyra is from 120 to 130 miles from Coff's Harbour by the railway.
1738. Something under 200 miles from Inverell—about 190? Yes.
1739. And the distance from Inverell to Casino, *via* Glen Innes and Tenterfield, what would that be? Further than to Coff's Harbour, I should say.
1740. Would it not be 230 miles—a difference of 40 miles in favour of the route you favour? Yes.
1741. You were asked, I think, what was the highest elevation between Guyra and Coff's Harbour? Guyra itself is the highest elevation; it will be the highest elevation on the line.
1742. What will the descent be between Guyra and the portion that you refer to as being 15 miles away at the Don Dorrigo scrub? About 1,500 feet.
1743. Is it a continuous descent? Yes; a continuous descent to Coff's Harbour.
1744. You would have another descent for 15 miles after the 2,000 feet? No; you can come down off the table-land further away than 15 miles. You can come off the table-land 40 miles from Coff's Harbour.
1745. Would not that increase the length of the line considerably? Yes; I reckon it will make it 130 miles from Coff's Harbour to Guyra.
1746. You estimate that, included in the 190 miles, there would be 40 miles to be allowed for the descent from the table-land, so as to reach Coff's Harbour by an easy gradient? Yes. A straight line from Coff's Harbour to Guyra is about 80 or 90 miles.
1747. *Dr. Garran.*] I understand you to say that you are a surveyor, and that you have a fair knowledge of the country? Yes.
1748. We are told that from Guyra to Guy Fawkes it is nearly level? Yes.
1749. You make no descent, practically? No.
1750. Could you descend from Guy Fawkes to Trial Bay? It is terrible country.
1751. Then that line is out of the question? Yes.
1752. To get to Trial Bay you would have to make a sweep northward to Glenreagh, and then come back by the coast? Yes.
1753. You would have to make a long detour? Yes.
1754. The connection of Guyra with Trial Bay is out of the question? Yes.
1755. Could you go from Armidale to Trial Bay? That is worse still.
1756. Could you go from Armidale to Guy Fawkes? Yes; it is a fine road all the way.
1757. As easy as from Guyra to Guy Fawkes? Yes, it is on the same level.
1758. It is as easy to reach Guy Fawkes from one point as from the other? Yes.
1759. The line from Armidale to Guy Fawkes, thence to Grafton, would be a fairly straight line? Yes.
1760. Would starting from Armidale suit the north coast people? Yes, quite well.
1761. It is immaterial whether the produce of the Inverell district goes from Armidale, or Guyra? Yes.
1762. Do you know what the country is spending now to make a harbour at Trial Bay? Yes.
1763. Do you think it likely that the country will spend an equal amount so little to the north as Coff's Harbour? I think it would be money well spent.
1764. Irrespective of the fact that so large a sum is being spent at Trial Bay? Yes; Trial Bay will make a harbour of refuge, but it will not make a port.
1765. Supposing Captain Howard's plan to make a breakwater at Coff's Harbour is carried out, would it make as good a harbour of refuge as Trial Bay? Yes, better.
1766. Then if we spend money at Coff's Harbour, we shall have all we want? Yes.
1767. The effect of your evidence is that the money which is being spent at Trial Bay is a mistake? Yes.
1768. Because there is no natural traffic to repay the cost? No; all the country behind it is barren.
1769. Then if we left off spending money at Trial Bay and went to Coff's Harbour, we should concentrate the traffic and the expenditure, thus killing two birds with one stone—making a harbour of refuge and a port for the produce at the same time? Yes.

1770.

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1770. How much did Captain Howard propose to spend? He considered two schemes—one scheme will take in 170 acres of water from 5 to 9 fathoms in depth, and can be carried out at a cost of £175,000. The other scheme would cost £280,000, but it would make a larger harbour. I think, however, that that is out of the question.
1771. Do you know how much it is proposed to spend at Trial Bay? I do not.
1772. I understand you to say that Captain Howard proposes to run a mole from the headland on the coast towards the island? Yes.
1773. Then you would enter between the headland and the island? Between the head of the breakwater and the island.
1774. And where would your jetty be? The jetty is now running out towards the island from the shore.
1775. It would be in the same place? Yes; on the north-east side there are rocks which break the seas from the north-east.
1776. Would large steamers like the Orient steamers be able to load there? Yes.
1777. You have seen the plans for Byron Bay? Yes.
1778. Do you think that you could make as good a harbour at Coff's Harbour for the same expenditure as at Byron Bay? I do not think that Byron Bay can ever be made a practical harbour. The breakwater there would sand up.
1779. Why not at your place, too? At Coff's Harbour there would be a current running through—it will come in at the north side, and run out by the south end of the island, to the east of the harbour.
1780. Does Captain Howard propose to have the opening between the shore end and the headland? Yes; 1,000 feet, to let the sand through.
1781. Will that interfere with the quiet water? No, not in the least.
1782. In spite of that opening the water inside will all be quiet water sheltered by the breakwater? Yes.
1783. I understand you to say that a breakwater at Coff's Harbour would cost less and be more useful than going on with Trial Bay and Byron Bay breakwater? Yes; it will shelter 200 acres of water—at Trial Bay, only 70. I presume that Byron Bay will be about the same. When I looked at the plans of Byron Bay and Trial Bay they seemed to be similar to one another.
1784. You confirm the statement that the land from Guyra to Grafton, by Don Dorrigo, is good land nearly all the way? Yes, and nearly all Crown land. Don Dorrigo scrub is a reserve.
1785. Supposing the Government sell a quantity of the land 15 miles away from Coff's Harbour, and devote the proceeds to building a railway, how far will it go towards building the line? It would build the railway altogether. It is the most magnificent land in the country. All the Don Dorrigo country is equally good.
1786. Taking the average from Guyra down to Grafton, what would the land near the line that has been surveyed fetch per acre on an average after the railway was made, or with the knowledge that it would be made? Some portions would bring about £5 an acre, I suppose.
1787. I say on the average? It is a hard thing to say. I should think about £2 an acre.
1788. Then every square mile would bring £1,280? Yes, and would be well worth it.
1789. And ten times that area on each side would build the line, notwithstanding its difficulties? Yes.
1790. Then there is a possibility of making 120 miles of line which will cost the country nothing? Yes.
1791. And if flush of money you would think it a good investment? Yes; I should.
1792. Do you think a private syndicate would take up that 10 miles of good land on either side of the line? Yes. It would be a fine investment.
1793. Do you know anything of the line from Casino to Tenterfield? No.
1794. Have you been up the whole of this Don Dorrigo route? Yes; I have been over it again and again. I was exploring that country for a railway.
1795. What is the length of the difficult part of the line—the descent from the edge of the table-land? It is about 10 miles from Glenreagh.
1796. There are only about 10 miles of bad country? About that.
1797. That is a very rough part, that 10 miles? Yes.
1798. Would it be good for grazing? Yes; splendid. All that mountain country on the eastern table-land about Coff's Harbour will make splendid pasturage. The parts which you can hardly crawl up are splendid land.
1799. It would be valuable for grazing? Yes.
1800. Would it make good dairy land? Yes; the finest in the world.
1801. Do you think that that country would be as good for dairy produce as the Illawarra, or the Richmond district? Quite as good, if not better. There is water there everywhere.
1802. Supposing a line were made from Guyra to Coff's Harbour, would it be wise to take it from Guyra to Inverell, or to go to the north-west? I would not like to offer an opinion on that.
1803. Do you know the Inverell country? No.
1804. *Mr. Wall.*] You say that the only advantage to be gained by your connection with Guyra is a saving of 37 miles of haulage? Yes.
1805. And to get the inland traffic? Yes.
1806. Where would the inland trade be connected; would it not be in the district of Moree, or in that direction? Yes; out that way. All the Gwydir country. Coff's Harbour is a natural port for that country.
1807. How far north of Trial Bay is Coff's Harbour? About 40 miles.
1808. Then the line from Coff's Harbour, Glen Innes, Inverell, and Moree, would be practically a straight line? Yes; a main trunk line.
1809. The line from Coff's Harbour to Guyra, back to Moree, would form a triangle? Yes; a large obtuse-angled triangle.
1810. Would there not be as great a detour in the line constructed *via* Glen Innes to Moree, and that part of the country, as there would be by coming round to Guyra? It would be shorter; that is all—37 miles shorter from Moree. That is, if you construct a railway from Inverell to Moree.
1811. Supposing we construct a line from Coff's Harbour to Guyra, you say that there would be a saving in haulage of 37 miles; but supposing that line is continued to Moree, you would lose that 37 miles again. Goods going in the direction of Moree would be carried further, notwithstanding that there would be a difference of 37 miles in going to Guyra. Would that 37 miles be saved in conveying goods from Coff's Harbour to Moree? Yes; 37 miles.

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1812. I understand that you are taking the distance that goods would have to be carried in going to Guyra? Yes.
1813. But it would not be necessary for those goods to be brought to Guyra to go to Moree. Assuming that the connection was with Glen Innes, could not the goods be taken to Moree without this 37 miles of extra haulage? From Sydney?
1814. From Glen Innes? No; there would be no saving from Glen Innes.
1815. No saving in connection with the inland trade? Not from Glen Innes. The goods are not going to stay at Glen Innes, though.
1816. To any point on this side of Guyra you would effect a saving of 37 miles? Yes.
1817. But you would not make that saving in the trade with Moree and that district? I cannot quite follow you.
1818. Taking the line from Coff's Harbour to Glen Innes, Inverell, and Moree, all through that part of the country this 37 miles would not be saved? No.
1819. But, coming from Coff's Harbour to Guyra, and down the Great Northern Line, you would save 37 miles? A line cannot be constructed from Glen Innes to Coff's Harbour. There is no proposal for such a line.
1820. I understand you to say that you do not want a line from Inverell to Coff's Harbour? No, from Inverell to the Great Northern Railway. I said that I knew nothing of the country between Inverell, Guyra, and Glen Innes. What I maintain is that the railway should be a part of a trunk line from the coast into the western country.
1821. The greater portion of the produce of the Don Dorrigo country, I presume, will be shipped on the coast? Yes.
1822. What is the freight per bushel from Coff's Harbour at present? The jetty is only just opened, and the North Coast Company are going to arrange to send their boats at the end of the month. I could not state the freight at present. There is no doubt they will be able to take the produce cheaper than it can be taken from any other part of the northern coast. There are no bars to cross, and there is no dangerous navigation.
1823. If a line were constructed to Inverell, the produce of the Don Dorrigo scrub would supply the north-western country? Yes.
1824. You think that they could compete with Glen Innes? Yes. The Don Dorrigo scrub country will produce enough potatoes for the whole of the colony.
1825. Do you know anything of the character of the soil round Inverell? Nothing, except what I have read about it. I believe it is splendid country for wheat.
1826. You cannot give any idea as to the cost of conveying produce from Coff's Harbour to Sydney at present? It would pay well to carry corn from Coff's Harbour to Sydney by boat at 1s. a bag.
1827. If you had a railway connecting Coff's Harbour with the Don Dorrigo country, do you think that that would meet your requirements with respect to this inland trade? If we did not get the inland railway, it would be the next best thing to have Don Dorrigo connected with Coff's Harbour; but I think it would be a bad thing for the colony not to have the benefit of the natural advantages of Coff's Harbour.
1828. I want you to point out where the natural advantages arise. It appears to me that you would be making a detour by bringing goods to Guyra. What difference would it make to you if you established an inland trade between the Don Dorrigo country and the Moree country, with Coff's Harbour to ship from, would not that give you all that you desire? Yes; a trunk line from Coff's Harbour into the country.
1829. Would not a line from Coff's Harbour to Inverell, and Inverell to Glen Innes, give all that you require? It would give a longer haulage, that is all.
1830. Less haulage if you were trading with Moree. Would you not be going out of your way in going to Guyra to open up a trade with Moree? Yes; but if once a line is made from Glen Innes to Inverell, then a line will be made from Inverell on to Moree, and we shall be cut out of that trade. Coff's Harbour will be no further from Glen Innes than Byron Bay.
1831. But, assuming that a line was constructed from Coff's Harbour to Inverell, from Inverell to Glen Innes, and from Glen Innes to Moree, would not that be a more practicable line than going round *via* Guyra? It looks so on the map.

TUESDAY, 26 APRIL, 1892.

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM HENRY SUTTON.	WILLIAM CHANDOS WALL, Esq.
The Hon. JAMES HOSKINS.	WILLIAM MCCOURT, Esq.
The Hon. FREDERICK THOMAS HUMPHERY.	JOHN CASH NELLD, Esq.
The Hon. ANDREW GARRAN, LL.D.	EDWARD WILLIAM O'SULLIVAN, Esq.
The Hon. JOHN DAVIES, C.M.G.	CHARLES COLLINS, Esq.
THOMAS THOMSON EWING, Esq.	HENRY DAWSON, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Francis Augustus Wright, Esq., M.P., sworn, and further examined:—

F. A. Wright, Esq., M.P. 26 April, 1892.

1832. *Chairman.*] I understand that you desire to put in a Return? I do. It is an official document from the Police Magistrate and Warden at Glen Innes. (*Vide Appendix.*)

James Inglis, Esq., M.P., sworn, and examined:—

J. Inglis, Esq., M.P. 6 April, 1892.

1833. *Chairman.*] You are the Senior Member for New England? Yes.
1834. You have occupied that position some time. Eight or nine years as Member for New England.
1835. And you are well acquainted with the district? Yes; with every part of it.
1836. *Mr. Sutton.*] Can you give any information as to the amount of traffic likely to be carried on the railway through that district? I should like, if permitted, to save the time of the Committee by making

a statement as tersely as I can. I should like to state my reason for advocating the construction of the railway, not from Glen Innes, but from a point further south. I have always been a strong believer in Inverell getting a railway. I think that Inverell will eventually be one of the most important centres in the colony. It will have a very large trade further to the west; but if you look at the map you will find that there is very little chance of settlement taking place to the north of the proposed line from Inverell to Glen Innes. I take it for granted that Inverell will get a railway, and, from a national point of view, I should like to see that railway go along the route that will conduce to the greatest benefit of the greatest number of settlers, and will do the most good to the country. If you make circles round Inverell and Glen Innes, making Glen Innes the centre of one circle, and Inverell the centre of another circle, if a railway goes to Inverell any farmer within that circle will have the choice of Glen Innes or Inverell as a depôt for his produce within a day's easy journey. It will only be 22 miles from the railway station. The line from Glen Innes to Inverell would never have been heard of but for the proposal to take the line to Grafton, a thing which will not be done this generation, and only at a cost of millions of money. Instead of going across the country from Glen Innes at right angles to the main line, if you make a line in the natural way that a line should be made, going from the main line like the veins of a leaf, it would include Tingha, Bundarra, Barraba, and all that western district which you will not reach with the line now proposed. You will leave it entirely out in the cold if you make a line from Glen Innes to Inverell. All the people from Glen Innes to Inverell will be served, no matter how the railway goes. Therefore, the point is, how we should spend the money to the best advantage, and to give railway communication to the largest amount of settlement. To the north of Glen Innes, away up by King's Plains and the Strathbogie Ranges, there never will be much settlement. There may be mining camps, but there will never be any ordinary permanent settlement, such ordinary permanent settlement as we look for in settling the country. But down the Bundarra River there are at present hundreds of settlers, hundreds of farmers. From Guyra along towards Wandsworth for the first 18 miles there are already six schools, and applications have been sent in for the establishment of three more schools. Wandsworth is an important centre midway between Guyra and Inverell. It is about 15 miles from Guyra, and a Land Court has been established there. Between Glen Innes and Inverell there are one or two schools. I mention this as showing the rate at which settlement is going on. The Land Court is going to hold its first sitting at Wandsworth on the 26th and 27th May, and a doctor has settled there, which is another evidence of the existence of population. A doctor would not go where there were no settlers. No doctor is ever likely to start business between Glen Innes and Inverell. Ollera and Moredun are two important centres which would be served by a railway from Guyra. On the Ollera run alone there are 50,000 sheep owned by selectors, leaving the station sheep out of the question. A correspondent, writing to me on the subject, says:—"Another important objection taken by the people up here, would be that if you make the railway from Glen Innes to Inverell you will have to make a very expensive bridge over the M'Intyre River, which will be avoided if the Guyra route is adopted." Another important point which I should like to put before the Committee is, that in my opinion there is no better chance of getting an outlet for all the New England produce, the produce of the western slopes of New England, than to put half a dozen locks on the M'Intyre River. A very small outlay would make a perpetual channel of from 18 to 20 feet, or at least from 10 to 20 feet of navigable water, and traffic would be able to get away down to South Australia and Albury, if two or three locks were put on the M'Intyre River. That river is a perpetual running stream, it has never been known to dry up. What I suggest has been done in other countries, and might be done here.

J. Inglis, Esq., M.P. 28 April, 1892.

1837. *Mr. Hoskins.*] Do you give that statement on your own knowledge? I give it from my experience of that part of the country.

1838. Have you been up and down the M'Intyre River? Yes; I believe that if the river were locked it would never be dry.

1839. Into what river would they go from the M'Intyre? The Barwon, and from that into the Darling, and from the Darling into the Murray. My own opinion is that the natural market for Inverell would be Sydney and Newcastle. As a lot of evidence has been given as to the probabilities of an interchange of commodities between Southern Queensland and Inverell, I should like to point out to the Committee that in Queensland they are even now going in largely for irrigation works. On the Condamine River, and round about Warwick, they are prepared to supply the whole of the wants of the northern part of our colony, so that it would be like carrying coals to Newcastle if you attempted to get an outlet for Inverell produce at Warwick and on the Darling Downs, where they can swamp you with produce. I do not think there will ever be a prospect of a profitable market for our produce in the southern parts of Queensland. To put the matter more succinctly before the Committee, I will read a statement which has been very carefully prepared. First, as to the goods traffic to Inverell:—Undoubtedly the great bulk of the goods inwards will go from the ports of Sydney and Newcastle,—machinery, implements, clothing, boots, groceries, liquors, salt, drugs, &c., must come from southern markets. Second,—Goods traffic from Inverell:—Wool is a leading article of shipment from Inverell, and this comes to Newcastle or Sydney. Mr. Wright, in his evidence, said that a railway at Inverell would draw 10,000 or 12,000 more bales of wool to that town. The present wool traffic would, therefore, be largely increased, all of it seeking southern outlets. Produce, such as butter, cheese, bacon, &c., meets a tariff obstacle of 3d. per lb. in Queensland, and as most of the districts of the northern table-land are sufficiently supplied by their own productions, any surplus must come south. Wheat is about the only article which has been seriously represented as requiring a northern outlet, but the representations that have been made are in many respects misleading. The fact that grain is carried at very low rates in New South Wales, as compared with the rates in the other colonies, is not fully recognised. Taking the special season rates (February to August), the rates on wheat are equal to about 2½d. per bushel 100 miles; 4d. per bushel 200 miles; 4¾d. per bushel 300 miles; 5d. per bushel 343 miles. Three hundred and forty-three miles is the distance from Inverell to Newcastle, *via* Guyra, and for this distance, in the season, wheat is carried for 5d. per bushel. To the north coast, supposing a railway were constructed, the charge would equal about 4d., and might even be 5d. if the costly character of the line were reckoned.

1840. *Chairman.*] Where are you assuming that the line would go to the north coast? Assuming that it would go to the north coast at Grafton. Supposing the railway went there, the charge would equal about 4d. The Railway Commissioners have mooted the idea that for specially costly lines it would be necessary to charge specially high rates, and I think that that would meet the approbation of the public. If the people of any district require a specially costly railway, they ought to pay for it by means of extra charges.

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1841. The law does not give power to do that yet? I say that it has been mooted, and the trend of public opinion is in that direction, that specially costly works should be paid for by those who are gaining the exclusive benefit of them, not by the general community. It is apparently admitted that a railway from Glen Innes to Grafton is out of the question. But a witness wished the Committee to believe that Inverell wheat would be sent from Glen Innes to Grafton by team. A little calculation, however, will show that Inverell wheat could be conveyed at less cost to Grafton if sent to Sydney and thence by steamer, than if sent, as suggested, from Glen Innes by team. The arguments respecting Queensland are weaker still. Inverell through to Brisbane the carriage would be equal to 11½d. per bushel, and 5d., which will take wheat to Newcastle, will take it only a short way into Queensland. At present, wheat is the only agricultural product which is admitted duty free into Queensland, all other grain and produce are subject to duty. How long this special exemption in favour of wheat will continue no one can tell. But if a railway were built specially with a view to facilitate the sending of wheat to Queensland, that very fact might be considered by the Queensland Legislature as sufficient reason for the imposition of a duty. Wheat is the only important article which has been referred to as favouring a connection at Glen Innes, and the balance of argument, even with regard to wheat, is in favour of a more southerly connection. Third,—Passenger traffic, in and out:—The bulk of the passenger traffic must undoubtedly be in the direction of the metropolis. All these considerations respecting goods and passenger traffic, taken together, seem to point most clearly to the desirability of the connections being at Guyra rather than at Glen Innes. Newcastle, rather than Sydney, is the natural port of the Northern Line, and the distance to Newcastle, *via* Guyra, is only 341 miles. It is needful to remember this, as it has been usual to refer rather to Sydney—443 miles distant—as the present shipping port. As our railways are supposed to be managed on commercial principles, it would seem reasonable if there were two routes, one open to water competition, and one either not open or less open to water competition, that the latter should be chosen. Mr. Cruickshank, in his evidence, spoke of having himself sent wool by team to Grafton and arranged the back carriage of 20 tons of sugar. Grain rates are so low that such competition in wheat is impossible, but Mr. Cruickshank and his friends would use the connection at Glen Innes as a means of forcing down railway rates and of passing profitable traffic on to Grafton when it paid them to do so. It is well known that pastoralists in the west use the railway to Bourke to get cheap water carriage. If the country is willing to suffer the loss of many thousands of pounds annually to give Inverell a railway it is only fair that the traffic for the main line should be secured as far as possible. This statement has been prepared for me by Mr. Pulsford, and I am glad to be able to put it before the Committee as the result of his inquiries into the matter.

1842. Are we to take it as yours? Yes; I endorse every word of it. It is quite in accord with my own opinion, and will commend itself to the common sense of everyone.

1843. This is a statement made from the investigation of railway books and so on by another party;—you have not made the investigation? Yes; I have. This is the outcome of my own letters on the subject. I have written to the papers on the matter, and I have had a long correspondence with the Commissioners on the subject.

1844. But you acknowledge that it is Mr. Pulsford's work? I wish to give Mr. Pulsford the credit of having prepared the statement, but I endorse every word of it, and give it as my own evidence.

1845. *Mr. Davies.*] It was prepared in conjunction with yourself? Yes; at my request. Then there is another point, and that is about the haulage. Assuming that the natural outlet for the trade of Inverell is Newcastle and Sydney, the haulage of all the products of that district for all time will be taken an unnecessary distance of 58 miles if the line from Glen Innes to Inverell is constructed—an extra distance of 58 miles, as compared with the Uralla route, and the average on the five classes of goods, as per goods rates for that distance, means 19s. 1d. on every ton carried. That means nearly £1 a ton for all time, which would have to be paid for all produce going from Inverell, and for stores going into Inverell. The route will traverse two sides of a triangle, and the traffic will have to go over an enormous height, whereas if the line started from Uralla, we should have 1,000 feet less to go in height, and a very much reduced mileage. There is no point on the Great Northern Line across the table-land so favourably situated to connect with Inverell as Uralla, as its elevation is nearer to that of Inverell than any other point proposed by over 1,000 feet, and there is no higher point on the road, there being a gradual descent all the way, while to reach Inverell by Guyra, or Glen Innes, several ranges of from 1,000 to 1,500 feet high have to be crossed. The third point is, that the Uralla line would pass through about 30 miles of reserves—gold, silver, and tin fields. Unless you adopt the betterment principle, you will have to pay an enormous amount of money to resume the land along the proposed route, which has been bought for the purposes of speculation, I believe, in anticipation of the railway being made.

1846. Are these your own notes? They are the outcome of a conversation which I had with Mr. Cleghorn. I can substantiate the facts which I am stating. The fourth point is, that if the railway is made between Uralla and Inverell, the extensive country about Bundarra will be embraced in the railway system of the country, while all the residents between Inverell and Glen Innes will be nearly as well accommodated with railway communication as if the trains passed their own doors, because they will have the choice of a station at either Inverell or Glen Innes, and the greatest distance to either by a good road would be only 22 miles; while, on the other hand, the Bundarra district will get no benefit whatever if the line is made by Glen Innes. I might mention that a large portion of the traffic from the west of Glen Innes, for which Mr. Hutchison and others claim credit, properly belongs to Uralla, and was carried to Uralla Railway Station, *via* Bundarra, until the Railway Commissioners reduced the freight of goods from Sydney to Glen Innes to much less than the same goods are charged to Uralla, although 75 miles nearer Sydney. By this means the carrying trade from the north-west to Uralla was diverted to Glen Innes, and they have therefore no right to claim it as their natural trade. Now that the differential rates are imposed, it pays better to take the traffic to Glen Innes, 75 miles further, than to take it to Uralla.

1847. *Mr. Sutton.*] From which point do you recommend that the railway should start? My own opinion, as one who has been all over that country and studied it, is that the line should start from Uralla, but I am very much alive to the necessity of giving Inverell a railway; therefore, as a compromise, I think we should adopt the Guyra route. It will be far less detrimental to general interests than starting from Glen Innes. I cannot see one argument in favour of starting from Glen Innes, unless it is that the line from Armidale to Glen Innes is already made. But we have to look very much ahead. If we are going to make a railway for all time, it will be a dreadful drawback, if the natural outlet for the produce

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produce is Newcastle and Sydney, to have to draw all the traffic over two sides of a triangle, instead of taking the hypotenuse. It would be better to make a railway at a natural point. The railway should never have gone to Armidale at all, it should have gone below the Moonbi Range, away by Barraba, Manilla, and up the Gwydir Valley. If you are going to take the goods and passengers up to Glen Innes, and then straight across the country to Inverell, you are only going to perpetuate a folly already committed. You are going to make it worse, and you would do a very great injustice to all that highly populous part round Tingha, Bundarra, Wandsworth, Moredun, Ollera, and all round the district touching the Gwydir slope. My contention is that you will never get an outlet of any consequence for the Inverell produce to the north. Its natural market is to the south and to the west. It pays the New England people now to send cut chaff right up to Narrabri. They send it down to Werris Creek, and up that line to Narrabri and Gunnedah. In seasons of drought, large quantities go from the well-watered districts of New England to the arid west. That will be an enormous market for the farmers. It is absurd to think of sending Inverell produce to Warwick and the Darling Downs, places which could supply the whole of Australia. They have a well-watered, splendid soil, and they are irrigating on the banks of the Condamine, and getting crops equal to those of any other district.

1848. *Mr. Neild.*] What crops? Wheat, lucerne hay, pumpkins, and other kinds of produce. They are feeding twenty and thirty sheep to the acre in some places on the Condamine. They put a strip of wire fencing in a paddock, and let the sheep into one portion of it, and when the grass is eaten down they turn the sheep in on the other side.

1849. *Mr. Dawson.*] How long have they been at this? Five or six years.

1850. And the lucerne is not eaten out? They plough the land up, and sow it.

1851. *Mr. Sutter.*] We have been told that there will be a great traffic in live stock from Inverell? The wool will come to Newcastle or Sydney.

1852. But what about the live-stock? They come down to Homebush now. The establishment of refrigerating works at Aberdeen is in favour of the junction being made as far south as possible. An enormous amount of capital has been spent at Aberdeen to start meat-freezing works. If you are going to make all the live-stock go across to Glen Innes, to travel on two sides of a triangle, instead of having a straight run, you will increase the price of live-stock and debar the pastoralists from getting an outlet by means of the Aberdeen Freezing Works.

1853. By going to Guyra you would avoid the haulage over Ben Lomond? You would by making the deviation at Uralla.

1854. *Mr. Collins.*] You say that the extra haulage would entail extra expense on the Inverell people? Undoubtedly.

1855. Do you know that the majority of the Inverell people are in favour of the line from Glen Innes? I am informed that exactly the opposite is the case. Two or three land-owners are in favour of it, but most of the farmers and selectors are in favour of the line going from Uralla or Guyra. The proprietors of the Bukkulla vineyard and others have taken a most determined stand against the junction being at Glen Innes. I do not think I am exaggerating when I say that seven or eight out of every ten of the *bona-fide* farmers and settlers round Inverell would rather see the line made *via* Guyra or Uralla than by Glen Innes. But all those who own land about Glen Innes are naturally anxious to see the railway go through their land. The farmers and others have been schooled into the belief that if they do not get a line from Glen Innes they will never get a line to Inverell at all. I believe, however, that ninety-nine out of every 100 would prefer a more southerly connection than Glen Innes if it could be obtained.

1856. Are you in favour of the Byron Bay scheme? I have not given much attention to it, therefore I should not like to say much about it.

1857. If a line were constructed *via* Casino to Byron Bay, would not that make Inverell 200 miles nearer the coast? I think it would be better to take it to Coff's Harbour. There you would have better gradients and better country for settlement. I have been down to Grafton, and down to the Richmond from the table-land, and I know the country pretty well. I have driven through it in rainy weather and it took me five days to go down the slopes. We had a horse and buggy and we had to walk nearly the whole of the way.

1858. *Mr. Ewing.*] You have already said that you are of opinion that Inverell should have a railway? Undoubtedly.

1859. It is, therefore, a question as to the route of the railway? That is one of the most important points.

1860. You have told us that we should have an eye to the future, and choose a route which will carry a larger population? Yes; one that will serve a larger population.

1861. If on one route there is good land, and on the other there is not, the route upon which there is good land will eventually have a larger population than the route on which the land is bad? That is common sense, but it is a small point. You have to look at the matter from the point of view of the whole colony. The whole of the colony will be dealing with Inverell, and in any case there will be comparatively few on the route between the two points, compared with the greater number who will be trading with that centre.

1862. A railway going through fertile country will have a better prospect than a railway going through sterile country? Not always. You have a railway going through the Peel River Estate, yet that is kept for sheep, and not for human beings.

1863. Do you know which is the better land, that on the route from Inverell to Glen Innes, or on the route from Inverell to Guyra? I think the land between Guyra and Inverell is just as good as the land between Glen Innes and Inverell for the greater part of the distance. When you get to Tingha you get on to poor agricultural land, but it is rich mineral land.

1864. If witnesses have assured us that the country between Glen Innes and Inverell is better than the country between Guyra and Inverell they have made a mistake? There is unquestionably good land all the way from Glen Innes to Inverell. The land is locked up, and there is no settlement at present. There is equally good land right away up to Kangaroo Camp, beyond Wandsworth, and at Moredun and Ollera. In one of those districts alone there are selectors who have 50,000 sheep.

1865. You mentioned the Uralla route; have you any idea what that route would cost? If I referred to my notes I could tell you, but that is more a matter for railway experts.

1866. We have heard that it will cost £200,000 more than the other route? It would not cost anything like

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like £200,000 more. You must take the part of the line from Armidale to Glen Innes, and the line you are going to make, and consider what will be the interest on the cost for all time. You must have an eye to the future.

1867. We are told that that line will cost £200,000 more? I would not care if it cost £500,000 more if it was the best route.

1868. You spoke about the charge *via* Glen Innes being £1 a ton more? It would cost about £1 a ton more if, instead of going from Uralla to Inverell direct, it was taken the extra haulage round by Glen Innes to Inverell. The actual extra charge, according to the rates, would be 19s. 1d. a ton.

1869. The main article of traffic from Inverell will be grain? There will be wine, fruit, preserves, and other things. I think that Inverell will be a very busy manufactoring centre. They have fine water-power there.

1870. Do you know that they are carrying from Glen Innes to Sydney at the rate of £1 a ton? Very likely. I did not know it.

1871. We have it in evidence, so it is not likely that there will be a difference of £1 a ton in the cost of carriage by the two routes? That is rather a catching question. That may be the charge on one particular class of goods. I am speaking of the five different classes to which the railway rates apply. I think the only object is to get at the truth.

1872. You said you believe that seven-tenths of the people of Inverell desire that the line should go from Guyra? That is my impression.

1873. We have had the Member for Inverell before us, and he said that public opinion in Inverell is strongly in favour of the railway going from Glen Innes? I am afraid that his inclination and his personal knowledge may pull different ways.

1874. You believe, looking to the future, that eventually there will be some railway connection with the coast? That will come when we have as many millions of population as we have tens of thousands at present.

1875. If it is possible to get a direct route to the coast, and if there is a great interchange of commodities, a direct route from Inverell, *via* Glen Innes, would be the best? I do not think so. I think it will be very likely that we can find a better route. There is the Don Dorrigo route. We might get a better route from Walcha to Port Macquarie.

1876. What would be the produce of the Don Dorrigo district? The same as that which Anglo-Saxon energy has produced in other parts of Australia where there is good soil, a good climate, and good water.

1877. Where there is an interchange of produce it means that one kind of produce is grown in one part of the country which is not grown in another; now, the Don Dorrigo scrub is 2,500 feet high? That is only one point that would be intersected by the line going to the coast.

1878. We have heard a great deal about the Don Dorrigo scrub—it will grow almost everything that New England will grow, but it will not grow what the coast will grow;—you could not grow sugar, bananas, oranges, and maize, as you could grow them on the tropical flats on the banks of the rivers? No.

1879. Therefore, there would be no interchange of traffic between there and Glen Innes and Inverell? You are trying to make a point that is not warranted by my evidence. I am not speaking of a railway to Don Dorrigo. Don Dorrigo has very rich soil and splendid timber, but I do not suppose that on those heavy slopes there would be a great amount of settlement. The question would be as to the easiest and best route through the coastal range. I believe that eventually the best route will be found to be from Walcha down to Port Macquarie. That coast line has not been surveyed—it is a *terra incognita*.

1880. *Mr. O'Sullivan.*] You have referred frequently to the population at Wandsworth and Ollera;—is there such a population as would be likely to support the line? I have stated that the population has increased at those places—it has increased largely within the last ten or fifteen years.

1881. Is it not a fact that these people are already served by the main line? Not more than Inverell is at the present time.

1882. Is it not a fact that Wandsworth is only 15 miles from the station? I am speaking of the whole country between Bundarra and the main line.

1883. We are not on the Bundarra route at all. Is it not a fact that Wandsworth is only 15 miles from the Great Northern Line? Practically, it is not further away from the railway station than the farthest point on the Glen Innes to Inverell line will be when you have a railway station at Inverell.

1884. That is not an answer to my question. Is it not a fact that Wandsworth is within 15 miles of the Great Northern Line? Yes.

1885. Then the country around Wandsworth is already virtually served by the Great Northern Line? What about the part further west?

1886. I want you to answer my question. Is not that population virtually served by the Main Northern Line? Very inadequately served.

1887. But you said that if we drew a circle around Glen Innes on one side, and another round Inverell, all within the circle would be within 22 miles of Inverell? Yes.

1888. Then are they not much better served at Wandsworth at the present time? Yes.

1889. Then already the proportion of population that you rely upon to patronise this line is served? I do not rely upon that population. I am speaking from a broader point of view.

1890. According to your own admission, that population is already served? I say very inadequately served.

1891. At all events they are served, but why more inadequately than the people 22 miles away from Inverell? Because they have not got the same road.

1892. Is it not a fact that there is a very fair road between Wandsworth and Guyra? Nothing like the road that there is between Inverell and Glen Innes. That is an old road that has been in existence for many years, whereas this is almost a new settlement.

1893. I suppose you know until recently the road to Inverell was a scandal to the district? I have travelled it for the last twelve years. It was better twelve years ago than the roads round Guyra.

1894. Have you been on the Guyra road recently? Yes.

1895. When was the last occasion? Last election.

1896. At all events a large portion of the population along the Guyra route is already served. Is it not a fact that the country between Wandsworth and Kangaroo Camp is really granite country? Beyond Tingha it is, but close to Tingha there are some of the finest fruit orchards to be found in the north.

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1897. I want to ask you about the country generally between Wandsworth and, say, within 10 miles of Inverell? If you desire to find out where settlement is taking place examine the country up and down the Bundarra River, and you will be astonished to find the number of farmers there who will be excluded by the line being made from Glen Innes.
1898. *Chairman.*] The question is as to the general character of the country between Guyra and Tingha? I have answered that up to the Kangaroo Camp the country is fit for the best settlement, is first-class agricultural country; but between Tingha and Inverell the land is poorer.
1899. *Mr. O'Sullivan.*] Do you regard the minerals of Tingha as likely to last? Of course, no one can say. It is an old saying with the miners that you cannot tell further than the point of your pick.
1900. Is it not a fact that the mines of Tingha have been failing for years past? That remark shows that you know nothing about it.
1901. *Chairman.*] Is it not a fact that the population of Tingha has been gradually decreasing? It is a fact that the alluvial tin has been decreasing, but there is a strong hope in the best geological minds in the colony that fine deposits of lode-tin will be found.
1902. *Mr. O'Sullivan.*] Then you want us to build the line in the hope that payable tin-mines will be found in the Tingha district? One of the biggest elements in railway construction is hope. If you have no hope you will not build a railway line.
1903. Have you read the evidence given before the Sectional Committee with regard to the tin-mines of Tingha? I think I did.
1904. Have you read the evidence in the papers on the table? Yes.
1905. How did you get it? Nearly the whole of the evidence was published in the New England newspapers.
1906. You stated just now that from your own knowledge most of the settlers at Inverell prefer the Guyra route? That is my opinion.
1907. Are you aware that, according to the evidence given before the Sectional Committee, nearly every witness was in favour of the Glen Innes route? Oh, yes; but that proves nothing. It only shows that the witnesses in favour of one particular thing were culled and brought before you.
1908. Let me ask how you know to the contrary? Because I have been amongst them.
1909. You have taken no sworn evidence, but you have gone amongst those likely to favour the Guyra line? I have done business with Inverell from twelve to fifteen years, and I know what all sensible men in Inverell think about it.
1910. Are you aware that Mr. Wyndham, Bukkulla, has changed his opinion? I know this, that hope deferred has been making their hearts sick, and that they will willingly take a railway anywhere. They are afraid that they will not get a railway *via* Guyra or Uralla, consequently they are glad to get a railway *via* Glen Innes.
1911. You spoke very strongly about there being no market in Queensland for wheat? I did not say no market.
1912. You seem to think that Queensland would be more likely to supply us? I think so.
1913. Are you aware of the quantity of flour that is produced in Queensland? No.
1914. Then you are not aware that there are not 8,000 tons produced in the whole of Queensland? No; I do not know anything about it.
1915. Perhaps you are not aware that 41,000 tons are imported annually? I am not. If they chose to go in for it, the Darling Downs alone could supply flour to the whole of Australasia.
1916. The Darling Downs are eminently suitable for wheat-growing? Yes; any quantity of land about the Darling Downs, about Warwick, about Roma, and Chinchilla.
1917. Why is that splendid land not cultivated? I do not know—there is no population yet.
1918. No population around Toowoomba and Warwick? Yes; there are German farmers there; but they find that fruit-growing pays them better.
1919. Is it not a fact that in dry seasons the crops fail there? They are going in for irrigation. They are sinking for artesian water. Places which formerly did not produce a blade of grass are now very productive.
1920. Is the place so flush of water that it could spare it? It gets 2 or 3 feet over the bank of the river at Warwick, in time of flood.
1921. But there are times when the river is almost dry? Yes.
1922. In dry seasons it would utterly fail? It only requires a weir to be put in.
1923. You say we ought to look to the future in building a line, not so much to the present? Yes.
1924. Do you know the Richmond and the Tweed districts? Yes.
1925. Are you aware that there is already a large population in those districts—a population of some 60,000, between the Tweed and the Clarence, and that that population is likely to increase very largely? Yes.
1926. Ought we not to bear in mind that that population will have to be supplied with wheat? They are on the sea-board.
1927. But there are very few harbours there? They can easily make harbours.
1928. You think it better to build an enormous harbour than to construct a railway that would open up a wheat district? I do not think that a line of railway over that difficult country could ever compete with water carriage. It would pay better to land the stuff in lighters than to carry it over that route.
1929. Is it always easy to get into those bar-harbours? No. Unfortunately not, but they are constructing jetties, and they can make a harbour even in a rough sea by the use of oil-bags, and anchored floating jetties. They can make safe harbours even on a stormy coast.
1930. If this line should be constructed from Inverell to Glen Innes, and from Tenterfield to Casino and Lismore, would it not be likely to open up a large interchange of products between the coast district and Inverell? My opinion is that even then it would be cheaper to take the produce down to Sydney or Newcastle, and send it up the coast by sea. I look upon the construction of a line to connect the coast with the upland districts as a matter that will not be within practical politics for the next three or four generations.
1931. *Mr. Haskins.*] I gather from your evidence that you are decidedly of opinion that if a railway were constructed to Glen Innes, the market for the products of that district would be to the west of Inverell, and also to the south, that is to Sydney, or the coast district? Yes.
1932. You have no idea of there being a market for wheat or flour grown in the Inverell district in Queensland?

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Queensland? No. Tenterfield already grows wheat largely. It is a very fine district, and Tenterfield would get the bulk of the trade. There are two or three flour-mills in the Tenterfield district.
1933. Are you aware that there are two or three flour-mills at Tenterfield? There is one at all events, Mr. Wherrett's.
1934. Do you not know that the area of good land at Tenterfield is limited? Yes, about Tenterfield; but there is good land 15 miles away. At Wilson's Downfall and King's Plains there are splendid areas for the production of wheat; also at Brown's Farms, and at Tabulam.
1935. You are of opinion that if there were a railway to Inverell the products of the district and the west would come to Sydney or to the coast district? I am very strongly of that opinion.
1936. You do not think that the Inverell people should look to Queensland for a market? I do not think that they would ever get a market there.
1937. You were speaking of the Bundarra district—there is no railway touching that district, is there? No, not near it.
1938. How far is it from the nearest point on the railway? I suppose that the nearest point is about Guyra.
1939. You say that there are hundreds of farmers in the Bundarra district? There are many; I, perhaps, should not have said hundreds.
1940. The land beyond the river is not good? Not near the river. Kingstown is 14 or 15 miles out of Bundarra. There are a lot of farmers about Kingstown, and all along the Stonybatter, at Ballala and Bendemeer, and that brings you round near Manilla. There is a lot of settlement around Manilla and Barraba. A great many settlers in the New England district have to go to Barraba in regard to their petty debt cases, and things of that sort. All that country would be served by a line from Uralla or Guyra, but it would not be touched by a line from Glen Innes.
1941. Which of the proposed lines to Inverell would you prefer to see constructed? I think the preponderance of facts is in favour of a junction with the main line at Uralla, but it would be a very fair compromise to make it at Guyra. It is necessary to arrive at some decision. Inverell ought to have had a railway long ago.
1942. Would not a line constructed from Inverell to Uralla or Kentucky open up a new tract of country which has not had railway communication before? Yes.
1943. Do you know anything of the character of that country? I have been all over it. It is nearly all mineral reserves between Uralla and Inverell.
1944. Is there much good land? Not so much as there is between Glen Innes and Inverell.
1945. Is there much good land unalienated between Uralla and Inverell? A large amount.
1946. We have a return here from the Lands Department of the land alienated by the Crown between Inverell and Glen Innes and Inverell to Guyra, *via* Tingha, and Inverell to Uralla, and on each route a very large proportion is alienated? Yes; nearly all the squatters have large freeholds.
1947. If a line were made by Glen Innes, Guyra, or Uralla, the greater portion of the good land which it would intersect has been alienated? I have no doubt that a great amount of it has.
1948. The land which still remains unalienated is mineral land? I do not think it would be the best land.
1949. Are you aware that all the land between Glen Innes and Inverell has been alienated? I understand so.
1950. Are you familiar with the betterment principle? I would not say that I am familiar with it. I have not made a special study of it.
1951. Do you think it a fair and just thing for the community, that if a railway is made in a particular district at a considerable cost, and that railway increases the value of the land in the neighbourhood, that the owners of the land should be called upon to pay, by a tax or by instalments, the difference between the earnings of the line and the amount of the interest on the expenditure and the working expenses? I would certainly make them give the land required for the line for nothing. Then I would make a special assessment as a contribution to the State for the enhanced value of those lands caused by the State expenditure.
1952. To what distance from the railway would you apply that? That would be a matter for experts.
1953. We have had it stated in evidence, even by witnesses favourable to the construction of the railway from Glen Innes to Inverell, that persons living 10 miles away are greatly benefited by the construction of the new line? Yes; anyone within a day's journey of the railway.
1954. Then, do you not think that the principle should apply, in varying degrees, to a distance of 10 miles on each side of the railway? Yes; I certainly think so.
1955. *Mr. Davies.*] Do you know the distance between Guyra and Glen Innes by the main line? About 30 miles, I think.
1956. Do you know the distance from Glen Innes to Inverell by the proposed route? I think the distance by the surveyed route is 55 or 58 miles.
1957. Have you travelled along these several surveys shown on the map? I have been over the route from Glen Innes to Inverell, and I have been at Wellingrove, Swanvale, and King's Plains, and I have travelled over the Strathbogie Ranges. I am pretty well acquainted with all that country.
1958. Have you traversed the route between Inverell and Glen Innes, shown by the puce-coloured line on the map? I cannot say that I have followed the surveyor's line, but I have been across all that country. I have travelled on the main road many times.
1959. And you say that the character of the country is good? Yes, it is fairly good.
1960. But there is not much settlement along that line? Very little.
1961. On any one of these lines? Very little to the north of the main road—only one or two stations. Between the main road and the Strathbogie Ranges there are very few settlers.
1962. Then the land is principally in the hands of private owners? Yes.
1963. Do you know that of your own knowledge? I know it to be a fact.
1964. Do you think the line would be a difficult one to construct, taking the route marked on the map in puce? When you leave the present main line there is a dip till you get to another high range; then, when you get over that, you have a pretty fair descent right into Inverell, with here and there a creek.
1965. Are you of opinion that the Government would be justified in constructing such a line as that marked in puce at a cost of £8,000 a mile? I do not think so.
1966. Do you think the railway would pay if made at a cost of £427,000? I do not.

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1967. Do you think it would pay interest on the cost of construction and working expenses? I think it would not.
1968. Do you think it would pay in the future? Not without a far greater amount of settlement and more traffic than there are at present.
1969. You favour the tapping of the main line at Guyra and going to Inverell along the surveyed line, marked in red? I prefer that to the puce line.
1970. You also said that the distance—37 miles extra haulage,—was against the people of Inverell, as they would have to travel on two sides of a triangle? Yes.
1971. Would that be very much against the produce of the district. It is tremendously against it. Owing to the differential rates, they now take the traffic to Glen Innes, and bring it back to Guyra to be distributed in the surrounding district.
1972. If the traffic went from Guyra, say to Inverell, would that be better than going from Guyra to Glen Innes, and then from Glen Innes to Inverell? It would make a great difference.
1973. What is the character of the country between Guyra and Inverell? The country right up close to Tingha is extremely good, but from Tingha it is mineral country, and not so good for agricultural purposes.
1974. I understood you to say that there are several public schools on the line of the Guyra survey? Yes. In the first 18 miles there are already six public schools, and three more have been applied for.
1975. You were asked whether you favoured the betterment principle? I do.
1976. Would not the people who are settled in that district find it to their advantage to have a line constructed within 20 miles of their holdings? Undoubtedly.
1977. Then it would increase the value of the land on each side of the line for 20 miles? Yes.
1978. Do you think that the betterment principle should be applied to the land-owners on each side of the line? I would so apply it as to make at all events a fair interest on the cost of the construction of the railway. I would even go to the extent of making a special trainage rate. I would not make a railway anywhere unless I could see a way to pay the interest on the cost of its construction, and that should be a first charge on those most benefited.
1979. You are strongly of opinion that Inverell should have a railway? Certainly.
1980. You are of opinion that it would not pay to make a railway at a cost of £8,000 a mile? It would not at present.
1981. And not for many years to come? I could not say that. Railways induce settlement and make freight for themselves.
1982. I understood you to say that the land on the route was principally in the hands of private owners? Between Glen Innes and Inverell it is.
1983. But between Guyra and Inverell more of the land is in the hands of the Crown? Yes; much more.
1984. And you prefer that line to the Swanbrook route? Yes.
1985. *Mr. Wall.*] You have been doing business in the New England district for many years? Yes.
1986. Were you there prior to the construction of the railway connecting the northern towns? Yes; I have done business there ever since it used to start from Moonbi.
1987. Have you any idea whether the land has increased in value since the construction of this line? I should say that it has gone up in value very largely.
1988. Have there been any cases to your knowledge in which a line passing through a town has tended to decrease the value of the land? I have never heard of any such cases. Sometimes it has taken away a temporary stimulus to business, but the price of the land always goes up.
1989. Would you apply the betterment principle to the land-owners only, or to those doing business in the district who derive any benefit from the railway? The one would be so intangible as compared with the other that it would be very difficult to make an assessment. You can assess the land, but the other would be too fluctuating a thing.
1990. The advantage to the business man would be as great as the advantage to the land-owner? The business man would participate. I see no objection to the business man paying an enhanced rate for freight to defray the interest on the cost of construction of the line.
1991. Do you think an enhanced rate of freight would be a better system of applying the betterment principle than the levying of a special tax on the land-holders? The special freight would be simply passed on to the consumer. The merchant would add it to the price of his goods.
1992. I should like to direct your attention to a report, and to ask you whether you agree with it or not, a report as to the character of the land between Guyra and Inverell:—"From the point last named (23 miles from Guyra) the line passes over poor stony land of porphyry and granite formation, to a point about 1 mile beyond Moredun Creek, whence to New Valley Range the country is fair pastoral land, but unfit for cultivation. From New Valley to Tingha (40 miles from Guyra) the soil is decomposed granite of the worst quality, poor grazing land, and quite unfit for agriculture"? That is a fairly accurate account of the district, I think.
1993. *Mr. Neild.*] You have spoken about the production of wheat in the vicinity of Tenterfield;—is it a fair description to say that the country round Tenterfield is sterile, or is it good agricultural country? When you get away from the flats on to the ranges it is unfit for agriculture, but the flat land is perfectly good.
1994. Do you know what quantity of wheat or grain is raised in Tenterfield? I could not say.
1995. Can you say in what direction Tenterfield grain finds a market? I should say that it comes south.
1996. It does not go to Queensland? I should think not.
1997. Is this a fair description of Tenterfield:—"With the exception of a very small area immediately around Tenterfield, the country is of the poorest description; it is fit for nothing but grazing sheep"? If you get down about 15 miles from Tenterfield you get into very good land indeed, but on the Inverell side of Tenterfield, when you leave the plain, you get into very barren, highly mineralised land, unfit for agriculture.
1998. Then the wheat produced in the vicinity of Tenterfield does not find a market in southern Queensland? In my opinion, it does not.
1999. Do you agree with this statement:—"Warwick will not grow wheat; it will produce good maize"? I should say that it will produce both maize and wheat.
2000. Are there any flour-mills in Warwick? Yes; there is Hayes' flour-mill, a very fine mill, with all the latest machinery.

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2001. Then you think that the southern portion of Queensland is quite as capable of producing wheat for the local market as Inverell is of supplying it? Quite so.
2002. The wheat would be of as good a quality? I think so.
2003. And there would be this advantage to the local grower, that he would not have the carriage to pay? That is so.
2004. Your decided opinion is, from your knowledge of the country on both sides of the border, that Inverell produce will have to find a market to the south? To the south or west.
2005. A market to the west would not affect the railway under consideration? If you were going to make an extension it would. They would send in, as they do from Armidale, very large quantities of fodder. They would send hay in bales, and also chaff. They send chaff and other produce down to Werris Creek, and up to Narrabri and Gunnedah.
2006. I gather from your evidence that, with the extension of the line to Moree, a branch to Inverell from, perhaps, Narrabri would suit the circumstances of Inverell quite as well as the proposed line? You would have the same difficulty again. You would have to go up two sides of a triangle. It would handicap the Inverell people too much.
2007. But supposing a line were made from Narrabri, that would be about equal to the Uralla proposal? The objection to that would be that it would be too much parallel with the existing main line.
2008. Would you give the preference to the Uralla line as against the Guyra line? Yes.
2009. But if there has to be a splitting of the difference you would accept the Guyra line? I think Guyra would be a very fair compromise. It would be infinitely preferable to the right-angled line from Glen Innes.
2010. Would it be as easy to reach the coast from Guyra or Uralla? I think it would. It must not be forgotten that it is very likely that a railway would be made from Hillgrove at a not very far distant time, and 12 miles further on there are Wollomombi and Rockdale. Then you get on to a very fair gradient and touch the coast about Kempsey. The Coff's Harbour route suggested itself to me as a feasible one, though I cannot speak from any personal knowledge of it. If you ask me whether it would not be more feasible to reach the coast from Guyra than from Glen Innes, I am of opinion that it would be.
2011. You know the route from Glen Innes to Grafton? Yes; the Newton-Boyd route.
2012. I understood from you a little while ago that there has been a difference of opinion among the people of Inverell as to the best route for the line, but that, in despair of the matter ever being concluded, they have agreed to accept what they can get? I believe that is a fact.
2013. And that difference would account partly, in your estimation, for the alleged change of front on the part of one or two individuals? I think it is a fair explanation. If there is a reasonable prospect of getting a line from Guyra the people would prefer it, but if not they will accept the one from Glen Innes.
2014. If they have good agricultural land around Inverell, would the crops raised on the land be capable of successfully competing with the crops grown much nearer to the southern market? I think so. I think they could supply a good deal of the consumption on the New England plateau.
2015. Without entering into a disastrous competition with Armidale? The Armidale people do not half supply their own wants, but they can grow barley, oats, potatoes, and other things.
2016. Is there sufficient agricultural land about Armidale for the people to supply their own wants? Yes; but they do not supply their own wants at present.
2017. Is that to be accounted for by the competition of sea-borne wheat sent up the line? To some extent it is, and they find that other things pay better.
2018. Generally speaking, would it be a good policy to construct a line chiefly for the purpose of carrying wheat? That would only be one product. I think that wool for many years to come will be quite as big a feature in the productions of the district as wheat.
2019. I am asking whether, in your opinion, it would be good policy to construct a railway primarily to carry wheat? It would form a very important factor in our proposal; but if the line were to be exclusively to carry wheat, then the question would arise whether that traffic alone would pay.
2020. Wheat will pay only when grown in large areas? Yes.
2021. And large areas of necessity mean limited population, as we see at Wagga, where a farmer has a frontage of 4 miles to the road? Yes; wheat will not be grown at a profit except with the use of labour-saving appliances, such as strippers and other machinery.
2022. It is an article of commerce of such universal consumption, that there is no article cut more finely? It would not pay if *petite* culture were indulged in. Small farmers would find it better to go in for mixed cultivation.
2023. *Dr. Garran.*] You say that your constituents do not grow agricultural produce? They do not fully supply their own wants.
2024. Yet, according to Mr. Price's evidence, within 5 miles of Guyra there is as fine wheat-growing land as you would wish to see. Is there good land within 5 miles of Guyra? There is splendid land, but I do not think that wheat is the best thing to grow on it—I think the climate is rather cold.
2025. We have had it in evidence that the climate from Armidale to Tenterfield is too cold for wheat-growing? In many parts it is. The land there would grow oats and potatoes better.
2026. Is the climate in your electorate favourable to the growth of wheat? In many parts it is favourable, in other parts it is unfavourable. It varies from the extreme altitude of Ben Lomond down to the semi-tropical climate of the lower lands.
2027. If the land is favourable, why do they not try it? I expect they find other things pay better.
2028. If that is the case, would the making of a railway from Glen Innes to Inverell induce the people of Inverell to grow wheat? Not unless they found it pay better.
2029. If the Great Northern Railway has not induced the growing of wheat all along the line, why should the making of another railway induce the growing of wheat? I do not know.
2030. The great object of making the railway, we are told, is to develop the growing of wheat? That is not my idea. My idea is to give access to a very rich district which grows a great many other things.
2031. What else would pay? Wool would pay.
2032. They grow wool already. They would not send any more wool to market? They would send the wool to Newcastle or Sydney—they also grow wine and other things.

2033. Do you think wine would make a profitable business for the railway? There must be large quantities of stores to be carried for the vineyards. I do not think wheat is the main element. It is only one of a number of products. Inverell is one of the richest districts in the colony. It is capable of growing anything. J. Inglis, Esq., M.P. 26 April, 1892.
2034. We have been told that south of Inverell the land is not good for any distance? At Bundarra, and up and down the river, the land is very good indeed.
2035. North and west we are told is a great district? I differ as to that. Except beyond King's Plains you get into the Strathbogie Ranges and barren country.
2036. I am speaking of due north? It is very good land due north and due west, till you get near Warialda.
2037. The great object is to get to the Inverell district, rather than to the township? Yes; the district is the place to be served.
2038. That is what I want to get at. Is there any better way of getting to this district than by this route that has been surveyed? Undoubtedly, through Guyra or Uralla.
2039. Is there no good way of getting at it more northerly? No; you get into broken country.
2040. Do you know anything of the upper part of the Severn Valley, supposing you were to go west from Dundee Station? It is very broken country there.
2041. Is there no station north of Glen Innes where you could get away to the west with an easy line? No; it would be very difficult country.
2042. You cannot get an easy line until you come to Guyra or Uralla? Yes, there is the Glen Innes line. They have got permission to make a tramway from Deepwater to Galena.
2043. Do you know the route of that line? Yes.
2044. Is that difficult? That is pretty easy, but beyond that the country is difficult.
2045. Then you cannot get from Galena to the west? No.
2046. You would not recommend that route? No; that would be as bad as the Grafton line.
2047. Then Glen Innes is the most northerly route to the west that we can get? Yes.
2048. If we want to go from Inverell to the Richmond district that is the shortest line? Yes.
2049. If we want to go to the Clarence district we should go by Guyra? Yes.
2050. Do you know anything of the route between Tenterfield and Casino? Yes; I have been up and down it two or three times.
2051. Do you think the Inverell people would find a local market there that would pay for the construction of this double line of railway? I do not think so. There is plenty of land about Tabulam.
2052. Supposing the people of Inverell wanted to sell wheat to the people of Casino and Ballina, would they be able to get it cheaper by sea carriage than from Inverell? Yes.
2053. So that however much the population of the Richmond Valley increases the cheapest way for them to get wheat will be by water carriage? Yes; or by our North Coast Railway, which will be made sooner than a line down to the coast.
2054. Until a line is made down to the Richmond, Sydney must be the market for the Inverell produce? In my opinion the market must be at Sydney, Newcastle, and in the west.
2055. So in any case the Inverell people at present want the shortest way to Sydney? I think that is the most practical thing to seek—that is their most natural market.
2056. If a line were made *via* Guyra to Inverell, do you think it would be found a few years hence that the real outlet was by way of the Richmond River? No.
2057. You do not think that the Guyra line could ever be found to be a mistake? The only point would be to have it further south. I do not think that there would be found to be any mistake from there being found to be a better market to the north.
2058. You think that the only choice is between Guyra and Uralla? Yes; or Kentucky.
2059. You do not believe that there would be a market on the Richmond River for Inverell produce? No.
2060. Nor in Queensland? No.

James Jamieson, Esq., Railway Surveyor, sworn, and examined:—

2061. *Chairman.*] What position do you occupy in the public service? I am a railway surveyor. J. Jamieson, Esq. 26 April, 1892.
2062. How long have you been engaged in the Railway Construction Branch? Fifteen years.
2063. You were engaged on the survey of the line between Inverell and Guyra? Yes.
2064. On the whole of that line? No, on a portion of it.
2065. Which portion? From New Valley Creek into Inverell.
2066. That is about half-way? Yes, midway between Guyra and Inverell.
2067. *Mr. Collins.*] Have you been over the whole route between Guyra and Inverell? Yes.
2068. Will you state what you think of the country between Guyra and Inverell? It is rather heavy country in which to construct a railway. There are several difficult points.
2069. What is the nature of the country? It varies.
2070. In the valley where you commenced? The country is very poor about there; it is decomposed granite.
2071. Are there many settlers about there? Very few.
2072. Perhaps you will state your ideas about it from an engineering point of view? The cost has been submitted by the Engineer-in-Chief.
2073. Did you make up the cost? No, that was done in the office from data supplied by me.
2074. And you say it will be a difficult line to construct? Yes.
2075. How long were you surveying the line? Five or six months.
2076. What is the grade? One in 40.
2077. Have you been over the line from Glen Innes to Inverell? Only by the road.
2078. You know nothing about the survey? No.
2079. *Mr. Ewing.*] The only information you can give us is with reference to the features of the line from Guyra to Inverell? Yes.
2080. You know nothing of the line from Inverell to Glen Innes? No.
2081. And you know nothing about the connection with the coast? Yes, I made a portion of that survey also.

J. Jamieson, Esq. 26 April, 1892.

2082. Where? The first was a permanent survey from Glen Innes towards Grafton, and the second from Guyra towards the coast.
2083. What is the line from Grafton to Glen Innes like? Very rough country.
2084. How far did you go towards Grafton? About 50 miles.
2085. You went towards the Don Dorrigo scrub? No, towards Guy Fawkes.
2086. Were you still on the table-land there? Yes.
2087. Therefore the part of the line which you surveyed from Guyra towards the coast only embraced the easy part of the line? Yes.
2088. You know nothing of the difficult part? No.
2089. You know nothing of the real difficulties of getting a connection from the table-land to the coast? No.
2090. *Mr. O'Sullivan.*] Is there any possibility of obtaining a better grade on the Guyra route? Yes; I think it could be improved to a grade of 1 in 60 by increasing the distance about 3 miles.
2091. Would you require to make many deviations? Yes; it would have to be deviated from the present trial survey.
2092. And to be lengthened about 3 miles? Yes.
2093. In its entire length, or only in the part which you surveyed? No; it would embrace another portion which Mr. Edwards surveyed.
2094. Do you know anything of the parts which were surveyed by Mr. Edwards? Yes.
2095. Is it very difficult work along there? It is very similar to the portion which I went over.
2096. What is your opinion of the country between Wandsworth and Inverell? It is principally a mining district; there is no settlement there.
2097. Principally a broken granite country? Yes.
2098. More noted for mineral wealth than for agricultural resources? Yes.
2099. Do you think it is country that will carry a large settlement? I think not.
2100. You did not make up an estimate of the line? No.
2101. You supplied the data? Yes.
2102. *Mr. Humphery.*] How many miles did you survey? Twenty-eight or 29 miles.
2103. In how many portions had you a grade of 1 in 40? On two portions of the line.
2104. What length? One mile and a half—that was the descent into Inverell; and then the descent from the New Valley Range, about 1½ mile.
2105. How many portions of line between where you terminated your survey at Guyra have grades of 1 in 40? I think the whole distance with a grade of about 1 in 40 was about 4 miles, between Guyra and Inverell.
2106. Three miles in your portion and 1 mile in the other part surveyed by Mr. Edwards? In my portion it would be about 2 miles.
2107. It would be about 2 miles in each portion? Yes.
2108. Have you estimated the increased cost of reducing that grade to 1 in 60? I have made a rough estimate.
2109. Can you give the figures? £21,000.
2110. *Dr. Garran.*] Do you know anything of the country north of this survey marked red—the Glen Innes country? Towards the Queensland border?
2111. Yes? No, I do not.
2112. You are only acquainted with part of the lines from Guyra to Inverell, and Guyra to Grafton? Yes; and from Glen Innes towards Grafton.
2113. *Chairman.*] Do you think the line marked "Mr. Moore's explored route" is better than the permanent surveyed route? No.
2114. You escape rough country where the red line is? Yes.
2115. Do you know anything about the Uralla route? Yes.
2116. Do you know anything of the Kentucky route? Yes.
2117. How much of it? The portion I surveyed is about 30 miles.
2118. From Inverell? Yes; in both cases.
2119. Is that country more or less difficult than the country between Guyra and Inverell? I think it is more difficult. There is a range which extends from Bundarra right across to the M'Intyre River.
2120. Is the country equal for settlement to that between Guyra and Inverell? I should say it is about similar.
2121. How long is it since you were engaged on these surveys? About four years.
2122. Large settlement might have taken place since then? Yes.
2123. But you do not think it probable, in view of the nature of the country? I do not.
2124. Is the surveyor who was on the other portion of this Guyra route in the Department now? Yes.
2125. Where is he engaged? Somewhere on the North Coast Railway, I think.
2126. I think you said you knew nothing about this other proposed route from Inverell to Glen Innes? Nothing.
2127. *Mr. Davies.*] During your six months residence in that country, whilst making your survey from Guyra to Inverell, did you observe much settlement? No; very little.
2128. Is it a fact that there are six public schools on that line? Not on the portion which I surveyed.*
2129. I suppose you frequently went along the whole line? Yes.
2130. And if there were public schools there you could see them? They might be some little distance from the surveyed line.
2131. Have you seen any at all in the district? I cannot say that I have.
2132. *Mr. Neild.*] Mr. Hogg was the engineer charged with the survey of the line from Glen Innes to Inverell—do you know whether Mr. Hogg is in the service now? He is not.
2133–4. Where is he to be found? I think he is in Tasmania.

WEDNESDAY,

* Note *(on revision)*:—The number of Public Schools in close proximity to the portion surveyed by me is six, viz., Tingha, Stanborough, The Ponds, Goomiwegia, Gilgai, and Inverell.

WEDNESDAY, 27 APRIL, 1892.

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM HENRY SUTTOR.	WILLIAM CHANDOS WALL, Esq.
The Hon. JAMES HOSKINS.	WILLIAM McCOURT, Esq.
The Hon. FREDERICK THOMAS HUMPHERY.	JOHN CASH NEILD, Esq.
The Hon. ANDREW GARRAN, LL.D.	EDWARD WILLIAM O'SULLIVAN, Esq.
The Hon. JOHN DAVIES, C.M.G.	CHARLES COLLINS, Esq.
THOMAS THOMSON EWING, Esq.	HENRY DAWSON, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

The Hon. Henry Copeland, M.P., Minister for Lands, sworn, and examined:—

The Hon. H. Copeland, M.P. 27 April, 1892.

2135. *Chairman.*] You are one of the Members representing New England, and also Minister for Lands? Yes.

2136. Perhaps you have some statement that you desire to make with reference to the proposed railway? First of all, I have been asked to present a Petition to the Committee from a large number of leading residents at Armidale. It contains the signatures of the mayor and aldermen, and, in fact, of nearly every man of any position in Armidale.

2137. Do you desire to have the Petition read? I desire to have it attached to my evidence.

2138. I would suggest that it be read. (*Petition read—Vide Appendix.*)

2139. Do you concur in the conclusions set forth in the Petition? Yes. I think I might be permitted to make a statement in the first instance, as I have taken the trouble to prepare a few condensed notes. Perhaps my evidence will read better if I give it in a continuous form. I find that one argument which has been strongly urged in favour of the Glen Innes route is that a very large proportion of the traffic at present goes from Glen Innes to Inverell. I find, from a return which I have received from the Secretary to the Railway Commissioners, that the rates charged by the Commissioners for a single ton of second-class goods, including aerated waters, ale, beer, steam-boilers, iron, lead, &c., to Guyra is £6 4s. 6d.—whereas they carry the same articles to Glen Innes, 37 miles further, for £6 per ton. For third-class goods, that is general goods, the charge to Guyra is £8 13s. 4d. per ton, but they carry the same class of goods 37 miles further, that is to Glen Innes, for £7 per ton. Then I find, with reference to truck rates, that the rates from Sydney to the stations between Glen Innes (including Glen Innes) and Wallangarra, inclusive, for sugar, rice, unwrought and galvanised iron, wire-netting, and fencing-wire, in four-wheeled truck loads of 6 tons, is £24 a truck; but to Guyra, 37 miles less distance, they charge £40 per truck. For first, second, and third-class goods they charge £30 a truck to Glen Innes, but £40 a truck to Guyra. This of itself seems to me to explain to a great extent how it is that goods go from Glen Innes to Inverell, instead of from Guyra to Inverell. I have also the rates here from Newcastle, but they show the same thing. From Newcastle and Great Northern Line stations to the stations between Glen Innes and Wallangarra, inclusive, for sugar, rice, unwrought and galvanised iron, wire-netting, &c., the charge is £21 per ton. For first, second, and third-class goods the charge is £27 per ton. But the charge from Newcastle to Guyra, which is 37 miles less distance, is £37 per truck. With reference to the road expenditure on the two routes, Guyra to Inverell, and Glen Innes to Inverell, I have obtained information from the Roads Department for the past five years—from 1887 to 1891, inclusive. The road from Glen Innes to Inverell is 53 miles 54 chains, and there has been expended on that road by the Roads Department £29,756 during that five years. But on the Guyra to Inverell road, which is 55 miles 10 chains, it being a little more than 1½ mile longer than the Glen Innes road, there has been an expenditure during that five years of only £12,250. These facts sufficiently explain how it is that at the present time most of the goods go from Glen Innes to Inverell, instead of from Guyra to Inverell. When Mr. Surveyor Hogg furnished his report to the Minister in 1883, according to his statement, 90 per cent. of the goods went to Inverell, *via* either Guyra or Uralla, but principally from Guyra. Of course, since the Guyra to Inverell, *via* Tingha, road has been neglected it has become a bad road, and seeing that the Railway Commissioners offered a direct premium on the sending of goods to Glen Innes, it is not surprising that the goods are at the present day sent to Glen Innes, and are even sent back again by train to Armidale, instead of being sent to Armidale direct from Sydney.

2140. These facts, in your opinion, sufficiently explain the larger amount of traffic that there is between Glen Innes and Inverell, than between Guyra and Inverell? Undoubtedly. The statement has been made here over and over again that the Inverell people prefer to deal with Glen Innes, but I say that they are compelled to deal with Glen Innes. Let the Railway Commissioners abolish their differential tariff, and let the road be made as good from Guyra to Inverell as that from Glen Innes, then you will find 90 per cent. of the traffic will go from Guyra to Inverell.

2141. *Mr. Wall.*] Can you tell how long the differential rates have been in existence? Something like two years, perhaps a little more. Mr. Barling, in giving evidence recently, made this statement:—"Mr. Deane explains that the distance, 51 miles, is that estimated by Mr. Hogg from Guyra to Inverell after his exploration. Actual survey made it 55 miles. If the grades are altered to 1 in 60 add 3 miles, making in all 58 miles." That is Mr. Barling's evidence, and it is supported by Mr. Deane's evidence. As a matter of fact, Mr. Hogg gave the distance as 51 miles. And after the termination of the last sitting of the Committee I went and had a personal interview with Mr. Deane, and he gave me this information, which I took down in his office:—"Chief Engineer says that Mr. Jamieson surveyed the Guyra line to Inverell, 54 miles." I would like to point out that he now gives the distance as 58 miles; but there has been no recent survey to extend the distance.

2142. *Chairman.*] Was not that 58 miles to bring it to the same grade as that of the Glen Innes to Inverell line? The statement of the Chief Engineer is: "Mr. Jamieson says the survey Guyra to Inverell, 54 miles; 1 in 40 to 50, 9 miles; 1 in 50 to 60, 8 miles; can get ruling grade 1 in 60 2½ miles longer." Fifty-four miles and 2½ miles make 56½ miles, but Mr. Jamieson, in his evidence, makes it appear that the present line is 58 miles long, and so does Mr. Deane. Then Mr. Jamieson goes on to explain that to get a grade of 1 in 60 the line would have to be made 3 miles longer. I am sure that that is a mistake.

2143. We have received a paper from Mr. Deane, in which he gives the length of the line from Guyra to Inverell as 55 miles 10 chains, with a grade of 1 in 40; but to get a ruling grade of 1 in 60 it would make the

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the line 58 miles 10 chains? Yes; that is the explanation which I wanted to bring before the Committee. From reading his evidence, and that of Mr. Jamieson, it would appear that the distance of the present route is 58 miles, and that it would have to be increased by 3 miles to get a grade of 1 in 60. Mr. Deane also assumes that, by extending the line 3 miles, a very considerable additional cost would necessarily be incurred, and yet he states that the other line has been extended 9 miles, whilst the cost has been reduced by £65,000. The length of the Glen Innes to Inverell line has been extended by recent surveys until it is now 9 miles longer than it was before, and yet the cost has been reduced by £65,000, and that notwithstanding that there are 7 miles of very heavy cuttings. But Mr. Deane assumes, in dealing with the Guyra to Inverell line, that by making it 3 miles longer the cost would be increased by £21,000. I fail to see how anyone, until a survey is actually made, can show whether there will be a reduction or an increase in the cost. The Guyra route has never been submitted to the Railway Commissioners. The evidence of Mr. Barling shows that the Railway Commissioners, in expressing a favourable view on the line from Glen Innes to Inverell, merely expressed an opinion upon the particular line submitted to them, and that the Guyra to Inverell line had never been submitted to them. Mr. Deane, also, in his evidence, showed very clearly that if the question had been submitted to him he would probably be able to give strong evidence in favour of the Guyra to Inverell line; but the question has never been submitted to Mr. Deane. He has cursorily made a slight reference to it, but it has not been submitted to him as a Departmental question, and therefore he is not authorised to make a statement in reference to it. It seems to me that in a case of such importance—and I shall endeavour to prove it to the country—that the two lines should be before the Committee. As the Minister holds that the two lines cannot be submitted at one time, I am of opinion that the Glen Innes line should be rejected by the Committee until the other line is submitted to them. They can then have the report of the Commissioners upon it, and the report of the Engineer-in-Chief, and they can take any other evidence. If the Committee then think, after inquiring into both lines, that the Glen Innes line is the better one, let them reject the Guyra line, and the Glen Innes line could be again submitted to them within twelve months, or even in less time if the Minister liked to exercise his powers under the Act. I certainly think that the two lines ought to be inquired into. With regard to the Glen Innes to Inverell line, I am of opinion that the strings have been pulled to a very great extent by land syndicates. There is one at each end of the line. There is the Furracabad Estate.

2144. Is it wise to give utterance to statements like that? I can give figures, taken from the parish maps, as to the area of these estates. I believe there are somewhere about 15,400 acres of land held by one syndicate at Glen Innes, through part of which this railway would run to Inverell. At the other end of the line there is, according to the parish maps, 16,287 acres held in the name of Campbell. There is an area of 14,104 acres held in the names of Campbell and Fraser, and an area of 3,401 acres held by Campbell and Gibson; also an area of 1,697 acres held by the Frasers, making a total of 35,498 acres, in most of which Mr. Campbell is interested. I am informed that Mr. Campbell, and two or three other gentlemen of Inverell, simply force a great number of the Inverell people into acquiescence in the line *via* Glen Innes. One of these gentlemen is Mr. Grainger, the bank manager, who, I am informed, holds mortgages over a vast number of selectors in the district; another is Mr. Sinclair, auctioneer. Mr. Campbell is a squatter. I know the Committee are of opinion that the people of Inverell are strongly in favour of the Glen Innes route. I can only say that many of these people have written to me expressing their strong opposition to the line. I received a letter from a land-owner two or three days ago, stating that he was strongly opposed to the line going from Glen Innes.

2145. Would you mind giving us the name? As the letter was not written for publication, perhaps I had better not give it.

2146. *Mr. Collins.*] Where is his land situated? I cannot say exactly, but close to Inverell.

2147. *Chairman.*] You do not know whether he has given evidence before the Sectional Committee? I do not. Mr. Deane gave evidence with reference to the climb over the Ben Lomond Range by the railway; but I notice that further on he corrected that evidence. The altitude of Glen Innes is 3,518 feet, according to the railway time-tables, and the altitude of Ben Lomond is 4,471 feet, so that they will have to carry every ton of goods that goes to Glen Innes over Ben Lomond, an altitude of 953 feet above Glen Innes. They will have to ascend 953 feet above Glen Innes in 22 miles, and to descend to Guyra 114 feet in 15 miles. By taking the line from Guyra they will avoid the carrying for all time of the thousands of tons that must be carried to that district over the Ben Lomond Range. That can be avoided by taking the line from Guyra to Inverell. I have not had an opportunity of looking up the altitude of the Waterloo Range. Mr. Deane speaks as if there were no range to get over between Glen Innes and Inverell. I know that there is a considerable range to climb, but I have not had time to ascertain the height of it. I am assured that, in leaving Glen Innes, they will have to climb the Waterloo Range and then to descend to Inverell, so that in bringing 1,200 tons of tin *via* Inverell from Tingha they would have to go from Tingha to Inverell, then climb over the Waterloo Range down to Glen Innes, and then over the Ben Lomond Range down to Guyra. One argument, in my opinion, against taking this line from Glen Innes is, even if you get a grade of 1 in 60, that there will be 32 miles of additional travelling, over which every ton of goods going to, or coming from, Inverell will have to be carried. Every ton of goods will have to be carried 32 miles further than it would have to be carried *via* the Guyra route, and each passenger will have to travel that distance and to pay passenger rates upon it, and at 2d. a mile this comes to 5s. 4d., which each passenger would have to pay more in going to Inverell, *via* Glen Innes, than would have to be paid in travelling to Inverell, *via* Guyra, and the time occupied in travelling would be an hour and a half longer by the Glen Innes route.

2148. *Mr. Hoskins.*] That applies to passengers coming south? Well, I cannot imagine that anyone will think that passengers to Sydney—and Sydney must be the head-quarters for Inverell—will be likely to travel north. When we get Byron Bay opened it is hardly likely that passengers would go to Tenterfield, and then to Byron Bay to get to Sydney, and it is still less likely that they would go to Brisbane to get to Sydney. I want to draw the Committee's attention to the additional expenditure for all time to come that will be incurred in the working of this railway *via* Glen Innes. The amount, according to the official report, for last year of the working expenses of the railways per train mile was 52·26d. If we assume that there is one passenger train to Inverell, *via* Glen Innes, each day, and three goods trains per week, each way, that would be eighteen trains altogether—twelve passenger trains and six goods trains. That would be 936 trains per annum. That, multiplied by 32, the number of extra miles for each journey, would show that the trains will have to travel an unnecessary distance

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distance of about 30,000 miles a year, the actual figures being 29,952 miles. That would entail an unnecessary annual loss to the railway of £6,522, which, at 4 per cent., would cover an expenditure of £163,000. I submit, therefore, that even if the Guyra railway were to cost, instead of less than the Glen Innes railway, £163,000 more, it would be the duty of the Government to make the railway *via* Guyra, because, although the interest and expenses of working might be the same, supposing it to cost £163,000 more, you would save to the people for all time to come the extra 5s. 4d. on each journey, and the hour and a half of time, and there would be a corresponding saving on the goods traffic. The running of the extra hour and a half on each journey would necessitate the trains running what would be equal to fifty-eight and a half continuous days, of twenty-four hours per annum—that is, by adopting this 32 miles longer route. The argument was used that we may have a railway to the Richmond River, north of Byron Bay. We may, but everything points to the fact that the first railway from the table-land will be from Guyra to Grafton, or to Coff's Harbour. But, assuming that a railway was already constructed to Byron Bay, according to the evidence, the distance from Inverell to Byron Bay would be 241 miles; according to Messrs. Scarr and Price's report, it is 232 miles, but 9 miles added on to the line between Inverell and Glen Innes would make the distance to Byron Bay 241 miles. We cannot imagine that people would travel from Inverell to Byron Bay to get to Sydney. People do not travel even from Newcastle by steamer now-a-days—they travel by train. Therefore the whole of the passenger traffic from Inverell must come to Sydney, and I think that is the traffic which should be most considered. We ought to adopt the shortest and the cheapest route for passengers. It does not matter how long goods are on the road. If they got to their destination in a week it is all right. But, assuming that the passengers went round by Byron Bay, by the time they arrived at Byron Bay they could, by adopting the Guyra route, be within 100 miles of Newcastle; 241 miles from Inverell, *viâ* Guyra, would bring them within 100 miles of Newcastle. 2149. What else is there likely to travel that way? I do not think that wool would go by that route. In my opinion there would be scarcely any traffic round there, except the traffic arising from an interchange of commodities between the semi-tropical districts of the Richmond River and the cool climate of New England. As regards the fruit, it is absolutely necessary that fruit should be sent from New England direct by train. They would never send fruit or wool by Byron Bay, unless a line of steamers be established with England, but that is unlikely because the steamers would have nothing to bring from England to Byron Bay. I submit that Byron Bay must be left out of consideration at present. When a line is constructed to Byron Bay that may be an argument in favour of constructing another leg of this line, viz.: from Glen Innes to Inverell. Take the Brisbane line—it is unreasonable to imagine that there will be any passenger traffic to Sydney *viâ* Brisbane. They will not want to go by the northern route when they have got a main trunk line. The people of the Inverell district will want to go southwards, to do business at Armidale, Tamworth, Newcastle, and Sydney. That is their natural direction. If they attempted to go north, and to do business in Queensland, they must pay duty on every article they send into Queensland, except wheat, and they will have to pay extra railway rates. They cannot send wool into Queensland without paying a 15 per cent. duty, and it is the same with regard to hides and other products. As to sending agricultural products, that is out of the question, as there is any quantity of good land in Queensland, to produce all that they require, and they have been supplying New England for a considerable period. I was in that district at the time of the last election, and the people of New England were using Queensland maize. That shows that there would be no market for maize from Inverell in Queensland. The legitimate market for that district will be at Armidale, Murrurundi, Newcastle, Tamworth, and other places to the south. It cannot be imagined that they would send very much to Brisbane, because of the duties, and the distance to Brisbane is only 89 miles short of the distance to Sydney by the Guyra route. The producers would be much more likely to send their produce to Sydney, where there is four times the population of Brisbane, to say nothing of the larger towns on the road. Even if the Queensland duties were swept away the traffic must go to the south, but seeing that duties are imposed in Queensland our people cannot find a market there. Again, supposing this line is constructed from Glen Innes, it would add to the proposed line to Grafton by 18½ miles. It will be 18½ miles further to go round by Glen Innes to Grafton than it will be by the Guyra route. It seems to me that whichever way you look at it, by making the Glen Innes line you are hampering the public for all time, and not merely the Inverell people, but everybody to the west and north-west of Inverell who is likely to use the railway. Tingha is a place which is going ahead. It seems to be the opinion of some persons that there is no population at Tingha except Chinese, but I find from the evidence of the Senior Constable at that place that there is a large population of Europeans, that the European population is increasing very rapidly. I will quote the evidence which he gave before the Sectional Committee. "Has the European population of Tingha increased or decreased during that time? In my district the European population in 1888 was 1,960, and the Chinese population 1,150. In 1889 the Europeans numbered 1,950, and the Chinese 1,000; in 1890 there were 2,120 Europeans and 1,100 Chinese, and in 1891 there were 2,285 Europeans and 708 Chinese, showing an increase in the European population, and a great decrease in the Chinese." There are 2,285 Europeans at Tingha. And what does this proposed line impose on them? Tingha, as is well known, is 15 miles on the road, on the Guyra side of Inverell. Therefore if the railway were made from Inverell to Guyra, the traffic of Tingha would be 15 miles on its journey; but if the railway is taken *via* Glen Innes, Tingha, which sent last year 1,200 tons of tin to Sydney, and some passengers, would have to send all its traffic *via* Inverell and Glen Innes. They are prospecting for lodes at Tingha, and I have no doubt that they will find them, just as in Victoria we found gold lodes after the alluvial. What you will impose on the Tingha people is this, that they will have to travel 15 miles by road to get to the railway at Inverell, and then 53½ miles from Inverell to Glen Innes, and 37 miles from Glen Innes to Guyra, making a total of 105½ miles from Tingha round to Guyra, whereas, by taking the direct route to Guyra, the traffic would have to go a distance of only 40 miles. I ask the Committee if it is a fair thing to impose upon over 2,000 Europeans who live at Tingha, an extra distance of 62½ miles for both passenger and goods traffic. Every time a passenger from Tingha journeys to Sydney and back he will travel an extra 125 miles, he will have to pay an extra passenger rate of £1 0s. 10d., and have six hours' additional travelling. There has never been an instance of the kind in the history of the colony. Take Bundarra—that is a flourishing town, and if the railway is constructed from Guyra, the Bundarra people will be within a few miles of it. I should say that Bundarra would be about 20 miles from the line, perhaps less. At present they have to cart their stuff some 70 miles to Tamworth. The construction of the line *via* Glen Innes would be a direct injustice to Bundarra, a town which has great possibilities, having some very good land, and only waiting for a railway to inspire it with new life.

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Through having to cart goods 70 miles that town has hitherto been crippled. I should like to draw the attention of the Committee to the Report of the Sectional Committee which took evidence in the district. In that Report they mention a number of things that are produced in the Inverell district. They say that good crops of maize were obtained, but I have pointed out that that maize cannot be sent to Queensland—it must come south, or pay a duty, but paying the duty is out of the question. In Queensland they are already growing maize, and Messrs. Scarr and Price point out that there is far more maize under cultivation on the track of the railway than there is at Tenterfield, Inverell, and Glen Innes all combined.

2150. *Mr. Neild.*] Which railway? The railway going into Queensland, where the Inverell people talk of finding a market. Messrs. Scarr and Price say:—"With regard to maize, the area planted in the three Darling Downs' districts above named has steadily increased, being in—1887, 13,269 acres; 1888, 16,651 acres; 1889, 19,339 acres, with an average yield equal to that of the Inverell district, and an area under cultivation largely in excess of Inverell, Glen Innes, and Tenterfield districts combined, which stand for those years respectively." For the combined districts of Inverell, Glen Innes, and Tenterfield:—1887, 6,541 acres; 1888, 7,332 acres; 1889, 7,971 acres. The Sectional Committee say:—"Good crops of maize are obtained, vine-growing has for years been successfully carried on." To take wine into Queensland you must pay the duty which is imposed, and you cannot conceive that they are likely to send out of Queensland for wine when they grow as good wine of their own on which they pay no duty. The Report of the Sectional Committee says:—"Vine-growing has for years been successfully carried on, and if sufficient facilities are offered there would be a large export of fruit." The export of fruit would have to come to the south. If it went to Queensland the Queensland duties would have to be paid. The Committee say:—"Owing to the want of a market the district at present only produces sufficient wheat for local consumption, and agriculture generally has of late years been on the decline." The last time that I was in Armidale a friend of mine came to Sydney and bought a ship load of wheat to be ground into flour and sent to Inverell. The Report continues:—"The farmers finding it more profitable to apply their land to grazing purposes." Well, if they apply the land to grazing purposes they cannot send the produce to Queensland, because they would have to pay a duty of 15 per cent. on wool as soon as it crossed the border. There is also a duty of 15 per cent. on tin. Ninety-nine per cent. of the passenger traffic must of necessity come south—to Sydney and Newcastle—and the bulk of the goods traffic must do the same. The distance from Inverell to Sydney is 443 miles by the Guyra route, and the distance from Inverell to Brisbane is 354 miles by the Glen Innes route, so there is only a difference of 89 miles between getting to Sydney and getting to Brisbane. We may fairly assume that not only the passenger traffic but a very large proportion, if not the whole, of the goods traffic must be carried between the towns to the south, such as Armidale, Tamworth, Singleton, Murrurundi, Newcastle, and Sydney.

2151. Then the distance by this line from Inverell to Newcastle would be just about the same as the distance between Inverell and Brisbane by the proposed route? Yes.

2152. *Mr. O'Sullivan.*] Judging by your statements, you think Sydney and Newcastle the natural markets for the trade of the Inverell district? Yes.

2153. If all you state is true, would it not be more to the interests of the State to construct a line by the Bundarra and Kentucky route? The Bundarra and Kentucky route goes over exceedingly poor land. I may be permitted to make this statement in justice to myself and the peculiar position that I hold. I consider that my position as Member for New England is more sacred than that of Minister of the Crown and Member of the Cabinet. I wish to point out that I am not in any way influenced by political motives in advocating the construction of this line from Guyra. If I had any political object to serve I should advocate the construction of the line from Uralla to Inverell, because there are ten times as many voters in and around Uralla as there are in and around Guyra. But when this line was proposed by the Jennings Government, of which I was a member, I distinctly refused to vote for it. At that time I was Member for East Sydney. I had no political connection with New England, and did not expect to have again. Notwithstanding that I was a Member of the Government which proposed the line, I positively refused to vote for it. That shows that I am not influenced by political motives. I am influenced wholly and solely by what I consider best for the public interest, irrespective of my position as a representative of New England.

2154. If your arguments are correct, that the natural market for the produce of the Inverell district is at Newcastle and Sydney, would it not be more conducive to the public interest to construct a line of railway from Inverell to Kentucky? No, it would be against the public interest, for two reasons. They would have nearly double the length of line to construct, and it would go almost entirely through very barren country. To go from Inverell to Bundarra and Kentucky they would have to construct 82¼ miles of railway. There would also be several expensive bridges to construct across the Bundarra and Rocky Rivers. That brings me to another point to which I wish to draw attention. If the line is taken from Guyra to Inverell there will be no bridges to construct when it is extended out west from Inverell; but if it is taken from Glen Innes to Inverell there will afterwards be a very expensive bridge to construct across the M'Intyre River.

2155. You used a strong argument about running for all time over a longer distance. I should like to ask whether it would not be much nearer for all time to travel from Inverell to Kentucky by the proposed line than from Inverell *via* Guyra? No, most certainly not. I venture to say that a railway from Inverell to Kentucky would cost double the amount to construct, including the bridges, and that when it was constructed it would not be one-sixth of the benefit to the public that a railway from Inverell to Guyra would be. The one railway would go nearly the whole way through splendid soil, and the other would go through very poor soil, fit only for grazing purposes, and not first-class for that.

2156. Then if it has been said that there is fine agricultural settlement at the Bundarra River, that is incorrect? I have stated that Bundarra ought not to be neglected, but by the route which you propose you are ignoring Bundarra, and giving no opportunity to the settlers to make use of a market.

2157. Do you know the distance between Guyra and Kentucky? Fifty-one miles, according to the time-table.

2158. You used a very strong argument about the cost for all time. I want to bring out whether for all time it would not be cheaper, in the interests of the people of Inverell, to come *via* Kentucky. You say it is 51 miles from Guyra to Kentucky, and 58 miles from Guyra to Inverell, making 109 miles, against 83 miles. Therefore you would have 26 miles more to travel *via* Guyra than *via* Inverell and Kentucky? Yes; but you only construct railways with the prospect of having a profit. If you run your trains empty, there must be a great loss. Whilst you might bring traffic direct from Inverell to Kentucky at a cheaper rate, you are giving the go-by to all the splendid land between Inverell and Guyra. 2159.

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2159. How far does this splendid land extend out from Guyra? About 30 miles.
2160. Does it go beyond Kangaroo Camp? No. There is a lot of it that you do not see, splendid land on the north side of the line. You do not see it unless you travel away from the beaten track. If you follow the railway or the ordinary road you go through a lot of comparatively poor country; but if you leave the road and go a mile or two further to the north you get into splendid country.
2161. There can be no doubt that there is fine land been Guyra and Paradise; but is not a portion of that already served by the Great Northern Line? No.
2162. How far do you consider that the railway serves the land? For agricultural produce 10 or 15 miles would be quite far enough to cart, if they could get a railway in that distance. The same argument applies equally well to the people west of Glen Innes.
2163. I want your opinion as to whether a large proportion of that good land between Guyra and Paradise is not already served by the Great Northern Line within a distance of 15 miles? In the same respect as the land west of Glen Innes is served.
2164. You have given strong evidence about Tingha;—do you consider that Tingha depends upon the discovery of deep tin lodes? Not necessarily. There are many minerals around Tingha. Within the last year or so rich silver has been discovered. To the west of Tingha diamonds, antimony, and bismuth have also been discovered in the neighbourhood. Tingha is a mining district, and what will be discovered there it is hard to say. I admit that a great deal of shallow alluvial tin has been worked out, but I hold that the tin lodes will be worked in the future, and will give more tin than has ever been taken out of the alluvial. In Victoria we worked nothing but alluvial gold whilst we could get it, but when that was worked out the miners devoted their attention to the lodes. They will have to do the same at Tingha with regard to the tin. I have seen as fine tin stone at Tingha as you could find in any part of the world. The lodes are rather thin, but they will probably open out better as they sink deeper.
2165. Up to the present time there have been no tangible results? No; there has been no capital put into the tin lodes.
2166. Tingha being a mineral country, it will not afford much scope for agriculture? It is poor country for agriculture, but it provides a market for agricultural produce.
2167. Between Paradise and Inverell is there not very little scope for settlement of an agricultural nature? I do not know. As I have already stated, north of the route you find considerably more agricultural land. That is referred to in Messrs. Scarr and Price's report.
2168. You made a remark about the land syndicates at each end of the Glen Innes line. What is the name of the syndicate at the Glen Innes end? It is the Haymarket Company.
2169. Is it not a fact that they have 15,000 acres all round the town of Glen Innes? The railway will travel several miles through it.
2170. Is it not already served by a railway? Yes.
2171. Therefore they will not have much to gain, and the betterment principle may be applied? We have heard of good sums being paid for the resumption of land for stations and for other improvements.
2172. Are you not of opinion that, by the application of the betterment principle, they are not likely to get any benefit at all? I would not say.
2173. Do you think it likely that they will? Yes; I do think it likely. They will get considerable benefit by having a railway line taken through their property, and railway stations established where small towns will spring up. They will be able to make subdivisions, just as they are going to do at Inverell. The gentlemen to whom I have referred have secured considerable tracts of land where the terminus is expected to be at Inverell, with the view of making a subdivision.
2174. If their land is at Inverell it matters little to them which way the line comes? It makes a great deal of matter. They will have a railway through their land, which extends considerably to the west of Glen Innes.
2175. I am speaking of the Inverell syndicate? It matters this much, that a railway from Guyra will not go through their land, but a railway from Glen Innes would go right through it.
2176. Are you aware that the proposed sites of each terminus have been secured by speculators, so that whichever way the line goes it must benefit somebody? No doubt.
2177. If we are bound to benefit someone, it matters little which route is adopted, so far as that is concerned? Except that where you have a bank manager who has a considerable number of mortgages in his possession, that bank manager, in his own interests, wants the railway to go in a certain direction, and the men over whom he holds the mortgages are not likely to come and give evidence against his interests.
2178. *Mr. Collins.*] Are they private mortgages? Yes, so I am informed.
2179. *Mr. O'Sullivan.*] That can hardly be accepted without corroborative evidence? I have not seen the mortgages; I give the information for what it is worth.
2180. Then you suppose that is the reason why so little evidence has been given at Inverell in favour of the Guyra route? Yes.
2181. Are you aware that only one witness in Inverell preferred the Guyra route? I was not aware of it, but I am not at all surprised.
2182. How do you account for Messrs. Scarr and Price favouring this line in preference to the Guyra line, after full inquiry? It is hard to say. I suppose that the Government officials have their predilections, and they generally take the colour of their predilections from the opinion of the Minister who sends them out. The Railway Commissioners have reported in favour of the Glen Innes line, but they have not been asked to report upon the Guyra line. What I ask the Committee to do is, in the interests of the public, not to saddle the people who use the railway with 32 miles of unnecessary haulage for all time.
2183. Does it follow that they will be saddled with it, in view of the fact that their trade may go in another direction? The trade cannot go in another direction.
2184. Is it not a fact that the Richmond and Tweed districts are likely to carry a large population? Yes.
2185. And they are not likely to grow wheat? There will undoubtedly be considerable traffic between the Richmond and Clarence districts and the table-land of New England, and it will increase from year to year.
2186. Do you think the traffic is likely to go *via* Grafton to the Don Dorrigo scrub, and thence to Inverell? Yes.

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2187. Would not that traffic be more likely to go *via* Tenterfield to the Richmond district? I think it quite possible, as Messrs. Scarr and Price recommend, that in time there will be a second line from the table-land, that is, from Tenterfield to the Richmond River, perhaps to Byron Bay. The first railway that must be constructed will be from the table-land to Grafton or Coff's Harbour.

2188. If these lines are constructed at some distant date, which line are the Richmond people likely to take? For what purpose?

2189. To send their produce to Inverell, and to obtain wheat from Inverell? The people on the Richmond would use the line to Tenterfield, but the people on the Clarence would use the line *via* Llangothlin.

2190. Do you think that the Clarence district is ever likely to carry such a population as the Richmond? Yes; the Don Dorrigo scrub is an area of as rich land as any that can be found in the Richmond district.

2191. Then the line to serve the larger population, and the coast trade, would be *via* the Don Dorrigo scrub to Coff's Harbour and Grafton? Yes; to connect the table-land of New England with the coast. The other line will not be constructed for some time. The Guyra to Grafton, or Coff's Harbour, line should be the first.

2192. The land on the Guyra route is to a great extent unalienated? Yes.

2193. Does not that arise from the fact that it is mineral land? Of course it does. The land about Tingha is not alienated because it is too poor. It gives a crop of minerals.

2194. Do you know that most of the land on the Glen Innes route is alienated? I know that the land on the route from Glen Innes to Inverell is alienated, and is held in large estates. There is no population there. There are no schools, and when that line is constructed it will rest with the people themselves as to whether you have any traffic or not.

2195. Is it good land? It is good land, and there is a great deal of inferior land, consisting of rocks.

2196. It is mostly good land on the hill tops, but if the railway is made is it likely that the land will long remain in three or four large estates? I think it is very possible. We have the instance of the line to Hay. That line runs through miles and miles of private land, which has not been broken up.

2197. Then you think that although it may be more profitable to cut up this land, it will remain in large estates as it is at present? We have no direct evidence that it will be cut up.

2198. We must look to the future, I suppose, when we shall have a larger population? The Peel River Estate has had a line running through it for the last ten years, and yet there has been no attempt to cut it up, though it would sell for £5 or £10 an acre.

2199. Is it not held by absentee proprietors? Partly.

2200. The proprietors of the Glen Innes estates are on the soil? Not in all cases.

2201. Is not Mr. Anderson one of them? Yes; plenty of them are living on the Hay line and other parts where railways have been made; but the estates have not been broken up.

2202. There are only about three large estates on the route from Glen Innes to Inverell, and they are very suitable for agricultural purposes. If a man could get 10s. an acre by leasing his land for agriculture would he not be more likely to do that than to keep it for sheep, which would only give a return of 4s. 6d. per acre per annum? I only know what has taken place already, and what has taken place before is liable to take place again. On the Guyra route there is already a very large population, which is proved by the number of schools there. There are a number of owners with reasonable areas ready for cultivation, and much of the land is under cultivation at the present moment.

2203. But all those holders are practically served by the Great Northern Line? No.

2204. Are they not within 15 miles of it? No.

2205. Is there not very little land beyond Wandsworth, except Paradise, fit for agriculture? Admitting all that, whatever argument of that kind applies to the people of Guyra applies with equal force to the Glen Innes line.

2206. Coff's Harbour route, which appears to have an influence on this line, is marked in the form of a semicircle on the map? Yes.

2207. There is not much population between the Armidale district and Coff's Harbour district, is there? Yes; of course there is, all the way to Guy Fawkes.

2208. As a matter of fact, there is not a large population? There is a very large population before you get down off the table-land. You then begin to get a population extending all the way to South Grafton, and it is rich land all the way.

2209. But the great Don Dorrigo scrub intervenes? The Don Dorrigo land is the richest land in New South Wales, and the best watered.

2210. At present, I suppose, it is only occupied by wallabies? Some of it has been selected. Some years ago I reserved the great bulk of it. That land could be cut up into special areas, and sold at from £6 to £10 an acre. The surveyor who measured it when I was in office offered £6 an acre for a portion of it.

2211. *Dr. Garran.*] How much is there of it of that quality? Thousands of acres. It is beautiful country, and it grows the best timber of every kind, and when you have taken the timber off there is rich chocolate soil to any depth.

2212. *Mr. O'Sullivan.*] Then if the line goes through there it is likely to attract population, and the State may be recouped by the sale of the land? I have no hesitation in saying that the railway could be constructed from Guyra to Coff's Harbour, or Grafton, without costing the State a penny. I would undertake to construct it out of the proceeds of special areas of the Don Dorrigo scrub.

2213. Supposing the line were carried out, that could not be done without making a portion of the North Coast Line? A portion of it would fall into the North Coast Line.

2214. It does not touch Coff's Harbour? No; if the line is constructed to Grafton a part of it will form part of the North Coast Line.

2215. So by the construction of that line we should save a portion of the North Coast Line hereafter? Not necessarily. This line could be constructed without the North Coast Line; but if it were constructed, part of it could be utilised for the North Coast Line.

2216. Are you aware that Mr. Francis Wright, who approved of the Glen Innes line long before he was a Member for Glen Innes, has given evidence to the effect that he deliberately shifted his place of business from Guyra to Glen Innes for another reason than that of the imposition of the differential rates? Probably he shifted his office because there was more traffic at Glen Innes, but that traffic was caused by the differential rates.

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2217. The differential rates have been put on within the last two years? Yes.
2218. And before that a large amount of the traffic went *via* Guyra? I think that about two years ago the differential rates were confined to Glen Innes—they did not come further south, but before that they applied to Guyra. Two years ago they restricted the differential rates to Glen Innes, and that has thrown the whole of the traffic into Glen Innes.
2219. *Chairman.*] Uralla would be in the same position, then, that Guyra is in now? Goods used to go from Uralla to Inverell and Bundarra.
2220. *Mr. O'Sullivan.*] You hold the opinion that the differential rates have materially influenced the trade *via* Glen Innes to Inverell, notwithstanding what has been said by Mr. Wright? I have only to point out the difference in the rates, and to leave it to the Committee to draw their own conclusions.
2221. You adhere to that, notwithstanding what Mr. Wright has said? The people in that part of New England which I represent are most of them men of common sense, and they would not be likely to pay £40 a ton for the carriage of goods if they could get them carried for £24 a ton.
2222. You think there is very little hope of Inverell wheat ever going to the Queensland border? Yes, I take the same view on that point as Messrs. Scarr and Price take, that it would be carrying coals to Newcastle.
2223. Though they have such splendid agricultural land on the Darling Downs, 68 miles in extent, they cultivate very little of it? I do not know that. They cultivate more than we do.
2224. Are you aware that in Queensland they do not produce more than 3,000 tons of flour annually? I am not. I am not surprised at anything in connection with agricultural statistics, considering the small quantity that we produce in New South Wales, notwithstanding the large areas of land that we have alienated.
2225. Do you know that they import 41,000 tons? It is very likely.
2226. Does not that show that there is a tremendous market in Queensland for wheat? It shows that they can get flour cheaper by steamer from Adelaide than they can afford to send it by train from Toowoomba, and much less would they be able to compete from Inverell with flour brought by steamer from Adelaide.
2227. What you said about the importation of maize from Queensland related to years before the protective tariff was imposed in New South Wales? I said that when I was in New England at the last election the people there were being supplied with, and were using, maize grown in Queensland. That was before our present tariff was imposed.
2228. Would the same thing go on since the tariff was imposed? No; I think our tariff will block out the Queensland maize, and I think the Queensland tariff will block out New South Wales produce.
2229. There is no duty on wheat in Queensland? No, but they have special railway rates, that come to the same thing.
2230. *Mr. Humphery.*] Can you reconcile Mr. O'Sullivan's statement with yours—that 3,000 tons of flour only were produced in Queensland;—you said that in one district alone there were 20,000 acres of land under wheat? No, under maize.
2231. How many acres are there under wheat? Messrs. Scarr and Price do not give the number of acres under wheat. As a matter of fact, Queensland gets the bulk of its flour from Adelaide by steamer. The steamers must bring something, and if they did not bring flour, which they carry at a cheap rate, they would have had to carry ballast.
2232. And it sometimes finds its way to Inverell? I believe so.
2233. Is it your opinion that a line from Glen Innes to Inverell should be regarded as a branch line, without the consideration of a possible connection between the existing northern line and the coast? I think it should be looked upon as a north-west branch, not simply to accommodate Inverell, but to serve the people to the west and north-west of Inverell.
2234. As a branch line? Yes.
2235. You have travelled along the route of the proposed line? Yes.
2236. Do you know the route marked with a puce line on the map? I have not been along that puce line.
2237. I believe that that line runs through the estates you have referred to? Yes.
2238. Within 15 miles that land would be served by the existing line? Yes.
2239. Although the northern line past Glen Innes has been open for some years, has any settlement taken place beyond pastoral settlement? No.
2240. Assuming that this line were constructed, would the interchange be between Inverell and the west, or Inverell and the north, without any intermediate traffic of importance? I think there would be a good deal of traffic from Guyra and Armidale out west and north-west of Inverell.
2241. I am speaking of the country between Glen Innes and Inverell—would the traffic be from beyond Inverell and Glen Innes, without any intermediate traffic between Inverell and Glen Innes? It would be without intermediate traffic; but the traffic would not be confined to Inverell. There are enormous sheep properties in that district, and immense clips of wool would come from the west and the north-west to the railway at Inverell. There is likely to be very little traffic between Inverell and Glen Innes unless the land is cut up into small agricultural settlements.
2242. Although the line has been opened so long, up to the present time there has been no sign of any intention on the part of the owners to cut up the land? No. And the small farmers on the Guyra line who have cultivated their land find their market, not so much in coming on to the Great Northern Line, but by taking their farm produce to Inverell, and to the north-west of Inverell.
2243. So it would be a matter of indifference to the people west of Inverell whether the line came from Glen Innes or Guyra, except as regards the additional carriage? Yes; except as regards the additional distance. They would have to travel 32 miles further.
2244. By the differential rates the Commissioners have placed Glen Innes in a better position than Guyra? Yes.
2245. At the present time the people living beyond Inverell get goods carried at a lower rate to Glen Innes than they could to Guyra? Yes.
2246. Speaking of the Don Dorrigo scrub, we have it in evidence that it has an elevation of 2,500 feet, so that products similar to those of the Richmond River could scarcely be grown there? I think they could. It has a less elevation than that. It commences at the foot of the New England Range and extends down to the coast. The eastern and northern portions are very little higher than Grafton. It is splendid land almost at the sea level round Coff's Harbour, a few miles from the sea. The scrub country commences at the foot of the New England Range.

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2247. Have you formed any opinion as to the probable earnings of a railway between Inverell and Glen Innes? I have not.
2248. You know what the cost of the line will be? Yes.
2249. Have you seen the estimated earnings? Yes; I had some notes on the subject when the Committee were inquiring into it before, but I have not those papers now. My opinion is that the railway should be constructed to Inverell. I have no hesitation in saying that, and I think it must be a paying line; but in my opinion it would pay better, and it would give greater convenience to the public, if the shorter route were constructed.
2250. Do you think there is a probability of the line, if constructed between Glen Innes and Inverell, earning enough to cover interest on the cost and working expenses in a few years? I am inclined to think that if the line is constructed from Glen Innes the Tingha people will prefer to cart their tin to, and get their stores *via*, Guyra, instead of paying 60 miles' additional haulage. It must be borne in mind that they will have to cart 15 miles to get to Inverell, and 15 from 58, allowing the greatest length of the Guyra line, would leave only 43 miles. They might just as well go to Guyra as go to Inverell, as they would only have 28 miles further to go, and they would save the cost of carriage from Inverell to Glen Innes, and from Glen Innes down to Guyra.
2251. But will they not gain the advantage of the differential rates? It is hard to say what rates will exist when the new railway is opened. I should think that the Commissioners will readjust the railway rates.
2252. But assuming that they will continue as at present, the advantage of coming to Guyra would be neutralised, owing to the less cost of carriage from Glen Innes? Yes; according to the present rates.
2253. Is it your opinion that the railway should be constructed as proposed from Glen Innes to Inverell? Most emphatically no. I think it will be a national calamity if it is, and I speak without political considerations of any kind.
2254. Do you give that opinion from your evident bias in favour of the Guyra to Inverell route. Supposing that that route had never come under consideration, would you think that a railway from Glen Innes to Inverell should not be constructed? If a railway is not to be made from Guyra to Inverell, then I say construct a line from Glen Innes to Inverell rather than keep Inverell without a railway; but the Guyra route is the proper one.
2255. *Mr. Hoskins.*] With reference to a question asked by Mr. O'Sullivan as to the construction of a railway either from Glen Innes to the Richmond or from Guyra to Grafton, do you consider that there is any probability of either of those lines being made for some years to come? I think there is a probability of a line being made *via* Llangothlin to Grafton or Coff's Harbour, on account of the enormous area of rich land which there is along the route in the hands of the Crown, and which would be available for settlement. It would be taken up in thousands of acres. If it were surveyed and thrown open, it would be snapped up at any reasonable price that could be put upon it.
2256. But you do not expect to see a line constructed from Glen Innes to the Richmond, or to Grafton, on account of the interchange of commodities between those districts and New England. You know that wheat or flour can be taken cheaper by the sea than by railway? No doubt—it will always be the case. But Adelaide wheat has now our duty of 6d. per bushel to pay. I do not anticipate sufficient traffic between either of those coast towns and the upland towns to make a railway pay, but I think that as there is such exceedingly good country between Guyra and Grafton that land should be opened up, and it can only be opened up by a railway. There being so much good agricultural land all along the route, there would be a traffic from that land to Grafton, one way, and up to New England the other, and goods would be sent from New England round to Don Dorrigo, and round there. I think there may be fair ground for expecting a traffic there, but there is very little ground for expecting a paying traffic from Tenterfield to the Richmond River, and there is not a ghost of a chance of a paying line between Glen Innes and Grafton. I would like to point out that the people of Glen Innes stuck out just as strongly for a railway from Glen Innes to Grafton as they are doing now for a railway from Glen Innes to Inverell, yet it is proved that the line, which was to cost £2,000,000, would have been an absolutely dead waste of money. That is shown by Messrs. Scarr and Price's report. Mr. Wright was the Minister who proposed that particular line. I am happy to say that I voted against it, although it was proposed by a Government that I was strongly supporting.
2257. Can you say, of your own knowledge, whether there are as many settlers residing on the land between Inverell and Glen Innes as there are between Inverell and Guyra? There is not a quarter of the number.
2258. There are more settlers between Guyra and Inverell than there are between Inverell and Glen Innes? A great many more. I have not the figures here, but you will find them in the evidence already given. You will find a statement as to the number of schools which there are on the Guyra route, and that is considered a fair indication of population. You will find that there are many times more schools on the route from Guyra to Inverell than there are on the Glen Innes route.
2259. Therefore, the Guyra route has the larger population? Yes.
2260. The advocates of that railway, yourself included, recommend it on the ground that it provides an economical means of conveying produce between the inland districts and the sea coast; would not that apply equally to the conveyance of tin from Tingha? No doubt. They would have to carry it 62½ miles further if it was sent by the Glen Innes route, and they would have to cart it 15 miles of that distance by road.
2261. Do you not think that if a railway were constructed between Inverell and Guyra, the economical means of transit which it would afford would tend to induce the working of tin land in a district which is, perhaps, now to some extent abandoned in consequence of the high rates of carriage? Yes; because they would not only have cheaper carriage for the tin, but also a cheaper carriage for the provisions and general stores from Sydney.
2262. Have you been to Tingha lately? I was there a few months ago.
2263. How many people are located in that neighbourhood? According to the statistics which I have quoted, there are 2,285 Europeans.
2264. That is a population larger than the population at Inverell, which is only 1,700? I was not aware of that.
2265. Have you given attention to the betterment principle, as applied to land which is improved by the construction of railways or other public works? I think our present system is radically wrong, because you can take the bulk of his land away from one person, and he gets scarcely any value for what he loses.

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I could give as an instance a case with which I am personally connected, where the Government took some 40 odd acres, leaving very little behind, and expect to get that land for nothing, although there has been a large expenditure upon it, because they say that the railway has improved the value of the remainder. But the land of other owners, through whose property the railway does not run, is improved quite as much, and they have not to contribute a cent. If the compensation was spread over the whole of the land in the district that was improved by the construction of the railway, that would be a fair and equitable thing, but when you take a line through a piece of land, and expect to get that for nothing, although the adjoining land is benefited as much as the land through which the line goes, you do an injustice.

2266. I gather from that that you are in favour of the betterment principle, provided that it is made applicable to other property besides that through which the line is taken? Yes. It should be made applicable to all the land that is improved in value by the construction of the railway.

2267. *Mr. Davies.*] I gather from your evidence that you are entirely opposed to the construction of the line from Glen Innes to Inverell? Yes.

2268. You have traversed several of these surveyed lines from Glen Innes to Inverell? Yes.*

2269. But you have not been over the Swanbrook line? No, but I know the nature of the country very well.

2270. What is the general character of the country there? It is trap-rock, basaltic formation, red and black soil, very stony. It has been described as good land, but some of it is unfit for cultivation by reason of the rocks. The soil between the stones is very good.

2271. Another great objection you have to the proposed line is that it strikes the main line at Glen Innes, instead of being 37 miles nearer Sydney on the main line? Yes.

2272. That constitutes one of the strongest objections that you have to the construction of this line? Yes.

2273. And another objection is that the land on the Glen Innes line is in comparatively few hands as compared with the land on the Guyra line, which has been taken up under conditional purchase. Is it not a line which would be difficult of construction? The line from Glen Innes would be more expensive to construct than a line from Guyra to Inverell. The Guyra line is described by Mr. Hogg as a line very easy of construction.

2274. But the Glen Innes line will be expensive and difficult of construction? Yes; more so than the other.

2275. What will be the depth of the cuttings? I have not gone into that.

2276. But they necessarily would be deep? Yes. I have seen a section of the railway from Glen Innes, but they have not made any sections of the Guyra line at all. My opinion is that until the Guyra line has been actually surveyed, and an estimate is made of the cost, it is not a proper thing to commit the country to either line. They have been examining, surveying, re-surveying, and deviating the Glen Innes line for years, and they find that the longer they make it the cheaper it is. I want them to adopt the same course with the Guyra line. They have done nothing with regard to the Guyra line except make a flying survey. Mr. Hogg described the line, when he made his flying survey, as: "From level to 1 in 100—13 miles; from 1 in 100 to 1 in 50—18 miles." There are 31 miles of very good line. Then he says: "From 1 in 50 to 1 in 40—20 miles." Fifty-one miles was the total length of the line. Now they have made it 58 miles without any further survey.

2277. If the cuttings on the line from Glen Innes to Inverell are deep the approaches on each side of the line will be very difficult? I may say, in general terms, that those cuttings would be excessively expensive, because they would be mostly through hard trap-rock.

2278. What was the quantity of tin-ore carried last year from Tingha? One thousand two hundred tons.

2279. *Chairman.*] What year is that for? I suppose it will be for the year 1890, but the quantity is about the same each year.

2280. *Dr. Garran.*] Speaking of this Dou Dorrigo scrub, you say that the land is worth £5 an acre? Yes.

2281. In its present state, unapproached by a road or railway? Yes. It could be sold immediately at £5 an acre, if it was known that a railway was to be taken through it. The bulk of it is reserved.

2282. I want to get at whether that £5 an acre is irrespective of the prospect of a railway, or in anticipation of a railway? There have been pieces of that land sold wherever they could find any that was not reserved; but they cannot get the produce away, and they are doing very little with it.

2283. But if a railway were made, it would sell for £5 or £10 an acre? Every acre of it would be rushed for at from £5 to £8 an acre.

2284. At £5 an acre, 640 acres would be worth £3,200? Yes.

2285. And 2 square miles on each side would be 2,560 acres? Yes.

2286. And that would be worth £12,800? Yes.

2287. Would the railway cost more than £10,000 a mile to make? It would be pretty expensive; but it is a well-watered country. There are beautiful little rivulets every mile or two.

2288. Supposing it cost £12,000 a mile to make a railway through that scrub, if 2 square miles on each side along the route were put to the credit of the Railway Construction Account, that would pay the cost of the line through the scrub? Yes. I should be very glad indeed if the Government would hand the land over to me, and let me undertake to build the railway.

2289. That is only taking 2 square miles on each side, and there is a large area of valuable land not included in that estimate? Yes.

2290. I suppose that the good land does not extend all the way to Grafton? Not all the way, but a great part of it.

2291. It is not all reserved to Grafton? No.

2292. What about the Orara River district? There was a rich gold-field there, on the Nana Creek.

2293. You would have a good deal of Government land all the way from the table-land to Grafton? Yes; and a considerable proportion in the Guy Fawkes district, and rich land all the way, with a fine climate.

2294. From Llangothlin to Guy Fawkes you go along the table-land? Yes.

2295. The table-land is not very rich? Yes, it is.

2296. Would it bring £2 an acre? It is mostly selected.

2297. Then there is nothing to get there, except by the betterment principle? No; unless you open a line to enable people to get to a market.

2298.

* NOTE (*on revision*):—I have evidently misunderstood this question. I thought Mr. Davies said, "You have traversed the road several times from Glen Innes to Inverell."

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2298. But I am talking of getting back from the land the capital spent in making the railway;—you will not get much between Llangothlin and Guy Fawkes? I have no doubt that the land from the fall of the New England Range down through Don Dorrigo will produce wealth enough to pay for the railway.
2299. I am not talking about wealth, but of money obtainable from the sale of the land? That is what I mean.
2300. Assuming that it would cost £10,000 per mile to make the line? I have no hesitation in saying that the unsold Crown lands on that railway route, say within a radius of from 5 to 10 miles on each side of the line, would provide ample money to build a railway.
2301. Taking the whole of the line from Llangothlin to Grafton, the Government own sufficient property which will be benefited by the construction of the railway to recoup them the whole of the cost of making that line? Yes; every penny.
2302. Then the Government could construct a railway 115 miles long on this route, on which there is a prospect of a larger population, and the railway would not add one shilling to the public debt of the country? I do not think it would, and the land at the present time is absolutely unproductive and worthless; it is reserved, and it is bringing nothing to the State, but it would be exceedingly valuable both to the State and to individuals if a railway were made.
2303. All that the Government want is £1,000,000 advanced to make the railway, and they could recover that £1,000,000 in instalments extending over 20 or 30 years, when the land was sold? Undoubtedly; and I would pledge my political reputation that if the money was expended, and the money for the sale of land was paid into a railway fund, that railway would not cost the country half-a-crown.
2304. I am assuming that the money as it came in would go to a Railway Construction Account. I ask whether, in 20 or 30 years' time, supposing the Government spread the payments over that period, the railway would not be paid for out of the proceeds of the land? I believe it would be.
2305. Supposing that to be the case, there is good ground for making that railway as soon as ever we can get the money? Yes.
2306. Do you think there is an equal chance of our making a railway from Casino to Tenterfield or Deepwater, and making it pay in the same way? No; I do not, most decidedly.
2307. Even assuming that that is a proper line to make some day, there is not the same immediate chance of making it without its costing anything? No; but it should be built.
2308. There are two routes from the coast to the table-land? Yes.
2309. One from the Richmond Valley, the other from the Clarence Valley, by the Don Dorrigo line. I want to know whether it is not clear that the Don Dorrigo line could be made without the country incurring a farthing of extra debt. You say "yes," and I understand you to say that we could not defray the cost of the other line in the same way? I do not think so. I do not think that there is the same area of good land in the hands of the Crown on that line.
2310. Do you know anything of that surveyed line from Tabulam up to Tenterfield? Yes; I have been over the whole of that.
2311. Is that a practicable route? It is pretty rough country to ride over. I do not know how it would be for a railway.
2312. Do you know anything of the country up to Timbarra? It is rough, broken country.
2313. Too rough for a railway? Yes.
2314. Is that a mineral district? It is so long since I was there, I should not like to give any evidence about it. It is mineral country all round about there—gold, principally.
2315. That would not offer a better alternative route, giving an easier grade? I do not think so. These are questions in answer to which I can only give a sort of haphazard opinion.
2316. You seem to give the preference in point of time to the Don Dorrigo line? Undoubtedly.
2317. Do you give that irrespective of the fact that that would make for the Guyra line? One reason why I advocate that line at present is that it would tap the more populous part of New England. Armidale, and all the people in that district, would do business with that line.
2318. If a line from the coast is to come *viâ* Guyra, that is a sort of reason why a line from Inverell should come to Guyra? Yes.
2319. Are you giving evidence in favour of the Don Dorrigo route from a feeling in favour of the Guyra line? No; I treat the two as entirely separate matters.
2320. The adoption of the Don Dorrigo line would be an argument in favour of the Guyra line? It would be. If the line is taken from Glen Innes to Inverell it will be 18½ miles further to Grafton.
2321. Do you know any of the country west of Dundee and Deepwater? No.
2322. You do not know whether we could get a railway out towards the west from there? No. I could not speak with any authority on that question. I think it is broken country.
2323. Supposing we got a railway from the Richmond River to Tenterfield or Deepwater, would there be any better line for getting away to the west than there is from Glen Innes? I do not think so, but I cannot speak with any certainty.
2324. You do not know the country well enough? No.
2325. *Mr. McCourt.*] Do you think we should construct a branch line of the same costly character as the main line? A great deal would depend upon the direction that the line took. Take the railway from Nyngan to Cobar. That may be looked upon as a branch line, but it will be such a long branch, if it is continued to Broken Hill, that I think it should be constructed permanently and well.
2326. Do you look upon this line to Inverell as a branch line? Yes.
2327. Do you think it should be of the same permanent and costly character as the main line? I think it should be equally permanently built; but we should have the cheapest station buildings that we could possibly get.
2328. I suppose three or four trains a day would be all that would pass over the line? The calculation I made was for a train to go and return each day; but I am inclined to think that if it went one day and returned on the next, it would serve the people remarkably well.
2329. Therefore, it is not necessary to make a line of a very costly character? No.
2330. You are in favour of cheap lines? Yes.
2331. Supposing the line is found not to pay, or that there is an annual loss on it of £12,000 or £13,000, would you be in favour of giving the Commissioners power to charge special rates? Yes; I think special rates should be charged until the line is a payable line.

The Hon. H. Copeland, M.P. 27 April, 1892.

2332. Would you be in favour of providing for that in the Bill, or would you leave it to the Commissioners? You would have to fix it by Act of Parliament, or you would soon have the Members for the district worrying the Government and the Commissioners on the subject.
2333. You are in favour of having a clause inserted in the Bill providing for the construction of this line, or in any Bill providing for any line, giving power to charge higher rates until the line pays? Yes, because a railway gives the people such enormous reductions in the cost of carriage that they can well afford to contribute towards the interest on the cost of its construction by paying higher rates.
2334. Do you know what general instructions are given to surveyors who are sent out to survey a line. Are they sent by the Minister from one point to another, or to find out the best line? They have to follow the route and make inquiries.
2335. I am speaking about what the Minister instructs them to do. Suppose he sent a surveyor to survey a line from Glen Innes to Inverell, what does he tell the surveyor to find out? The surveyor generally has some knowledge of the country, and his first trip consists in taking an aneroid, going over the country taking levels, and so on. He does not make anything like a survey, but he makes himself acquainted with the district first. He tries to find out which is the easiest route for a railway from point to point. He is not directed as the Czar of Russia directed his engineers, when he told them to make a line straight from St. Petersburg to Moscow.
2336. He is instructed to survey a line from two points and to find out the best route between them? The survey comes a long time afterwards. There are generally several flying trips made with the aneroid before they find out which route is worth surveying.
2337. Do you think it is the best way to send out a surveyor with general instructions to find out the best route? Yes.
2338. Has that been done in this case? I think it has not been done.
2339. Do you think it should be done? If the question was remitted to Mr. Deane as to which of these railways he should recommend to be constructed, my honest opinion is that he would advise the construction of the line from Guyra.
2340. Do you think that Mr. Deane should be sent out with further instructions to find out the best route? The difficulty is that the Government have sent this railway proposal to the Works Committee, and no official likes to report against the opinion of the Minister. The Minister for Works is, to some slight extent, pledged to this route, and until you get rid of that state of things you do not free the hands of the officials. If the Committee would adopt the suggestion which I have made, and reject this route for the time being, then the Government could submit the other route to them. The Committee could go over the route, take evidence, and have the officials perfectly free from Ministerial influence. Then, after inquiry into the two lines, if they thought that the Glen Innes route was the best they could reject the Guyra route, and the Minister could again submit the Glen Innes route. That is, to my mind, the only practical way of dealing with the question. The Minister has interpreted the law to be that you cannot have two routes before the Committee at one time. It seems to me that the real benefit to be obtained from a Committee of this kind vanishes when it is held that the Committee is not to be at liberty to choose the best route.
2341. According to you, the Minister does act like the Czar of Russia in some respects? Yes, when they want to make a line which suits their fancy.
2342. *Mr. Ewing.*] With regard to the elevation of Don Dorrigo. Of course, unless that district is in a tropical climate there can be no interchange of products between it and the table-land. Do you know that Guy Fawkes is 4,000 feet high? I reckon that Don Dorrigo does not commence until you get past Guy Fawkes.
2343. We have it in evidence that within 15 miles of the sea it is between 2,000 and 3,000 feet high? No. There may be isolated parts as high as that. It is all good land. I have been on good land in that district where I am sure the altitude could not have been from more than from 100 to 200 feet above the sea level.

THURSDAY, 28 APRIL, 1892.

Present:—

JACOB GARRARD, Esq. (Chairman.)

The Hon. William Henry Suttor.	William Chandos Wall, Esq.
The Hon. James Hoskins.	William McCourt, Esq.
The Hon. Frederick Thomas Humphery.	John Cash Neild, Esq.
The Hon. Andrew Garran, LL.D.	Edward William O'Sullivan, Esq.
The Hon. John Davies, C.M.G.	Charles Collins, Esq.
Thomas Thomson Ewing, Esq.	Henry Dawson, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. John Frederick Utz, General Merchant, Glen Innes, sworn, and examined:—

Mr. J. F. Utz. 28 April, 1892.

2344. *Chairman.*] You are a general merchant, living at Glen Innes? Yes.
2345. You gave evidence before the Sectional Committee twelve months ago? Yes; at Glen Innes.
2346. I understand that you desire to give some supplementary figures as to the trade which has increased since you gave that evidence? That is so.
2347. Any new facts we should be glad to have as clearly as you can give them? I desire to give a statement as to the increase of the trade in the district since I gave evidence before. I have purchased a large quantity of wheat this year at Inverell, and it has been carried by teams to Glen Innes. I have bought 6,000 sacks of wheat since January last, and I have paid an average of 9d. a bushel for the carriage from Inverell to Glen Innes. I want to show the Committee that if a railway were constructed from Glen Innes to Inverell the carriage, instead of being 9d. a bushel, would be about 1½d. a bushel.
2348. That is based on existing rates on the trunk line? The wheat is not carried at truck rates—it is carried at a special rate. The calculation is based on the charges made all over New South Wales, and if the line is made the wheat will be carried at 1½d. per bushel, or 5s. a ton. Instead of getting 6,000 sacks of wheat, if the line were made, my purchase would be equal to about 25,000 sacks.

Mr. J. F. Utz. 28 April, 1892.

2349. Where do you find a market for flour;—are you a miller, also? Yes; I am a miller as well as a merchant. My present market extends as far as the Queensland border. I am sending flour to Tenterfield, and even as far as Stanthorpe. I supply the Emmaville mines, where there is a fair population, and I send to Deepwater and Castlerag. There are various tin-mines about Deepwater, half-way between Glen Innes and Tenterfield.

2350. But they could not consume any more flour than they are consuming now if the line were made? No, they could not; but at present there is a lot of flour carried to that district from Newcastle, because there is not a sufficient quantity at Glen Innes to supply the whole of those markets.

2351. Then flour is brought from Newcastle to Glen Innes? From Newcastle to Glen Innes, to some extent, for the reason that there is not a great quantity of wheat grown about Glen Innes, and the land carriage from Inverell to Glen Innes, being 9d. per bushel, it is too high for the Glen Innes producers to compete.

2352. You think that if a railway were constructed to Inverell an increased quantity of wheat would be grown, and you could beat back the flour coming from the coast, and capture the market further south? I could compete with the flour that is now coming from Newcastle, and run it out of the market.

2353. You say that you are in possession of all the markets to the north, and it is a fight between the local produce and the flour coming from the south;—how far south could you go? Certainly not further than Armidale.

2354. You think you would catch all the markets south as far as Armidale? Yes. I may also state that there is a very fair market nearly as far as Grafton, east of Glen Innes. There are several mines at Glen Elgin, and a population is springing up there. The old gold-field, opened some thirty years ago, has lately been floated into a company, and there will be 200 men put on shortly. At present there are only about fifty.

2355. Had you this fact before you the last time you gave evidence? No; this is fresh evidence. These mines have started again since the Sectional Committee were at Glen Innes, and this population has now sprung up only about 28 miles from Glen Innes.

2356. You have told us the wheat production during the past year in the Inverell district; can you tell us of any other produce which has increased since you gave evidence before? No.

2257. Has there been any increase in goods going out west from Glen Innes since the Sectional Committee were there? There is an increase in wool from Goondiwindi and the Queensland border, north-west of Glen Innes.

2358. From there to Glen Innes, by Inverell? Leaving Inverell to the right there is a road to Bonshaw.

2359. You think that if the railway were constructed the traffic would go to Inverell? Yes; it must go to Inverell. They are simply using the Bonshaw road because it is a few miles nearer than going round by Inverell. If the railway were made to Inverell they would use that as a terminus.

2360. There has been an increased quantity of wool from Goondiwindi to Glen Innes during the last year? Yes. At present there are six or eight teams in those parts carrying wool.

2361. Can you give us any idea of the extra quantity that has come in during the last year from those places? No. Not exactly, but it must be something considerable. The teams seem to be employed a great deal more than they were in previous years.

2362. Are you the owner of any teams on the road? No.

2363. Have you any other statement to make? In regard to the market for my flour, I may say that I have a market within 30 miles of Grafton. Dalmorton is another place where they use it.

2364. Am I to understand that you can compete with the sea-borne flour down to within 30 miles of Grafton? Yes, I can; I can send my flour to within 30 miles of Grafton at present at 30s. a ton. I am competing with my flour there.

2365. Would you get your wheat carried cheaper if the railway were made? I should be able to go further towards the coast.

2366. You have not the slightest doubt about that? I am quite positive. If I can get my wheat carried at 1½d. per bushel that will save me 7½d., which will enable me to go much further north or east to compete with the sea-borne article.

2367. But in view of the costly character of the line, and the probability of its not paying, do you think it fair that only the same rates should be charged on it as are charged on the trunk line. Do you not think it would be a fair thing to charge at least 50 per cent. more on a branch line? I should not consider it fair to charge 50 per cent. more, but I do not think anyone would object to an additional charge of 25 per cent.

2368. Even with that additional 25 per cent. the line would enable you to extend your market? Yes. I notice in to-day's *Sydney Morning Herald* a statement made by Mr. Copeland.

2369. I do not think you should traverse the statements of other witnesses. Give us your own opinion? I merely wanted to disabuse the minds of honorable members. It was stated by Mr. Copeland that this line was agitated for by a land syndicate, who have some 15,000 acres of land at Glen Innes which the proposed line would pass through, but I say that that land syndicate has not 2,000 acres of land along the route.

2370. That would be benefited by this line? They have not 2,000 acres of land within 2 miles of the line. This new line will go entirely through land that belongs to selectors and *bona fide* farmers.

2371. Can you tell us how far west from the main trunk line this company's land extends? It does not extend 1½ mile from Glen Innes.

2372. From the main trunk line? From the main trunk line.

2373. So, in your opinion, it will benefit very little, the land being served at present by the main trunk line? The land is served by the Great Northern Line, and it is nearer to the present line than it will be to the new line from Glen Innes to Inverell. Mr. Copeland stated, in his evidence, that it was owing to the differential rates which exist at present, that there is more traffic between Glen Innes and Inverell than between Guyra and Inverell. I know, for certain, that two-thirds of the traffic went from Glen Innes to Inverell before we ever got the differential rates in that part of the country. If the differential rates could be put aside for six months, the traffic would still go from Glen Innes to Inverell, if the two lines were left to compete on an equal footing.

2374. But, as a matter of fact, since the differential rates came into force the trade has fallen off between Guyra and Inverell? That is correct; but it is because the Tingha people are availing themselves of the Glen

Glen Innes route. The Tingha people were the only people who got their goods from Guyra. I may say, whether this railway is made from either one place or the other, it concerns the Inverell people far more than it concerns the Glen Innes people. If a vote were taken by ballot on the question at Inverell, eight-tenths of the people in that district and in the western district would vote in favour of the line from Glen Innes, in preference to a line from Guyra. Mr. J. F. Utz. 28 April, 1892.

2375. Do you think a practically unanimous vote would be arrived at, because the people are sick at heart about the battle over the route? No, I do not think so; but they are anxious to have the connection at Glen Innes. I have heard several settlers say that they would as soon have no railway at all as have a railway from Guyra.

2376. *Dr. Garran.*] Of this wheat that you have bought recently, have you sent any to Sydney? None.

2277. You do not find a market at Sydney? No; none whatever.

2378. In the evidence which you gave before the Sectional Committee, you spoke of an interchange of commodities between the Clarence River district and the tableland? Yes.

2379. And you mentioned sugar as one of the local products? Yes.

2380. Is that sugar that you buy at the Clarence refined or raw sugar? Raw sugar.

2381. Does the sugar ever come to Sydney to get refined? No.

2382. Is there no market for refined sugar? There is; but most people would as soon have raw sugar.

2383. They buy it as it is turned out of the mills on the Clarence? Yes.

2384. So there is a *bona fide* interchange of traffic? Yes.

2385. You say that you have sent a little wheat to Stanthorpe? Not wheat; flour.

2386. Is that the farthest point into Queensland? Yes.

2387. Practically it is the first station inside the border? Yes.

2388. What is the distance from Glen Innes to Stanthorpe? It is about 85 miles.

2389. And you have to suffer the break of gauge? Yes, for a few miles.

2390. Do you pay duty on that flour? No.

2391. If there were a duty on that flour would that stop your trade? I have not gone into that.

2392. Have you sent much into Queensland? No, I have just started. I have only just completed my roller plant at my mills. That enables me to compete against any other brand of flour which comes into the colony.

2393. Is your flour better than that which they make at Warwick? I do not know, but I am sure it is quite as good.

2394. You have spoken of the great increase of traffic to the west of Inverell? Yes, to the west and to the north-west.

2395. That would go to Sydney whether a line were made from Guyra or from Glen Innes? Yes, a great portion of the wool.

2396. It would all go to Sydney? I do not see that it would.

2397. Supposing a railway were made from Inverell to Guyra, would not the whole of that increased traffic go down to Guyra? It would not.

2398. Where would it go? It would go to Grafton.

2399. Would it be taken by teams to Glen Innes, and from thence to Grafton? Yes. Within the last five years I have contracted with several station owners to carry wool to Grafton at very low rates. It is done through the carriers working for me. They make a contract to bring stuff from Grafton, and they take wool down from a few miles east of Inverell at 2s. 6d. a cwt. I have sent wool from Glen Innes to Grafton at 2s. a cwt. within the last four years.

2400. Then teams which bring up loading from Grafton will take your return loading very cheaply? Yes. I pay £3 10s. a ton for my up loading from Grafton, and anything that I have to send down they take cheaper. They take the wool at a very low rate.

2401. If it pays a squatter west of Inverell to send his wool all the way by dray to Glen Innes, and then down to Grafton, rather than send it by railway, will it not pay them equally well to send it the same way after this railway has been made? For the sake of convenience they use the teams, for the reason that they take the wool right away from the station.

2402. They would use the teams still? To a very great extent.

2403. Then those who send by teams now would send their wool by teams if the railway were made? Probably they might.

2404. Then how are they to contribute to the profit of the railway? That depends upon circumstances. The extra time may overbalance the cheapness of the carriage by teams.

2405. You tell us the extra time does not overbalance it now. They take the wool to Glen Innes, but instead of putting it on the railway there they send it down to Grafton by dray? The extra time between the western district and Glen Innes may overbalance that.

2406. It is only 50 miles further to Inverell? That is all. I could not say whether they would send the wool by team or use the railway.

2407. These men get their wool carried cheaper by road than they could get it carried by railway, do they not? They must get it carried cheaper or they would not send it by road.

2408. If it is cheaper for one man it is cheaper for another? Yes.

2409. Do they all know that it is cheaper? They do; but the reason that there is no more sent by road is that there is not sufficient return loading. If there were sufficient return loading, three-fourths of the wool would go to Grafton. But you cannot get the return loading, and the carriers cannot carry cheaply on those roads.

2410. Then there is only back loading for a limited quantity? Yes.

2411. And as much as there is return loading for goes by the road? Yes.

2412. Supposing you could get the whole of the wool taken down by cheap carriage on the roads, do you think it would go that way? I should say so.

2413. Supposing they found that out after the railway was made? They know it now.

2414. Supposing the carriers would take it at that cheap rate after the railway was made—you say that the wool would all go to Grafton? They cannot find sufficient back loading, therefore they cannot take the wool to Grafton. The thing is now done through a merchant who gets goods up, and he is used by his customers to get their wool carried cheaply.

2415. Yes, but if more wool went down there would be more stores coming up from Grafton? There would not be more, because there is not one ton of back loading to every 6 or 8 tons of wool that could be sent.

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2416. For every 10 tons of stores that come up how much natural back loading is there? During the wool-season about ten times the quantity.
2417. And at other times of the year? Nothing at all.
2418. Then the drays must go back empty for the rest of the year? They go back empty, generally.
2419. Has the quantity of wool sent down to the Clarence diminished since there have been cheap rates by the railway? It has.
2420. The Railway Commissioners, by lowering the rates, have intercepted a deal of it? Yes.
2421. Do you think they would have to lower the rates still further to get it if a railway were made to Inverell? I do not think so.
2422. You still think that you would keep your present customers who send their wool down by you? Yes, I can, if I offer them the same inducements.
2423. *Mr. Wall.*] You bought a very large quantity of wheat? Yes.
2424. What is the price of wheat now at Glen Innes? About 4s. 9d. a bushel.
2425. What is the price at Inverell? 4s. a bushel.
2426. Do you think that if the Inverell people could get their wheat to Sydney for 5d. a bushel they would forward it direct to Sydney? If they could not get a better market in that district probably some of it would find its way to Sydney, but if they could get a better market they would not send it.
2427. You bought 6,000 sacks of wheat this year? Yes.
2428. Have they been growing wheat about Inverell before to your knowledge? Yes.
2429. Where have they been sending it to? Last year's crop was greater than any they ever had before. They had principally a local market before, and very little found its way to Glen Innes.
2430. What is the price of flour at Glen Innes? £12 5s. and £12 7s. 6d. a ton.
2431. Then they get a higher price at Glen Innes than in Sydney? Yes, a few shillings higher. The same class of produce is sold in Sydney at £12.
2432. You do not think there is a probability of opening up a trade between Inverell and Sydney in flour? Not to a large extent. Surplus supplies might be sent to Sydney if they could not get a market anywhere else in the district, but if they could get a market in the north, or to the east, it would be more suitable for them.
2433. You have been milling for some time? Yes.
2434. Have you ever sent surplus flour or wheat to Sydney or Newcastle? Never.
2435. Do you think you could send more in the direction of Armidale and Stanthorpe than you are now sending? Not to Armidale. I could send more to Stanthorpe, and the southern portions of Queensland.
2436. Where did those people get their supplies from before you supplied them? Before I bought this large quantity I had not such a complete milling plant as I have now. A large quantity of Victorian and Adelaide flour used to come into our district, but that is now decreasing every month, because the article which I am turning out is equal to it.
2437. From what direction does Adelaide flour come? Newcastle and Sydney.
2438. There has been a trade from Sydney to that district? Yes. Before we had such a good plant they would pay £2 a ton more for good flour rather than use an inferior article.
2439. *Mr. Dawson.*] You say that this year you bought 6,000 sacks of wheat? Has the Inverell district always been able to supply local wants? Always.
2440. You have never brought wheat from Cootamundra? Yes; two years ago I brought a little wheat from Cootamundra, availing myself of very cheap railway freight. I got my wheat delivered at Glen Innes at 16s. 8d. a ton. It was carried something like 600 miles at 16s. 8d. a ton; but the Commissioners found out that there was a mistake in regard to the rate, and they put a stop to it. Wheat cannot be delivered from Cootamundra at Glen Innes at the same charge now. It was only carried for one season at that rate.
2441. Is it a fact that there is a lot of wheat grown about Warwick? Yes, in certain seasons. I have been in the district about thirty years. They get one good season out of every four.
2442. Is one season out of four sufficient for them? In the best season I do not think that they can wholly supply their own requirements.
2443. *Mr. Neild.*] There are flour-mills at Inverell? Yes.
2444. Are not those mills able to grind all the wheat that is grown in the district? No; they are only small mills. Mine is the largest in the district.
2445. Supposing that other mills were established at Inverell, sufficient to consume all the wheat grown in the district, would there be much chance of traffic in wheat from Inverell to Glen Innes? If there were mills put up to consume all the wheat grown in the district I should still be able to buy my wheat at the same price.
2446. If you bought the wheat at the same price it would cost more to deliver it at your mill than at the Inverell mill? I have no market at Inverell for my flour now.
2447. The carriage of flour would be relatively cheaper than the carriage of wheat, because it takes more than a ton of wheat to make a ton of flour? Yes; but even so, at present the Inverell millers cannot compete with me, although they bought sufficient for all their requirements.
2448. You spoke of supplying flour to Emmaville? Yes.
2449. Would it not be cheaper to take flour from Inverell to Emmaville than to take wheat from Inverell to Glen Innes, and then to take the flour from Glen Innes to Emmaville? No, it would not.
2450. What is the distance from Inverell to Emmaville? Between 50 and 60 miles. It is a very bad road. If I got the wheat delivered from Inverell at Glen Innes at 1½d. a bushel, I could deliver a ton of flour for 15s. at Emmaville; but the carriage from Inverell to Emmaville is £2 a ton.
2451. But you will admit that the erection of proper mills at Inverell will seriously interfere with the traffic of wheat from Inverell to Glen Innes? It may interfere with the traffic in wheat; but if a large milling company started there and made flour, the local population would not be able to consume the whole of the flour; they must send it somewhere. It must go to the east of Inverell. But they are supplying these districts already by teams.
2452. *Mr. O'Sullivan.*] Are you well acquainted with the Tenterfield district? Yes.
2453. Is there much cultivation of wheat there? There is not any great extent of it.
2454. Why? It is poor soil there, and there is only one valley near the town where they can farm to any extent. They have not produced more than 25,000 bushels of wheat in that district this year.

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2455. Where do the farmers of the Glen Innes and Guyra districts send their produce to, usually? They have principally a local market. The farmers round Glen Innes grow potatoes, hay, oats, corn, maize, and some wheat, but not much.
2456. Do they send the produce to Sydney and Newcastle? It has been sent to Newcastle. I have in my pocket an account of 6 tons of potatoes that were sent to Newcastle by a farmer. The potatoes were sold, and he got in return £1 0s. 2d. for the 6 tons.
2457. *Mr. Collins.*] Had the differential rates anything to do with that? The differential rates have nothing to do with potatoes.
2458. Quantities of potatoes have been wasted in that district? Yes. They have sent hay down from there, but the return was so small that the farmers would as soon see it rot in their paddocks as to take the trouble to send any more of it to market.
2459. *Mr. O'Sullivan.*] Putting aside all local prejudices, and speaking as a business man, do you think that a market for Inverell wheat and other produce could be found at Newcastle and Sydney? Certainly not. If I was living in China, and had nothing to do with New South Wales, I should say that the proper market for the produce of Inverell is north-east of Glen Innes. If they have large supplies of wheat some will probably come down to Newcastle and Sydney, but three-fourths of it must be sold in the district.
2460. You think that the surplus wheat would be sent to Newcastle and Sydney? Merely the surplus.
2461. *Mr. Ewing.*] We have had very definite evidence with regard to public opinion in the northern districts as to where the railway should join the main line. We were told that a syndicate were exercising great influence in Glen Innes. You know something of public opinion in Inverell,—where do they want the line from Inverell to go to? If a ballot were taken, eight-tenths of the people in the district would be found to be in favour of the line going from Inverell to Glen Innes.
2462. I want something more definite still than that. You know that Mr. Murray, Mr. Moore, and Mr. Cruickshank have represented that district in Parliament for the last six or eight years? Yes.
2463. Do you think they were under the influence of a syndicate? Certainly not. They were independent Members, under the control of no syndicate.
2464. What is the value of the good land on the New England table-land, say within 3 miles of the railway? It ranges from about £2 to about £4 or £5 an acre.
2465. Supposing you covered it with scrub that it would cost £6 an acre to clear off, what would the land be worth then? I do not know any land that is worth £6 an acre to clear.
2466. We have had evidence with regard to the Don Dorrigo scrub. We have been told that it would be taken up with avidity at £5 or £10 an acre if a railway were made in that district? Not much land in New England would be worth £5 an acre.
2467. *Mr. Dawson.*] Is the Don Dorrigo scrub-land worth £5 an acre? I know nothing about it.
2468. *Mr. Neild.*] You said that only when they had a surplus would wheat go from Inverell to Newcastle? Only any surplus after supplying the districts to the north and to the east.
2469. By that you mean that breadstuffs sent to Newcastle will have to be sold at a lower price than breadstuffs that are sold locally? Yes.
2470. Then the farmers in the Inverell district would not be able to compete profitably in the Newcastle district and the metropolitan market? No. They would only use it as an outlet for surplus stocks.
2471. Which they would have to sell at a very small profit, or not at all? If a man sold 800 bushels of wheat and he had 200 left, the remainder would go to Newcastle or Sydney.
2472. *Mr Humphery.*] In reply to a member of the Sectional Committee, you said that within a few miles of Glen Innes and Inverell farm land would be worth £2 10s. an acre. Which statement is correct—the one which you have made to Mr. Ewing or that which you made to the Sectional Committee? At that time I spoke of land within a mile or two of a town—I did not mean the intervening country.
2473. Which of the two statements is correct? Both of them.

John Harper, Esq., Goods Superintendent, Department of Railways, sworn, and examined:—

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2474. *Chairman.*] What are you? Goods Superintendent on the Railways.
2475. I understand that you collected the data upon which the Commissioners based their report on the probable earnings of the railway? Yes.
2476. *Mr. Ewing.*] I presume that your special commission from the Commissioners would be to estimate the anticipated revenue? Yes.
2477. And with that principle you had to deal? Yes.
2478. Will you tell us what is the basis of your calculations? The difference between the rates through, and the rates from Glen Innes to Inverell.
2479. The difference between the mileage rates to Inverell, and the mileage rates to Glen Innes? Yes.
2480. In that calculation you have not taken into consideration the additional revenue from the main line? No.
2481. So, in regard to the national aspect of the matter, that is hardly a fair view to take? The Commissioners only profess to give the revenue of the line. It does not represent all that the line will produce.
2482. You do not take into consideration at all the increase of the traffic on the main line coming from the new line? No.
2483. Do you, as an expert, believe that there will be some increase? Decidedly.
2484. Did you assume that the rates from Glen Innes to Inverell would be the same as the rates in other parts of the colony? Yes; irrespective of the differential or competitive rates.
2485. Your differential rates are what you call competitive rates? Yes.
2486. And you consider that this branch line is out of the region of competition? Yes.
2487. You think you can levy any rate that you see fit to impose? We can levy any rate that our powers enable us to impose.
2488. Therefore, you might increase this estimate very materially? Yes.
2489. I suppose that eventually, when competition sets in from the coast, you will have to re-model the whole thing? Yes.
2490. It is of no use my asking you how? No.

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2491. That would be determined absolutely by competition? Yes.
2492. I notice that your revenue covers the working expenses by £1,000? Yes.
2493. You were in the Inverell district? Yes.
2494. Notwithstanding that you lose the interest on the outlay, and only make £1,000 over the working expenses, would the construction of this line be justifiable? My own impression is that it would be.
2495. Why? It is a good district, they have a good rainfall, and if it had railway communication the district would improve very rapidly, and bring a lot of traffic to the line.
2496. Where do the people in the district wish the railway to join the main line? As far as my information went, they appeared to want to go to Glen Innes. Of course there were diverse opinions—some wanted the railway from Guyra. The majority were in favor of the Glen Innes route.
2497. Supposing a railway were made to Glen Innes, what special advantage do you see in it over the Guyra line? I would not say—I have not had an opportunity of comparing the two.
2498. You know nothing of the Guyra line? No.
2499. Your whole task consisted in investigating the proposed line from Glen Innes to Inverell? Yes.
2500. Supposing the farmers at Inverell made Sydney their market, and came from Inverell to Glen Innes, and then to the metropolis, how much more per ton would they have to pay than they would if they came by Guyra, the difference in distance being 32 miles? Seven pence per ton.
2501. How much per bushel is that? About a farthing.
2502. Therefore, if they had to send their produce from Inverell to Glen Innes, and then to the metropolis, the worst that could happen would be that they would pay a fraction of a farthing more in freight? That would be the difference.
2503. If they sent to the north or to the east they would be a little more than that to the good? Yes.
2504. *Mr. Hoskins.*] In what way did you ascertain the amount of the traffic from Inverell to Glen Innes? The tonnage that comes from that district was ascertained at Guyra, Glen Innes, and other points where the traffic falls into the line. Returns were obtained as to the yield of wheat to show the possible development of the traffic, and a margin had to be allowed for that.
2505. You have allowed, in your estimate of revenue from goods and passengers, for the probable increase of the traffic? Yes; that is the traffic outwards from the district, not inwards. The traffic inwards is the actual traffic which has been carried to the district. An approximate estimate was made of the traffic from the district, it being assumed that the railway would open up the land and cause an increased cultivation of wheat.
2506. Of course, you are aware that it is calculated that there would be a loss of £13,000 or £14,000 a year on this line? Yes.
2507. Did you travel on the route between Glen Innes and Inverell? Yes.
2508. Of course, you ascertained the character of the country? Yes.
2509. Did you see many settlers on the route between Glen Innes and Inverell? No; there is not much settlement between the two towns.
2510. Where did you see agriculture being carried on which led you to estimate that there would be an increase of revenue when the railway is opened? Within 6 or 7 miles of Inverell.
2511. West of Inverell? North and west.
2512. Can you tell me whether, if the railway were carried from Guyra to Inverell, it would accommodate the inhabitants of the Inverell district as well as a line constructed from Glen Innes to Inverell? Certainly, as a method of carriage.
2513. I suppose you had a good many conversations with the residents in the district? Yes.
2514. Judging from the conversations you have had with people there, what opinion did you form as to where the greater portion of the increased products of agriculture in the district would be sent to? The Inverell people themselves imagine that they would find good coast markets for their produce. All the Inverell people look forward to getting a railway to the coast. They also believe that they might get a market in Queensland, but I did not attach any importance to that idea. The present market is towards the south, at the towns between Newcastle and Glen Innes.
2515. Do you think there is reasonable ground for expecting a larger demand for wheat and flour in those southern districts? I think so. The year that I was there the Inverell people were the only people in the northern district who had any wheat.
2516. What year was that? The end of 1889.
2517. Are you not aware that there is a great deal of agricultural land in the neighbourhood of Armidale? Yes; but I have not known wheat to be grown to any extent in the Armidale district.
2518. You say that the people in the Inverell district believe that if the railway were extended to Inverell, by whichever route, their principal market for cereals would be on the coast? Yes. Their principal desire was to get a connection with the coast. They consider that in the coast district will be their principal consumers. That is their view, not mine. But if they had a railway, no doubt they would get a market on the coast.
2519. Do you think, from your knowledge of freights, that cereals and flour could be sent from Inverell to the coast, to the Clarence and the Richmond, to compete with flour from South Australia or Victoria? I am rather disposed to think that they could. The carriage of wheat would cost a little over 3d. a bushel from Inverell to Grafton.
2520. Do you consider that cereals ought to be carried over a branch line with very heavy gradients at the same rate as that at which they are carried on the main lines of railway? I would rather not discuss that question. It is a question of policy for the Commissioners.
2521. Could cereals be carried as profitably from Glen Innes to Grafton as they could be carried over the same distance on the main line? Not if the gradients were worse than on the main line. I have no idea what the gradients would be on a line to the coast, but I know that they are pretty severe on the main lines.
2522. Did you ever read Messrs. Scarr and Price's report on the proposed Newton-Boyd route? Yes.
2523. Do you think a railway could be worked profitably over such a route with the same rates as those charged on the northern line? If a better route than that cannot be got to the coast it will be a very expensive line to work, and it would require a great deal of traffic, and traffic of a higher value than cereals, to make it pay.
2524. Do you think it possible, if low rates were charged for the conveyance of flour from Inverell by railway

railway to the coast, that the Inverell people could compete favourably with the producers in South Australia and Victoria? I am under the impression that they could. J. Harper, Esq. 28 April, 1892

2525. Have you any idea of the consumption there would probably be in the coast districts? I believe there are 20,000 or 30,000 people down there who would be large consumers.

2526. Do you, or do you not, think that a railway from the table-land to the coast, say, to the Clarence or to the Richmond River, will be made, say, within the next ten years? I could not say.

2527. The people at Inverell desire the construction of a railway because they look to the east coast for a market for their produce? The majority of those whom I met did.

2528. Do you think that if they largely increased the quantity of their cereal products in the Inverell district they would find a profitable market for their wheat and flour to the south, as far as Newcastle or Sydney? In certain seasons they would.

2529. Mr. Scarr stated that the market for the surplus products of the Inverell district would be Sydney—are you of that opinion? I believe that the cereals would move in this direction.

2530. You do not think that Queensland would offer a very large market for that district? No; I do not.

2531. Their principal market is to the north-west, is it not—Bingera, and towards the Barwon? Yes, and at Glen Innes.

2532. Did you ascertain, when you were in the Inverell district making inquiries, that the production of wheat in that district had diminished, the people having given it up simply because it did not pay? Yes; they had no market and the road carriage was too high—that was the reason of it.

2533. When you were in Glen Innes did you ascertain whether there was much wheat grown in that district? Yes.

2534. Is there much wheat grown at Glen Innes? I think that the year that I was there there were 8,000 or 9,000 acres under wheat.

2535. Your estimate of the probable receipts from the traffic of the railway is based not only upon the goods brought to Inverell by the railway, but also on the local productions and their probable increase? An allowance was made for wheat and maize grown in the district. It was 3,500 tons.

2536. What is their production now? The average for last year was 16 bushels to the acre.

2537. What quantity did they produce? They had 4,628 acres under wheat, and 5,189 acres of maize last year at Inverell.

2538. You do not know what the production was? The wheat was 16 bushels to the acre, and the maize 24 bushels to the acre.

2539. Therefore your estimate is considerably in excess of the production last year? Yes.

2540. *Mr. Davies.*] The instructions you received from the Commissioners were to report upon the probable coaching traffic as well of the goods traffic between Glen Innes and Inverell? Yes.

2541. How do you arrive at the amount of revenue that you estimate for coaching? That is an approximate estimate.

2542. How is it made up? From our experience of other towns similarly situated to Glen Innes. 5,000 passengers is the estimate for the year. 3,000 first-class and 2,000 second-class passengers.

2543. Where did you get your information from? By comparing it with the returns from other districts in a similar position to Inverell.

2544. What is the population of Inverell? The population of the district is something like 6,000.

2545. With reference to goods, I suppose that that also is an approximate estimate? The amount inwardly to Inverell is an actually-ascertained quantity.

2546. How is that made up? It is made up from our railway books; 3,483 tons were carried to Glen Innes and Guyra for the Inverell district during the year preceding the estimate.

2547. What is the character of the goods carried? All classes, except produce; merchandise, woolpacks, and all the ordinary country goods.

2548. What is the character of the goods coming from Inverell? Wool, wheat, maize, potatoes, and tin ore.

2549. Did you also make an estimate of the working expenses? No; that was made up by the Commissioners.

2550. You think it would be possible to obtain a revenue of £8,200 a year from the line if constructed? Yes.

2551. Between Glen Innes and Inverell? Yes.

2552. From the coaching and goods traffic? Yes.

2553. You have not inquired into any other route but this? No.

2554. *Dr. Garran.*] You are carrying goods to Glen Innes at the same rate as you are carrying them to Guyra? No; it is a little less at Glen Innes.

2555. How does it compare as between Armidale and Glen Innes—is there much difference? The truck loads to Glen Innes are cheaper than to Armidale, but that is on one particular class of goods only—third-class goods.

2556. You carry to Glen Innes for a little less then to Armidale? Yes; in full truck loads.

2557. If this line is made from Glen Innes to Inverell, will you continue that plan? No; we should then charge a new rate between Glen Innes and Inverell.

2558. But you will charge the same rate between Sydney and Glen Innes as you do now? Yes.

2559. You will charge the full mileage rates between Glen Innes and Inverell? Either that or the ordinary mileage rate. We should add to the Glen Innes rate 53 miles, to make up the difference.

2560. Then you bring the produce down from Inverell to Sydney for a less price than you would by the old-fashioned distance rates to Glen Innes itself? No; we do not carry anything on the up journey at competitive rates.

2561. You only carry up-country traffic at competitive rates? Only up-country traffic. That is, high-class traffic which will bear it.

2562. You give the benefit of the charge to the producer to make up for it? No; we do not touch the producer.

2563. The producer does not get the benefit of the differential rates? I presume that he does in our being able to carry on the railway.

2564. You do not give him the nominal benefit, but you carry his goods at very low rates? Yes.

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2565. You give the merchandise the benefit, and charge it higher? Yes.
2566. But you can give the producers the benefit of the differential rates by charging them lower? Yes.
2567. From Inverell to Sydney wheat will have to pay the full mileage distance? Yes.
2568. Then would it not be a great advantage to the Inverell people to save 35 miles? That would amount to 7d. a ton.
2569. Then if a line were made from Inverell to Guyra, they could bring their wheat down for 7d. a ton less than they could bring it by the Glen Innes route? Yes.
2570. And all that they could get would be the minimum price at Sydney for their produce? I do not know that Sydney is considered a good market.
2571. I understood you to say that the best market was the local market, and that they would send their surplus to Sydney? Yes.
2572. When sending the surplus they have to take the lowest price ruling? Yes.
2573. But in addition to getting the lowest price, you make them pay 7d. a ton more to go by a round-about journey, thus further handicapping the local producers? Yes.
2574. As soon as they have filled up the local market they have no option but to come to Sydney? To come in the direction of Sydney.
2575. The local market is at present about supplied? The production was beyond the requirements of the local market when I was there.
2576. If the local market were not supplied, would you not be sending wheat and flour up beyond Guyra during that year? Yes, we did. We sent wheat to Tamworth and Armidale.
2577. Have you sent it since—that was an exceptional year, was it not? We are sending flour every day in the direction of Tamworth and Murrurundi.
2578. Sending it to Tamworth, or the north? Not to the north.
2579. Then the local market must be supplied by local production? Yes.
2580. Is not the fact that you are not carrying wheat and flour to the north of Tamworth a proof that local production is supplying the market there? Yes.
2581. The present production meets the present local demand? Yes.
2582. Then if you make a railway to stimulate that production, unless you equally stimulate the local demand, the surplus must come to Sydney? Yes, or in this direction.
2583. You say that if we make the line we shall greatly stimulate production, and that there is no market except Sydney? Or in the direction of Sydney.
2584. If you make a railway round by Glen Innes you charge all the producers an extra 7d. more than you would charge by the Guyra route? Yes, no doubt.
2585. Then if you are going to stimulate local production, as there is no local market, would it not be fair to give them the cheapest carriage to Sydney? As a general principle, most decidedly so.
2586. The Commissioners have power under their Act to make any reasonable charge on a branch line, I suppose? Yes; as long as they charge all persons equally.
2587. Until they find the carriers cutting them out they can raise their rates? Yes.
2588. There is nothing to prevent them from making high charges on a branch line? No.
2589. I understand that the Commissioners carry wheat for a very small profit? Yes.
2590. So if you increase the traffic on the northern line tenfold you would not make a very great profit? No; but we expect that the population in the district will benefit us in other ways.
2591. You would not make much on wheat, but you would make more on passenger and other traffic? Yes.
2592. As long as the people are living there their production of wheat does not bring in much to the railway? No; it is according to population.
2593. Still, a population cannot settle there without something to do? No.
2594. A mining population would pay as well as a wheat-growing population—perhaps better? Yes.
2595. The produce of mines pays a good rate? Relatively.
2596. On the whole, the least profitable thing for a railway is a wheat-growing population? I cannot say that. A pastoral population is not always a very paying one—they employ very few people.
2597. But wool pays a good rate? Yes; but there are not many engaged in its production.
2598. A wheat-growing population is the least remunerative, as far as produce is concerned? Yes.
2599. *Mr. Wall.*] In reporting on this line, was it your duty to compile a return, or to make a report, for or against the construction of the line? My duty was to obtain statistics for the Commissioners, who visited the district themselves.
2600. In the construction of a branch line, as a general principle, can you say whether a line running at right angles to the main line, or one running, as the Guyra line does, at a sharper angle from the main line, is best calculated to open up the country? That depends very much upon circumstances.
2601. Do you think the Guyra line, as shown on the plan, would not deprive the present main line of a portion of its legitimate traffic? It may; but I do not think that at that angle we should lose anything in mileage.
2602. I am speaking of the line within 25 miles of the point of convergence—would it deprive the main line of some portion of its traffic? It would.
2603. Within the first 25 miles the line would serve people who already have railway accommodation? It would be giving them an alternative line.
2604. Have you any idea of the returns derived from any other section of the Great Northern Line? Only of the branch line to Narrabri.
2605. I am speaking of any section of the main line—have you any return of the traffic as to any section of the main line? No, we have not.
2606. If the returns for any one section of the line were taken, do you think that any section of the line by itself would be found to pay? None of our branch lines are paying the interest on the capital and the working expenses.
2607. I am now speaking of the main line—do you think that any section of itself pays, irrespective of the general traffic? I daresay that there may be a section which pays in the busy part of the country; but it would be an exceptional thing to find a section paying independently.
2608. In calculating the quantity of goods conveyed on this line to the market, assuming that they came to Newcastle, would not the return be very much greater on any section of a line nearer to Newcastle? Certainly. Every increased mile means greater profit.

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2609. But that increased profit is not credited to the line once it comes on to the main line? It is not in the case of this estimate.
2610. Therefore, although the outer section of a line may not pay in its general contribution to the main line, it may be a better paying section than the line on which there is a greater traffic? Yes; that is the principle which the Commissioners had laid down when they commenced to consider these new lines—that they would not expect them to pay interest on the capital, on account of their contributions to the main line.
2611. You could not give any idea of the actual contributions of this line to the general traffic? No; you would want to know where the traffic was carried to. It would be an almost interminable question.
2612. You spoke of another branch line which was not paying? There are several mentioned in the Commissioners' reports.
2613. Do you know any section of the line which pays interest on the cost? I have no returns of the main line; I am speaking of branch lines.
2614. Do you know whether we could obtain that information, to make a comparison between any other section and that proposed to be constructed? No; it could not be obtained.
2615. You have reported upon a good many lines, and you have a general knowledge of the traffic? Yes.
2616. Would you recommend the construction of this line? Yes; leaving out of consideration the merits of other lines. My impression is that Inverell is entitled to a railway.
2617. What would be the cost of the carriage of grain from Inverell to Sydney? About 6d. a bushel, I think.
2618. I suppose that your attention has been directed to the greater yield in the Inverell district than in most other districts? Yes.
2619. Do you think that, with the greater yield in the district, it would pay the farmers to send wheat to Sydney? That was their own impression. When I was up there it was about the only district that had any wheat at all.
2620. Do you regard the proposed railway as a branch line? Yes.
2621. And your calculations were only based upon the part from its divergence from the main line to Inverell? Yes.
2622. In constructing a line of that kind, do you think that a line running at right angles to the main line would open up more country than one at an acute angle? A line at right angles to the main line would mathematically open up more country.
2623. With regard to the trade of Inverell, was your attention directed to the probability of the opening up of a trade with Queensland? Yes; the Inverell people spoke of it as a possibility.
2624. Do you think they will open up a traffic with Queensland? I do not attach much importance to that idea. In the neighbourhood of Warwick they can grow everything they want.
2625. *Mr. Neild.*] You spoke of not seeing many settlers when you were making your investigations? Yes.
2626. Where did you discover this concensus of opinion as to the route? In the town of Inverell.
2627. Not at Glen Innes? No; I did not consult the Glen Innes people at all.
2628. What percentage of increase on the present traffic did you allow in your estimate of the probable revenue? The wool traffic is an ascertained amount. We doubled the output of produce. The produce amounted to 3,520 tons, but the revenue is not very much, only £262 10s.
2629. You say that in the district there are about 6,000 people? Yes.
2630. That must be for a considerable distance around the town of Inverell? Yes.
2631. What is the population of the town? About 2,000.
2632. Does that 6,000 include children? Yes; the total population.
2633. And you anticipate 3,000 first-class and 2,000 second-class passengers? Yes.
2634. Adult passengers? Yes.
2635. But the whole of the adult population of the district could not possibly exceed 3,000? No.
2636. Then, do you estimate the passenger traffic will equal the number of adults in the district? Yes. It is a low estimate, from our experience. If I were to estimate it again, in the light of recent experience, I should make it higher.
2637. You spoke about the east coast markets for Inverell breadstuffs? Yes.
2638. What extent of a market do you think exists in the north-eastern portion of the colony? There are some 20,000 or 30,000 people on the Richmond, the Tweed, and the Clarence.
2639. Do you think that those districts would afford a market for the whole of the products of Inverell? No; I think the Inverell district is capable of growing a great quantity of cereals.
2640. Do you think that those portions of the colony would give a market for Inverell breadstuffs in the absence of railway communication? The Inverell people hope to get a railway.
2641. From some point on the Great Northern Line to the Grafton or Richmond districts? Yes.
2642. But in the absence of such a railway, that portion of the colony could not be a market? No.
2643. Therefore the Inverell products would have to come southward? Yes.
2644. Have you any idea whether it would go north? Yes; the produce would probably go to Tenterfield, and Inverell would sometimes find a market at Glen Innes.
2645. With reference to the differential rates, do not the differential rates tend to dislocate the natural course of traffic? That is not our experience.
2646. Supposing it was 50 miles from Glen Innes to Inverell, and 50 miles from Guyra to Inverell, would not the traffic to and from the south necessarily go by way of Guyra to Inverell, rather than round two sides of a triangle, unless it were for the differential rates? No doubt the traffic would go where the carriage was cheapest.
2647. Then the differential rates tend to dislocate the natural course of the traffic? Yes; as far as the rates are concerned.
2648. As to the growth of a lot of wheat at Inverell, are there not vast areas of agricultural country through which lines are already running which are not used for wheat production? Yes.
2649. Is there not, for instance, a farm under tillage near Wagga with a frontage of something like 4 miles to the railway? Yes.
2650. Where wheat is grown not for the wheat crop but for hay? Yes; a great deal of it is cropped for hay and some of it for wheat.
2651. Some of that particular farm is cropped for wheat? Yes.

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2652. Would you be surprised if the Senior Member for the district states that the whole of it is cropped for hay? It would not be in accordance with information which I have received on the subject.
2653. Did you report on the Narrabri line? No.
2654. Do you remember anything of the circumstances surrounding the adoption of the line to Narrabri? I do not.
2655. Is it not a fact that in a very large number of cases where railways are proposed, one of the chief inducements held out for their construction is the prospect of a large production of wheat? Yes.
2656. Are these promises often fulfilled? I could scarcely answer that. I should like to see them fulfilled.
2657. You do not know, officially, that those expectations are fulfilled? I know that a great deal of land has been put under wheat in the last four or five years, which shows that they are moving in that direction.
2658. On the newer lines? The South-western line is extensively cropped with wheat—the Narrandera to Hay line, and wheat is being grown west of Dubbo.
2659. I suppose, from the supplies of wheat which pass through your Department, you are of opinion that the present railways in the colony intersect a very large area of wheat-growing land, and only a comparatively small portion of that land is at present cropped with wheat? Yes.
2660. *Mr. Dawson.*] On a terminal line like that to Inverell, would you get an account of all the wool that is sent from that station, if it was not paid for there. Supposing that a squatter sends down 500 bales of wool, and it is paid for by Mort & Co., in Sydney, would that appear to the credit of the Inverell line? No; not in the return book. You would get it in the tonnage, but not in money. The money would appear on the books of the station where it is collected.
2661. *Mr. Collins.*] Why were the differential rates established at Glen Innes? For the reason that we were losing from £12,000 to £13,000 a year, owing to the competition of teams. The steamers and the carriers reduced their rates.
2662. Are the differential rates extended beyond Glen Innes? Yes; to Tenterfield and the Queensland border. Of course, they operate against the Queensland railways, too.
2663. That is what they were imposed for? That is one object.
2664. What was the cost of the line from Werris Creek to Narrabri? £610,234.
2665. And what was the loss on the line in 1887? £14,946.
2666. And what was the loss when the last return was made, in 1890? £3,389.
2667. Showing a decrease in the loss of £11,000? Yes.
2668. Are you aware that the line is paying more than the interest on the cost? I could not say.
2669. Do you know that there are quantities of forage sent from New England along the Narrabri line? Yes.
2670. Where does it generally come from? Some from Tamworth, some from Glen Innes.
2671. You say that Inverell is a good maize-producing country? Yes.
2672. Do you know whether this year has been a good year for maize? I could not say.
2673. Are you aware that thousands of bushels of maize are going out to the north-west from Warwick to Narrabri, Moree, and Walgett? Yes; we feel the effect of it, too.
2674. You feel the effect owing to the goods going to Narrabri and the wool coming back? Yes.
2675. I suppose if Narrabri Station got the credit for all the wool received there, there would be a large profit shown? I could not say.
2676. *Mr. Humphery.*] When you were at Inverell, did you obtain any information that would enable you to form an opinion as to what further extensions could take place in the event of this line being made? The Inverell people spoke about its extension to Bingera.
2677. I prefer your opinion? I formed no opinion that I should care about putting on record.
2678. You did not care to take into consideration any possible extension of the line west or north-west of Inverell? No.
2679. Did you collect statistics between Narrabri and Moree? No.
2680. You are unable to give us information as to whether it is desirable to lengthen the line to the west of Inverell or to extend it to Narrabri? I think it would be a desirable thing to do, if the railway was constructed.
2681. To do what? To extend it westward, in the direction of Bingera and Moree.
2682. Have you any knowledge of the country beyond there? No.
2683. *Mr. Hoskins.*] When you were at Inverell making inquiries, did you hear the people say that the reason why they wished to have the railway constructed from Glen Innes to Inverell was because they hoped, and believed, that it would be the first step towards the making of a railway from Glen Innes to the coast? Decidedly.
2684. Therefore, their primary object in asking for this line is to get a railway down to the coast? That was undoubtedly their object.
2685. It is not with any idea of using the Great Northern Line at all? No.

Thomas Henry Hassall, Esq., M.P., sworn, and examined:—

T. H. Hassall, Esq., M.P. 28 April, 1892.

2686. *Chairman.*] You are Member of Parliament for the electorate of the Gwydir? Yes.
2687. *Mr. Collins.*] How long have you been living in the north-western district? Since 1867.
2688. Are you well acquainted with the country between Moree and Inverell, and Goondiwindi? I have travelled over it repeatedly.
2689. Did you have the mail running from Moree to Goondiwindi? Yes.
2690. Do you think, from your acquaintance with that country, that it would be better served by a railway from Narrabri to Moree, or by a railway from Inverell to Bingera and Moree? There can be no question as to the two routes, as far as the people in the district are concerned. Any one acquainted with the district must know that Moree is situated, with regard to the Queensland border, something like the apex of a fan. It is 80 miles from Goondiwindi, a considerable town on the Queensland border, and also some distance from Mungindi. Then there is Collarendabri. Glen Innes is about 420 miles from Sydney, and it is about 46 miles from Glen Innes to Inverell by the road. It is between 46 and 50 miles from Inverell to Warialda, and Warialda is about 38 miles from Bingera, and it is about 45 miles from Warialda down to Moree. From Sydney to Narrabri is 350 miles. It is 65 miles from Narrabri to Moree. If the people

T. H. Hassall, Esq., M.P. 28 April, 1892.

people in that part of the country wish to use the railway to Inverell they will have first to come to Warialda, travel 45 miles to Inverell, 46 miles to Glen Innes, and then go 420 miles from Glen Innes to Sydney. They would not do it. They would go from Moree to Narrabri, along a direct road. I do not think that the Inverell line would be of any service to the people residing in the north, west of Bingera, Warialda, and Yetman.

2691. Then you think that the people in that district will be better served by a line from Narrabri to Moree than by a line from Inverell? I am certain of it.

2691½. What is the character of the country from Narrabri to Moree? The country from Narrabri to Moree, with the exception of one little hill on Galathera Plains, is about as level as a table all the way. There are a very few small creeks, which could be crossed by culverts.

2692. *Mr. Dawson.*] What would be the cost of constructing a line through that country from Narrabri to Moree? I could not say. I can tell you what an expert told me. Mr. Amos said he would like to get the construction of it at anything like £3,000 a mile. I think it could be done for £2,500 per mile, if not for less.

2693. *Mr. Humphery.*] Would it be more costly to construct the line from Inverell to Bingera than by that route? I should say it would cost double the money. It is undulating country, which would necessitate cuttings and embankments. Towards Bingera you get on to black soil ridges, which are pretty rough in some places.

2694. Is the whole of the land between Narrabri and Moree, and between Inverell and Warialda and Bingera, suitable for wheat production? I could not say. I have seen good wheat grown at Moree, and good lucerne. In its present state you could only describe it as first-class grazing country.

2695. What about Bingera? There is good agricultural land on the banks of the Gwydir, and good mineral country about Bingera.

2696. *Mr. Hoskins.*] What is the difference in the distance to Newcastle or Sydney and to Goondiwindi, by Narrabri and Moree, as compared with the distance between Sydney or Newcastle and Goondiwindi, by the northern railway, to Glen Innes and Inverell? I should say that between the two there is a difference of something like 100 miles in favour of the route by Moree and Narrabri.

2697. *Mr. O'Sullivan.*] At present does not a large wool traffic go from Inverell to Glen Innes Station, or to Goondiwindi? No; as a rule it comes across the plains to Narrabri when the plains are open, that is when you can get water and grass, or when the plains are not too heavy. I may tell you that there are two alternative routes. The wool does not go from Inverell. It occasionally goes up to Warialda, and crosses to Tamworth. It comes through that way when the roads are too heavy on the plains, or when there is no water for the carriers' stock.

2698. Are you aware that the business people of Inverell say that they are doing a business with Goondiwindi? They may be doing a business in cereals.

2699. A large wool traffic comes through Inverell from that portion of the country? They may get a wool traffic from Wellingrove, Ashford, Bonshaw, and Texas.

2700. Then there would be a prospect of a line to Inverell serving a portion of the northern district? Yes, east from Texas; but I do not think it would serve much.

2701. *Dr. Garran.*] Supposing the line you mentioned between Narrabri and Moree were made, and the line from Glen Innes to Inverell were made, would the traffic from the intermediate districts go more to the one side or to the other? Anything east of Warialda and a line running due north from Bingera, would be attracted towards Inverell; but anything west would come to Moree.

2702. You see by the map that Bingera is nearer to Inverell than Moree? Yes.

2703. You think that the level country, and the shorter distance to Sydney, would send the traffic to the Moree line? Yes.

2704. If the people had to take their produce by road, they would have a little longer journey to the Moree line, but a shorter railway journey to Sydney? Yes.

2705. You think they prefer that? Yes; because they would be coming direct.

2706. You see by the map that the line from Newcastle to Narrabri is much straighter than the line from Newcastle to Glen Innes? Yes.

2707. If you have to go by Glen Innes you waste a great deal of distance? Yes.

2708. You do not waste the same distance in going by Narrabri? No; you would be at Narrabri almost at the same time that you would be at Armidale.

2709. Then it is quicker and cheaper for the Goondiwindi and M'Intyre district traffic to go by Moree? Yes; the line there would attract the traffic, but the Inverell line would not.

2710. That would get the traffic along to the east? To the north and north-west, and to the east as far as Inverell and Warialda.

2711. Is it good land all the way? It is good land right up to the foot of the Nandiwar Ranges.

2712. If we want to increase the produce of the district to the west of Inverell, Narrabri, and Moree, this line would do it? Yes, it would; and in my opinion it would encourage agriculture on the slopes and spurs coming down from the mountains.

2713. Can agriculture be carried on as far west as Moree and Narrabri? Yes.

2714. Is that country fit for irrigation? I do not think they would have any trouble in irrigating it. They could put dams across the creeks, and irrigate a great deal of country. There would be no difficulty in carrying out irrigation on the Gwydir River. I may mention that Messrs. Booth, Robertson, & Co. bought a large cattle station in the district, and when they sent their manager over he asked me if there was any possibility of sending water from the bed of the river into a creek, to convey it to their run. I told him that I had seen water breaking over the banks of the river, and flowing down the creek for miles. They first cut a channel and deepened the creek, but they could not get the water into the creek unless the river was bank high; but they met that difficulty by putting down a steam-pump, and they pumped water from the river, and sent it 35 miles down the creek, saving fully 50,000 sheep by so doing.

2715. Supposing we wanted to stimulate the growth of wheat for the Sydney market, could we do it on that land 20 miles east of the line from Narrabri to Moree? Yes; that is between the line and the mountains.

2716. That line would give as quick carriage to Sydney as any you could get? It would give the quickest.

TUESDAY, 3 MAY, 1892.

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM HENRY SUTTON.	WILLIAM CHANDOS WALL, Esq.
The Hon. JAMES HOSKINS.	WILLIAM MCCOURT, Esq.
The Hon. FREDERICK THOMAS HUMPHERY.	JOHN CASH NEILD, Esq.
The Hon. ANDREW GARRAN, LL.D.	EDWARD WILLIAM O'SULLIVAN, Esq.
The Hon. JOHN DAVIES, C.M.G.	CHARLES COLLINS, Esq.
THOMAS THOMSON EWING, Esq.	HENRY DAWSON, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Edmund Lonsdale, Esq., M.P., sworn, and examined:—

E. Lonsdale, Esq., M.P. 3 May, 1892.

2717. *Chairman.*] You are one of the Members for New England? Yes.
2718. You gave evidence before the Sectional Committee which visited Armidale at this time last year in reference to this question? Yes.
2719. *Mr. Humphery.*] Do you wish to supplement the evidence you gave before the Sectional Committee? Not much, but some matters which were then problematical I can now speak of emphatically. For instance, with regard to the point of the market for Inverell. My evidence before the Sectional Committee was that arrangements were then being made to get maize from Queensland for Armidale, but that agreement was completed, and Queensland has since been supplying Armidale with maize, which was originally supplied from Inverell.
2720. Have you anything further to add? Well, I think the evidence with regard to the market is an important point, as bearing upon the question of outlet. Of course, the market, in the first instance, would be out west, and anything which is over would be sent south, wherever you make the connection with the Great Northern Line. Four-fifths of the passenger traffic for all time to come will be to Sydney and Newcastle, even if you get a connection with the coast, because people do not like the sea voyage. In my opinion, the route to the south should be the shortest possible. The tapping of the country at Guyra will bring Inverell directly into communication with the totally different climate of New England and district, in which there are totally different products. There is a possibility that Inverell will then compete with Queensland in certain kinds of produce. We import large quantities of wheat, maize, and various cereals which are produced largely at Inverell, and the suggested railway would give the district a chance of competing, so far as maize is concerned, with Queensland. I notice from the evidence, that Mr. Wright and Mr. Hutchison made certain statements, and I heard read to-day a telegram in which the evidence of Mr. Copeland was questioned upon the same point. I think I may fairly put the question in this way—I am certain that, given the same mileage rate, the traffic must go by Guyra. The freight now obtaining between Guyra and Inverell is the cause of the traffic going round by Glen Innes, and I think it must be patent to anyone that, given two railway lines, one from Guyra to Inverell, and one from Glen Innes to Inverell, with equal mileage rates, the traffic will, of necessity, go *via* Guyra.
2721. Are you speaking of passenger traffic? All traffic.
2722. But it is stated that by reason of the differential rates the goods traffic from Glen Innes would be charged less than the goods traffic as far as Guyra;—would not that tend to divert traffic from Guyra? No doubt it might have that effect. If the Commissioners choose to fight one line as against another in that way, of course every calculation will be upset; but I put it to any business man that my view must be the correct one, given an equal mileage rate from the two places.
2723. Have you considered whether there will be an interchange of products between the Inverell district and the coast, in the event of a connection being made between the existing northern line and the coast, either at Grafton or Casino? I do not think there is a very large interchange with the coast, but there is a continued interchange between Inverell and New England. The moment you get down to the coast you get among the same kind of produce. The people on the coast would not be likely to send their produce up to Inverell, but there might be a competition between them and the Inverell people for the New England business, which is a large one at the present time.
2724. The evidence before us is that the products of Inverell would be very different from those on the Richmond and at Grafton? Well, the climates are somewhat similar, and they produce the same things, with the exception of sugar.
2725. Do they produce wheat on the Richmond? No; but I was referring to other products.
2726. You do not think it likely that the producers of wheat would send it to the Richmond, in preference to sending it to Armidale? Certainly not.
2727. Why? Simply because the sea-borne wheat would compete with them.
2728. But could it compete against the railway-carried wheat, assuming that the existing differential rates remained;—suppose, for instance, that the rates for wheat from Inverell to the coast were about 4d. a bushel? The sea-borne wheat comes right up to New England to-day, and competes with the produce of our own district, and we are 360 miles from Sydney.
2729. What is the freight? I am not in that line of business myself; but I take it that the freight in the other direction would be at the same rate as the freight from the coast.
2730. But if wheat can be carried, according to the existing rates, from Inverell to the coast for 4½d., do you think it is likely that sea-borne wheat would be carried more cheaply? I think so. Of course, if you like to make railway rates so low as to compete successfully with sea-borne wheat, you can do so.
2731. And your opinion is that the products of Inverell would be carried at a loss to the coast, if carried in competition with sea-borne produce? Yes.
2732. Or the rates on the railway would have to be merely nominal? Yes. If you are going down to South Grafton and Coff's Harbour from Guyra, and, according to the evidence, I believe that would be the easiest line to construct, I think the connection with Inverell should also be made at Guyra.
2733. Have you been over the country between Grafton and Guyra? I have been down the road, but not through the bush. I have been through the Don Dorrigo scrub, and a good deal through the country, but not along the line itself. I know the nature of the country.
2734. Do you think that your evidence, given before the Sectional Committee with regard to the construction of a line between Inverell and Guyra, has been confirmed by the information you have since gained with

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with regard to possible traffic? It has been more than confirmed. I spoke of things then problematically, I can now speak of them with absolute certainty.
2735. So far as the line between Glen Innes and Inverell is concerned, you think there is no advantage to be gained from the interchange of traffic with southern Queensland? No.
2736. And that nearly the whole of the profitable traffic will be between Sydney and Newcastle and Inverell? Yes. Of course, a line to the coast would shorten the distance, but in consequence of the number of handlings I think the produce would come down the main line. The distance from Guyra to South Grafton I reckon at about 150 miles, whereas the distance from Guyra to Newcastle is 287, and to Sydney 389.
2737. Have you anything further to say in support of your contention that Guyra is the most desirable point of connection for the line to Inverell? Well, large quantities of potatoes are produced in the district, and they must go west to a great extent, and in that way the traffic on the railway would be increased. Some portion of this produce is sent west now by dray. This particular kind of produce grows better there than in any other land in the district.
2738. Would the produce of Glen Innes be similar to that of Guyra? Not so far as that particular thing is concerned. Guyra produces large quantities of wheat, but the soil is more adapted to the growth of potatoes—it is a rich volcanic soil.
2739. In your opinion, there would be a larger quantity of produce taken from Guyra west, than from Glen Innes west? Yes; I think so.
2740. Would that apply to the general produce of the district? Yes; I think so. The population of that part of New England is also much larger than the population of Glen Innes; the market is, therefore, a larger one.
2741. Is there much agricultural settlement around Guyra? It is nearly all agricultural settlement.
2742. Is there more than around Glen Innes? I do not know much about Glen Innes, but I think so.
2743. How long is it since you were at Glen Innes? I was there about twelve months ago, but it is thirteen or fourteen years since I was about the place. I was merely in the town twelve months ago, and I could not give you any idea as to what there is round about it.
2744. And in making a comparison between the produce of the two districts you are guided by the knowledge which you gained thirteen years ago? Well, the land is very well settled just about Guyra. There are a large number of farmers, and I think there are a larger number than about Glen Innes. The town is far larger, and the demand for produce would be greater.
2745. *Dr. Garran.*] You say that the Queensland growers of maize have cut out the Inverell growers in the Armidale market? Yes.
2746. Is not that due to their having a continuous railway line, while the other people have 52 miles of road? No; my impression is that they will always do so. I am told that Queensland maize is being sent into Inverell in competition with the Inverell farmers in their own market.
2747. That is stronger evidence than you gave before;—do you know that of your own knowledge? No, but I am informed that it is so. My belief is that this will continue to be done, and that being so, the best thing for Inverell would be to get the railway connection as far from the Queensland border as possible.
2748. You do not think that the Inverell people, even with the advantage of a railway, would cut out the Queensland growers of maize? No. I think the Queensland growers would still compete with them in their own market—that is, if the line were made to Glen Innes.
2749. If that is the case, do you think that it is likely that the Inverell wheat-growers will compete in the wheat market in Queensland? No; I think from what I hear that the Darling Downs will supply all the south of Queensland, and some portion of the Brisbane market. Sea-borne wheat will supply the balance.
2750. I understood you to say that wheat is now being sent up from the coast to Armidale? It is not grown on the coast. Our harvest is just in now, but every year we have sea-borne wheat coming up from Sydney. Wheat from Cootamundra has been brought up to Armidale.
2751. At some time in the year wheat is sent up from Sydney to Armidale? Yes.
2752. That would go *via* Tamworth? Yes.
2753. Is not Tamworth a good wheat-growing district? Yes.
2754. Have not your constituents in Guyra good wheat-growing land? Yes.
2755. Why do they not grow wheat? Because they have often wet weather at harvest time, and they find that other things pay them better. There is a good deal of land there under sheep, but I am not sure that the low price of wool will not drive the farmers into wheat-growing again.
2756. The farmers have abandoned wheat-growing for sheep? Yes.
2757. Have the farmers at Armidale done the same? Yes. The land is patchy. You cannot find continuous areas of good land such as you can find at Inverell. The good land spreads away for some miles about Guyra, but as I have said there is the wet weather at harvest time to contend with.
2758. Is it a better wheat-growing district than Tamworth? I should think it is quite as good.
2759. Is there not considerable room for the extension of wheat-growing round about Tamworth? No; I think not, until the Goonoo Goonoo Estate is cut up.
2760. You think there would be a large growth of wheat if the Peel River Company's Estate were cut up? Yes.
2761. While that remains as it is there is not much more room for wheat-growing? No.
2762. Do you think that if this estate were cut up Tamworth would supply Armidale comfortably? Yes.
2763. Do you think that the wheat-growers at Tamworth would be cut out by the sea-borne wheat? Well, if a line were made to the coast, I think a certain quantity of sea-borne wheat would be brought up.
2764. *Mr. Wall.*] You consider it a waste of time and money to construct a line to Inverell at all? No; I think Inverell should have a line, and that the people out west should have a line; but it would be a waste of public money to send the traffic 37 miles further than there is any need to send it.
2765. I understand from your evidence that you consider the sea-borne wheat would compete with the Inverell wheat, and that even if railway communication were made the Inverell farmers would not be able to send their wheat into Queensland? I do not think I put it in that way. What I said was that Armidale was the market for Inverell. Of course, there is a market to the south, after Inverell has done with the west.

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2766. Supposing a line were constructed from Inverell to South Grafton, do you think any trade would be opened up with the coast? That would depend upon a variety of things. If the wool could be sent down to ocean-going vessels, it would necessarily go that way, because of the shorter distance.
2767. Have you any knowledge of the character of the land between Inverell and South Grafton? I have never been down by the Newton-Boyd line, but I have some knowledge of the country between Guyra and South Grafton. I know the country over which the line would go from Guyra.
2768. It is reported to be good country and good soil? Yes.
2769. Do you think the opening up of that country by railway communication would promote settlement? Yes; there is a considerable amount of settlement going on there now. One or two Victorian farmers have come over, and have taken up land on the Guy Fawkes.
2770. Some figures have been placed before us showing the distance from Inverell to South Grafton, *via* Guyra, to be 218 miles, and from Inverell to South Grafton, *via* Glen Innes, 170 miles? That cannot be the case; there must be a mistake somewhere.
2771. This line has been submitted with some reference to the coast line, and I want to elicit from you whether, in the event of a connection with South Grafton, it is desirable to construct the line to one point or the other. There is a difference of 48 miles in the two distances I have given you? It is simply absurd. The line could not be constructed so as to give you that difference. If you take the distance round by Fairfield and Casino, and the distance round by Guyra, through Don Dorrigo, I think you would find them to be about the same.
2772. You think it would be possible for the people of Inverell to open up a trade with Sydney with wheat? Well, if the shorter line to the coast were made, and if the handling did not affect it, it might be possible.
2773. But speaking of the connection with the Great Northern Line, do you think they would send their produce down from Guyra or Glen Innes? They ought to do so, because their average per acre is larger than that obtained in any other part of the colony. Of course, if the line were taken *via* Uralla, the distance between Sydney and Inverell would be shortened by 58 miles.
2774. Where is their proper market? Out west, and, for surplus produce, down south.
2775. Whence do the people out west get their supplies at the present time? A good deal of it from down Sydney way.
2776. The evidence goes to show that Inverell at the present time supplies most of that country with wheat? I have no doubt she sends a lot of flour out there.
2777. Then there is no possibility of increasing the production at Inverell to any great extent, unless she sends her grain to Sydney? Armidale would take a great deal of wheat from the district, and if the line were made to the coast a lot of the produce would go down to South Grafton.
2778. You think that if they could save 48 miles in their connection with the coast it would be an advantage to them to send their wheat in that direction? Of course, the public interest has to be considered in the matter. If a line could be made from Glen Innes to Grafton in 110 miles, undoubtedly this railway should go to Glen Innes, but I regard that proposal as quite impracticable. I do not think it possible that the line can be made in 110 miles.
2779. *Mr. Neild.*] Wheat is grown near Armidale? Yes.
2780. Is the whole of the soil suitable for wheat so occupied? No.
2781. To what use is it put? A good deal of it is under sheep. Some of the best land is devoted to that purpose.
2782. Soil suitable for the growth of wheat is used for sheep-farming? Yes.
2783. By squatters and by selectors? Yes. The selectors combine the two things,—agriculture and sheep-farming.
2784. Which pays the settlers in the vicinity of Armidale best—wheat or wool? Wool has been paying best, but it is at a very low price now, and I question very much whether the price will not soon drive the farmers into growing other things.
2785. Is the yield of wheat in the Armidale district fairly good in good seasons? Yes.
2786. It would compare favourably with the produce of other wheat districts in the colony? The average is as good as it is anywhere, but in special years Inverell and Tamworth would beat us.
2787. Notwithstanding that you have good soil, suitable for wheat production, it appears to pay you better to import your wheat and to grow wool? Yes.
2788. How long have you been in the Armidale district? Twenty-three years.
2789. Then you were there before the railway was constructed? Yes.
2790. Did the construction of the line stimulate the growth of wheat? No; it was the other way about.
2791. That is to say, sea-borne wheat was carried? Yes.
2792. Do you remember anything of the agitation for the construction of the line to Armidale? Yes.
2793. And was wheat-growing held out as one of the reasons for the construction of the line? I do not remember that argument being used. The general argument was that goods would be obtained there very much cheaper, and that it would be an advantage to the district to have cheap communication with the coast. While the farmers were injured in one way they were bettered in another. But, on the whole, they are far better off with cheap communication.
2794. *Mr. Collins.*] Have they had a good season in Inverell for maize this year? I could not say.
2795. What about Armidale? They have not grown much maize there. They had a good season as far as wheat is concerned.
2796. Notwithstanding that there is 6d. a bushel duty upon maize, a lot of maize has come down through Warwick to Armidale? Yes. When I went to Armidale first, wheat was 2s. 6d. a bushel; that was when there was no railway. It was simply because the farmers, having the market to themselves, were stimulated to production until they produced more than they could send away.
2797. Are there any mills at Armidale? Yes, three.
2798. Are they under the roller system? There is one roller.
2799. Do they make good flour? The bakers did not like it at first. I think they said it was too strong.
2800. Do they import any Adelaide flour? It has been imported.
2801. Notwithstanding that there is good wheat grown about Inverell and Glen Innes, you import Adelaide flour. Yes.
2802. And you use Tamworth flour also? Yes.
2803. In quantities? Yes.

Henry Deane, Esq., Engineer-in-Chief, Railway Construction Branch, Department of Public Works, sworn, and further examined:—

H. Deane, Esq. 3 May, 1892.

2804. *Chairman.*] You have furnished the Committee, since you were last examined, with a statement of the various distances and the cost of the various surveyed lines which are connected with the particular line under consideration? Yes.

2805. Perhaps you will kindly read the statement you have prepared, so that any questions which may arise out of it can be cleared up as you proceed? Yes.

GLEN INNES TO INVERELL.

Line submitted to Parliament (Hogg's Line):—

Length, 44 miles 37 chains, with junction of 1 mile 15 chains along Main Line. As this length would have to be made, the total length would be 45 miles 52 chains.

Ruling grade, 1 in 40. There are 19 miles of grades varying between 1 in 40 and 1 in 50.

Estimated cost, £492,400, but this could probably be reduced.

2806. Do you desire to offer any explanation as to those particulars? No.

2807. *Mr Davies.*] What is the direction in which the reduction could be made? I think it is very likely that the earth-works may cost a little less. The price when we come to call for tenders may be a little lower.

2808. It is only in that way that you expect to make a reduction? Only in that way. No improvement in the line is possible.

Line recommended as a substitution, *viâ* Maid's Valley, Swanbrook Creek, and Brodie's Plains.

Length, 53 miles 34 chains.

Ruling grade, 1 in 60. Not only is the ruling grade a very much better one, but the undulations are very much less, and there is less loss of fall in having to surmount intermediate summits in descending from Glen Innes to Inverell.

Estimated cost, £427,400, or £8,000 per mile.

The survey made is a flying one, but has been made with sufficient care to obtain the best route on the whole. It may be improved in detail both as regards length and cost. The chief item of cost is the earth-work, and it is possible that when the survey is worked up some reduction may be made in it.

With regard to that line, I believe it will be shown that it can be made for about £400,000. There is a small deviation in the first instance, mentioned in my evidence before, which would reduce the amount to the extent of a few thousand pounds. It is to the north of Hogg's line, near Wellingrove. Then there is a portion of the line which coincides with the original trial survey which has not been worked up at all, and I believe it is capable of improvement.

2809. The estimate is based upon the old survey and when you go over it you may find it capable of alteration? Yes.

2810. *Mr. McCourt.*] How much of the £8,000 per mile is devoted to rails and sleepers? My estimate for the permanent way is £2,242 per mile, that is for 55 miles, because the main line and sidings will amount in length to about that. That would be for rails, sleepers, and ballast, and laying down.

2811. Then the difference would be for cuttings? I estimate that the excavations alone will cost something over £150,000, then the culverts and bridges will cost nearly £38,000. I reckon the full freight of 2d. per mile upon the permanent way materials, because it is doubtful whether we could get them conveyed for less. The arrangements between my branch and the Commissioners is that where the rails can be carried in empty trucks with a prospect of bringing freight back, the material can be conveyed at 1d. per mile.

2812. What would be the weight of the rails? Sixty pound steel rails.

2813. *Mr. Wall.*] The Commissioners recommended some time ago the construction of lines at £1,750 per mile. The cost you give for permanent way only is £2,242, that is actually more than the Commissioners recommended? Yes.

2814. Could the cost of the permanent way be so reduced as to bring it within the Commissioners' estimate without injury to the line? With regard to the estimate of £1,750 per mile, I wish to say that on making inquiry of the Chief Commissioner, I understood that that rate included all materials which they could supply, that is, second-hand materials, where the permanent way was being relaid, and in every respect all the items would be cut down as much as possible. The £1,750, however, did not include anything besides permanent way and earth-works, and it was understood that the lines would be taken through easy country. The estimate did not include stations, water-supply, turn-tables, fencing, and many things of that kind, nor did it include anything for contingencies and engineering expenses, so that there is a great deal to be added to it before you have a complete line, especially a line of a good permanent character.

ALTERNATIVE ROUTE, *viâ* KING'S PLAINS.

Length, 56 miles, 32 chains; Ruling grade, 1 in 60; Estimate, £400,200=£7,090 per mile.

This survey is also a flying one, but it is doubtful if any improvement could be made in it. The undulations are greater on this line than on the Maid's Valley line, and the sum of the rises in the direction of Inverell is 261 feet more than on the recommended route.

2815. *Chairman.*] The King's Plains route is common with the main line from Apple-tree Gully into Inverell? Yes.

2816. *Mr. Humphery.*] There would be a saving of nearly £30,000, with a grade of 1 in 60. Why have you not adopted that route in preference to the route recommended? If my opinion is borne out, there will not be a difference of £30,000 in construction, because the Maid's Valley route will be brought down to £400,000. However, there was a difference, and the reason why, with that difference existing, the Maid's Valley route was recommended, was that, taking it altogether, it is the better line. The land is more suitable and available for settlement. There is a more even fall also, and it is a better line to work, as well as a shorter line.

GUYRA TO INVERELL.

Length, 55 miles 10 chains.

Ruling grade, 1 in 40.

Estimate, £390,900 = £7,090 per mile.

By lengthening this line to the extent of about 3 miles the ruling grade can be altered to 1 in 60. This can be done partly by deviations, and partly by cutting down the grades. These operations would much increase the total cost, and probably bring it up to that given for the Glen Innes-Inverell line recommended. The particulars would thus stand:—

Length, 58 miles 10 chains.

Ruling grade, 1 in 60.

Estimated cost, £427,400.

Mr. Moore's suggested deviation would cause an additional length of 5½ miles.

2817. *Mr. Sutton.*] Is this a trial survey? Yes.

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2818. You say that the ruling grade can be reduced to 1 in 60 if the line were made 3 miles longer? There is no doubt in my mind that that can be done. I have had the matter gone into.
2819. Would not the cost be more than you have estimated—£427,400? There is an increase of £37,000 for the increased length of 3 miles and the reduction of the grade.
2820. *Chairman.*] How is it that you can increase the more difficult line—the Wellingrove line—in length, that is by some 8 or 10 miles, and still keep it at the same figure, while in the case of the Guyra route you increase it only some 3 miles to get the same grade over a considerably less difficult country, and yet keep the same amount? It is all due to the features of the country. The Guyra line admits of improvements. The line for which the trial survey has been made is one which is much more capable of improvement in itself than the line from Glen Innes to Inverell.
2821. But as you have reduced the other line in cost, how is it that the much easier line is not reduced proportionately? You cannot make any comparison, because the submitted Glen Innes line is a totally different line from the recommended line—it goes through different country. The course is different throughout. There is not an inch of the submitted line adopted in the case of the recommended line.
2822. It is an easier route altogether than the line put before Parliament? Yes.
2823. Your 1 in 60 line from Guyra to Inverell would follow as nearly as possible, making allowance for deviations, the surveyed route? Yes.
2824. *Mr. Hoskins.*] Is the survey of the line from Guyra to Inverell as complete a survey as that of the line from Glen Innes to Inverell? It is quite as complete.
2825. You also said that the country between Guyra and Inverell permitted of greater deviation and, perhaps, alterations of the original route than did the country in the case of the other line? I do not think I said that. I did not intend to put it in that light exactly. The facility with which you can alter the line depends upon the features of the country. In comparing the Guyra to Inverell line with the line from Glen Innes, it must be borne in mind that the submitted Glen Innes line crosses ranges, and goes at right angles to water-courses, without seeking the lower places of the range so much as directness.
2826. You said that you had no doubt that some material alterations could be made tending to a reduction of the cost of the proposed line from Glen Innes to Inverell—could you say the same thing with regard to the proposed line from Guyra to Inverell. Are the surveys from Guyra to Inverell so full and complete that no reduction could be made by more detailed surveys? No. I do not think any material improvements can be made on the Guyra to Inverell line, that is regarding the line as a 1 in 40 line. It could be made 1 in 60, but in making the improvement in that respect you would increase the cost.
2827. Do you think, from the information furnished to you by your officers as to the character of the country between Guyra and Inverell, that you could make an improvement in the estimate of the cost, while making the line upon the improved grade of 1 in 60? I doubt if much improvement could be made. Perhaps here and there a little earthwork could be cut out.
2828. *Mr. Humphery.*] When was the permanent survey *via* Wellingrove made? I have not the date here, but I believe that it was in 1885 or 1886.
2829. That was the line submitted to Parliament? Yes.
2830. When was the now proposed line surveyed? Last year.
2831. Then the country has been a gainer by the delay? A decided gainer.
2832. As the result of delay the grade has been reduced from 1 in 40 to 1 in 60, and the cost from £8,000 to a little over £7,000 per mile? The cost of the original estimate was about £11,000.
2833. Then the result of delay is, that the cost of construction has been reduced from £11,000 to a little over £7,000, while you have an improved grade of 1 in 60? Yes.
2834. In the first instance was the permanent survey carefully made? I believe so. A considerable amount of care was devoted to it. I believe from what I have read of the reports that Mr. Whitton was under the impression that the country had been completely explored, whereas it evidently had not.
2835. Your explanation is, that since the permanent survey of six years ago, the country has been more carefully examined, leading to a better route? Yes.
2836. *Mr. Neild.*] What is the difference in the character of the trial survey and the permanent survey;—is there any difference in the work executed by the survey? The permanent survey means a complete survey, a complete marking out of the line, and a survey of the boundaries of property.
2837. Then it relates rather more to the marking out of property than to engineering features? The permanent survey includes the staking of the adopted line. The trial survey is merely one which is tried in the first instance.
2838. Take the Guyra to Inverell trial survey;—what would be required to make it a permanent survey? It would be necessary to take sections across the line at different points, to see to what extent it could be improved, and then, the proper line being adopted, the curves and straights would be carefully staked out, and pegs of a permanent character put in. The line would be marked at every chain, and the land would have to be surveyed in such a way as to enable it to be purchased, and the proper transfers to be made.
2839. Then, in connection with the permanent survey, it is possible that improvements might be made in curves and so forth upon the trial survey? Yes.
2840. What is the date upon which the trial survey was made from Guyra to Inverell? I have not the date with me, but I can furnish it.*
2841. Since the survey from Guyra to Inverell was made, additional surveys have been made between Glen Innes and Inverell? Yes.
2842. In point of fact, the interest of the Department has been concentrated to a certain extent upon the line between Glen Innes and Inverell, and very little attention has been paid to the proposal for a line between Guyra and Inverell? Yes.
2843. *Dr. Garran.*] Do your surveyors know enough of the country 5 miles on each side of the survey between Guyra and Inverell to be able to say with confidence that they have the best line? Yes; I think so.
2844. Do you not think that if they were to give as much attention to the Guyra-Inverell line as has been given to the Glen Innes-Inverell line, you could find some substantial improvement? No.

Reduced Levels.

Glen Innes, 3,517 feet above H.W.S.T.
Guyra, 4,325 feet above H.W.S.T.
Inverell, 2,011 feet above H.W.S.T.

With

* NOTE *(on revision)*:—The survey was commenced in June, 1888.

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With reference to the particulars I am now about to read, I may mention that I put in Llangothlin because the line really starts from the station at Llangothlin.

2845. *Chairman.*] You mean that the line carried down through Don Dorrigo really does not start from Guyra but from Llangothlin, 7 miles north of Guyra? Yes.

GUYRA (LLANGOTHLIN) TO SOUTH GRAFTON.

Length, 155 miles 66 chains.
Ruling grade, 1 in 40.
Sharpest curves, 10 chains radius.
Estimated cost, £1,919,242 = £12,316 per mile.
This cost has been got out in different lengths, as the class of country varies very considerably.

	Mls.	Chs.	£	Cost per mile. £
Part No. 1.....	40	37	269,491	6,660
Part No. 2.....	33	63	395,620	11,708
Part No. 3.....	29	6	593,432	20,410
Part No. 4.....	25	40	460,540	18,060
Part No. 5	27	0	200,159	7,413
	155	66	£1,919,242	

I hoped at one time to be able to get a grade of 1 in 50, but some of the country is so exceedingly rough that I have not been able to do so. I do not think it is possible to improve the line materially.

2846. *Dr. Garran.*] We have been told that the first portion of the line was nearly level, so that the difficulty of 1 in 40 could not occur there? No. You can get a grade of 1 in 60 for some distance. The greater part of sections 2, 3, and 4 are through difficult country. We could not get the grade down to 1 in 60 there.

2847. Has this route been examined with the same care as the Glen Innes-Inverell route? Yes.

2848. Is it not a hasty opinion? No, it is formed from a survey which it took a long time to complete. It was a very difficult survey.

2849. Are they still on it? No; they have finished.

2850. How long were they upon the work? Roughly speaking, about a couple of years, I think.

2851. Is it heavily timbered country? Yes.

2852. Then there might be an easier route which it would be difficult to see through the thick timber? I doubt it, because the country is scored so deeply with water-courses in the difficult parts. There are water-courses and ravines, and you must take certain spurs.

2853. Was not Mr. Eugene Rudder the discoverer of that route? I do not remember. I know that he had a good deal to say about it, and that he made a good many recommendations.

2854. Has he been of considerable assistance to the Department in that respect? I think some of his suggestions have been valuable.

2855. *Mr. O'Sullivan.*] Is Mr. Simpson one of the officers who made a survey of this line? No; he made the first exploration. It was on his report that the Minister sanctioned the survey of that line.

2856. Who were the officers who made the survey? Mr. Jamieson did about 50 miles from Guyra, Mr. Thornby did the middle section, and Mr. Cumming did the line from South Grafton up.

2857. Your information is based upon those surveys? Yes.

2858. *Mr. Davies.*] About what part would section No. 3 be? About midway.

2859. That is very difficult country? It is the worst part of the line.

2860. *Mr. Ewing.*] With regard to the grade, to the best of your belief you cannot get a better grade than 1 in 40 through the rougher parts of Don Dorrigo? I am quite sure about that.

GLEN INNES TO SOUTH GRAFTON.

Length, 102 miles 10 chains.
Ruling grade, 1 in 33.
Sharpest curve, 8 chains radius.
Estimated cost does not exist, but a sum of £2,000,000 was voted in 1884 for this line.
A portion of this line, about 43½ miles, has been revised, with the result that the 1 in 33 has been cut out, and 1 in 50 made the ruling grade; the curves are also reduced to those of 10 chains radius. On the unrevised portion there are 1 in 40 grades and 8 chains curves, but these can certainly be cut out by adding somewhat to the length.

With regard to this line an alteration has been made, giving a grade of 1 in 50, but no estimate has been made up to the present time. It lengthens the line about 12 miles, making it 114 miles instead of 102. It is a costly line, but it is a better and a safer line than the original one. These deviations would be considerably cheaper in parts if the ruling grade adopted were 1 in 40 instead of 1 in 50; but an effort has been made to get a 1 in 50 grade, and with success. There are some kinds of country where a certain ruling grade must necessarily be adopted, where you cannot get anything better. There are other kinds of country where, by going to considerable expense, you can get a better ruling grade, and this is one of them. The cheapest grade would be 1 in 40, but 1 in 50 would be obtainable.

2861. *Chairman.*] It is possible that in the unrevised portions of the original survey you may be able to continue the 1 in 50 grade? Yes.

2862. That would give a better grade than you have *via* Don Dorrigo? Yes.

2863. Would it increase the cost much over the £2,000,000? I do not think it would, but I am not in a position to say what the cost would be—it has not been got out.

2864. *Dr. Garran.*] I understand that the revision of this line rather impressed you with the idea that it was not at all a hopeless project to go down by the Newton-Boyd road route, direct from Glen Innes to Grafton? No; I think it is quite a practicable line.

2865. You saw what Mr. Scarr said in his report? Yes.

2866. You do not take so bad a view as he does? No; I think when Mr. Scarr's report was made he had not seen what had been done with reference to the deviation? I do not think he was acquainted with it. There is no doubt that on the original line the descent on the upper part of the Mann River was a very bad one, showing works of a very heavy character, and it was doubtful whether if a line were made there it would ever be a satisfactory one, and whether it would not always be exposed to danger from slips.

2867. You think that if Mr. Scarr knew all that you know now he would have somewhat mitigated his disparaging remarks? Yes.

2868. You look upon this line as a possibility in the future? I look upon it as a possibility. It is not for me to favour one route or the other, but from an engineering point of view the line would be quite practicable.

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2869. You can make a line of 1 in 50 all the way down? Yes.
2870. *Mr. Wall.*] Have you information to enable you to form an opinion as to the best connection between Inverell and South Grafton—that is to say, whether it should be *via* Guyra or Glen Innes? I have not at present. Do you mean in the way of expense?
2871. In the way of expense and distance. I see the distances as given in your statement are—Inverell to South Grafton, *via* Guyra, 218 miles; and Inverell to South Grafton, *via* Glen Innes, 170 miles. Would the cost be proportionately less for the lesser distance? No doubt the shorter distance from Inverell to South Grafton would be *via* Glen Innes.
2872. Would there be greater engineering difficulties than on the line *via* Guyra? No; I do not think there would.
2873. And there would be a saving of some 48 miles in connecting with the coast? Yes.
2874. You have no knowledge of the country through which the lines would pass? I have been from Glen Innes to Grafton, and have examined portions of the route. I have a very good idea of the route through which the other portions of the line would pass.
2875. Do you think it is a country adapted to agricultural settlement? A good deal of it is nothing but ridges and steep gullies. The bed of the Mann is a narrow gorge, and we follow it down for a considerable distance on the Glen Innes to Grafton route.
2876. If you were recommending a connection between Grafton and Inverell, which line would you recommend—the line *via* Guyra or the line *via* Glen Innes, that is, from an engineering point of view? I am afraid I have not enough information at present about the Glen Innes to Grafton line to enable me to give a decided opinion. The line from Guyra to Grafton undoubtedly passes through the best country.
2877. *Mr. McCourt.*] The line from Glen Innes to Inverell is practically an extension of the proposed line from Grafton to Glen Innes? No; they start from different points as originally laid out. The line for which a vote was taken, from Glen Innes to South Grafton, really started a few miles north of Glen Innes and turned off there.
2878. But the first inception of a line from Inverell was the line *via* Glen Innes to the Clarence, was it not? Yes.
2879. And Glen Innes came to be fixed on as the starting point for the Inverell line because it was proposed to take a line from Glen Innes to Grafton? I do not know very much about the history of the line at that particular time.
2880. But if a line were constructed from Glen Innes to Grafton, it would form an inducement to take a line from Inverell to Glen Innes? Yes. It would be a natural thing to look for a line to the coast from that point.

TENTERFIELD TO CASINO.

Original Survey:—

Length, 86 miles 71 chains.
Ruling grades, 1 in 33.
Sharpest curve, 8 chains.

Revised Survey, in progress:—

Length to junction with Grafton to Casino line, 84 miles.
Length from junction to Casino, 12 miles.
Total, 96 miles.
Ruling grade, 1 in 50.
Sharpest curve, 10 chains radius.
The survey not being complete, no true estimate can be given.

The total length of the revised survey is 9 miles longer than the original survey. In the original survey there are very heavy grades, and the process of cutting out these alone will tend to lengthen the line. The revised survey, however, although longer than the original survey, has a portion in conjunction with the Grafton and Casino line, that is to say a portion of 12 miles is common to both.
2881. *Chairman.*] That would be to the south of Casino? Yes. I had that portion of the line re-surveyed, with a view to a more suitable crossing of the river—not a better crossing, because the foundations are not quite so good, but one that admits of a better station site in Casino. It is a better line taken altogether, and the crossings of the Richmond Range are lower.
2882. Did the original survey come direct from Casino and strike further south? The original survey was nearly north and south, it is deviated very little.
2883. Do you think the grade of 1 in 50 can be improved? No. I think we ought to be satisfied with 1 in 50 in descending the range.
2884. What is the ruling grade on the Lismore to the Tweed line? 1 in 50. It is through a very rough piece of country.
2885. *Dr. Garran.*] Do you not think you can bring the grade down to 1 in 60? I do not think so, certainly not in the main descent.
2886. *Mr. Ewing.*] You say, "The survey not being complete, no true estimate can be given." Can you give us any idea of the cost of construction per mile? Give it approximately, I do not wish to bind you absolutely? I am afraid I could not give you any information on that point.
2887. We have to compare the lines from Guyra and Glen Innes to South Grafton, and I want to compare them as to cost? I was considering that question the other day, but I do not think it is safe to make an estimate.
2888. Will it be a heavier line than the line from Lismore to the Tweed? I do not think so.
2889. Then it would cost, say, about £10,000 a mile? I dare say £10,000 or £12,000 would cover it.

Through Distances—

	Mls.	Chns.		
Sydney to Guyra	384	8		
Guyra to Inverell	55	10		
Sydney to Inverell	439	18		
Add for revision	3	0		
			442	18
Sydney to Glen Innes	420	58		
Glen Innes to Inverell	53	33		
Sydney to Inverell			474	8

Sydney

Sydney to Llangothlin	391 5		H. Deane, Esq.
Llangothlin to South Grafton	155 66		
Sydney to South Grafton		546 71	3 May, 1892.
Sydney to Glen Innes	420 58		
Glen Innes to South Grafton	117 8		
Sydney to South Grafton		537 66	
Sydney to Tenterfield	478 60		
Tenterfield to Casino	96 0		
Sydney to Casino		574 60	
Inverell to South Grafton, *via* Guyra		218 24	
Inverell to South Grafton, *via* Glen Innes		170 41	
Inverell to Casino, *via* Tenterfield		207 35	
Inverell to Byron Bay		256 15	

2890. *Dr. Garran.*] Do you know anything of the nature of the country to the north of the plan on the easel, and to the westward of Dundee and Deepwater? No.

2891. Supposing a railway were made from the Richmond towards the northern line, striking it at Tenterfield, could you get away to the westward by an easier grade than you would have on the line from Glen Innes to Inverell? I think it is doubtful.

2892. You have no flying surveys to indicate it? I believe an exploration was made some years ago, but the results were destroyed in the unfortunate fire at the Garden Palace.

2893. There is nothing left in the office to show the results of the exploration? No.

2894. *Mr. Ewing.*] Could you tell us the cost of the line from Grafton to Casino;—you give it in two schedules, and they do not appear to fit? I could not state it from memory.

2895. Would it be £7,000 a mile? I think it is very likely, but I cannot say with accuracy.

2896. Have you any idea as to what the cost of a bridge over the Clarence would be? No estimate has been made.

2897. Is the Clarence at that point as wide as the Hawkesbury? The Hawkesbury is about 3,000 feet.

2898. Then, approximately, I presume it is as wide as the Hawkesbury;—what did the Hawkesbury bridge cost? Three hundred and fifty thousand pounds.

2899. Do you think a bridge over the Clarence could be built more cheaply? Before making an estimate of the cost of a bridge it is necessary to know the foundations. I cannot at present give an estimate.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

Railway from Glen Innes to Inverell.

APPENDIX.

A.

PRÉCIS OF PAPERS RELATING TO THE PROPOSED ROUTES FOR A RAILWAY TO INVERELL.

An examination of the country between Glen Innes and Inverell was made in the year 1878 by Mr. Surveyor Francis. No further action seems to have been taken until the year 1881, when a public meeting was held at Inverell and resolutions were carried in favour of a railway from that town, *via* Glen Innes, to the Clarence River.

This was followed in 1882 by a petition to the same effect from a Railway Conference held at Glen Innes.

In July, 1883, a deputation from the district, accompanied by a large number of members of the House, waited on Mr. Secretary Wright in the same interest. The Minister promised to recommend a railway—not any particular line—to Inverell.

In reply to the Commissioner for Railways, Mr. Traffic-Manager Higgs, in September, 1884, reported that Glen Innes and Guyra were about equi-distant from Inverell, but, judging from the present course of the traffic, Guyra was the station to which the traffic would naturally come. In four weeks 281 tons of ore had gone to Guyra and 250 tons of goods from the latter to Inverell, while, in the same period, only 40 tons, each way, had passed between Glen Innes and Inverell.

In the following month the sum of £578,000 was voted by Parliament for a line from Glen Innes to Inverell.

A further public meeting was held at Glen Innes in July, 1885, to give expression to the views of the residents in favour of the proposal.

In April, 1886, Mr. Secretary Lyne laid the plan, section, and book of reference of the line, Glen Innes to Inverell, on the Table of the House as exhibits only, subsequently promising, as soon as opportunity offered, to propose that line for the approval of the House.

About this time, with a view to strengthen the hands of the supporters of the proposal, public meetings to advocate the construction of the line (Glen Innes to Inverell) were held at the following places:—Glen Innes, Inverell, Brodie's Plains, Rob Roy, Goonoorah, Ballamanna, Paradise, Elsmore, Swamp Oak, Bannockburn, and Little Plains, at which enthusiastic resolutions were carried in favour of the line.

About April, 1886, a rival line was proposed, running from Uralla, *via* Bundarra, to Inverell, and the promoters of the scheme found their exponent in Mr. Inglis, M.P.

Guyra also was proposed as a point of junction of the Inverell line with the main line, and found many supporters.

Under date of 15/9/86, Mr. Secretary Lyne moved in the Assembly the approval of the plan, section, and book of reference of the Glen Innes to Inverell Railway. An amendment was moved that Guyra or Uralla be the point of junction with the main line, but was negatived, and the original motion was carried by 33 votes to 5.

On the 14th October following, in the Legislative Council, Dr. Mackellar proposed a similar motion, but an amendment to refer the matter to a Select Committee was moved and carried by 21 votes to 5.

Under date of January, 1887, Mr. Traffic-Manager Higgs submitted to the Commissioner for Railways an estimate of the financial aspect of the matter as under:—

Estimated earnings	£11,500
Estimated working expenses	£6,340
Estimated net revenue	£5,160

but made no allowance for interest on the capital expenditure.

13/8/87.—Mr. J. P. Abbott, M.P., forwarded to the Minister a letter which he had received from a Mr. Seton stating that by a track—which he was prepared to point out—to the north of the present route, the costly crossing of the Waterloo Range and its spurs might be avoided, and a large amount be saved in the cost of construction and of working the line.

Under date of June, 1887, the hon. sec. of a local association forwarded to the Engineer-in-Chief a plan of the district and of the several proposed lines, and drew attention to the following points:—(1) The distance of Inverell from Newcastle, *via* Glen Innes, is 370 miles, *via* Uralla it is only 320 miles. (2) On the Glen Innes route, a rise of 1,136 ft. has to be ascended and descended, causing an enormous expense in the working of the traffic. (3) On the Uralla route there is no intervening elevation. (4) From Glen Innes the construction of a line will be very costly. (5) Between Glen Innes and Inverell there is very little settlement, while from Uralla the line would pass the Rocky River Gold-field, and the Stannifer, Stanborough, and Tingha Tin Mines; also, near the town of Bundarra. (6) On the Glen Innes route the land is mostly alienated, while the Uralla route passes through 25 miles of mineral reserve.

It would appear from a memo. on this paper that the survey of a line from Kentucky (near Uralla) had already been recommended.

Mr. Inglis, M.P., addressed the Minister, asking that before any decision was arrived at in regard to the adoption of a route, there might be a full and searching inquiry into the proposal to make Uralla the point of junction with the main line. This letter was referred to the Engineer-in-Chief, who reported that a rough trial survey had already been made of a line from Uralla. It would cost £12,000 a mile, exclusive of land and compensation, but this might possibly be reduced on careful survey. A deviation of 15 miles to a point on this line gave a better section.

21/12/87.—On the application of Mr. Inglis, M.P., Mr. Secretary Sutherland directed the survey of the deviation from Kentucky referred to by the Engineer-in-Chief.

Under date of 2/1/88, Mr. Alexander submitted report on the trial survey of a line from Guyra to Inverell, giving the following particulars:—

Length	55 miles
Ruling gradient	1 in 40
Estimated cost	£403,861
Estimated cost per mile	£7,326

Messrs. F. A. Wright and Cruickshank, M'a.P., wrote to the Minister, urging that the line, Glen Innes to Inverell, might be referred to the Railway Commissioners for report.

The Engineer-in-Chief was asked to report upon this application, and in reply stated that the line, Glen Innes to Inverell, had been finally staked, that the Guyra route had been trial-surveyed and estimated at £375,100,* and that the line from Kentucky had been trial-surveyed, but not estimated.

Messrs. Wright and Cruickshank were informed that no definite conclusion could be drawn until all the alternative lines had been surveyed.

2/4/89.—A similar statement was made in the House by Mr. Secretary Bruce Smith. In April, 1889, a Mr. John Wetherspoon addressed a letter to the Chief Commissioner, urging the desirability of constructing the line from Glen Innes to Inverell—(1) On account of the fertile and productive nature of the country through which it passes, which would insure the line paying cost of working and interest on capital; and (2) as forming part of a line which would some day have to be made from Grafton to New England and the interior. 16/5/89.—

* Does not agree with amount stated, 2-1-88.

16/5/89.—The Engineer-in-Chief submitted a tabulated statement as follows of the several routes which had been surveyed:—

	Length	Distance Inverell to Sydney.	Total Cost.	Cost per mile.
	M. Chs.	M. Chs.	£	£
1. Kentucky to Inverell, *via* Bundarra	82 68	417 36	614,150	7,413
2. Uralla to Inverell, *via* Bundarra	81 76	423 64	604,280	7,374
3. Uralla to Inverell, *via* Yarrowyck	80 43	423 17	576,730	7,160
4. Guyra to Inverell	55 10	439 18	403,861	7,326
5. Glen Innes to Inverell, *via* Swanbrook Creek	44 68	465 46	580,600	12,943
6. Glen Innes to Inverell, *via* Wellingrove	44 37	466 31	492,400	11,074

The Engineer-in-Chief reported on the above that the grades on No. 1 are exceptionally severe, there being 25½ miles of 1 in 40 and 1 in 50, that on No. 2 the grades are also severe, there being 25 miles of 1 in 40 and 1 in 50, that on No. 3 the grades are again severe, there being 23½ miles of 1 in 40 and 1 in 50, that on No. 4 there are 14¾ miles of 1 in 40 and 1 in 50, and that on No. 5 there are 14 miles of 1 in 40, while No. 6 is spoiled by 1 in. 30 chs. of 1 in 33.

10/7/89.—Mr. Deane, in reporting on the rival routes as above, stated that the conclusion at which he had arrived was that the advantages were all in favour of the Guyra line, the adoption of which he therefore recommended.

The Minister requested the Railway Commissioners to let him have their opinion of the rival routes, having regard to the fact that a railway from the main line to Grafton was urged upon the Government.

16/8/89.—Mr. Cruickshank, M.P., addressed the Minister in advocacy of the Glen Innes route, stating that the consensus of local opinion was in favour of that line, that wool, &c., could be conveyed by team to Grafton, and thence by steamer to Sydney for £2 a ton less than it could be carried by railway, and that if a line were taken from Guyra the bulk of the traffic would still go from Glen Innes to Grafton.

28/8/89.—Mr. J. Wetherspoon addressed a further letter to the Chief Commissioner condemning the Guyra and Kentucky routes, and setting forth the advantages—by reason of the fertility of the district—of the Glen Innes route.

September, 1889.—The Town Clerk, Armidale, presented to the Minister a petition numerously signed in favour of the Guyra-Inverell line, and asking for the survey of a line from Guyra to the coast.

3/9/89.—Mr. Wetherspoon forwarded to the Minister, through Mr. Wright, M.P., remarks upon the several routes conceived in the same spirit as the letter addressed to the Chief Commissioner. The Kentucky route he condemned because Kentucky is only a village, the population on the route small, and the land barren. As regards the Uralla route, while admitting Uralla to be a small town, he maintained the features of the country to be the same as on the Kentucky route. Guyra, he pointed out, is a small village, and although the land in its immediate vicinity is good, the character of the land soon changes, and until within a short distance of Inverell it is no better than on the routes first named. A large land-holder had stated that it would take twelve acres of this land to feed a goat, and that very badly. He (Mr. Wetherspoon) advocated the Glen Innes line on purely national grounds, and on the principle of the greatest good to the greatest number. But the line had intrinsic merits to recommend it. The land was of extraordinary fertility, and every acre of it, except reserves, had been taken up. Wheat-production was 40 or 50 bushels to the acre, and he had seen a crop of maize producing 80 bushels.

The Minister minuted that Mr. Land-Valuer Thompson, who was under orders to proceed to the district to examine the routes, should carefully read and consider this statement.

4/9/89.—The Land Valuer reported on the Guyra route as under:—Around Guyra and for 7 miles along the route the land is volcanic and well suited for cereals, potatoes, and fruit. This is succeeded for 9 miles by a lighter and poorer soil, but with some rich alluvial flats. Then 4 miles of rich basaltic soil, succeeded by 10 miles of porphyry formation, with very poor soil. Then 4 miles of well-grassed granite land followed (into Tingha 5 or 6 miles) by light stanniferous country. Tin-mining is carried on, but its proper development is retarded by want of capital. In 1888, 1,260 tons of tin were produced and more was expected for the current year. The population of Tingha was 2,424 in 1881, but it has now probably diminished. The stanniferous country extends for 4 miles, succeeded by 4 miles of good red soil. Then for 6 miles into Inverell the land is good, for the last 3 miles very superior. There was a consensus of opinion as to the fertility of the country round Inverell, the wealth of the district and the salubrity of the climate. The population between Guyra and Inverell is chiefly pastoral. The number of holdings (land) within 5 miles of each side of the proposed line is 561, with an area of 100,000 acres. Excluding Guyra and Inverell, there are nine public schools with 450 pupils.

7/9/89.—The Municipal Council of Uralla addressed the Minister, urging the claims of Uralla to be considered in deciding as to the point of junction of the Inverell line with the main line, pointing out that in respect of distance from Sydney the Uralla route had the advantage over the Guyra route by 18 miles, and over the Glen Innes route by 45 miles. Moreover, to reach Glen Innes, Ben Lomond had to be crossed, involving an ascent of 1,158 feet. To Guyra, also, there was an ascent of 1,015 feet. So that in addition to the longer mileage there was the increased cost of haulage over the steep grades. It had been demonstrated that although distance might be saved, and cost of construction lessened by steep grades, this was more than compensated for by the increased cost of working the traffic on such grades.

8/9/89.—Mr. Inglis, M.P., forwarded to the Minister a newspaper cutting which points out that a line with a grade of 1 in 40, even if constructed at a much cheaper rate, would, in the long run, prove a more expensive line than one with a grade of 1 in 66, because the cost of working the traffic would be so much greater on the steeper grade. This had been conclusively proved by Mr. Goodchap and Mr. Hamand. A line starting from Guyra had been recommended, but why ascend 1,000 feet to Guyra, when all that could be done from Guyra, as regards the coast, could be accomplished from Armidale, a line from which towards the coast would take in Hillgrove as well? But for Inverell the proper starting point was Uralla. The man would be thought mad who, wanting to get to Inverell from Uralla, went to Armidale, up the "Pinch" to Guyra, and then turned westward to Inverell. A man's natural instinct and common sense would lead him to take the direct and natural road down the Bundarra, and onwards to Tingha.

Mr. Deane, who was asked to report with reference to this article, stated that he had already given his opinion that Inverell should be connected with Guyra, as being the cheapest route, and the most direct to the coast. The only advantage in adopting the Uralla route was that it would shorten the distance to Sydney for passenger, wool, and stock traffic. Agricultural produce would never go that way. It would not pay.

9/9/89.—Mr. W. Litchfield, of Tingha, addressed the Minister in advocacy of the Guyra line as serving the interests of Tingha, pointing out the injustice of compelling the Tingha people to send their produce 90 miles round by way of Glen Innes, and asserting that a line from Guyra would suit the bulk of the Inverell people, and that if a plebiscite were taken there would be a substantial majority in favour of such a line. Tingha produce would never go to Grafton, Sydney being their natural market, and a line to Grafton would only mean the enrichment of the steamer owners at the expense of the railways of the colony. The monetary transactions of Tingha in the last seven years amounted to £1,027,874.

16/9/89.—The Land Valuer reported on the line Uralla to Inverell, *viâ* Yarrowyck, as follows: "The country near Uralla is mostly granite with the usual light and gravelly soil, but there are several small farms along the river flats. Then for 30 miles to Abingdon the country is granite and is devoted to pastoral uses, for which it is best fitted, much of it being high rocky ranges of little value. For 15 miles from Abingdon the country is mostly white box pasture with good agricultural land on the creeks. Thence to Gilgai is poor granite country except a belt of good red soil round Gilgai. Thence to Inverell the country is generally good. Bundarra, a small well-built town, would be served by this line. Also Tingha, of which a notice will be found in the Guyra report. Within 5 miles of proposed line there are 683 land holdings, with an area of 121,600 acres. The country is stocked with sheep and cattle. Excluding Bundarra, there are five public schools with 201 pupils.

Mr. Cruickshank, M.P., was informed, in reply to his letter of 24/1/90, that the Inverell line would be one of the first to be referred to the Inspectors.

Mr. Copeland also was informed, in reply to letter of 13/2/90, that the whole matter of the rival routes would be dealt with.

31/5/90.—

31/5/90.—The Under Secretary addressed a minute to Messrs. Scarr and Price, requesting them to examine the following routes to Inverell:—Glen Innes, Guyra, Uralla, and Kentucky, and in making their recommendation to have regard to the following railway proposals:—

Tenterfield to Casino.
Glen Innes to Grafton.
Guyra, *via* Don Dorrigo, to Grafton.

28/6/90.—Mr. Manning addressed a letter to the Minister (sending a copy also to the Press), in which in highly metaphorical language he set forth the claims of Inverell to be connected with the Clarence by means of a railway, *via* Glen Innes, concluding with an expression of confidence that Inverell, in spite of all adverse influences, would obtain this, her undoubted right.

12/8/90.—Messrs. Scarr and Price submitted their report, in response to the Under Secretary's minute of 31/5/90. Those officers dealt exhaustively with the several matters remitted to them for report, but it may suffice here probably to give the conclusions at which they arrived, viz., (*a*) a line should be constructed from Guyra, *via* Don Dorrigo, to Grafton, and if this were the only probable line to the coast, the Inverell line should start from Guyra, but (*b*) the Examiners were impressed with the necessity, in the future, for constructing a line from Tenterfield to Casino; (*c*) the country therefore would be better served by a line from Glen Innes to Inverell, than by one from Guyra to Inverell, "because Glen Innes is between the two points of connection with the coast." The following then are the recommendations of the Examiners:—

1. The construction of the Glen Innes to Inverell line.
2. The construction of the Guyra, *via* Don Dorrigo, line to Grafton.
3. At a later date, the construction of the line from Tenterfield to Casino.

25/11/90.—Mr Copeland, M.P., forwarded a memorial from the residents of Inverell, Tingha, and Guyra, setting forth that in their opinion: (1) No valid reasons for making the Inverell line from *Glen Innes* have been given. (2) That by this arrangement Tingha is left out in the cold altogether, although a line through the mines would have suited Inverell just as well. (3) That Tingha in seven years has produced 16,000 tons of tin ore, of the value of £800,000, and has received 8,400 tons of goods, and that to pass so important a place by, is a policy difficult to understand. (4) That the Don Dorrigo route to the coast, starting from Grafton, being considered the best, the line from Inverell to Guyra is the best communication from the west and is the cheapest. (5) The Railway Commissioners state that the bulk of the land between Glen Innes and Inverell being held in large estates there is very little prospect of traffic being obtained on the way. If this be so, the memorialists ask, how can the Glen Innes line do more than enrich those who hold so much land on the route? (6) In view of these facts the memorialists urge that the Guyra-Inverell line may be submitted to the Public Works Committee at the same time as the rival line.

1/12/90.—The following is the substance of the Report submitted by the Railway Commissioners:—

Estimated cost		£492,400
Annual cost—		
Interest at 3½ per cent.	£17,234	
Working expenses	6,296	
		23,530
Estimated traffic—		
Passenger	3,000	
Mails	500	
Goods	4,290	
		7,790

Showing an annual loss of £15,740, or £1,494 towards paying the annual interest amounting to £17,234. The Commissioners direct attention to the length and severity of the grades—19 miles of 1 in 40 to 1 in 50, and recommend a special examination of the country with a view to find easier grades. They state also that Mr. George Arthur, the representative of property owners, through whose land the line passes for 17 miles, has offered any land required for a consideration of 20s. an acre.

Under date of 10/4/91, the Acting Engineer-in-Chief reported that he had examined a proposed new line from Glen Innes, past Wellingrove and up to the point where it enters the Maid's Valley, and that the rest of the line is a compilation of old surveys. He had satisfied himself that it is a good line, and that a gradient of 1 in 60 had been obtained. It would, however, be 52 miles long; 7 miles longer than the staked (Hogg's) line. The earthworks would be extremely heavy, and waterways would be more costly than on Hogg's line. He would recommend the submission of this line to the Public Works Committee, but it must be understood that the present survey is subject to deviations.

On the 20th April, Mr. Deane wired that his examination of the line was completed. Length, 53 miles 34 chains. Cost, £427,400 = £8,000 per mile. Ruling grade, 1 in 60. Estimate of line submitted to Parliament could be reduced, but not to above amount, and its ruling gradient remained 1 in 40.

The above is a précis of this case, but the earlier papers are very meagre and do not seem to disclose the whole case; and it seems probable that in the lapse of years some documents have got mislaid.

C.A.B., 1/5/91. J. BARLING.

A1.

Précis of Further Papers.

It being considered expedient to furnish a *précis* of the more important of the newspaper utterances in regard to these conflicting proposals the following statement is submitted:—

It would appear from the newspaper report of the deputation which waited on Mr. Secretary Wright in July, 1883, to advocate the Glen Innes–Inverell scheme, that it was stated by one of the speakers that the proposed railway would tap the country—rich agricultural land—from a point 10 miles east of Glen Innes to a point 30 miles west of Inverell, say a million acres, 50,000 acres of which were rich open lands ready for the plough. The latter, at the present rate of production, would yield 27,000 tons of grain, and bring to the railway a revenue of £37,900, and this would soon be increased three-fold. The tin produced would also give a revenue of £8,600, and wool £5,000. It was further stated that there were in the district 1,200,000 sheep, and that, given an outlet for the trade, the district would be able to supply the entire colony with flour, instead of going to Adelaide for a large portion of it.

The *Daily Telegraph* (31st July, 1883) in commenting upon these representations was emphatic in favour of the proposed line, expressing the belief that the deputation had made out an unanswerable case and pointing out that while other lines had to make long stages to reach a terminal (and paying) point "the Glen Innes–Inverell line would along nearly every mile of it be bordered by country producing copiously, carrying a large population, and, while sending out its products in large quantities, requiring the return of many matters of commerce necessary for the support and comforts of its inhabitants."

The *Sydney Morning Herald* of the same date, on the other hand, while admitting that the Inverell district was entitled to railway communication, insisted upon the necessity for great caution in the choice of a route, and pointed out that much would depend upon whether Tenterfield or Glen Innes were adopted as the starting point for a line to the coast. It directs attention also to the inconvenience to the Tingha people of having to send their goods by a circuitous route—nearly three sides of a triangle—as they would have to do if the Glen Innes route were adopted.

About this time a voluminous newspaper controversy took place between the advocates respectively of the Glen Innes route and of the more southerly point of junction with the main line.

Thereon the *Echo* (20th August, 1883) remarked that the contest seemed to be between distance and productiveness, the point of greater productiveness being in favour of the Glen Innes route, and that of greater distance against it, while on the other routes the conditions were exactly reversed. The longest line (the Glen Innes), it had been admitted, would reach the largest number of persons, and it could not be disputed that the locality which sent out the most produce would require the largest quantity of supplies.

A writer in the *Sydney Morning Herald* of 4th September, 1884, argued that the Glen Innes route ought to be adopted only as one section of a line to Grafton, and that, putting the latter out of the question, it was a mistake to take the Inverell

line

line to Glen Innes. As regards the line to Grafton, he maintained that it would be a sucker and not a feeder of the main line in that it would take away to Grafton, for shipment, goods which otherwise would have been carried by rail to Newcastle and Sydney.

The *Echo*, in its issue of 10th September, 1884, asserted that the then recent opening of the main line to Glen Innes had unmistakably indicated the true course of the traffic, inasmuch as since that occurrence three-fourths of the goods to and from Inverell were taken by road from Mother-of-Ducks, it being better and cheaper to carry the longer distance by road than to pay the additional railway freight to Glen Innes and the shorter road carriage thence to Inverell. It is only fair to add that a few days after a telegram from Glen Innes was published in the *Evening News* characterising this statement as "a direct falsehood," but no rebutting evidence was adduced.

The *Sydney Morning Herald*, of 29th August, 1888, contains the report of a deputation which waited on the Colonial Secretary to oppose the Glen Innes route and to urge that the starting place from the main line should be some point between Kentucky and Guyra. The deputation pointed out that if the Inverell people alone were concerned and they chose to pay for an unnecessary 34 miles of running it was their concern, but as a matter of fact it affected the general public, for it must be borne in mind that, running one passenger train and one goods train each way per day, the 34 miles would involve 34,824 miles of extra running per annum, and this at 55d. per train mile would mean an annual charge of £7,293. The Premier informed the deputation that he could not then give them an absolutely definite answer, but they might rely upon the Government to adopt a route which, while as economical as any other, would serve the largest number of persons and contribute to the development of the largest area of country.

The *Armidale Express*, in its issue of 2nd August, 1889, directed attention to the same feature as that referred to by the deputation, viz., the heavy cost of the extra running involved in taking the line by way of Glen Innes. It insisted also upon the absurdity of encountering the ascent and descent of Ben Lomond (1,010 ft.) when it might be avoided by making the junction further south.

Messrs Scarr and Price, who had been deputed to investigate and report upon this matter, having reported against a line from Glen Innes to Grafton and in favour of the line from Glen Innes to Inverell, and also of a line from Guyra to Grafton, the *Armidale Chronicle* of 20th August, 1890, fell foul of that report condemning its conclusions as "absurd." "If," the article said, "the Glen Innes-Grafton line was to be abandoned, why take the Inverell line to Glen Innes at all, that being a part of the same scheme? As the Examiners had recommended a line from Guyra to Grafton why not carry the Inverell line to Guyra, and thus take in Tingha, and avoid the extra and unnecessary mileage *viâ* Glen Innes?" The population between Inverell and Guyra was three times as large as that between Inverell and Glen Innes.

In its issue of 27th September, 1890, the same paper commented again in unfavourable terms upon the report. It maintained that as the Examiners had recommended two coast lines—one from Guyra to Grafton, and one from Tenterfield to Casino—it would be found that the Inverell line was in the wrong place should either of the coast lines not be constructed. The examiners admitted that the Guyra line, taken by itself, possessed conspicuous advantages, and that, although longer, it would cost £88,539 less than its rival. Leaving out of account the line Tenterfield to Casino with its enormous cost of £15,000 a mile, the balance of evidence was largely in favour of the Guyra line.

The *Chronicle* again, under date of 1st October, 1890, draws comparisons between the two routes, and arrives at conclusions greatly in favour of the Guyra route.

The *Hillgrove Guardian*, while admitting that that town had no direct interest in the question, was of opinion that, taking an impartial view, Guyra would appear to be the most suitable point at which to connect the Inverell line with the main line.

Under date of 26th December, 1890, an article appeared in the *Armidale Express* utterly condemning the Glen Innes route for reasons similar to those given in other newspaper articles already quoted, maintaining that there is not a single argument in favour of the Guyra route, and advocating the claims of Uralla, on account of its position and as receiving more wool than all the other stations put together, to be the point of junction of the Inverell line with the main line.

C. A. B., 31/8/91. J. BARLING.

B.

RAILWAY COMMISSIONERS' REPORT.

Office of the Railway Commissioners of New South Wales, Sydney, 1 December, 1890.

Proposed Line of Railway from Glen Innes to Inverell, *via* Wellingrove—44 miles 37 chains.

In accordance with section 13 of the "Public Works Act, 1888," we beg to report as under:—

Cost of Construction—

The Engineer-in-Chief estimates the cost of constructing the line (exclusive of land and compensation) at		£492,400
Annual Cost—		
Capital expenditure at 3½ per cent.		17,234
The working expenses are estimated as under—		
Traffic Branch	£1,756	
Locomotive Branch	1,500	
Permanent-way Branch	3,040	
		6,296
Total annual cost		£23,530
Estimated Revenue—		
Coaching	£3,000	
Mails	500	
Goods	4,290	
		£7,790

It will be observed that the estimated traffic, after paying working expenses, leaves a balance of £1,494 towards paying interest on the capital outlay.

The gradients on portions of this line as at present surveyed are severe, there being some 19 miles of from 1 in 40 to 1 in 50, and it is therefore suggested that a special examination of the route, and the country in the vicinity of it, should be made for the purpose of securing, if possible, better grades.

In September, 1889, when we inspected the route, we were asked to mention that Mr. George Arthur, who, it is understood, represents the owners of property through which the proposed line passes for a distance of about 17 miles, offered to convey to the Government any land required in connection with the construction of the line for a consideration of £1 per acre.

The Common Seal of the Railway Commissioners of New South Wales was hereunto affixed this 5th day of December, in the year of our Lord 1890, in the presence of—

H. McLACHLAN.

E. M. G. EDDY, Chief Commissioner.
W. M. FEHON, Commissioner.
CHARLES OLIVER, Commissioner.

B1.

STATEMENT BY THE RAILWAY COMMISSIONERS ON THE REVISED ROUTE FOR THE RAILWAY.

Government Railways of New South Wales,
Secretary's Office, Sydney, April, 1891.

Sir,

With reference to your inquiry relative to effect of the alteration of grade on the Glen Innes-Inverell line, I beg to submit herewith statement which has been amended in view of the effect the alteration will have upon the working of the line.

H. McLACHLAN.

The Secretary, Parliamentary Standing Committee on Public Works.

GLEN INNES TO INVERELL.

Revised Line, April, 1891.

Ruling grade	1—60
Length	53 miles 34 chains.
Cost of construction, exclusive of land	£427,400
Interest at 3½ per cent	14,959
Working Expenses.	
Traffic Branch	£2,000
Locomotive Branch	1,500
Permanent-way Branch	3,638
	£7,138
Revenue.	
Coaching	£3,200
Mails	500
Goods	4,500
	£8,200

C.

[To Evidence of J. Barling, Esq.]

RAILWAY EXTENSION—NORTHERN DISTRICT.

REPORT BY MESSRS. SCARR AND PRICE.

Ordered by the Legislative Assembly to be printed, 17 September, 1890.

Department of Public Works, Sydney, 31 May, 1890.

MINUTE PAPER.—RAILWAY EXTENSION—NORTHERN DISTRICT.

THE Minister desires Messrs. Scarr and Price to at once proceed to undertake the following inquiry in connection with Railway Extension in the Northern districts of this Colony.

The first matter for determination is the best way of connecting Inverell with the Great Northern Railway, for which the following points of junction have been proposed, viz. :—

(1) Glen Innes.
(2) Guyra.
(3) Uralla.
(4) Kentucky.

It will be necessary to give these routes the most careful investigation, with the view of determining which of them presents the promise of securing the most favourable results in the general public interest.

The second branch of the inquiry will embrace the consideration of the question as to the best means of connecting the Great Northern Railway with the proposed coast line. For this purpose the following routes have been suggested, viz. :—

Tenterfield to Casino,
Glen Innes to Grafton, and
Guyra, *via* the Don Dorrigo Scrub, to Grafton.

The third matter for attention is the connection between Guyra and the Coast about Coff's Harbour.

The merits of the proposed line from Tamworth, *via* Manilla, towards Inverell should also be inquired into.

The placing of these instructions under distinct headings must not be taken to imply that the different sections are each independent of the other. On the contrary, every branch of the inquiry must be looked at from the standpoint of its relation to the others. For instance, in taking up the subject of the connection of Inverell with the Great Northern Railway, regard must be had to the trend of its traffic, whether to Queensland on the one hand, or to the coast on the other. This will then bring in the question of the connection of the Great Northern Railway with the proposed Coast Line, either *via* Tenterfield or perhaps Guyra ; and in the event of Guyra being found to afford the best means of connection, that may be taken as determining the best connection between Inverell and the Great Northern Railway—that is to say, if the trade of Inverell is likely to find its outlet (say) at the Clarence or Coff's Harbour. This must not be taken as an indication of what may be the solution of the question, but merely as showing the inter-dependence of one branch of the inquiry on the others.

In carrying out these inquiries, Messrs. Scarr and Price should carefully abstain from expressing any opinions on the subject-matter of their inquiry, but they are empowered and enjoined to obtain every kind of information bearing on the questions submitted to them, from whatever sources may be available. No statistics should be regarded as data which have not been carefully verified ; and, in fact, the inquiry should be of such a character that whatever the conclusions arrived at may be, it should not be in the power of anyone to say that the whole of the facts have not been collected.

All available office plans and papers will be placed at their disposal.

These instructions are purposely given in outline only, with a view of leaving the freest scope to the judgment of the Officers selected to carry out the important work entrusted to them.

J. BARLING.

RAILWAY EXTENSION—NORTHERN DISTRICTS.

The Under Secretary for Public Works,—

Department of Public Works, Sydney, 12 August, 1890.

Sir,

We have the honor to report that, in accordance with the instructions contained in minute No. 1,672 of 31st May, 1890, we proceeded to the Northern Districts to prosecute the inquiry forming the subject-matter of these instructions.

As our instructions stated we were "to investigate with the view of determining which of the routes submitted, presents the promise of securing the most favourable results in the general public interests," we understood that we were to examine and report in a comprehensive manner upon the whole question, having regard rather to its commercial aspect than to enter into a discussion on the engineering merits of rival lines.

To do which thoroughly would require a great expenditure of time, with a view to discovering possible improvements, and would be trespassing unnecessarily on the duties of the Railway Construction Branch.

We trust then this report will be taken as an expression of the views of two independent and unprejudiced persons, engineers, who have gone carefully over the whole district, and looked at the question from every outside standpoint, but who, not having at the time seen the plans or sections of the lines, had no means of judging the engineering merits of any line

line further than by the knowledge gained from following its route as closely as possible, and from a rough statement furnished to them of the estimated cost, length, curves, and grades of some of the lines; and have, therefore, gone only briefly into engineering matters.

The necessity for this plea will be the more apparent when it is borne in mind the great extent of country travelled over, and that the survey of one of the most important lines is not yet completed.

An inspection, since our return from the field, of the existing plans and sections of the several lines has given us no reason to in any way modify our views.

We went over each of the several routes of proposed railway lines referred to us, examining the land passed through, and as far as possible the adjacent country—trying to gather from every source available all information bearing at all upon the question.

With this aim we invited the heads of public bodies, such as Municipal Councils, Progress Committees, &c., as well as the residents generally to make such statements as they might wish, and to furnish us with evidence for or against any proposed route.

And in order to afford every facility for their so doing, we arranged for interviews with those bodies collectively, and with the residents individually—noting the statements made and evidence furnished.

So that we consider no person can justly say that full opportunity has not been afforded for bringing forward any evidence or statement in support or otherwise of any particular line.

And here we might remark that we were met at the outset with this difficulty, namely, a disinclination on the part of the people to undertake the labour of again supplying the same statistical information, &c., they had already furnished to various officials and Government Departments.

Again, some statements made to us proved, on investigation, so utterly biassed and unreliable that we had, whilst refusing to hear no one, to put a good deal of what was stated aside, and trust largely to our own observation, and to information derived from disinterested persons.

At the same time we feel called upon to recognise the great trouble taken by some of the public bodies and private individuals in the matter, and the large amount of information they supplied us with.

In this report we do not propose furnishing a mass of statistics to show the probable traffic of any particular line or lines either for comparison or otherwise, for the reason that the whole traffic area under consideration is of such a comparatively untouched character that it appears to us any comparative calculations, based on present statistics, would be misleading, and no guide us to future traffic development.

The whole question of production and the consequent traffic must be very largely speculative, and can only be estimated from an investigation of the apparent capabilities of the country passed through and the facilities offered for settlement.

With this view then, we propose to give a detailed description of the nature of the country along each route separately as to its fertility, present and latent resources, settlement, and trend of traffic, and afterwards to summarise the whole, and state such conclusions as appear to us may be fairly drawn.

The routes travelled over by us were as follows:—

1.	Guyra, *via* Tingha, to Inverell	55 miles.
2.	Glen Innes, *via* Swanbrook, to Inverell	44¾ ,,
3.	Glen Innes, *via* Wellingrove, to Inverell	44¼ ,,
4.	Inverell, *via* Bundarra, to Kentucky	82¾ ,,
5.	Inverell, *via* Yarrowick, to Uralla	80½ ,,
6.	Guyra, *via* Don Dorrigo Scrub, to South Grafton (estimated at)	145 ,,
7.	Grafton, *via* Newton Boyd, to Glen Innes	102 ,,
8.	Tenterfield, *via* Fairfield and Tabulam, to Casino	86 ,,
9.	Inverell, *via* Bingera and Barraba, to Tamworth	147 ,,

We also inspected the country adjacent to Coff's Harbour, with a view to a connection between the Guyra and Grafton line, and the coast at that place.

Of the routes named, the surveys of No. 6, Guyra to Grafton, and the Coff's Harbour connection have not yet been completed. The former is in progress, but there remained, at the time of our visit, an interval yet unsurveyed of (say) 40 miles, between Guy Fawkes (to which point Messrs. Jamieson and Thornbury had worked from Guyra), and the head of Tallawadja Creek, near Glen Reagh, to where Mr. Cumming had surveyed from Grafton.

The connection between the Guyra-Grafton line and Coff's Harbour had not yet been even explored.

Of these unsurveyed portions then we can only speak in general terms from an inspection of the intervening country.

Guyra to Inverell.

Statements much at variance with facts have been persistently made by some of the opponents of this route, as to the quality of the land over which it passes; it being freely described as "worthless," "thoroughly rotten," &c.

On the contrary, though a considerable portion of the country traversed by the line is of very inferior character for agricultural purposes, the wholesale condemnation of the country is certainly not justified.

From Guyra, for a distance of 8 miles, the soil is of a rich red volcanic nature, capable of producing heavy crops of cereals, &c., suitable to the climate.

Thence to Wade's selection, 3 miles west of Tenterden and about 23 miles from Guyra, the land consists of black alluvial flats and volcanic ridges.

This class of country extends for some miles on either side of the line; on the northern side merging into the Ben Lomond Range, and on the south into the high granite country bordering on the Bundarra River.

From the point last named (23 miles from Guyra) the line passes over poor stony land of porphyry and granite formation, to a point about 1 mile beyond Moredun Creek, whence to New Valley Range the country is fair pastoral land, but unfit for cultivation.

From New Valley to Tingha (40 miles from Guyra) the soil is decomposed granite of the worst quality, poor grazing land, and quite unfit for agriculture.

This character prevails for some 4 or 5 miles beyond Tingha, when volcanic ridges of red soil are met, which extend at intervals, alternating with granite slopes to the Gilgai, 5 miles from Inverell and 50 from Guyra.

Thence to Inverell the soil is generally rich and good, with the exception of some rocky ridges.

On the whole the land along this line may be said to consist for 30 out of the total length of 55 miles, of soil good above the average, the other 25 miles being unfit for agricultural, and of only second rate quality for pastoral purposes.

A considerable portion is held in freehold by Tenterden and Ollera Stations.

There is, however, not nearly so large a proportion of land held in this way by the stations on this line as on the Glen Innes to Inverell route.

Timber.

There is along this line little timber fit for bridge building or other railway purposes.

Between Tenterden and New Valley are some ridges of stringybark, with a little ironbark, and along the line are forest reserves amounting to 14,000 acres; but as two sawmills have been working there for some time, no doubt the limited quantity originally available has been much reduced.

So that nearly all the timber for railway construction would have to be brought from elsewhere.

Minerals.

At Tingha is a large reserve for tin-mining purposes, from which, during the last eight years, a large quantity of stream tin has been obtained, stated to be 16,000 tons, valued at £828,722.

The output for last year was 1,200 tons, of a value of £62,000.

The question of the probable permanency of this field appears to depend largely upon the development of the tin lodes, as the output of stream tin is steadily decreasing.

On this point, we find in the Annual Report of the Department for Mines for 1889, Mr. Warden Fraser says:—"Several reefs have been discovered and are being tested, and I have no doubt the prosperity of this field will mainly depend upon the many reefs which are known to exist all over the field, and which prospectors are from time to time discovering. Then when capital * * * and approved appliances * * * are brought to bear on them, I anticipate a permanent source of profitable industry for this field."

Mr.

Mr. Litchfield, one of the oldest residents, and who is intimately identified with this field, also states that with greater facility for carriage of machinery and tin ore by railway, and the encouragement this would give to investors, he is sanguine the Tingha tin-field will be a lasting and important one.

At present there seems to be no doubt that tin-mining on this field is languishing, a steady decrease in the output being apparent for several years past.

The prosperity and permanency of the field is therefore contingent upon fresh development.

Whether this will occur remains to be seen.

If it does, and the output of tin be maintained, Tingha, as a feeder to the railway, will be of considerable importance.

On the other hand, the failure of the tin yield, and the comparative unfitness of the land for other purposes, will inevitably lead to the complete or partial disappearance of Tingha as a town.

From Guyra Railway Station there were forwarded to Tingha during the year ending 30th June, 1890, 512 tons of goods, and received from that place for despatch by rail, 566 tons, the greater part of this last being tin.

For other places on the line, distant over 10 miles west of Guyra, there were forwarded during the same period 150 tons, and received for despatch by rail, 148 tons,

A considerable proportion of the Tingha tin is now sent to Glen Innes Railway Station.

Population.

The population residing on the Tingha mining reserve is 2,500, most of whom are depending more or less upon the tin mines.

Of these, 1,000 are miners, three-fourths of whom are Chinese.

The population within six miles of Tingha is 1,800, a large proportion being Chinese.

Omitting that around Tingha, the population residing along the line is comparatively small.

The numbers between Guyra and Tingha, within 3 miles on either side of the line, as given by the police, are 250. Those within a radius of 5 miles of Guyra are not included.

Within that radius there are eighty-five families residing.

Between Inverell and Guyra there are ten public schools (excluding Inverell and Guyra), having 509 children on the roll, representing 119 families. Of these, 171 children, representing 74 families, attend Tingha School.

The land for the first 30 miles out of Guyra is capable of supporting a much increased population so far as it extends. But as the area feeding the railway along this length will be limited in width, this population in the aggregate cannot ever be very large, as the good land bordering the line is bounded on the south and west by a tract of hilly and somewhat barren country between it and the Bundarra River, country too hilly to admit of traffic being freely drawn from that direction; and on the north and east by the hilly country in the direction of Ben Lomond and the head waters of the Macintyre River, where also it comes within the influence of the Great Northern Railway.

Engineering.

There appear to be no engineering difficulties to contend with on this route, much of it being a surface line, the curves and grades are easy, except through the New Valley Range, and at a few other points.

By slightly increasing the cost of works, we believe the ruling grade of 1 in 40 could be reduced, and the curves improved.

The line as laid out will terminate in the centre of Inverell, after crossing the Macintyre River at the town.

The necessity for this does not seem clear, as the line might be very well stopped at the southern side of the river, and so save the cost of a large bridge, and the purchase of valuable town allotments, as well as avoid the necessity of a second bridge in the event of the line being extended still further westward.

There is already one road bridge, and a new one under consideration, which could be erected to suit the traffic to and from the railway station.

Glen Innes, *via* Swanbrook, to Inverell.

This line, after leaving the Great Northern Railway, near Glen Innes Station, crosses Furrucabad Plain, and the range forming the watershed between the creek of that name and Reddeston (or Clairvaux) Creek, and the latter creek near its source, then descending Waterloo Range by a steep gorge emerges on Waterloo Plain, above Balaclava Station, thence ascending by an easy grade by the summit of the watershed between Waterloo (or Wellingrove) Creek and Swanbrook, tributaries at the same point as the main road from Glen Innes to Inverell, goes over this range, crossing and recrossing the road near this point—say 16 miles from Glen Innes.

The land along the line to here, with the exception of the descent to Waterloo Creek, where it is stony, is of the best quality—rich black or red volcanic soil—and extending for some miles on either side.

Fully three-fourths of the land on this length is fit for cultivation.

It appears to be all alienated and chiefly used for pasturage.

From the point last named, 16 miles from Glen Innes, the line descends by a steep grade to the head of Swanbrook Creek, and for, say, 4 miles passes through barren stony gullies, and along rocky sidelings, on the right bank of the creek, until it again comes out into less hilly country, near Mansfield's selection, which open country continues through Young's selections, and to a point where the line again crosses from left to right, near the road crossing.

At Swanbrook Village it crosses the creek about 12 chains below the road, and again three-quarters of a mile lower down.

From Mansfield's selection to this point, about 3 miles, the land is good, and the great part fit for cultivation.

From this second crossing of Swanbrook, the line follows closely the right bank as far as Littler's selection, at the western boundary of the Newstead Pastoral Holding, where it crosses the creek a third time.

The greater part of this 6½ miles, between the second and third crossing, is closely shut in by a high range on the north, and on the south is cut off by the creek from a considerable area of good land, which lies in the direction of the main road.

From the third crossing of Swanbrook, at Newstead boundary, right through to Inverell—a distance of 15 miles—the land, with the exception of a few stony ridges, may be said to be of first-class quality, rich black or red soil for miles on either side of the line—a considerable area, as on the Long Plain—being free from timber.

Out of the total length of 44 miles, we estimate that 29 miles of first-class land is passed through, the remainder being excellent pastoral land.

Timber.

There is along this line no timber of any value for construction purposes, and the whole of that required for the works would have to be brought from a distance.

Minerals.

There is no mining of any kind in progress on or near the line except a little tin-mining at Elsmore, 5 miles to the south.

Here, we find from the Report of the Mines Department for 1889, there were raised 113 tons of tin during that year, valued at £5,928.

Population.

The population is sparse throughout, and settlement, for other than pastoral purposes, small.

We find the number of schools, exclusive of Inverell and Glen Innes, to be 10, with an enrolment of 263 children, representing 73 families.

The numbers of persons residing along the line we were unable to obtain, but the school numbers will afford a fair comparative test.

The land throughout the greater part of the length is undeniably capable of supporting a large population, being of the most fertile description, and a large percentage of it fit for the plough.

But it would appear that so far comparatively few persons reside on and cultivate the land, as it is chiefly held in four large estates, viz., Inverell, Newstead, Waterloo, and Balaclava.

And as a very large portion of these estates are either freehold or conditionally purchased there appears little prospect of further settlement on a large scale taking place—as, although it was asserted to us that some of these estates would be cut up and sold as soon as the railway was made, we, judging from results where railways have already been made through large estates, cannot place much value upon such assertions.

The

The tendency at the present time throughout the Colony being apparently to increase the size of estates, rather than to break them up.

Engineering.

The chief difficulties on this line are at the descent of the Waterloo Range, where a grade of 1 in 33 occurs, and in following the Swanbrook Creek, above Swanbrook Village.

The Waterloo Range is so steep and difficult at this place that we fear the grade can only be improved at the expense of much injury to the curves, which are already sharp, or by the substitution of tunnels.

The cross section of the land is very steep, and will considerably add to the apparent quantities of excavation and embankment.

To avoid the descent of the Waterloo Range at this place a line was surveyed up Maid's Valley to connect the first portion of the Wellingrove line with the remainder of the Swanbrook line.

This, though an easy connection, would much increase the total length between Glen Innes and Inverell, without corresponding advantage.

This line terminates about 1¼ mile to the north of the centre of the town of Inverell, and if extended to the westward would require a bridge across the Macintyre River.

Glen Innes, *via* Wellingrove, to Inverell.

Leaving the Great Northern Line immediately north of Glen Innes Station, this line crosses Furrucabad Plain, and ascends the range between that and Reddeston (or Clairvaux) Creek, on the northern side of the Inverell Road, with which it runs parallel and close to as far as Beaufort School, 5 miles from Glen Innes.

Here it leaves the road and crosses Clairvaux Swamp and Creek, ascending the Waterloo Range, which is here comparatively low, reaching the Head of Punch's Gully, down which it runs, crosses Wellingrove Creek, about 1½ mile above Ryan's homestead, 15 miles from Glen Innes.

From Glen Innes to this point, the land is generally of excellent quality, the exception being the descent of Punch's Gully, where the granite crops out, and the land, though well grassed, is unfit for agriculture; also in some places the tops of the ridges are too stony for cultivation.

From Waterloo Plain the line ascends a somewhat difficult range, and, descending to Creer's selection, passes through the King's Plains Estate for 11 miles, until the travelling stock reserve is met, 27 miles from Glen Innes.

This 11 miles is open, undulating country, of first-class soil, little of it being unfit for cultivation, the only exception being a length of 2 to 3 miles, where the country is ridgy, and the soil not of very good quality. There appears to be a comparatively small extent of this.

From the intersection with the travelling stock route the line follows more or less close to the road, through first-class red or black soil, to near Munzie's selection, where it crosses Swanbrook Creek; and thence to Inverell it is nearly identical with the Swanbrook route, the lines at two places almost touching, and at no point between this crossing of Swanbrook and Inverell more than a mile distant from each other.

Land.

Estimating in the same way as we have done in the cases of the two lines previously dealt with, out of the total length of 44 miles, 37 miles of first-class land is passed through, the remainder being excellent pastoral land.

A large proportion of the country passed through is, however, held in large estates—Inverell, King's Plains, Waterloo, and others—the amount of land taken up and occupied by *bona fide* selectors being comparatively very small, and unless the estates referred to be broken up, which experience shows is not at all certain, there would appear to be little prospect of any large quantity of traffic being obtained by the way, apart from what may be gathered from country further back to the north.

Timber.

Of timber for construction purposes, there is none along the line, and what will be required for railway purposes must be brought from a distance.

Minerals.

Of minerals, there do not appear to be any on this line.

Population.

The land being, as already stated, held in large estates for grazing purposes, the population along the line is small.

The schools have been included in those referred to on the Swanbrook line. The two routes being so close to each other, it is difficult to separate the schools.

Engineering Questions.

The chief difficulty, as on the Swanbrook line, is the descent of the Waterloo Range; this is accomplished by a long grade of 1 in 40.

The crossing of the range from Waterloo Plain to King's Plains will also be rather difficult, but on the whole this would appear to be a superior line to that *via* Swanbrook.

The extension of this line westward from Inverell would also necessitate a bridge across the Macintyre River.

Inverell, *via* Bundarra, to Kentucky.

Leaving Inverell, on the left or southern bank of the Macintyre (the opposite side to the main portion of the town), the line as far as Gilgai is common to the Guyra-Inverell line already dealt with, and to that point, as described under that head, the soil is generally rich and good, with the exception of some rocky ridges.

Land.

From the point of divergence, 5 miles from Inverell, at Gilgai, for a distance of 3 miles, the land is good, consisting of low ridges of red volcanic soil.

From that point, however, so far as soil is concerned, it may be described in a few words; granite and slate formation, inferior second-class or fair third-class land for agricultural purposes, excepting round Bundarra, where there is a limited area of good land.

Being undulating and generally lightly timbered, it might, in course of time, be taken up for combined agricultural and pastoral purposes, and would, perhaps, for a few years produce light crops of wheat of good quality, but the soil is too light and shallow ever to support any considerable population.

The line, as far as Toryburn, runs at no great distance from the Bundarra River; at some places quite close.

This, to some extent, cuts it off from the country beyond, as the river is, in most places, difficult to cross.

The land on the opposite side is generally of the same quality as that traversed by the line—granite formation, with some good flats of limited extent along the banks of the river and its tributary creeks, but with no large extent of agricultural land.

On the western side of the line this same inferior quality of soil prevails generally, right back to the ridge between Bundarra and the Namoi waters, where high broken country prevails.

There is a considerable quantity of land available for selection along the route, and some large reserves.

Timber.

Throughout this line there is little or no timber of any value, and that for railway purposes would have to be brought from a distance.

Minerals.

In former years a considerable quantity of tin was produced between Bundarra and Gilgai, in the neighbourhood of the now deserted village of Kimberly (on Cope's Creek), and at Stanborough, where, however, very little is now obtained, and this little is included in the return from Tingha.

At the present time very little mining can be said to be carried on in close proximity to this line.

Population.

Population.

The land between Gilgai and King's Gap, 5 miles from Bundarra, being chiefly a mining reserve, few but miners live along it, and these are included in the estimate of the Tingha mining reserve.

The population residing in the district between King's Gap and Toryburn, through which the line runs for 27 miles north and south—and which extends 25 miles back towards Barraba on the west, and to the hilly country east of the Bundarra River—is stated by the police to be 1,500, including the population of Bundarra Village (about 500).

The line crosses the Bundarra River just above the iron road-bridge (a large bridge will here be necessary), and passes through the village of Bundarra, which is the only settlement of any importance on this line.

The wayside village of Bundarra, containing about 500 inhabitants, is substantially built, and is the commercial centre of a limited district.

There is a moderate quantity of fairly good land in the vicinity; but farming does not appear to be carried on to any large extent, the chief support of the town being the pastoral industry.

The town can hardly be said to be a progressive one, as would appear evident from the fact of the only bank which existed for some years having lately been closed.

The traffic of the place could not be considered of much importance in connection with railway extension. The Guyra-Inverell line would secure its traffic at Tingha, 18 miles by road; but the Glen Innes-Inverell line would not, as the nearest station on that route would be Inverell, 30 miles by road; whilst Uralla, 124 miles nearer Sydney, is but 52 miles.

Inverell, *via* Yarrowick, to Uralla.

This line branches from the Inverell to Guyra line at Swinton's Station, 4 miles from Tingha, and runs generally parallel with the Inverell to Kentucky route, varying in distance from 4 to 10 miles from that route, and passing about 7 miles to the east of Bundarra.

The country passed through is, on the whole, of the same inferior quality as that on the Kentucky line, with the exception of some limited areas of good land near the banks of the creeks tributary to the Bundarra River, being generally of granite formation with poor gravelly soil.

The country is more ridgy than on the Kentucky line, but little distinction as to quality of soil can be made between the two lines; the comparison being rather in favour of this route.

The same remarks will apply to this line as to the Kentucky line as to population, resources, and prospective traffic.

Timber.

There is scarcely any timber of value, and all required for purposes of construction would have to be brought from a distance.

Minerals.

The only mineral being worked is gold—in the vicinity of Uralla on the old Rocky River Gold-field—and this in a limited way.

As these workings are so near the Great Northern Railway, the proposed line would not be affected in any way by them.

Grafton, *via* Newton Boyd, to Glen Innes.

In the inspection of this line we were, at the outset, met with by the difficulty of traversing it throughout at all, and the impossibility of doing so on horseback on account of the mountainous and broken nature of the country along a considerable part of its length.

From Grafton to Jackadgery, near where the line enters the valley of the Mann River, the country is described as being fairly level, undulating, good grazing country, with only a limited quantity of arable land, and this of only medium quality.

We were advised by persons well acquainted with the country and the route, that it would be impossible to follow it through, except on foot, and then only in fine weather, when the rivers are crossable.

This being the case, after examining the country round Grafton, we decided to travel by road to Newton Boyd, and there, striking the line, follow it down the valley of the Mann River, and then in the reverse direction towards Glen Innes.

Here, again, we were stopped by a fresh in the Mann River preventing us crossing, and, as we were informed that to carry out our intention it would be necessary to cross and recross the river many times, we were compelled to give up this idea.

In order to obtain a view of the surrounding country at Newton Boyd, we ascended one of the mountain ranges rising out of the Mann River to a height of 2,000 feet, and from this, so far as the eye could reach, little could be seen but precipitous mountain ranges similar to that upon which we stood, excepting a strip of fairly good land lying along the banks of the Mann and Henry Rivers, in the vicinity of Newton Boyd, which, we were informed, belonged to the station of that name.

From Newton Boyd the line follows the Mann River up for 19 miles to the foot of the Big Hill, and is hemmed in on both sides the whole distance by broken, mountainous country, presenting no appearance, so far as can be seen from the road or line (which are near each other) or from the mountain tops, of any land available for settlement.

From the top of the Big Hill, on the main road, 2,500 feet above the river, a point commanding an extensive view—the same prospect is afforded as that described above—high mountains, and broken country.

To quote from official papers, we have Mr. Hyndman, Railway Surveyor, in September, 1873, saying:—"The country along the Mann River is high granite ranges, with rough rocky peaks. From Big Hill to Jackadgery is of the same character, loose trap and clay slate on schist—mountains fall steeply to the river. Steep rocky bluffs at every bend. Country is inaccessible for horses. From Jackadgery to Grafton the country is undulating." (See Parliamentary papers to order, 20th April, 1875.)

Mr. Cowdery in the same year, 1873, says:—"The granite mountains rise up on either side to a great height—some at least 1,000 feet, and the bed of the river is full of boulders, making it impassable for horses." (See same papers.)

Mr. Palmer says:—"The whole of the country is very mountainous. The creeks, as they approach the table-land, become a succession of falls and rapids, and are very often enclosed by perpendicular slopes of great height." (See same papers.)

Our own observations confirm these reports, and show not only the enormous expense of constructing a line here—an expense so great as to make it in effect commercially impracticable—but also that little or no traffic would come to the railway by the way, except perhaps a little timber.

Of this we saw little or none, though it is stated that patches of good timber do exist amongst the ranges.

The inaccessibility of the country would, however, militate very much against this being brought to the railway.

The line for about 50 miles would, if constructed, be practically inaccessible from any little good country that may exist adjacent to it amongst the ranges, because of the steep broken nature of the mountains.

In fact, speaking in general terms, from where the line enters the valley of the Mann River, near Jackadgery, to its exit on the table-land a few miles from Glen Innes, it runs through a mountain gorge hemmed in and cut off from the surrounding country by precipitous ranges, rising in not a few places to a height of 1,500 to 2,000 feet above the beds of the rivers.

This being the case, it must be apparent to any unprejudiced and disinterested person that to adopt this line as the coast connection would be to throw upon the 45 miles between Inverell and Glen Innes the strain of earning interest upon the whole of the enormous capital required for the construction of this line. That is to say,—the 45 miles between those two places would have to earn interest upon the whole of the 147 miles from Inverell to Grafton.

We cannot think it necessary for us to say much more upon the subject of this line.

The nature of the country through which it passes is admitted on all sides. The consequent cost is in evidence from the reports of the Engineer-in-Chief, who estimates this at £19,600 per mile, or a total of £1,999,000, and the impossibility of this section earning even a reasonable proportion of working expenses must be apparent.

The grades and curves are also shown to be such as are beyond the limit of a reasonably safe railway—8-chain curves and 1 in 33 grades,—and the cost of working must necessarily be great.

And though even improvements in curves and grades should be found possible, the barren and rugged nature of the country and the absence of any probable wayside traffic should be sufficient to condemn it.

In the face of all these facts, we feel justified in reporting this line to be an impracticable one,—commercially, if not absolutely so from an engineering point of view,—and we do not therefore feel called upon to say more on the subject of it.

Guyra,

Guyra, *via* Don Dorrigo, to Grafton.

This line leaves the Great Northern Railway, near Llangothlin Platform, 7 miles north of Guyra Station, and after crossing a small stream, which is the head of the Falconer or Guyra River, rises to the summit of the range forming the watershed between the Macleay and the Clarence Rivers, and follows it to near Alfreida Station, a distance of 43 miles. Throughout this length it leaves the actual summit for no great distance at any point, and only to avoid high points and maintain grades.

From Alfreida—the range bearing away to the south and rising to a considerable height in the Snowy Hills—the line is carried in a more easterly direction to Rigney's Station, where it crosses the Armidale and Grafton Road. Thence it continues easterly past Moles' house and through the Guy Fawkes country.

At the time of our visit, the survey had been carried by Mr. Jamieson to Biscuit Creek, 48 miles from Guyra, and within 2 or 3 miles of the point where he would connect with Mr. Thornbury's starting point.

Mr. Thornbury had carried the survey on some 17 miles further, making a total of 65 miles from Guyra.

From that point, a gap of about 40 miles remained unsurveyed, to the point at the head of Tallawadja Creek, where we saw Mr. Cumming, who had carried the survey thus far from Grafton, *via* Glen Reagh, a distance of 40 miles.

Land.

From Guyra, for a distance of 43 miles, the land is of superior quality, consisting for the most part of rich volcanic soil, a large proportion of which is fit for cultivation, the only obstruction being a few stony patches on the summit of the range.

The same character of land appears to prevail for some miles on either side of the line, and from the elevated plateau along which the line runs, commanding an extensive view throughout, we had full opportunity of seeing this.

The country presents the appearances of open ridges, free from deep gullies, lightly wooded, and well adapted for agricultural purposes.

From the point referred to—43 miles from the Great Northern Railway—an interval of poor granite country is passed through, extending for (say) 7 miles until approaching the Armidale-Grafton Road, where the rich volcanic soil again appears and extends for several miles in length.

This character of soil prevails over the whole of this Guy Fawkes country, embracing a considerable area from the coast fall on the south of Rigney's to Tyringham (Perrott's) Station on the Armidale-Grafton Road, 25 miles in one direction northwards and right through to the Little Nymboida, north-easterly along the proposed line of survey.

As we failed to obtain a guide through the Don Dorrigo Scrub, along the course of the proposed line, or to ascertain that any track existed in close proximity to it, practicable for horses, we travelled by the Armidale-Grafton Road, as far as Perrott's, and then struck across, *via* Bostobrick and the Little Murray Creek, through the Don Dorrigo Scrub, to Coghlan's, on the Brelsdown Creek, and thence to the head of the Bellinger River—thus cross-cutting the country and the scrub from north-west to south-east.

Mr. Simpson had previously explored, on foot, the proposed line from north-east to south-west through the Scrub. He describes the land thus:—"From the Armidale-Grafton Road to the Deer Park the land is open for considerable stretches, and of a very superior nature, covered with a fine growth of natural grasses."

"From the Deer Park, right away to the Little Nymboida, the land is very good, and is covered with a fine forest of beautifully grown timber."

"The whole district is abundantly watered by perennial streams." (See Mr. Simpson's report, 23/8/89.)

Our route was for 25 miles, as far as Perrott's, generally parallel with, and on the average 10 miles distant from, Mr. Simpson's; and then at right angles to his line for a distance of 25 miles, through the Don Dorrigo, to where we descend the coast fall, to the head of the Bellinger.

We found, from the crossing of the Little Murray Creek right through to the verge of the coast slope above the Bellinger, the land to be of the richest description of scrub land, and capable of producing heavy crops of cereals, &c.

This tract of country, so far as the dense scrub permitted, has been well examined, and found to possess land of superior quality throughout.

A large part of it is covered with so dense a growth of scrub and vines that except along tracks cut by the cedar getters, it is impossible to force a way with horses.

As Guy Fawkes is at about the same elevation as Guyra—4,400 feet above the sea-level—the rigorous climate of New England prevails there.

Thence through the Don Dorrigo Scrub to the head of the Little Nymboida the fall is considerable, though gradual, and a more temperate though still cold climate prevails, which will permit of the growth of cereals, potatoes, and other products of temperate climates.

This stretch of country appears to be an elevated table-land, falling abruptly towards the coast on the east and south, and sloping, at first gently, to the north, and finally pitching suddenly into the valley of the Nymboida, with a gradual inclination throughout to the north-east.

On the range forming the division between the heads of the Orara and the Little Nymboida Rivers, we found Mr. Cumming's Camp.

Here the elevation was about 2,300 feet above sea-level.

Thence to the valley of the Orara at Glen Reagh—12 miles—the country falls rapidly, and, in the immediate vicinity of the line, consists of high ridges with deep valleys between, presenting along this 12 miles no land fit for cultivation except small flats close to the creeks in the vicinity of Glen Reagh.

From Glen Reagh to Grafton the land is generally of good quality.

Along the valley of the Orara it is superior, whilst the slopes are, though lighter and sandy, fairly good.

Taking the whole length of line from Guyra to Grafton, a distance we estimate at from 140 to 150 miles, a remarkable stretch of country is passed over; for with the exception of the space of 7 miles west of Guy Fawkes, and the length of 12 miles west from Glen Reagh, both referred to above, there is no part which does not present large areas of land fit for cultivation.

The greater part of it is of the most fertile nature, with a temperature ranging from the rigorous climate of New England, 4,400 feet above the sea, to the semi-tropical one of the northern sea-coast. And it is probable that in no part of New South Wales is there a finer stretch of rich land of equal extent so little broken in upon by barren intervals as this.

The rainfall is considerable, and the whole is intersected at short intervals by perennial streams.

Timber.

Not only is the soil of this tract eminently fitted for cultivation and capable, when properly tilled, of supporting a dense population, but the splendid forests of marketable timber, of almost every kind indigenous to the Colony, which prevail over a large extent of it would, with railway communication, find employment for hundreds of persons and supply the principal markets of the colonies for many years to come. Commencing about the Deer Park, and extending northwards beyond the Armidale-Grafton Road and eastwards to the sea shore, a forest of magnificent timber covers the whole face of the country.

In the Don Dorrigo Scrub are cedar, beech, pine, and all the varieties of scrub timbers, whilst beyond this vine scrub itself, in the densely-timbered land, extending right up to the town of South Grafton, forests of the finest ironbark, tallow-wood, turpentine, blackbutt, &c., exist in lavish abundance.

Fortunately very large areas of this splendidly-timbered country have been reserved, so that the forests may be said to be practically untouched, and directly railway communication is established a large traffic must at once spring up in carrying timber to the nearest port as well as to the badly-timbered country towards the western interior.

Unlike many timber forests where the land is comparatively valueless after removal of the timber, the greater part of this land may be at once put under the plough, and support a large population.

The value of this stretch of country can scarcely be exaggerated.

We take leave to suggest for consideration whether, large as are the existing forest reserves along this route, they might not be extended with advantage. This suggestion we would apply also to the Tenterfield to Casino route.

Minerals.

At Nana Creek and the vicinity mining for gold has been carried on more or less for some years past, but at present this industry does not appear to be giving very satisfactory results.

Near Glen Reagh Station we were informed coal existed, but nothing appears to have been done towards proving or developing the seam.

Thirty-five miles from Guyra, in a north-easterly direction, is the Kookoobookra Gold-field, upon which there is a population at the present time of 250 persons, and between the two places 70 others.

This gold-field does not at the present time appear to be in a very flourishing condition.

Population.

The population along this line is very small. From Guyra to Guy Fawkes there are very few selectors, and only some half-dozen stations. A large quantity of the land is unalienated. About Guy Fawes are a few selectors, and three or four stations, chiefly stocked with cattle. Thence to Glen Reagh the country may be said to be practically unsettled and uninhabited, except by a few cedar-cutters. From Glen Reagh to Grafton the country is more thickly settled, and on the better land are a good number of selectors.

On the whole the tract of country along this line has a sparse population, but it is capable, when supplied with railway communication, of supporting a large number of people.

Engineering.

The line from the Great Northern Railway to near Guy Fawkes appears to be very easy; in fact, the greater portion is a surface line, requiring no large bridges and few culverts. For the next 10 miles occasionally difficult pieces occur. The following 40 miles is still unsurveyed, but we think no difficulty will be found in securing a good line.

The descent from the Don Dorrigo table-land to Glen Reagh is considerable, and some difficulty is being experienced in the route now under survey, and it may be necessary to try a line down the valley or along the spurs of one of the creeks further west—perhaps Kangaroo Creek.

From Glen Reagh to Grafton presents no difficulties.

Advantages.

As a link between the Great Northern Railway and the proposed coast line, this route has the following advan :—

(1.) So far as has been yet ascertained, it will be comparatively inexpensive for 60 miles at the Guyra end, and also for 30 miles at the Grafton end. The intermediate portion, the position of which is yet unfixed, will be probably found more expensive; but as far as can be seen no great difficulty will be encountered.

(2.) For the greater part of its length it passes through land of excellent quality and abundantly watered, most of which is still unalienated.

(3.) Along 70 to 80 miles of the route it runs through a forest of fine timber of nearly every description known in the Colony.

(4.) Along the route a range of climate exists, gradually changing from the cold of New England to the semi-tropical heat of Grafton, thus permitting of the production of a variety of crops.

(5.) It will afford direct connection between the coastal districts of the Macleay and Bellinger, as well as those further north, with New England and the west.

(6.) That it will, at Guy Fawkes, where it crosses the Armidale to Grafton Road, be within 36 miles, by a fairly good road, of the Hillgrove Gold-field, which has, at the present time, according to the statement of the police, a population of 3,000 persons.

This field is now in a prosperous condition, and likely to be permanent.

Disadvantages.

The only serious disadvantage in connection with this line, so far as can be judged before completion of the survey now in progress, is the somewhat circuitous route between Inverell and Grafton.

The distances by the alternative routes would be:—

Inverell, *via* Glen Innes and Llangothlin, 219 miles.
" " Guyra and Llangothlin, 207 "

as against 146 miles by the more direct, but almost impracticable route, *via* Glen Innes and Newton Boyd.

The distance from Llangothlin (the actual point of departure of this line from the Northern Railway) to Grafton being estimated at 145 miles.

In the absence of this completed survey, it is not possible to say what engineering difficulties may exist, but it is not thought there are many to be encountered, nor can the exact distance be stated until the survey is completed.

If this line be found practicable throughout, the length of it would appear to be the only real disadvantage it has.

And this objection is modified to some extent by the quantity of excellent land passed through, and the abundance of timber on the way.

Coff's Harbour Connection.

This is a question which must depend largely, first, upon the route finally determined upon for that part of the Guyra to Grafton line, between the Don Dorrigo Scrub and the Orara Valley, and secondly, the position of that section of the projected North Coast Railway between Coff's Harbour and Grafton.

At present the former line is being surveyed from the Orara Valley, at Glen Reagh, up the right or east bank of the Tallawadja Creek, on to the table-land.

If this survey result in a practicable line being obtained by that route, it would appear more judicious to deviate the proposed coast line north of Coff's Harbour from its present position, and striking off a little north of Coff's Harbour to cross the coast range (which is here very low) and run into the valley of the Orara, near Sherwood's, and then, *via* Bagawa, to join the Guyra-Grafton line at Glen Reagh, making the one line serve thence to Grafton, and so avoid having two lines nearly parallel in close proximity.

This would form a fairly good connection with Coff's Harbour, and the fertile country lying along the sea and the coast range from the Bellinger northwards, and also bring the Macleay District into touch with New England and the interior.

If, however, the rise from Glen Reagh, *via* Tallawadja Creek to the Don Dorrigo, is found too abrupt, it may be necessary to look for a line up the valley or along the spurs of one of the creeks further west—for instance, Kangaroo Creek; in which case, as a greater distance would exist between the two lines, it might be advisable to continue the coast line, *via* Woolgoolga, as originally proposed. Considerations of coast defence may be of weight here.

As to a direct connection between the Guyra-Grafton line at the verge of the table-land and Coff's Harbour:—

The most direct course would be to leave the Guyra to Grafton line on the water-shed between the heads of the Little Nymboida and Orara Rivers, and striking nearly due east, descend by the head of the Orara, which here apparently flows nearly west to east, and, crossing the coast range, skirt the northern side of the high bluffs which abut on the sea above Coff's Harbour.

Without some exploration it would be presumptuous to offer any decided opinion on the possibility of a practicable line being obtained here, but from observation of the country from several commanding points, it appears likely that considerable difficulty will be experienced in doing so. It is entirely a matter for exploration and survey.

Should this, however, be found a practicable route, it becomes a question whether it would not be advisable to continue the Guyra to Grafton line direct to Coff's Harbour, and there, connecting with the North Coast line, carry the traffic over that line to Grafton, either by Woolgoolga as surveyed or by the suggested deviation, *via* Bagawa, Glen Reagh, and the Valley of the Orara.

From the Bellinger northwards along the littoral there is a large quantity of most fertile scrub land, and the table-land connection being made at Coff's Harbour, greater facility would be given for the interchange of produce between that part of the coast and New England.

The land from Coff's Harbour across the coast range to the Orara Valley at Sherwood's, and thence down that valley to Glen Reagh, is of the most fertile description, the greater part being thick scrub and heavily timbered.

The whole question of this connection with Coff's Harbour, however, is, as previously stated, a matter for exploration and survey, but we think it well worthy of attention before a final decision is arrived at.

Tenterfield to Casino.

From Tenterfield, for some 7 miles, the line runs through moderately hilly country, which gradually merges into ranges, and thence to Black or Plumbago Creek, near Tabulam, a distance of 45 miles from Tenterfield, the country consists of high ranges with steep slopes, but not generally of a rocky or broken character.

From Tabulam to Casino the country is of an open character, and the ranges more moderate in height, presenting no great engineering difficulties.

The

The land as far as Barney Downs Station, some 6 miles out of Tenterfield, is good, and a considerable quantity of it is under cultivation. From that point it gradually merges into the high ranges mentioned above, and until Tabulam is reached there is little land adapted for cultivation. Though the soil on some of the hills is good, they are generally too steep to admit of tillage.

From Tabulam to Casino the land is generally very good, and a large proportion of it fit for agriculture; it consists of rich black soil flats, with lighter sandy loam on the ridges. On the Richmond—or Sandilands—Range and its spurs, the soil is of the rich nature usually found in the dense vine-scrubs such as cover this range.

We have statements from police officers and other reliable persons that the good land extends north to the Queensland border, and south as far as Yulgilbar, and that of this a considerable quantity is rich scrub land.

The forest land is good, except in places where broken.

Along the valley of the Upper Richmond there is a large area of good land fit for cultivation.

Timber.

From Sandy Hill, 20 miles from Tenterfield, right through to near Casino, the proposed railway line runs for about 60 miles through a forest of splendid timber of varied kind, a forest probably unsurpassed in the Colony.

On the Richmond Range large quantities of "hoop pine" exist, whilst cedar is found in the same district.

This timber forest, we learn from good authority—the police and others—extends north to the Queensland border, and for many miles southward.

A large and profitable timber traffic may therefore be relied on as soon as this line is constructed.

A limited trade now exists in wattle-bark, which is forwarded from Tenterfield into Queensland. The quantity exported through Wallangarra Station for the year 1889 was 107 tons, and for the half-year ending 30th June, 1890, 80 tons.

It is claimed that this trade would be largely developed if this line of railway were constructed, and this we think probable, as much of the rich land between Tenterfield and Drake, too steep for other purposes, is now clothed with wattle.

Minerals.

An important point in connection with this proposed line is, that it would pass through the extensive mineral field in the vicinity of Drake, known as Fairfield.

The Prospecting Board, in a report dated 12th of March, 1889, say:—

"From the foregoing it will be seen that in this district there are numerous ore deposits, containing gold, silver, copper, lead, zinc, &c. * * * * With more efficient gold-saving appliances * * * * steady and profitable yields may be anticipated."

We find that large sums of money have been spent in erecting machinery, and in mining on a number of claims on this field, and several are still working more or less actively; but, on the whole, so far unsuccessfully as regards dividends, and mining would, therefore, appear to be at a low ebb.

It still remains to be proved how far the field can be profitably worked. The construction of a railway, and the consequent saving in freight, would materially assist towards the successful working, especially of the baser metals.

The yield of gold would appear to have steadily increased during the three years 1887, 8, and 9, amounting to £4,798, £5,999, and £8,522 in those years respectively; and at the time of our visit good yields were being obtained at Long Gully.

At the Richmond Range, in close proximity to the proposed line, we saw the coal seams which had been discovered near "Ross' Inn."

There were five seams varying in thickness from 9 inches to 4 feet 3 inches.

These cropped out of the hill in the bed of a watercourse where we were enabled to take samples, of which we obtained the attached analysis kindly furnished by the Mines Department.

The analysis goes to show that the samples we submitted contain too large a percentage of ash to be of commercial value.

Should exploration of these seams prove that good steam coal can be obtained at a greater depth or further into the hill, it would be an important factor in connection with this line by providing coal for railway and other purposes in the north.

We append a statement furnished to us by the Tenterfield Progress Association giving statistics, and setting forth the case generally in favour of the construction of this line. It was impossible for us to verify this in every particular as to figures, but, taking it as a whole, it appears to be a fair statement of the case.

Population.

The population is generally small along this route, except on the Fairfield diggings. Here the numbers given by the police are 1,288 Europeans and 62 Chinese for Drake and the neighbouring district, and for Tooloon, whence the traffic would join at Tabulam, 200.

The population along the other parts of the route—exclusive of Tenterfield and Casino—would probably amount to less than another thousand.

The numbers of the present population along these lines afford but little criterion, however, as to the value of the country as a support for future railways.

The whole country may be said to be nearly in a virgin state, and the results of railway communication can only be estimated by taking the whole of the circumstances as to each line together, and can only be speculative.

Cattle Traffic.

The land along the route is principally occupied by large cattle stations, and some of it will never be fit for any other than grazing purposes, owing to its hilly nature.

It is probable that a considerable traffic would accrue to the railway in fat cattle. At present the greater part of the fat cattle go to Ramornie Meat Preserving Works, near Grafton, or are consumed locally. The remainder are driven to, and trucked at, Tenterfield for the southern markets.

We were unable to obtain any reliable estimate of the number of fat cattle likely to be forwarded by rail in the event of this line being constructed, but it would probably be large judging from the total number of cattle in the Richmond Electorate, viz., 152,000, and from the fact that fat cattle deteriorate so much when sent by sea that few are despatched that way, and only low prices are given at Ramornie.

Engineering.

With regard to engineering matters, the opinion we arrived at as to this line was that the curves would prove the chief trouble.

The nature of the mountain ranges should allow of good grades being obtained.

As much of this line will be along steep sidelings of a rather unstable nature, precautions will be necessary to guard against land slips in wet seasons.

Several tunnels will be required, but none of them of very great length, and one large bridge across the Clarence at Tabulam, where, owing to the great height to which the flood rises, a very long approach will be required on the western side.

This line would appear to be capable of great improvement in some places.

Advantages.

The advantages possessed by this line are:—

1st. That it passes through a large extent of good land between Tabulam and Casino. In addition to which it would afford an outlet to another large area of good land which extends some distance north of Tabulam, along the Upper Richmond in the direction of Mount Lindsay, and also to the fertile country on the Clarence below Tabulam.

2nd. It would tap and connect with the interior the districts of the Richmond and Tweed, which, we gather from the evidence given before the Works Committe, on several occasions, are unsurpassed in the Colony for fertility, and have a rapidly-increasing population.

3rd. That, upon the completion of the proposed harbour works at Byron Bay, a capacious port, with deep water, will be afforded to the inland districts within a reasonable distance—232 miles from Inverell. 4th.

4th. That it passes for nearly the whole distance through a fine forest of magnificent timber, in which there must be a large traffic, both towards the interior and the coast.

The forest reserves here, as on the Guyra to Grafton line, are very extensive.

5th. That it will traverse and assist to develop the very promising mineral field about Drake—a field which, although at present not yielding largely or profitably, may later on, when the evil effects of rash speculation have passed away, become a valuable one.

It has been stated that "of the sixty-seven known minerals, forty-seven have been discovered in Drake and the neighbourhood."

Whether this be literally correct or not we are unable to say, but it appears very certain that a large number of the metals of commerce exist here, and it is possible that this field may yet become so developed as to support a very large population.

6th. That by this route, upon the completion of the line from Casino to the Queensland border at the Tweed, with the short interval thence to the present Queensland terminus, near Southport, a second connection with Brisbane will be had; and by altering the gauge on this length (about 50 miles) of the Queensland line a uniform gauge would be had between Sydney and Brisbane, and the distance lessened by 16 miles as compared with route *via* Wallangarra and Toowoomba.

Disadvantages.

The disadvantages are:—

1st. That the line between Tenterfield and Casino will be a costly one, estimated at £15,000 per mile, and a total cost for 86 miles of £1,290,000. The curves between Tenterfield and Tabulam are numerous and sharp, and the grades in some places steep. There is, however, nothing impracticable about the route, and further examination will probably prove that these objections may be considerably modified.

2nd. That for the greater part of the distance between Tenterfield and Tabulam (50 miles) the land is unfit for cultivation; an objection largely compensated for by the wealth of timber and promise of a valuable mineral field upon it.

3rd. That the line would be so far north as to neutralise in a great measure any benefit the more southern coast districts would otherwise derive from a connection with the interior.

And it is here the Guyra-Grafton line possesses the advantage. That it would strike the coast-line fairly midway and so, as far as any single connection can do, afford equal facilities to all parts of the coast between (say) the Macleay on the south and the Richmond on the north.

Tamworth, *via* Manilla, to Inverell.

We travelled from Inverell to Bingera and thence, *via* Barraba and Manilla, to Tamworth.

Land.

Although there is along this route, between Tamworth and Bingera, a considerable quantity of good land, it, on the east, quickly merges into the high granite country running out northward from the Moonbi Range and that forming the watershed between the Bundarra and Manilla Rivers, whilst on the westward the better country soon falls within the influence of the Narrabri line of railway.

We, therefore, do not consider that at present this line is necessary.

A large traffic, however, now exists, coming from Warialda, and the north and north-west, in the direction of Goondiwindi and Moree, and trending to Tamworth Railway Station.

Inverell to Bingera Extension.

And this, we would suggest, may be best met by the extension of the Inverell line to Bingera, thus effectually intercepting this traffic at Bingera.

This extension would also serve to carry produce such as flour, forage, potatoes, &c., from New England and Inverell to the westward, as well as to bring in further traffic from the west to the sea coast when the coast connection is carried out.

This Bingera extension would run through one of the most fertile parts of the Inverell district.

For nearly 20 miles this is thickly occupied by farms, and on it are some of the best in the district.

The rich red or black soil extends for 15 miles further, though principally occupied by the Myall Creek Station, while the remaining 12 miles to Bingera is on the whole fairly good land.

The land at Bingera, and for about 12 miles in the direction of Tamworth, is also of a very rich quality, and will doubtless be cut into farms and cultivated—when the alluvial gold-mining ceases—and prove an additional feeder to this suggested extension from Inverell.

Traffic.

The question will probably be asked,—Will the Warialda to Tamworth traffic make use of the railway if extended to Bingera?

The position would be this,—Bingera is 100 miles from Tamworth by road, the greater part of which is still unmetalled, whereas Bingera would be, with a railway, *via* Inverell and Glen Innes, from Tamworth 231 miles.

It may be thought that goods can be sent 100 miles by road at less cost than 231 by rail.

Taking wool, at present one of the most important items of carriage.—The Railway Commissioners carry wool from Glen Innes to Sydney, 422 miles, at £3 15s. per ton; add to this the full ordinary rates for wool 90 miles, Bingera to Glen Innes, say £1 10s., and we have a total of £5 5s., Bingera to Sydney per rail.

The road freight, Bingera to Tamworth, 100 miles, would be (say) £3 10s.; add rail freight, Tamworth to Sydney, £3 15s.; total, £7 5s. per road and rail. Showing a saving in carriage by rail against road of £2.

And if the wool traffic be intercepted and taken by rail it follows the return loading must go by the same route.

As to passenger traffic.—The coach fare, Bingera to Tamworth, 100 miles, is £1 17s. 6d., and rail Tamworth to Sydney, 281 miles first class, is £2 7s. 5d.; total, £4 4s. 11d.

Bingera to Sydney by rail would be (say) 512 miles, and we find the first-class fare for that distance would be (say) £4 3s. 6d., or in round numbers, about the same amount for a first-class rail fare (with comfort), as for a day and a night's coaching with a night's train travelling to follow.

If the extension from Glen Innes stops at Inverell, this large traffic now passing from the north and north-west, *via* Warialda and Bingera, to Tamworth, will continue as at present, and none, or very little of it, be obtained for the railway until Tamworth is reached.

This Inverell to Bingera extension, as we have above stated, passes through a rich stretch of country studded with farms, so that considerable wayside traffic would be picked up.

We, therefore, after due investigation, confidently urge consideration of the advisability of this extension to Bingera in connection with any from the Great Northern Railway to Inverell, and the propriety of drawing sooner to the rail a traffic which, although not sufficient to justify the construction of a railway for itself, is large enough to become a very valuable addition to that of the Northern Railway and proposed branch.

A railway from Tamworth to Inverell would be practically a competing one against the Great Northern and any connection with Inverell.

Trend of Traffic.

Assuming Inverell to be connected with the Great Northern Railway either at Glen Innes or Guyra, and no connection made with the coast, it is clearly apparent that by far the greater part of the resulting traffic must be with Sydney and Newcastle.

As part of the traffic going south, taking the item of wool, we estimate that the clip from 750,000 sheep—equal to 2,000 tons—which is at present sent to Sydney and Newcastle from the country around and west of Inverell, would be tracked at Inverell; to which must be added 1,352 tons of tin now tracked at Glen Innes and Guyra—the produce of the Elsmore and Tingha fields. (*See* Mines Report, 1889).

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We also find that for the twelve months ending March, 1890, 2,648 tons of general goods were received from Sydney and Newcastle at Glen Innes Station for despatch to Inverell, and that 512 tons were received at Guyra for Tingha, which would probably come by rail to Inverell in the event of the Glen Innes line being made. So that, without going into the consideration of probable increase, we have this large amount of tonnage going to or coming from the south; and, until a connection is made with the coast near Grafton, and an interchange of products established between there and the west, this Sydney and Newcastle traffic must be the principal.

The coast connection effected, however, a considerable traffic will no doubt arise in supplying the coast districts near the Clarence with breadstuffs and other articles not produced there, and a corresponding return of products from that semi-tropical district.

This will also apply to the coast districts north of the Richmond River, where the population is increasing at a rapid rate, and if the connection from Tenterfield to Casino and Lismore were also made, these districts would be supplied with the same products, breadstuffs, &c., and a northern traffic established.

It is contended that, with a railway to Grafton, the products of Inverell would all go to that port for shipment to Sydney; but a comparison of the rates of carriage would hardly support this.

From Inverell to Sydney, *via* Glen Innes, 466 miles, calculated at present rates, wool would be carried to consignees' stores for £3 15s. per ton.

From Inverell to Grafton, *via* Glen Innes and Don Dorrigo lines, at present mileage rates would be £3 1s. 8d., add to which, sea freight, extra handling, insurance, and cartage from wharfs in Sydney, and the margin of difference would hardly be enough to divert the traffic, once loaded.

With an improved port, however, goods would probably be sent to Grafton for direct shipment to other countries.

It has been stated that with the construction of the Inverell-Glen Innes line, a considerable trade in breadstuffs would spring up between Inverell and Queensland, in supplying the country west of Toowoomba.

It does not, however, appear that such is likely to occur at present, as the following will show.

The distance, Inverell to Wallangarra, *via* Glen Innes, is 112 miles, and the freight upon wheat would be 9s. per ton, or 2·92 pence per bushel.

Wallangarra to Toowoomba is 132 miles, and the cost of carriage at Queensland rates, 11s. 9d. per ton, or 3·81 pence per bushel. Total, 6·73 pence per bushel, Inverell to Toowoomba.

Brisbane to Toowoomba is 101 miles, and the cost of carriage, 10s. 5d. per ton = 3·38 pence per bushel, leaving a difference in favour of Brisbane of 3·35 pence per bushel, to cover the cost of landing sea-borne wheat at Brisbane.

Inverell to Sydney, *via* Glen Innes, would be 466 miles, and the cost of freight 17s. 4d. per ton = 5·62 pence per bushel to land the wheat in a large market, as against 6·73 pence to land it in a limited one at Toowoomba.

Further, the area put under wheat in the three districts in the Darling Downs, viz., Allora, Warwick, and Toowoomba, was, for 1889, 14,242 acres, as against 10,485 acres in Inverell, Glen Innes, and Tenterfield. And Queensland statistics show that the area put under wheat was as great in 1889 as in any previous year, except 1884, when it was slightly in excess of 1889.

With regard to maize, the area planted in the three Darling Downs Districts abovenamed has steadily increased, being in—

1887—13,269 acres
1888—16,651 „ } Darling Downs District,
1889—19,339 „

with an average yield equal to that of the Inverell District, and an area under cultivation largely in excess of Inverell, Glen Innes, and Tenterfield Districts combined, which stand for those years respectively.

1887—6,541 acres
1888—7,332 „ } Combined districts of Inverell, Glen Innes, and Tenterfield.
1889—7,971 „

This would go to show that wheat and maize growing has been so fairly successful in the Darling Downs District as to make any competition in these products a very questionable matter from places so distant as Inverell.

It has been proved to us that at present neither Glen Innes nor Tenterfield, which claim to be wheat-producing districts and possess mills, are sending wheat or flour (in quantity) into Queensland, as we find that, although a considerable quantity of flour crosses the border at Wallangarra, it is all brought from Sydney and sent only a few miles into the adjacent Colony, principally to Stanthorpe and the vicinity. And it would appear that the special rate charged in Queensland on imported flour is practically prohibitive. Nevertheless, this Toowoomba market would still be open to Inverell, when paying prices prevailed, owing to failure of crops in Queensland.

But that a traffic must eventually spring up across the border is inevitable, as it would seem inconceivable that with federation accomplished and tariffs assimilated two great Colonies should not have an important interchange both of passenger and goods traffic, more particularly when a uniform railway gauge is adopted.

Summary.

On the immediate necessity for connecting the magnificent and extensive country about Inverell with the Railway system, no one who has travelled through the district can have any doubt.

It requires neither figures nor statistics to prove it—it is self-evident (and it is to be regretted that want of unanimity amongst the people should have delayed its construction so long).

We, therefore, confine ourselves to the question submitted to us, namely:—What connection will be conducive of the greatest good to the greatest number?

The Uralla and Kentucky lines, though possessing many engineering merits, and having the great advantage of being the most direct routes to Sydney, besides having been shown to run through very poor country, present to us the insuperable objection, that neither would form any direct link towards connecting the western interior with the north coast districts.

We, therefore, dismiss them from further consideration.

We also dismiss the "Swanbrook" route from Glen Innes, as that *via* Wellingrove seems superior.

This leaves only the Guyra to Inverell, and the Glen Innes to Inverell, *via* Wellingrove, to be discussed, and their advantages and disadvantages compared.

As a connection with the Great Northern Railway, the Guyra to Inverell line has the following advantages:—

1st. It is the least expensive, the estimated cost being £403,861.
2nd. It is, as to grades and curves, the better line.
3rd. It passes through a fair quantity of good land, much of which is unalienated.
4th. It offers the more direct connection with Sydney.
5th. It would also be the more direct connection between Inverell and the proposed Guyra to Grafton line.
6th. It passes through the mining district and town of Tingha; though, as pointed out previously, the permanence of this tin-field remains to be proved.
7th. It would get the Bundarra traffic, which would hardly come to the Glen Innes line.

The single disadvantage is, however, that in the possible event of the Tenterfield to Casino line being constructed at no distant date, as a second connection with the coast, all traffic to and fro between Inverell and the country north of Grafton, as well as that with Queensland, would have to be taken 48 miles out of the way, *via* Guyra, as compared with the Glen Innes to Inverell route.

The advantages possessed by the Glen Innes to Inverell line are:—

1st. The length to be constructed and worked is less than the Guyra line, although the cost of construction will be greater.
2nd. It passes for almost the whole distance through land of the most fertile character.
3rd. It strikes the main line nearly midway between the proposed coast connections from Guyra and from Tenterfield, and, as the result of our investigations tends to show that both these connections will be justified within a reasonable future, it seems desirable when this occurs that the line to the western interior should be midway between them.
4th. That it is the shorter route to Queensland from Inverell.
5th. That it will connect two important towns, viz., Inverell and Glen Innes, between which there is at present a considerable local traffic.

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On the other hand the disadvantages are :—

1st. That the estimated cost of the line is £492,400, or £88,539 in excess of that to Guyra.

2nd. The grades are heavier and the curves sharper.

3rd. That the traffic to Sydney and southern parts, and that to the coast at Grafton, by way of the Don Dorrigo, would be taken 26 and 12 miles respectively out of the more direct course *via* Guyra.

4th. That almost the whole of the land along the route is alienated and principally held in large pastoral estates.

Taken by itself, as a connection between Inverell and the Great Northern Railway, the Guyra line possesses advantages over its remaining rival from Glen Innes.

We must now consider how the proposed connections with the coast will affect it, and this is really the key of the whole question.

The Grafton to Glen Innes line we have already dismissed on account of its many disadvantages both engineering and commercial, which the saving in mileage, its single advantage, is quite insufficient to out weigh.

The line from near Guyra, *via* Don Dorrigo, to South Grafton, though rather circuitous in route, possesses many merits, and is apparently the best line that can be got from Grafton to the table-land.

That the present and future prosperity of the Clarence depends on such a connection being made is pretty well apparent, for it has now practically ceased to be the seaport of New England.

That the present prosperity of Inverell or New England depends on getting this connection has not been made clear to us, although we heard it freely stated, though the future in a measure does.

For if the Clarence is made a first-class port for direct shipment to England, as Sir John Coode's Report indicates it will be when the proposed improvement works are carried out in their entirety, it will then be a matter of great importance to the interior to have this port as an outlet, and be able to ship produce by deep-sea vessels.

We, therefore, think that the Don Dorrigo line, from near Guyra to Grafton, should be constructed.

If this were to be the only connection with the coast, then the Guyra to Inverell line should undoubtedly be made, as being the more direct.

But we cannot help being impressed with the necessity for constructing, in the future, the line from Tenterfield to Casino, for the following reasons :—

It will connect the fertile and populous Richmond District and Byron Bay with Tenterfield and the interior.

It will tend to develop the important mining district of Fairfield.

It will open up a large area of good land *en route*.

It will pass through one of the finest forests in the Colony.

It will form a link in a more direct route between Sydney and Brisbane.

And will open up a traffic area, which would not be served by any line to Grafton from the table-land.

Conclusion.

Being, therefore, convinced that soon after the completion of the Guyra to Grafton line, the Tenterfield to Casino Railway must also be constructed, we are of opinion that the general interest of the whole country would be better served by the line from Glen Innes to Inverell than by the line from Guyra to Inverell, for the reason that Glen Innes is between the two points of connection with the coast.

The advantages of such a position were fully shown when discussing the trend of traffic.

It would appear to us desirable, rather, for all time, to take the southern traffic 26 miles round than, by effecting this saving, to commit what appears likely ultimately to be a considerable Queensland and Richmond traffic to a detour of 48 miles, with the ascent and descent of Ben Lomond, and at the risk of it afterwards proving necessary to construct a second western connection to meet this northern traffic.

And on these grounds we found our disposition to favour—

1st. The construction of the Glen Innes to Inverell line.

2nd. The construction of the Guyra, *via* Don Dorrigo, to Grafton line.

And at a later date that from Tenterfield to Casino.

We have, &c.,
PERCY SCARR.
EDWARD B. PRICE.

Proposed Railways, Northern Districts.

Table of Distances.

Existing Lines.

	Miles.
Sydney to Kentucky	334
,, Uralla	343
,, Guyra	385
,, Glen Innes	422
,, Tenterfield	479
,, Wallangarra	490
Guyra to Llangothlin	7
Llangothlin to Glen Innes	30
Glen Innes to Tenterfield	57
Tenterfield to Wallangarra	11

Proposed Lines.

Inverell, *via* Swanbrook, to Glen Innes	44½	West of the G. N. Railway.
,, ,, Wellingrove, to Glen Innes	44½	
,, ,, Guyra	55	
,, ,, Yarrowick, to Uralla	80½	
,, ,, Bundarra, to Kentucky	82¾	
,, to Bingera	45	
Bingera, *via* Barraba, to Tamworth	100	
Llangothlin, *via* Don Dorrigo, to Grafton	145*	East of the G. N. Railway.
Glen Innes, *via* Newton-Boyd, to Grafton	102	
Tenterfield to Casino	86	
Inverell, *via* Guyra and Llangothlin, to Grafton	207*	Through distances.
,, Glen Innes and Llangothlin, to Grafton	219*	
,, Newton-Boyd, to Grafton	146	
,, Guyra and Tenterfield, to Casino	235	
,, Glen Innes and Tenterfield, to Casino	187	
,, Glen Innes, to Sydney	466	
,, Guyra, to Sydney	440	
,, Uralla, to Sydney	423	
,, Kentucky, to Sydney	417	

Queensland Lines.

Wallangarra to Toowoomba	132
Toowoomba to Brisbane	101

* Estimated.

D.

STATEMENT OF THE TONNAGE OF WHEAT AND FLOUR FORWARDED FROM AND RECEIVED AT THE UNDER-NOTED STATIONS DURING THE YEARS 1889 AND 1890 :—

[Supplied by the Minister for Railways, Queensland.]

Stations.	Wheat.			Flour.		
	Forwarded.	Received.	Total.	Forwarded.	Received.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Stanthorpe, 1889	1	3	4	15	290	305
,, 1890	.....	3	3	16	356	372
Total	1	6	7	31	646	677
Warwick, 1889	.....	1,305	1,305	672	99	771
,, 1890	21	2,796	2,817	1,141	62	1,203
Total	21	4,101	4,122	1,813	161	1,974
Toowoomba, 1889	107	122	229	488	1,409	1,897
,, 1890	48	290	338	543	1,506	2,049
Total	155	412	567	1,031	2,915	3,946
Gross Total	177	4,519	4,696	2,875	3,722	6,597

E.

COMPARATIVE STATEMENT OF ALIENATED, RESERVED, AND CROWN LANDS IN THE VICINITY OF THE SEVERAL PROPOSED RAILWAY LINES CONNECTING INVERELL WITH THE GREAT NORTHERN RAILWAY LINE.

Inverell to Glen Innes.

	Within 1 mile on each side.	Within 20 miles on either side.	
		Northern side.	Southern side.
Alienated Land	About 55,000 acres.	About 440,000 acres.	About 270,000 acres.
Crown Land (exclusive Reserves)	nil	,, 165,000 ,,	,, 50,000 ,,
Reserves	,, 7,000 ,,	,, 45,000 ,,	,, 80,000 ,,

NOTE.—Of the 125,000 acres reserved, about 70,000 acres are on account of mining.

Inverell to Guyra, *via* Tingha.

	Within 1 mile on each side.	Within 20 miles on either side.	
		North-eastern side.	South-western side.
Alienated Land	About 40,000 acres.	About 312,000 acres.	About 275,000 acres.
Crown Land (exclusive Reserves)	,, 3,000 ,,	,, 40,000 ,,	,, 148,000 ,,
Reserves	,, 23,000 ,,	,, 98,000 ,,	,, 192,000 ,,

NOTE.—Of the 290,000 acres reserved, about 210,000 acres are on account of mining, and 34,000 acres for the preservation of timber.

Inverell to Uralla.

	Within 1 mile on each side.	Within 20 miles on either side.	
		Eastern side.	Western side.
Alienated Land	About 65,000 acres.	About 432,000 acres.	About 300,000 acres.
Crown Land (exclusive Reserves)	,, 5,000 ,,	,, 104,000 ,,	,, 380,000 ,,
Reserves	,, 30,000 ,,	,, 198,000 ,,	,, 140,000 ,,

NOTE.—Of the 338,000 acres reserved, about 255,000 acres are on account of mining, and 81,000 acres for the preservation of timber.
N.B.—The above computations are only approximately correct.

F.

[To Evidence of F. A. Wright, Esq., M.P.]

MINING IN THE GLEN INNES AND EMMAVILLE DISTRICTS—OFFICIAL REPORT.

Telegram, dated 14 May, 1891, from M. H. Fitzhardinge, Esq., Mayor, Glen Innes, to F. A. Wright, Esq., M.P.

HAVE posted you official report from Warden, referring to mining interest. Please place before Sectional Committee. Warden's illness prevented earlier submission.

Sir, Warden's Office, Glen Innes, 13 May, 1891.

In response to your letter of the 9th instant, and for the information of the Sectional Committee of Public Works, I beg to state that the mining industry in the Glen Innes and Emmaville Districts gave employment during 1890 to an average number of 1,200 miners, and that there is every reason to anticipate a steady and large increase in the number as the various mines now being opened out are brought into settled working order.

On the Paddy's Land Range, south-east of Glen Innes, a promising lode of sulphide of copper, bearing 20 oz. of silver to the ton of ore, has been taken up by a Sydney syndicate, who are erecting furnaces with a view to the production of copper-matte for shipment direct to Europe.

Before the present year runs out many hands will be steadily employed on this mine. On both slopes of this range antimony has been found, and one of the properties has recently changed hands for a considerable sum of money.

A

A few miles nearer Glen Innes, the auriferous reefs at Bear Hill are being well developed and already employ about 100 miners. In this new country (including Konkabookra adjoining), about 350 people are settled in connection with mining, directly and indirectly, and the number is being daily added to as the works progress.

At Oakwood Gulf, more directly east of this town, the Starlight Gold Company have spent about £6,000 in developing their very valuable property. In connection with this mine and others in its neighbourhood, about forty people are employed and additions are being made to their ranks.

The bismuth mines at Kingsgate employed 100 hands to the close of 1889, but over-production of the metal led to the shutting down of the mines. When they reopen, it is expected that a larger number of miners will be taken on.

Close to Glen Innes, on the east, mining in the alluvial for tin has taken a start, and it is stated that fifty men will shortly be set to work on the Mann River by one company.

Twelve miles, north-westerly, on Clairvaux, a promising reef of silver-bearing galena has been opened, showing a vein not less than 14 feet wide, but the amount of silver per ton (20 oz.) is not sufficient to pay the present heavy charges for carriage to, and treatment at, the distant reduction works at Granville and Dry Creek.

At Glen Elgin, north-easterly, a rich gold-bearing reef has been taken over by an English company, just formed, who will shortly commence work with a capital of £60,000. There are other proved reefs in the locality awaiting the advent of enterprise of a similar nature and the resulting influx of population to add their quota to the general wealth of the community. Close to the gold reefs are the tin-bearing lodes at Pleasant Creek, as yet undeveloped, but of sufficient promise to lead to the expectation of their being turned to profitable account in the near future.

Across the range, on the western fall, the silver mines at Castlereagh are known to be rich, and it cannot be long before the advent of skilled smelters, backed with capital, overcomes the difficulty at present experienced in treating these refractory ores. The alluvial tin mines at Vegetable Creek have not lately been so productive as when first opened, by some hundreds of tons, but the lodes are numerous and rich, and are attracting more attention than formerly. When this phase of mining is taken seriously in hand a larger number of men will find more permanent employment than the alluvial mines could ever afford.

Wolfram, in a massive vein, has lately been found on this creek, Emmaville District, and preparations are being made to work it.

I have given, in detail, the best known centres of mining in the division under my charge, to show the extent of the mineral wealth of the district, and, inferentially, the possibilities of the near future, when incoming capital shall have drawn a larger mining population into the recesses of the rugged mountains where the mines are mostly situated.

The main food supplies of a population so employed ought to be drawn, as in the past, from the agricultural lands west of them, and the breadstuffs of the inland slopes will doubtless find a ready market at the mines if cheap means of communication should be established from the west to the centres of distribution.

Appended is an abstract from my annual report, showing the average number of miners employed during the past year, and nature and value of minerals raised.

G. MARTIN,
Warden.

M. H. Fitzhardinge, Esq., Mayor, Glen Innes.

ABSTRACT Mining Report, Glen Innes Division, for the year ending 31st December, 1890, showing output of Minerals and average number of Miners employed.

		£ s. d.
	Emmaville District :—	
Tin ore	1,150 tons—value	80,950 0 0
Silver ore	1,075 tons concentrates yielding as per assay 102,150 oz.—estimated gross value	20,430 0 0
Copper regulus	2 tons—value unknown	.....
Emeralds	2,225 carats—no return of sale	.....
	Glen Innes District :—	
Gold	941 oz. 4 dwt. 19 gr.—value	3,514 6 0
Tin ore	151 tons 18 cwt.—value	8,050 14 0
	Total value	£92,945 10 0

District.	Minerals worked for.	Europeans.	Chinese.
Emmaville	Tin	301	500
	Silver	95	.....
	Emeralds	13	.....
Glen Innes	Tin	32	60
	Tin and Gold	21	25
	Gold	80	17
	Silver	4	.....
	Totals	546	602

B.C.—Glen Innes, 6/2/91.

G.

[To Evidence of Hon. Henry Copeland, M.P., Minister for Lands.]

PETITION FROM RESIDENTS OF THE TABLE-LAND OF NEW ENGLAND.

To the President of the Public Works Committee.

The Petition of the undersigned residents of the Table-land of New England,—

Humbly sheweth :—

That in the interests of the northern districts and the colony generally it is desirable that the proposed line of railway connecting the district of Inverell with the Main Northern Line should have its junction at Guyra.

From the report of Messrs. Scarr and Price it has been shown that :—

1. It would effect a saving of 33 miles in distance over the proposed Glen Innes-Inverell line.

2. It affords the more direct communication with the natural market—Sydney.

3. It would be the more direct communication between the district of Inverell and the proposed Guyra-Grafton line.

4. Most of the land through which it passes is unalienated, whilst nearly the whole of the land on the proposed Glen Innes-Inverell line is alienated and would have to be purchased.

5. It would effect a saving of one hundred thousand pounds or over (*vide* Messrs. Scarr and Price's report), exclusive of the cost of purchasing the land.

Your petitioners therefore humbly pray that you will give favourable consideration to the Guyra-Inverell line.

And your petitioners will ever pray, &c.

Name.	Occupation.	Address.
A. Crossman	Auctioneer	Armidale
William Drew	Mayor	do
John More	J.P.	do
J. D. Bradley	District Inspector of Schools	do
J. Braund & Co.	Merchants	do
John A. M'Donald	Solicitor	do
Wm. C. Higinbotham	Merchant	do
E. Hargrave	Solicitor, &c.	do
Geo. Allingham	Stock and Station Agent	do
J. W. Nungram	Stock and Station Agent	do
James Miller	Gentleman	do
H. C. Antill	Miner	do
Julian R. Mitchell	Journalist	do
James Snape	Sharebroker	do
H. T. Head	Commercial Traveller	do
Chas. H. Leverett	Builder	do
M. Guigni	Watchmaker	do
Chas. Wusan	Auctioneer	do
A. J. Apps	Saddler	do
John Hunter, per W. Dummer	Storekeeper	do
B. Weaver	Chemist	do
S. W. Kirke	Draftsman	do
H. E. Blaxland	Agent	do
A. J. Nunnington	Surveyor	do
Hyles Baker	Storekeeper	do
R. W. Brereton	Hotelkeeper	do
W. G. Brereton	Prospector	do
Geo. G. M'Bean	Mine owner	do
J. J. Moore	Auctioneer	do
H. G. Mallam, jun.	Clerk	do
Herbert G. Mallam	Chemist	do
Andrew Black	Freeholder	do
A. Geo. Jenkins	Stock Agent	do
P. G. Marsh	Grazier	do
W. J. Crawford	Schoolmaster	do
D. Daly	Farmer	do
O. Wade	Hotelkeeper	do
Thomas Fitzgerald	Poundkeeper	do
C. J. Castles	Town crier	do
H. Goldman	Hairdresser	do
G. Beckingham	Labourer	do
J. Sullivan	Labourer	do
Terence M'Guire	Farmer	do
C. Pemberton Salusbury	Selector	do
Squire Wilson	Hairdresser	do
Thomas Stuart	Watchmaker	do
Albert Simpson	Solicitor	do
John Kickham	Hotelkeeper	do
Geo. Wigan	Surgeon	do
Ben. Blaxland	Agent	do
Rich. Hargrave	Grazier	do
L. G. Mallam	M.B., Ch.M., &c.	do
C. Horne	Banker	do
R. Hargrave, jun.	Station Manager	Hillgrove Station
M. J. Finn	Clerk	Armidale
H. D. Ross	Station Manager	Walcha

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

SECTIONAL COMMITTEE.

RAILWAY FROM GLEN INNES TO INVERELL.

REPORT.

The Sectional Committee, appointed on the 23rd April, 1891, to inspect, take evidence, and report on the proposed Railway from Glen Innes to Inverell, have to report as follows:—

Four members of the Committee, namely, Mr. J. Garrard, M.L.A. (Chairman), the Hon. W. J. Trickett, M.L.C., Mr. E. W. O'Sullivan, M.L.A., and Mr. W. McCourt, M.L.A., left Sydney by the 7 p.m. train on Thursday, 30th April, 1891, arriving at Glen Innes on Friday, the 1st May, when they at once commenced their inquiry at the local Court-house by taking the evidence of Mr. M. A. Maclean, Chief Draftsman at the District Survey Office, Armidale, as to the lands on the various proposed routes of railway, and Mr. C. M. Stuart, Supervising Engineer engaged in surveying the line from Glen Innes to Inverell *via* Wellingrove and Swanbrook.

On Saturday, the 2nd May, the Committee were occupied during the whole day in examining the following witnesses:—Mr. M. H. Fitzhardinge, Mayor of Glen Innes; Mr. J. F. Utz, merchant and importer; Mr. C. Legh, selector; Messrs. W. Woods, T. O'Hara, and P. Walsh, farmers and dairymen; Mr. J. A. M'Intyre, grazier; Mr. J. A. P. Selkirk, Manager of the A. J. S. Bank; Mr. P. M'Cormack, hotel proprietor; Mr. J. Healy, produce merchant; and Mr. E. Grover, builder.

On Monday, the 4th May, the Committee took the evidence of Mr. W. T. Cadell, grazier, and then left for Inverell by the main road, travelling by special coach. They were accompanied by Mr. Stuart, Supervising Engineer, who pointed out the junction of the Wellingrove with the Swanbrook route at Maid's Valley, and gave other information as to the direction of the new survey. Passing near Waterloo and Balaclava the Committee arrived at the village of Swanvale, about 30 miles from Glen Innes, at 12·45 p.m., and took evidence, at Caldow's Hotel, from Mr. W. Young, Postmaster, Mr. D. S. Anderson, grazier, and Mr. A. Caldow, hotelkeeper. They afterwards resumed their journey to Inverell, which was reached at 5·30 p.m., after passing through Long Plains. At Inverell they were joined by Mr. Tonkin.

On Tuesday morning, the 5th May, the full Committee met at the Court-house, Inverell, and took the evidence of Messrs. J. P. Pawley, Mayor of Inverell; E. Grainger, Manager of the Bank of New South Wales; W. Gilholme, farmer; J. Taafe, farmer; J. Coggan, farmer and grazier; J. Moore, farmer; J. Bryden, farmer; P. B. Eddy, farmer and grazier; H. Wyndham, grazier; A. M'Clymont, farmer; E. Wyndham, winegrower; J. W. Moore, builder; G. F. Lewin, fruitgrower; H. Penberthy, storekeeper; H. M. M'Lean, storekeeper; A. Oliver, miller and produce dealer; and R. Alcock, coach proprietor.

On Wednesday, the 6th May, the Committee continued their inquiry at the Court-house, Inverell, where they examined the following witnesses:—Messrs. C. C. Loxton, surveyor and farmer; R. Stout, storekeeper; H. P. Baly, Acting Crown Lands Agent; J. Sinclair, stock and station agent; and A. G. Jenkins, storekeeper; after which a portion of the surrounding district was inspected, including the estates of Blair Athol, Byron, and Inverell.

Early

Early on Thursday morning a visit was made to the site of the terminal station for the proposed railway, and at 10·15 a.m. the Committee left Inverell by special coach for Tingha, travelling by the main road. Passing through Gilgai, a small settlement 5 miles from Inverell, they arrived at Tingha at 12·30 p.m., and after visiting a tin-mining claim close to the township took evidence at the local Court-house, where the following witnesses were examined:—Messrs. R. Buist, mining manager; W. Litchfield, mining agent; E. Warland, fruitgrower; R. A. Wiseman, grazier; T. Jones, winegrower; J. Rank, Senior-Constable. In the evening evidence was taken at the Commercial Hotel, from Messrs. B. C. Martin, miner; C. Bowers, miner; and A. J. Parker, storekeeper.

At 7 a.m. on Friday, the 8th May, the Committee proceeded *en route* to Guyra, passing through New Valley and Kangaroo Camp, and arrived at Wandsworth at 12·30 p.m. Here they took evidence from the following persons:—Messrs. E. Everett, grazier; D. Stewart, grazier and farmer; W. Ferguson, grazier; W. Wade, grazier and farmer; W. Willis, grazier and farmer; J. E. Everett, C.E.; and W. M'Crossin, storekeeper. Continuing their journey by coach along the main road the Committee reached Guyra at 5·30 p.m.

On Saturday, at 9·30 a.m., the Committee met at the Guyra Hotel, and examined the following witnesses:—Messrs. A. W. Everett, station manager; W. Moore, farmer and produce dealer; J. Kirk, farmer; W. Kenny, farmer; G. Drabsch, farmer and grazier; R. Sutton, farmer; L. Dean, carrier and farmer; J. Monteith, farmer; A. F. Dutton, grazier; R. Pearson, mill proprietor; and W. Relton, grazier and farmer. The Committee then left Guyra by train for Armidale, where they arrived at 1·30 p.m.

A meeting was held in the Court-house, Armidale, on Monday, at 9·30 a.m., for the purpose of taking further evidence, and the following witnesses were examined:—Messrs. W. Drew, Mayor of Armidale; H. Hogarth, Acting District Surveyor; J. Moore, senior, miller; C. Wilson, auctioneer and commission agent; R. Richardson, merchant and miller; F. Braund, merchant; J. F. French, architect and civil engineer; J. J. Moore, auctioneer and commission agent; J. Craigie, auctioneer and commission agent; and E. Lonsdale, builder. Leaving Armidale by the 1·50 p.m. train, the Committee next visited Uralla, and examined the following witnesses in the local Court-house:—Messrs. M. J. M'Mahon, Mayor of Uralla; W. Cleghorn, sheep-farmer and fruit-grower; J. D. Leece, Council Clerk; J. Haines, flour-mill manager, and J. H. Sandilands. They then proceeded by train to Tamworth, where they arrived at 9·15 p.m.

On Tuesday, the 12th May, the Committee met at the Royal Hotel, Tamworth, and took evidence from Messrs. C. J. Britten, brewer, and L. H. Hyman, of the firm of Cohen and Levy, merchants. They left Tamworth by the mail train at 4·50 p.m., and arrived in Sydney on Wednesday, at 5·35 a.m.

From the evidence taken and from personal observation, the Committee found that the district of Inverell possessed productive capabilities to an exceptional degree, having a vast extent of rich agricultural soil, which a favourable climate and regular rainfall render peculiarly suitable to the growth of wheat and other marketable products. Good crops of maize are obtained, vine-growing has for years been successfully carried on, and if sufficient facilities offered, there would be a large export of fruit. Owing to the want of a market the district at present only produces sufficient wheat for local consumption, and agriculture generally has of late years been on the decline, the farmers finding it more profitable to apply their land to grazing purposes. There is a large area of land already cleared and fit for the plough, which would at once come into cultivation if access were given to a market. If Inverell were connected with the northern railway system it would become an important centre for a large extent of valuable country, already under profitable pastoral occupation, to the west and north-west. A good deal of trade is already done between Inverell and these districts, and the evidence showed that they would send considerable traffic to the railway in the shape of wool for Sydney, and return stores. It was stated that for 20 miles west of Inverell the conditions as regards soil and climate were favourable to agriculture.

With these facts before them the Committee had little difficulty in arriving at the unanimous conclusion that Inverell was deserving of railway communication, and on this point they found a general concensus of opinion in all the centres of population visited.

Of

Of the four routes proposed by which to connect Inverell with the Great Northern Line, namely, those terminating respectively at Glen Innes, Guyra, Uralla, and Kentucky, the two last being so similar in their main features, the Committee treated them as one, and practically limited their inquiry to the Uralla line. This route possesses disadvantages which place it out of competition with the two more northern routes. In the first place, Uralla is too far to the south to enable Inverell to connect conveniently, either with Queensland or the coast, and in the next place the line is much longer than the others, and would, in a measure, compete with the Great Northern Line.

As to the respective merits of the Glen Innes and Guyra routes, the Committee found a considerable conflict of opinion. Summarised from the evidence, the arguments in favour of the former were these—that in view of a probable market for Inverell wheat in Queensland, and on the northern coast of New South Wales, it offered the more direct access to those markets; that Glen Innes was midway between Tenterfield and Guyra, the two probable points of junction with the coast; that the land through which the line would run was of a superior character, capable of carrying a large agricultural population; that the distance of Tingha (an important and somewhat populous mining centre) is only about 15 miles from Inverell; that the existing traffic from Tingha, Inverell, and further west goes to Glen Innes.

On behalf of Guyra it was contended that there was at present a considerable population along the route; that the mining township and district of Tingha would be better served by the line; that it would also take the Bundarra traffic, and accommodate the settlers of Wandsworth, Tenterden and Ollera; and that this was the more direct route to Sydney, and also to the coast *via* Guyra. The quantity of unalienated Crown land (excepting reserves) within 20 miles on either side of the Glen Innes-Inverell route is 215,000 acres, and on the Guyra-Inverell route 191,000 acres. The reserves on the Glen Innes route comprise 125,000 acres, and on the Guyra route 290,000 acres.

The feeling of the people of Inverell, as almost unanimously expressed by the numerous witnesses examined there, was in favour of a connection with Glen Innes, and the Committee think some consideration should be given to the wishes of those who are most immediately concerned in the question. Their chief reasons for preferring this route are that it will give them more direct communication with Queensland, where they hope to find a market for their produce, and that the land on that route is better. On the question of a probable wheat market in Queensland the Committee found a considerable difference of opinion. It was contended by some that Inverell would not be able to compete with the Darling Downs, the principal wheat-growing district of Queensland, while it was shown, on the other hand, that the yield on the Darling Downs was very uncertain, owing to bad seasons, of which there were five in the ten years from 1880 to 1889 inclusive.

The Committee are inclined to think that the probability of a future wheat market in Queensland cannot be left out of the question, and this, together with the fact that Glen Innes is nearly midway between the proposed coast connections at Tenterfield and Guyra, must have some influence on their decision. They think it important also to consider these points: that the population in the Richmond and Tweed districts, which will be connected with the Great Northern Line at Tenterfield, will be much greater than the population in the Clarence district, which will be connected with the Great Northern Line at Guyra; that a connection at Guyra would involve a longer railway carriage for Inverell produce on its way to the Richmond and Tweed Rivers, which are non-wheat producing districts, and will, in the near future, carry a large population; that the land along the Glen Innes route, although mostly held in large estates, is of such a fertile character that, with railway communication, it must inevitably come into cultivation; that, though Tingha would be better served by the Guyra line, it will be within a distance of 11 miles from Brodie's Plains, on the Glen Innes line; and that even with direct railway communication there would be no reason to expect any rapid growth of population in the locality of Tingha, where the evidence shows that the population and yield of tin are rather diminishing than increasing.

After carefully weighing all the circumstances the Committee recommend the construction of a line of railway from Glen Innes to Inverell, according to the amended survey *via* Wellingrove and Swanbrook.

J. GARRARD,
Chairman.

2nd June, 1891.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

RAILWAY FROM GLEN INNES TO INVERELL.

[TAKEN BEFORE THE SECTIONAL COMMITTEE.]

FRIDAY, 1 *MAY*, 1891.

[*The Sectional Committee met at the Court-house, Glen Innes, at 3.45 p.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM JOSEPH TRICKETT. | EDWARD WILLIAM O'SULLIVAN, Esq.
WILLIAM McCOURT, Esq.

The Sectional Committee proceeded to consider the proposed Railway from Glen Innes to Inverell.

Mr. Mordaunt A. Maclean, Draftsman in charge of the District Survey Office, Armidale, sworn, and examined:—

Mr. M. A. Maclean. 1 May, 1891.

1. *Chairman.*] What position do you hold in the Public Service? I am Draftsman in charge at the District Survey Office, Armidale.
2. Who is the District Surveyor? Mr. Hogarth is the Acting District Surveyor, but he is absent from Armidale at present.
3. How long have you been in your present position? Twelve months, but I have been connected with the office for five years.
4. How long have you been in this district? Five years.
5. Have you an intimate personal knowledge of the country that would be benefited by the proposed railway? I have no personal knowledge of the country between Glen Innes and Inverell.
6. The only knowledge you have then is from the office records? Yes.
7. Are you in a position to state the area of Crown lands, say, between Glen Innes and Inverell? I could ascertain from the office maps.
8. You have not made it up? No.
9. Is there much unalienated land between Glen Innes and Inverell, or has the land nearly all passed from the Crown? I do not think there is very much; a large proportion of the land is alienated.
10. Is the sketch produced, showing the unalienated lands, reserves, and alienated lands respectively, approximately correct? It does not seem to show many reserves along the line between Glen Innes and Inverell. I should think there were more than are shown here.
11. If this has been compiled at the head office during the past week from the information at their command, ought it not to be fairly accurate? It ought to be accurate.
12. And knowing that it has been compiled at the head office, you would hardly be justified, without reference to your maps, in saying that it is not accurate? No.
13. Does that plan show that the greater portion of the land between Glen Innes and Inverell has been alienated? Yes, by far the greater portion.
14. In regard to the different proposed routes for a railway from Inverell, viz., by Kentucky, Uralla, Guyra, and Glen Innes, on which route do you consider there is more unalienated land according to that plan? On the route from Inverell to Guyra.
15. And on which route is there the largest area of reserves? The largest area of reserves would be on that route also.
16. What is the nature of those reserves? They are mineral reserves and reserves that have been made pending the settlement of the railway route.
17. You do not know anything of the character of the country on the different routes? I have been on parts of the other lines—on the Guyra to Inverell line, for instance.
18. How far out from Guyra? 30 miles, in the direction of Inverell.
19. What is the nature of the country along that 30 miles? It is poor country, as a rule, except in the immediate vicinity of Guyra.
20. Do you know anything of the nature of the country between Glen Innes and Inverell? No, only from hearsay.
21. Armidale is the land centre of this particular district, embracing Inverell? It is the head office of the local land administration, which embraces Inverell.
22. Does the land district extend to Bingera? No, it stops short of Bingera.
23. Has there been much land taken up in the Inverell district generally? Yes, there has been a large area.
24. On which of the surveyed lines has there been most land taken up? I think the largest portion has been on the Guyra-Inverell line.

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25. Do you think that has been taken up for *bona fide* settlement, or merely for speculative purposes? I think for *bona fide* settlement.
26. You say that the land along the Guyra line is inferior—would people be likely to take it up for *bona fide* purposes if it is inferior to land in other portions of the district? I was not thinking of it in connection with agricultural land, but merely grazing land. It is mostly grazing land between Guyra and Inverell, except what is metalliferous.
27. Then the land that has recently been taken up on the Guyra route is principally for pastoral purposes? Yes.
28. And has it been taken up in large areas? Up to 1,280 acres.
29. Do you produce for the information of the Committee a map of the county of Gough, which includes the country that will be traversed by the proposed railway? Yes.
30. The blue line on the map shows the proposed line *via* Swanbrook? Yes.
31. The other lines are not marked upon it? No. A small portion of the line to Guyra and also to Kentucky is shown as running from Inverell.
32. Have you any knowledge as to how far the country is influenced by a line of railway—do you think, for instance, that people would send their produce to a railway if they were 30 miles away from the line? Produce would hardly be sent so far as that I should think. The selectors in this district, as a rule, seem to like to get within 10 or 12 miles of the railway.
33. And beyond that distance they go in for things which are not dependent upon railway carriage? Yes, the land is not so much settled, and they can graze sheep over it.
34. You are not a surveyor yourself, are you? No, I am not a licensed surveyor.
35. Do you know anything of the country on the Wellingrove route? No.
36. In the portion of the country between Guyra and Inverell, over which you have gone, are there any very great engineering difficulties? No, none.
37. Do you know to what station on the northern line the people of Inverell now send their produce? No.
38. Have you any other map? Yes. I also produce a map of the county of Hardinge, which is immediately to the south of the county of Gough, showing the surveyed lines from Inverell to Guyra, Inverell to Uralla, and Inverell to Kentucky. This is not charted up to date, but is an old county map, merely produced to show the route of the various lines.
39. How did you obtain that information? We have it charted on our parish maps.
40. Did the railway authorities give you the information necessary to chart it? Yes; it is a tracing from railway surveys.
41. Is the information sufficiently minute to enable you to show on your plans the exact position of the various lines? Yes; or closely approximate.
42. On the map of the county of Gough the unalienated Crown lands from Glen Innes to Inverell, *via* Swanbrook, are shown by a pink tint, and amount approximately to 4,000 acres,* including all reserves. This is in the immediate vicinity of the surveyed route, but there may be, and no doubt are, other Crown lands? None within a mile on each side of the line.
43. *Mr. Trickett.*] Could you supply to the Secretary of the Public Works Committee in Sydney, a return showing the quantity of unalienated land through which the four different railway routes pass? Yes.
44. Could you also supply a return showing the amount of unalienated Crown lands on either side of those routes, distinguishing one side from the other, within a distance (say) of 20 miles? Yes.
45. Besides the Glen Innes and Guyra lines, there are two other proposed routes, viz., one from Inverell to Kentucky, and another from Inverell to Uralla. Do you know anything of these two latter routes? Yes; I have been over that country a good deal.
46. What is its character? It is mostly granite country—it is grazing country.
47. Is it a better or worse class of country than that on the other two lines? It is not as good country as that on the other two lines.
48. Is it mineralised country, most of it? Yes; but I think it is so much mineralised that it is not likely to be productive.
49. Are there any mines scattered along those two routes of any importance? No; the country is purely grazing country.
50. Is most of the land along those two lines alienated? No; only a small portion of it.
51. The rest is leasehold? Yes.
52. Those two routes would, of course, be very much longer than either the route from Guyra to Inverell, or Glen Innes to Inverell? Yes.
53. Between Inverell and Guyra, *via* Tingha, are there any centres of population at the present time, besides Tingha? There is a small township at Wandsworth, about 12 miles from Guyra.
54. Is that of any importance? No; it is merely the postal town for the surrounding settlers. There are a large number of selectors in the immediate neighbourhood.
55. From your knowledge of that portion of the line which you traversed, did the settlement seem of a permanent character? I think so.
56. Are the settlers men who have been there some considerable time? Yes; and their families are growing up, and selecting land in the same locality.
57. And so far as you can see it is a settled population? Yes; for 15 or 20 miles there is a settled population.
58. Does the same state of things prevail, as far as you know, on the route from Inverell to Glen Innes? I can only speak from hearsay on that point; but I believe the land is mostly contained in landed estates.
59. There are no towns of any importance at all on that line, are there? No.
60. In regard to the settlement along the route from Inverell to Guyra, did you notice whether the land was recently taken up? The settlement has not been recent, but has been gradually spreading for many years—ever since the tin-mines first broke out.
61. The land is in the Eastern Division, is it not? Yes.
62. You cannot tell us, with any degree of certainty, what amount of land remains undisposed of? No, I could only hazard a guess.
63. *Mr. O'Sullivan.*] The large estates called Waterloo, King's Plains, and Inverell, lie between Glen Innes and the town of Inverell? Yes.
64. Is there any probability of these estates being cut up and let as leasehold, or sold? The Furracabad Estate

* NOTE (*on revision*):—I thought between 4,000 and 5,000, but since find the amount to be over 7,000 acres.

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Estate was subdivided into small areas, by the Haymarket Building Co. of Sydney. They bought the station in order to cut it up into small farms, varying from 30 to 200 or 300 acres, but the land did not sell, and no real settlement followed the attempt.
65. This is an additional estate, besides the three just mentioned? Yes.
66. Is there any probability of the other three being cut up? I know that Newstead has been divided between the two Messrs. Anderson.
67. Where is Newstead? On the railway route between Glen Innes and Inverell.
68. Then there are actually five large estates on that route? Yes.
69. Is this good agricultural land? I believe it is very good, but I speak from hearsay.
70. Do you think it likely that these estates will be cut up and sold at any time in the near future? I have not heard any reliable talk about it.
71. And no reports about it in the district? No, not a word.
72. I believe there are two large estates called Tenterden and Ollera, on the route between Guyra and Inverell? Yes.
73. Do you know anything about those? No, not about their being subdivided; but they are very thickly populated with selectors.
74. Then I suppose the resumed areas are pretty well settled? I should say that of the resumed area on Ollera, about 20,000 acres are vacant at the present time.
75. There are 20,000 acres available there now for selection? Yes, quite that.
76. This is part of the land embracing the leases that fell in last July? Yes.
77. Are these 20,000 acres reserved? No; the land for 1 mile on each side of the line is reserved for a trial line from Guyra to Inverell.
78. And do you think it likely that selection will increase if the railway is constructed in that direction? Selection is increasing there very fast now.
78½. Without the railway? Yes, quite apart from the railway.
79. Is there any selection upon the Wellingrove route? There has been a good deal just at Wellingrove proper. It took place immediately on the termination of the leasehold, last July; but the land was all taken up by the station.
80. Which, in your opinion, is the better land;—that along the Wellingrove route, or along the Guyra route? The land along the Wellingrove route, taking it all through.

Mr. Charles M'Donnell Stuart, Supervising Engineer, Railway Construction Branch, Department of Public Works, sworn, and examined:—

Mr. C. M'D. Stuart. 1 May, 1891.

81. *Chairman.*] What position do you hold in the public service? I am a Supervising Engineer of the Railway Construction Branch.
82. *Mr. O'Sullivan.*] How long have you been engaged in this district? Three months.
83. Upon what work? Surveying a railway line between Glen Innes and Inverell—the new route *via* Wellingrove and Swanvale, and Brodie's Plains.
84. Are you the discoverer of the last deviation? I consider Mr. Burge ought to get the credit of that. He is the engineer in charge of the Department, and he went over the line and proposed the route. I surveyed the line, but he suggested the route.
85. Will you explain the reason for the extraordinary turn which the new route takes towards the town of Wellingrove, and on to Swanvale? The first reason is that you have to cross the Waterloo Range, and in order to do that at a low point you have to go round by Wellingrove, and you get into a very low saddle of the range, and after you get across the Waterloo Range you enter the valley of the Waterloo Creek, and on the opposite side of that there is another range which is the boundary of King's Plains, and you have to run right down Maid's Valley until you get round the end of the range at the Glen Innes Road, and you there join the Inverell line.
86. At the Glen Innes Road you pick up the old Wellingrove route? No, the Swanvale line. You do not pick it up, you improve upon it. On the old Swanvale line after crossing the ridge there is a grade of 1 in 33 for some distance, but by keeping closer to the road we have obtained a grade of 1 in 60.
87. So that by deviating towards the town of Wellingrove, you have succeeded in reducing the grade to 1 in 60? Yes.
88. But by so doing you have increased the length of the line? Yes.
89. This increased distance has been variously estimated at 7, 9, and 10 miles;—which is correct? The correct length is 9 miles.
90. Is it, do you think, an engineering advantage to have made this deviation? Yes, in the sense of getting a better gradient.
91. That improved gradient will, of course, be of great advantage to the Traffic Branch for all time? Yes.
92. Although this line is 9 miles longer, it will in reality be cheaper to construct than the original line? Yes.
93. Why? Because there are much heavier works on the other line. There is a very heavy cutting, for instance, when crossing the Waterloo Range to get to King's Plains, and there is also a heavy cutting crossing the range to get down to Inverell. On the old line they went straight across country.
94. Are there no heavy works on the new route? Yes, about 12 miles of it is fairly heavy work. That is what makes the estimate as high as it is. There are parts of the line where the work will only cost £4,000 or £5,000 a mile.
95. And what is the average rate per mile? £8,000.
96. Of what do the 12 miles of heavy work consist? Getting down the Waterloo Range first, and getting down to Swanvale afterwards, and then getting round the banks of the M'Intyre River to Inverell.
97. I suppose it is impossible to reach the town of Inverell by railway from Glen Innes without crossing these ranges? It is impossible without making the distance indefinite.
98. And you think that after due inquiry and proper research you have now discovered the best practicable route between Glen Innes and Inverell? It is the best route in the direction that I have been ordered to survey.
99. Do you think it would be possible to get even a still better route by going further out of your way? Of course there is the old line—the King's Plains line; but the question is;—can that line be improved? Well, I am not in a position to say.

100.

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100. You mean by "improved" getting a better gradient? Yes.
101. You have no heavy bridge work to construct on this line? No very heavy bridge work, but there would be very numerous bridges.
102. Any swampy land to cross by viaducts? No.
103. Are there many creeks to cross? Yes; a great many creeks, and it is very broken country—miles of it.
104. I presume there is plenty of ballast to be obtained on the line? Yes.
105. Any timber? Very little good timber.
106. *Mr. McCourt.*] What sort of country does this new line go through? The formation is principally basaltic rock and granite.
107. Is it better or worse than the old line? I have not been over the old line.
108. Are there more Crown lands on the new route than on the old one? I do not think so; there is very little Crown land along this new route.
109. Have you been over the Guyra route? No.
110. *Chairman.*] According to the original Wellingrove survey, would the line leave Glen Innes immediately at the present station or to the north of the station? To the north of the station.
111. There are one or two alternative routes from the station? Yes; they are shown on the map by three red lines.
112. By your amended route you propose to leave Glen Innes from the southern end of the railway station? Yes. The reason of that is that the main line at Glen Innes is on a gradient of 1 in 50 going north from the station. The creek is at a still lower level, and if you start to go north you will get even a worse gradient than 1 in 50, and we are limited to 1 in 60.
113. Then your reason for joining the main line at the south of the Glen Innes station is to get a better grade by a greater length? Yes.
114. But if the traffic from Glen Innes is to be southward when it joins the main line, would not that add to the expense of going to Glen Innes and shifting your engine to the other end and going back the other way? Yes; the engine will have to shunt every time for the traffic going towards Sydney. It would be in the right direction for traffic going north.
115. On the other hand, if the trend of the traffic from Inverell when it joins the northern line is northward of Glen Innes the proposed junction would be in the direction in which the traffic would go? Yes.
116. Is this matter of joining and getting a better grade there of very much importance? Yes. We are limited to a grade of 1 in 60, and it would be a pity to spoil the line in one spot for the sake of the gradient.
117. Did you have anything to do with the original line called Hogg's line? No.
118. Had you anything to do with the Swanbrook line? Yes; I was up here eight years ago picking up the old survey of the Swanbrook line, but with no instructions to make any deviation at the time. It was after the Garden Palace fire.
119. The original plans of the Swanbrook line were destroyed in the Garden Palace fire, and eight years ago you came up to re-survey the line? Yes; simply to pick up the old lines.
120. Do you think that the Swanbrook line is capable of any great improvement? Nothing further than the improvements made on it since we have joined it.
121. There are no improvements capable of being made between Glen Innes and the point where your amended line touches it, or nearly touches it? No, there is no improvement that could be made that would not make the line longer.
122. Where is the most difficult portion of the line between Glen Innes and Inverell—is it on the half nearest Glen Innes or on the half nearest Inverell? I think on the half nearest Glen Innes.
123. How many miles from Glen Innes? Eight miles.
124. That is the most difficult portion? It starts there.
125. And extends for how many miles? There are 5 miles of it there.
126. Starting 8 miles from Glen Innes, there are 5 miles of the most difficult portion of the country? There are three difficult portions; that is the first. The next one occurs 22 miles from Glen Innes, at the head of Swanvale.
127. How far does that extend? It runs down to 31 miles.
128. Of what nature are the difficulties;—is the country of a mountainous character? It is rough mountainous country—broken country.
129. That is number two difficulty; where is the next? The third occurs going into Inverell, and that is a difficulty you cannot avoid, no matter in what direction you go, Inverell being in a hollow.
130. According to the altered scheme now submitted by the Department, the line enters Inverell in a different method altogether from that proposed in the previous surveys, does it not? Yes; it goes in by the M'Intyre River, while the original surveys of both the Swanbrook and Wellingrove lines entered the town further north.
131. Is it very difficult to follow the altered route by vehicle? It is impossible.
132. Does the main road from Glen Innes to Inverell go anywhere near the line, or cross it? It crosses it in three places, and for 7 miles it runs parallel with it.
133. From the main road from Glen Innes to Inverell can you get a very fair idea of the country through which the new line passes? Yes; you can get an idea of where the difficult part comes in going down to Swanvale, because you are there going parallel with the survey.
134. That is the number two difficulty? Yes. The first difficulty you cannot see without an actual visit to the spot.
135. The second difficult part from Swanvale can be seen from the road? Yes.
136. And also the last difficult part? No, you cannot see the last.
137. Then you are of opinion that by going over the ordinary road from Glen Innes to Inverell the Sectional Committee would be able to get a very fair idea of the nature of the country and of the engineering difficulties it presents? Yes.
138. Are there not a large number of very sharp curves on the line you are now surveying? Yes.
139. What are the curves? Twelve chains radius.
140. Is that an exceptionally sharp curve? Yes; that is the limit.

Mr. C. M'D. Stuart. 1 May, 1891

141. So that although you have reduced the grades, you have not in any way reduced the curves? No.
142. And that could not be done without considerable expense? In one case where the line goes down into Swanvale, you could not reduce the curves. You could shorten the distance, but you would not get a grade of 1 in 60. You have the creek on the one side and the mountain on the other, and you could not do it.
143. What are your general instructions in reference to these surveys; are you to keep a certain grade and a certain curve? Yes.
144. As easy as possible in both cases, but not to go beyond a certain limit in either? Exactly.
145. Your original instructions as to grade were 1 in 40, were they not? That was so in regard to the original line.
146. But the work you had to do here has been to try and get something less? Yes, 1 in 60; but of course, with the understanding that we did not put in a 12-chain curve if we could possibly avoid it.
147. The curves have a very great deal to do with the smooth and economical running of the train, have they not? Yes.
148. And recognising that you always try to get the easiest possible curve you can? Yes.
149. You do not think it possible to reduce any of these curves? Not without going to a great deal more expense; going down Swanvale there is a length of 5 miles where you cannot avoid them; you cannot get the distance without them.
150. Was Mr. Deane over this route? He was round by Wellingrove to the head of Swanvale.
151. He saw the first and second difficult parts? He did not see the second, he saw the first.
152. The difficulty in the second part is one more of curves than of grades? Yes.
153. While in the first part the difficulty is one more of grades than of curves? Well, it is combined.
154. The difficulty in the second part is as regards curves? Yes.
155. How long have you been engaged in railway work? Twenty years.
156. All that time in this colony? No. I have been nine years in the service of the Government of this colony.
157. What other lines have you been connected with? The first survey I was on was that from Glen Innes to Grafton.
158. Did you make the original survey? No. I did the same as I did here. In consequence of the Garden Palace fire, I had to pick up the old survey of the portion nearest Grafton. After that I went on to the Swanvale line and picked up that survey. Shortly after that I was appointed Assistant District Engineer on the Illawarra line, and I was for five years on the line between Coalcliff and Kiama. Since then I have been engaged on different surveys. I was employed on the Nyngan to Cobar line, and also in improving the Molong to Parkes survey, and after that I came up here.
159. Are you familiar with the whole of the route of the Glen Innes to Grafton line? No.
160. Only the lower portion? Yes, from Newton-Boyd to Grafton.
161. Is the last part the most difficult to deal with? No, it is the easiest.
162. From your knowledge of the country do you think it is possible to improve what is known as the Glen Innes to Grafton route so as to decrease the cost? That would be impossible to say, unless you made a thorough exploration.
163. What are the severest grades in the portion with which you have to deal? I do not remember, but I know you could get 1 in 60.
164. But you are aware that that was the easiest portion of the line? It was the easiest portion of the line as far as the grades are concerned.
165. Do you know anything about the proposed route from Guyra through the Don Dorrigo Scrub? No.
166. Is there much cultivation along the route of the proposed line from Glen Innes to Inverell? There is very little cultivation until you get close to the M'Intyre River, on the flats, within a few miles of Inverell.
167. The rest of the country is occupied for grazing purposes? Yes. It is all held in runs, or the majority of it.
168. Are there any mineral developments along the line? No. I believe they worked tin at Newstead at one time.
169. Are there any villages or settlements along the main road between Glen Innes and Inverell? There is a half-way house, and a couple of small farms.
170. In Swanvale? Yes. The good land, until you get within 10 miles of Inverell, is limited. You have a range of mountains on both sides.
171. The country is better on the Glen Innes side than on the Inverell side? Yes. The country most to be benefited is that behind Inverell, and not the country on the route.
172. From your knowledge of railway matters, in view of the decreased working expenses on a reduced grade, do you think it is well to face the additional 9 miles in length? I think so. I do not think there would be any loss, for there would be the additional freight. The Department would get the freight per mile, and it would be no loss to them.
173. But the line itself would be constructed for less money than the estimated cost of the line with a grade of 1 in 40? Yes.
174. So that the producer would not have to pay a higher freight to meet an increased cost? No; but he would have to pay for the additional mileage.
175. Does the estimated cost per mile of this railway bear favourable comparison with the cost of other lines? It is a fair average, considering the difficulties of the country it goes through.
176. You would not call it an easy line to construct? No.
177. Would you call it a difficult line? I call it a fairly difficult line.
178. Not to be compared with the Cobar to Wilcannia line, for instance? Oh, no. It is a mixed line—one half is difficult, and the other half is as easy as you could get.
179. There are the three difficult parts you have mentioned, and the rest is fairly easy? Yes.
180. *Mr. O'Sullivan.*] Is this line as difficult as that from Molong to Parkes? More so.
181. Are 12-chain curves considered dangerous? No, they are not considered dangerous; but, of course, there is a good deal of friction between the rolling stock and the rails.
182. A train would not go at any high rate of speed on a sharp curve? No. You could not get more than 20 miles an hour.
183. It would be unsafe to travel more than 20 miles an hour? Yes.

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184. *Chairman.*] Do I understand that you are of opinion that the line now being surveyed, which may be called the Wellingrove-Swanbrook line, to Inverell is the best one that could be obtained, and that you would recommend it from all points of view as the one to be constructed? As far as that direction goes. You see there is the King's Plains line, the old line. That may be open to improvement. I cannot say.

185. You mean that the original Wellingrove line may be open to improvement? Yes. But it is a distinctly different line of country, and unless you went over it and examined it, and in fact, run another survey over it, you would not be in a position to say, because there is a range of mountains between the two lines, so that I practically know nothing whatever about the other line.

186. But that alteration, if any, would not come in until after you had passed the first difficult pinch? You can get round by keeping further north, and you can get an easier line still.

187. Then if you could connect the King's Plains line further north, it is probable that even a better line than the one you now speak of might be obtained from Inverell if it were desirable to tap the main line further north than Glen Innes? Yes, it might be, but I am not in a position to say. I know it is very difficult to get down from the King's Plains to Inverell, and all the lines entering Inverell have gone in at a grade of 1 in 40 with the exception of this deviation.

188. You think it possible that a cheaper line per mile might be constructed by going 2 or 3 miles further north of Wellingrove; but it would increase the length and not reduce the total estimate? Yes.

189. Do you know anything of the King's Plains country? No.

190. But you believe it is very difficult to get from King's Plains down into Inverell? Yes.

SATURDAY, 2 MAY, 1891.

[*The Sectional Committee met at the Court-house, Glen Innes, at 10 a.m.*]

Present:—

JACOB GARRARD, Esq. (Chairman.)

The Hon. William Joseph Trickett. | Edward William O'Sullivan, Esq.
William McCourt, Esq.

Mr. Moreton Hyde Fitzhardinge, Mayor of Glen Innes, sworn, and examined:—

Mr. M. H. Fitzhardinge. 2 May, 1891.

191. *Chairman.*] You are Mayor of Glen Innes? Yes.

192. How long have you occupied that position? This year, and one year before.

193. How long have you been resident at Glen Innes? Since 1878.

194. You have been practising as a solicitor in the town? Yes, all that time.

195. Have you an intimate knowledge of the district through which the proposed railway will pass? I cannot say I have an intimate knowledge of it. I have an intimate knowledge of this end of the line, and have an intimate knowledge of the outskirts of Inverell.

196. You are aware that there have been three surveys between Glen Innes and Inverell—one *via* Swanbrook, another *via* Wellingrove and King's Plains, and a later one *via* Wellingrove and Swanbrook? Yes.

197. Do you know, approximately, the country through which these three routes pass? Yes.

198. Do you know the Wellingrove route, for instance? Yes.

199. Is there any difficult country there for railway construction? No.

200. Is Swanbrook easier? Swanbrook is easier after you pass the Waterloo Range.

201. You are aware that the last proposed line is 9 miles longer than the one submitted to Parliament? Yes; I have heard so.

202. But with considerably easier grades? Yes, 1 in 60.

203. Will you make a statement to the Committee as to the population of Glen Innes, and other facts bearing upon this inquiry? According to the last census, the population of the Glen Innes district was—males, 5,389; females, 3,964. The population of the town was—males, 1,585; females, 1,245; also, 638 Chinese and 87 Aboriginals. In the year 1881, the population of the district was 6,900: and of the town, 1,330. The total area of the electoral district of Glen Innes is 2,433,280 acres; the number of acres alienated 329,356, and the area cultivated 10,339 acres. These figures are taken from the statistics for 1889. The land under cultivation in this district in 1882 was 6,516 acres; and in 1889, 10,339 acres. The average size of holdings in the district of Glen Innes is 718 acres. In 1889, the live stock was as follows—12,662 horses, 79,816 cattle, and 704,091 sheep. The capital value of unimproved land in the municipality according to this year's assessment was £53,141. The annual rental value of occupied land for this year is £23,650. The number of acres under wheat in this district in 1886 was 8,241 acres, returning an average crop of 19·1 bushels. In 1890, the acreage under wheat was 8,927 acres, returning an average crop of 12·64 bushels.

204. How far does the Glen Innes district to which these figures apply extend westward? About 15 or 16 miles. It extends 29 or, perhaps, 30 miles north, about 25 miles south, and about 75 miles east.

205. Then if the area to the east is so much larger, you may take off at least half of the figures in these statistics as not being affected by the railway? I think nearly all the figures are affected by the railway, because there is hardly any cultivation to the east of Glen Innes—it is nearly all grazing and mineral land.

206. Then the question would be affected as far as the stock were concerned? I think that even the greater proportion of the stock are on the west side of Glen Innes; in fact, I am nearly sure. With regard to sheep I am certain, and with regard to cattle it is about evenly divided. Horses may be in greater numbers on the east.

207. To what extent would this district be benefited by the proposed railway? By the opening up of communication between Glen Innes and the west.

208. And I suppose this benefit would extend 20 miles in a northerly direction? Yes. I think that for 20 miles north the country would be benefited by this railway communication. At present there is absolutely no market for 20 miles on either side of us.

209. Take the south. The traffic for 20 miles to the south of a line direct from Glen Innes to Inverell, and being 20 miles also from the Great Northern Line, would go to the northern line rather than to the Inverell line, would it not? I think not; the people would find no market on the northern line.

210.

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210. Where would they find a market? At Inverell, and to the west of Inverell. There is no cultivation three years out of five west of Inverell of any kind, owing to the heat and drought.
211. The market for the productions of Glen Innes is west, and not east? Yes; the market Glen Innes requires principally is for potatoes, hay, and oats. These cannot be grown anywhere west of Glen Innes. No potatoes of any kind are grown west of Glen Innes.
212. Then Glen Innes would supply Inverell, and the west of Inverell, with these products? Glen Innes does supply Inverell pretty well with potatoes at present. But she cannot send any further, because the cost of carriage is too great. Neither hay, oats, nor potatoes can be cultivated very far west of Glen Innes.
213. Then what products would be brought from the west to the northern line? Wheat, I take it, would go to Queensland from Inverell.
214. Is there a market in Queensland? I think so.
215. Are you aware that they grow more wheat on the Darling Downs, and round about Toowoomba, than they require for their local wants? They only get a crop on the Darling Downs once in three, or perhaps twice in five years. When they do get a crop, I have no doubt they supply their own market. I am not pretending to give evidence on this point, but I know this from reading and observation.
216. But if we have statistics to show that the requirements in Queensland are more than met by the production of wheat on the Darling Downs, and round about Toowoomba, is there any likelihood of their being consumers of wheat from this portion of the colony? I have gone through the statistics with other gentlemen, and we are satisfied that such is not the case.
217. Can you give us any idea of the passenger traffic between Inverell and Glen Innes? No; except that I know there is a large passenger traffic.
218. Do the people of Inverell, and west of Inverell, desiring to reach the Great Northern Line, come to Glen Innes for that purpose, or do they reach it at some other place? I am almost certain that they come to Glen Innes at the present time.
219. The Inverell people only? The Inverell people, and the people west of Inverell.
220. How far west? Moree, Bonshore, and the districts round there. I have frequently met persons from Moree.
221. How do the Warialda people come? I cannot say.
222. And the Bingera people? I should imagine that the Bingera people would come here.
223. This railway would cost a very large sum of money. Do you think that, if constructed, it would immediately pay working expenses? I am not competent to say.
224. If the railway were constructed, do you think there would be a very large increase in the production of the district? I am certain of that.
225. Which would not only feed this branch line, but also the Great Northern Line, either going north or south? Yes.
226. Where do the people here now find a market for their produce? There is absolutely no market for hay. It is delivered in town at the present time for 30s. a ton. Hay and chaff cannot be carted in large quantities owing to the cost of carriage. In wet weather its carriage is impossible, and even in dry weather it is very expensive.
227. What maintains the apparently growing town of Glen Innes? Certainly the farming industry does not at present. Very few farmers are putting in crops except for their own use and their cattle.
228. How do the inhabitants live? They live on the resources of the district. We have very large mineral resources indeed. Most of the farmers have been obliged to take to other pursuits, and they raise a few sheep and cattle just to make a living.
229. Do the minerals come from the east or the west of the Great Northern Line? Both east and west.
230. Of what do they consist? Tin, gold, silver, copper, bismuth, and I believe antimony, but I am not sure.
231. *Mr. Trickett.*] Since you have been in the district has it retrograded or progressed? It has progressed. When I came to Glen Innes the three banks in the town were small weatherboard buildings, but they are now very commodious buildings erected at large expense. The three stores were also small buildings, and they are now very large and expensive structures, and the same may be said of one of the hotels.
232. What is the condition of the municipality? It is in a very healthy state indeed.
233. Has it any debt? We have no debts whatever on the rates in the municipality. We are absolutely unincumbered, and our overdraft at the bank is less than £100, and the rates for this year have not yet been received. We raised a loan of £3,000, which we paid off with the sinking fund established for that purpose. There is a £3,000 loan, the security for which is the land on which the Town Hall stands.
234. That was the loan to build the Town Hall? Yes; that is not connected with the rates. We are proud to say that our municipality is in a very good position indeed.
235. With regard to the value of property, is that higher or lower than when you came here? Very much higher indeed. When I came here some of the land where I reside, within a mile of the town, was purchased by me for £2 an acre, and it is now valued at about £20 per acre.
236. With regard to the state of business here—is that sound and good? Yes; perfectly sound.
237. If a railway were constructed to connect Inverell with the main line, would it be an advantage to the district in enabling it to find a market for its products? Yes, I am certain of that.
238. Were you here before the railway reached Glen Innes from the south? Yes, the railway was open to Willow Tree when I came to Glen Innes—the other side of Tamworth.
239. What was the result when the railway passed on from Glen Innes and went further north—was that beneficial or otherwise? There was no retrograde result of any kind. Of course the town was very lively while it was the terminus, but there was no retrograde result in the main business when the train passed on, but I cannot say it was beneficial.
240. Have you been over the country between Glen Innes and Inverell? Yes; about twenty times, perhaps a little more. I have been along other parts besides the road.
241. Did you observe whether there had been any progress in regard to small holdings? For a distance of 12 miles from Glen Innes all the holdings are small.
242. With the people living upon them? Yes, all have people living upon them.
243. Have not many of the selectors sold out to the squatters? No. I do not think a single one of those to whom I am referring has done so.

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244. Right through to Inverell? No, as far as Waterloo Station—14 miles from here.
245. Beyond that, what is the case? Beyond that, Waterloo Station, King's Plains Station, and Newstead Station bound the road on both sides pretty nearly all the way until you get close to Inverell.
246. Do you regard the proposed railway from Glen Innes to Inverell entirely on its own basis or as being a factor in the question of a railway to the coast? In the evidence I have given this morning I have regarded it simply on its own bottom, without reference in any way to the east.
247. You think it is of sufficient importance to rest upon its own merits without any other consideration? Yes, without any consideration whatever in regard to the eastern line.
248. *Mr. O'Sullivan.*] I gather from your evidence that the agricultural industry of the Glen Innes district is kept in a dwarfed and languishing condition for the want of means of transit to its proper market? Yes, that is the case; there can be no doubt whatever about it.
249. And I notice also that the chief resource of the district is the pastoral industry, supplemented by mining? Yes.
250. The annual cost of the proposed railway, *via* Wellingrove, would be £23,530, in the shape of working expenses and interest. From this has to be deducted £2,500, being 3 per cent. interest on the saving effected by the deviation, leaving a balance of £21,030. The estimated revenue is £7,790, showing a deficiency of £13,240. Do you think the Government of the country would be justified in constructing a line of railway where, at the outset, there would be an annual deficit of £13,240? First of all, I cannot admit that the estimated revenue is correct. We have gone into the figures, and evidence will be brought before you to-day to show that the figures regarding the revenue must be incorrect. This can be shown from actual and not approximate returns.
251. You dispute the correctness of the figures, and contend that they ought to be very much larger? Yes. We shall show beyond a doubt that they ought to be larger.
252. Do you admit that there will be a deficiency at all? I am not competent to say. I think there will be a deficiency, but it will not amount to £13,000.
253. Allowing that there is a deficiency, do you contend that the indirect advantages to be given to this district and the Inverell district by the construction of a railway will be so great as to justify our undertaking the work, notwithstanding that there is a deficiency? Yes, I think so.
254. You think that the additional value given to the Crown lands, and the encouragement given to settlement and cultivation will be so great as in themselves to justify the construction of the line? Yes, I think it would be justified. I may mention that there is a lot of land within our municipality that is reserved. It is not vested in the municipality, it is open for sale.
255. But, as a matter of fact, there is not much Crown land on the proposed route? No. There is a great deal in our district.
256. I notice that the proposed route will go through large estates? Yes.
257. Have you any reason to believe that those estates will be cut up, and either sold or leased? I am satisfied they will be.
258. You think it will be much more profitable for the owners to do that than to carry on grazing? Much more so.
259. Therefore they will be likely in the future to cut up their estates, and a large population will be settled between Glen Innes and Inverell? I am sure that will take place.
260. I gather that you look for your market more to the west than towards the coast? Yes, that is, the market for the commodities I have mentioned. Then again, they can grow nothing at Grafton in the shape of potatoes. On neither side of us can they grow potatoes as well as we can.
261. If you can supply potatoes you can supply all vegetable crops? Well, the other vegetable crops do not require the particular climate and soil that potatoes do.
262. Is there no chance of Inverell cutting you off in that respect? No, not the slightest. They only get a potato crop about once in five years.
263. It pays them better to crop with wheat? Yes, they have a drier climate. Our rainfall makes our wheat of less value than the wheat at Inverell. They can use a stripper while we cannot, and, owing to the moist climate, the wheat does not ripen all at once. Our climate is particularly adapted to the growth of potatoes and oats.

Mr. John Frederick Utz, general merchant, Glen Innes, sworn, and examined:—

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264. *Mr. Trickett.*] What is your occupation? I am a general merchant, carrying on business at Glen Innes.
265. How long have you been in the district? Thirty years.
266. Of course you have seen considerable improvement in the district generally during that time? I have.
267. Will you state to the Committee what, in your opinion, are the advantages that would accrue from the construction of the proposed railway from Glen Innes to Inverell? I would first touch upon the trade that at present exists between Glen Innes and Inverell and the western districts. The tonnage from the Glen Innes Railway Station to the western districts at present is 2,750 tons annually. That is the inward traffic. In addition to the traffic which comes from the railway there are about 1,000 tons sent from Glen Innes to Inverell and the western districts by myself and other business people. I may state that I obtained the information I am now giving from persons doing business with the railway—commission agents, and so forth, and also from my own general knowledge of goods carried by carriers, which latter information I will give later on. The 1,000 tons of goods to which I have just referred are chiefly made up of salt, iron, wire, sugar, general merchandise, produce, and so forth. There is also in addition 250 tons of goods brought from Grafton to Inverell through Glen Innes by carriers. This will bring the total tonnage of goods to Inverell and the western districts to 4,000 tons. There are on an average twenty-seven carriers on the road from Glen Innes to Inverell; they average about twenty-five trips a year, carrying on an average 4 tons each, or equal to 100 tons for each carrier. This gives a total per annum of 2,700 tons.
268. There is a discrepancy between that and the total tonnage of 4,000 which you just referred to; how will the balance be made up? There are farmers and carriers who do a little loading almost every week from the Inverell district, from Ashford, Wallangra, and those places. I also estimate that another 1,000 tons of goods goes to the Inverell district from Tamworth, Uralla, and Guyra on the northern line. I

arrive

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arrive at this estimate from information I have received from business people in the Inverell district, and from squatters and others to whom I have written on the subject. The principal portion of these goods go from Tamworth, the rest going from Uralla and Guyra. This makes a total of 5,000 tons that would be sent by railway to Inverell if a line were constructed from Glen Innes.

269. Do you not think that the 1,000 tons of goods sent from so far south of Glen Innes in the direction of Inverell would continue to be sent by team instead of being sent up to Glen Innes and then on by rail? I certainly think these goods would be sent by the rail, especially as under the differential-rate system it will not cost any more to send them further north along the main line.

270. So that the freight from Sydney or Newcastle to Glen Innes would be just the same as it would be to Uralla or Guyra, or even Tamworth, and the goods would have less distance to go when they arrived at Glen Innes? Yes. I think the traffic I have mentioned would be increased at least by 25 per cent. if the proposed railway were constructed. This would be brought about by the influx of population that occurs wherever a railway is constructed. Another reason why I think this increase of 25 per cent. would take place is that a great deal of the north-western trade from Goondiwindi, and that part of the country, which at present goes to Queensland would be diverted along this railway. Not only from the country on the northern side of the M'Intyre River, which divides the two colonies, but also from the New South Wales side of the river, a great deal of traffic at present goes into Queensland. For instance, I know as a fact that the Bonshore station does all its business with Queensland.

271. You mean that the people there get all their goods from Queensland? They get all their supplies from Queensland, and they send their wool there.

272. Why would they use the railway—would it be cheaper? It would be cheaper and much more convenient. I will read to the Committee extracts from letters I have received from people in that part of the country, which will show that what I am stating is correct. Mr. D. Sinclair, of Welltown, near Goondiwindi, Queensland, says, "The carriage to and from this station, during the past season of drought, has been 1,200 bales of wool, equal to 220 tons, and 51 tons return loading; total, 251 tons for 80,000 sheep. With ordinary seasons this amount is considerably increased both ways. At present all our trade is with Cambooya. But should the railway open to Inverell, which is about the same distance from here, there is no doubt but that all our trade would go that way, for our wool was shipped from Sydney the last two seasons *vîa* Brisbane. Should the railway be opened to Inverell, I have no doubt whatever all the wool in the district around Goondiwindi would go by Inverell. There is, on the Queensland side of the border, about from 3,000 to 3,500 bales of wool which would go that way, and would certainly secure to Inverell the whole return goods and stores required in this district. There is at present a considerable quantity of wool grown on the New South Wales side of the border, which now goes to Brisbane, which, for a certainty, would not be the case if they could reach the railway at Inverell." I may state that the Railway League wrote to Mr. Sinclair and other gentlemen, asking whether if a railway were constructed to Inverell they would trade with New South Wales, or still go to Queensland, and the letters from which I am now quoting were received in reply. A letter was received from Mr. William Onsler, of Goondiwindi, in which he said, "If a line were constructed to Inverell, I may positively state that all the loading for this district would come that way, thus saving the Brisbane profit on goods which consumers here could buy far cheaper in New South Wales." Those are two letters from gentlemen living out there, and carrying on grazing on a very large scale. There is a letter also from Mr. Robert Miller, of Goondiwindi, who says, "I am glad you are making a move to have railway communication, so as to bring the outlying portions of the colony into closer communication with the centres of population. I have been making inquiry in order to reply to your question, but I cannot give much information. The quantity of wool which is at present carried from here from the different stations within 30 miles of Goondiwindi, on the north side of the river, would be about 3,000 bales, with back loading to correspond. Then there are the town supplies, and also the farming population to be reckoned. There are now sixteen waggon carriers employed on the road between here and our nearest point on the Queensland railway, at Cambooya. Goondiwindi is increasing very much in population; a great deal of land is being thrown open as agricultural and grazing farms, and I have no doubt that it will, in a few years, be a thriving place, especially if railway communication is established, either from Queensland or New South Wales." These extracts, I think, will prove that the proposed railway communication would be of great benefit to the north-west districts of New South Wales, and would serve also a portion of the country within the Queensland border.

273. There is one thing in Mr. Sinclair's letter which strikes me as peculiar. He says he would get his goods much cheaper if he could obtain them from New South Wales;—do you think he has taken into consideration the duties he would have to pay on those goods? I think so, because at present a great quantity of New South Wales goods goes into Queensland from Sydney. Many of the Brisbane merchants buy in the Sydney market, and the consumer in Queensland at present pays the duty on those goods. This increased traffic would bring the total tonnage that would be carried along the railway from Glen Innes to Inverell and the western district up to 6,250 tons per annum. Then I take it that after the line had been opened for twelve or eighteen months there would necessarily be a still further increase in the traffic of 25 per cent. This increase of 25 per cent., I contend, will be chiefly brought about in this way: A great portion of the land along the line, now held by large holders, will be cut up and sold to small farmers, who will settle down and carry on agriculture. These farmers will, on the Inverell side, chiefly grow wheat; and on the Glen Innes side there will, of course, be a large traffic in potatoes, oats, chaff, and produce of that kind, which will be sent to the western districts, where the people cannot grow such commodities with any advantage to themselves.

274. You say that the construction of the railway would result in these large estates being divided into smaller holdings;—has that been your experience with regard to the line passing through Glen Innes—have the lands through which the line has passed been cut up? No, that has not been my experience here concerning the northern line; but the railway does not pass through such good country as that between here and Inverell, and around Inverell.

275. Not such good agricultural country? No. The land between Glen Innes and Inverell is specially adapted to farming, and, in my opinion, no large holder would run a sheep to the acre when he could turn the land to better profit by either selling or leasing it to farmers. It would be against his own interest to keep his land locked up for grazing.

276. What, in your opinion, would be a fair-sized holding on which a working man could make a living? About 100 acres and upwards.

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277. Do you think a man could live on 100 acres? Yes. There are people in our own immediate district supporting families on less than 100 acres. I know of dozens of such people. The 25 per cent. increase which would result in twelve or eighteen months from the opening of the line, owing to the cutting up of the large estates to which I have referred, will bring the total tonnage up to 7,375 tons per annum. I have ascertained that in the month of December, which is a very fair average month to take, 514 tons of goods came to Glen Innes by the railway. These 514 tons were carried in 173 trucks of, say, 3 tons each. I have shown that over 7,000 tons of goods would have to go into the Inverell district if the railway were constructed, and I now wish to show that, taking 300 working days, if a goods train is sent from Glen Innes to Inverell with an average number of trucks, say, about ten, each carrying 3 tons, this would amount to a total of 9,000 tons a year, if a goods train were run every working day. The train would be fully employed for 300 working days in the year, and it would carry 9,000 tons. According to the figures I have quoted, the estimated tonnage has reached between 7,000 and 8,000 tons, and therefore at the very starting of the line, I consider that a goods train would be nearly fully employed conveying these goods.

278. The 514 tons brought by the railway in December last were goods not for Glen Innes only? For Glen Innes, and a portion would go to the Inverell district. They were goods landed at Glen Innes Railway Station, and carried by 173 trucks.

279. At the rate of 514 tons a month the total for the year would be 6,168—how do you arrive therefore at a total of 9,000 tons for Glen Innes and the surrounding districts? I arrived at the 9,000 tons on the basis of 10 trucks of 3 tons each for 300 working days.

280. Taking 514 tons as the average quantity of goods coming to Glen Innes and Inverell in a month, you will see that the total quantity for the year will be 6,168? But you have to add to that 1,000 tons of goods which go from Glen Innes to Inverell, and which have not come by rail. Those goods come from the coast.

281. That brings the total up to about 7,000? In quoting 9,000 tons I wished to show that a goods train would be very nearly employed in taking the quantity of goods which I have shown will probably be carried over the line if it goes from Glen Innes to Inverell.

282. I think you are still wrong in your figures. You say that 10 trucks, with an average of 3 tons each, running on 300 working days, would carry 9,000 tons a year? That is what I stated.

283. But you only build your traffic up to 6,250 tons? I do not mean to say that we would get 9,000 tons at the start, but I think I have proved by my figures that the traffic would amount to 9,000 tons very soon after the railway was constructed, and that, therefore, a train of 10 trucks would be fully employed running 300 working days. I do not mean to say that you would get a traffic of 9,000 tons at the start, but the figures I have given show that you would get a traffic of about 7,000 tons at the start

284. The 9,000 tons, you think, would not be carried immediately, but within two or three years? Yes; about two years after the railway was constructed. I maintain that there would be an immediate traffic of about 6,000 tons, and that after the line had been constructed for a year or two there would be an increase in the traffic of 50 per cent., which would be made up by an increase of 25 per cent. in the first year, caused by the influx of population, which would accrue the moment it was known the railway would be constructed, and 25 per cent. which would result from the increased production consequent upon the additional population.

285. Of the 514 tons of goods landed at Glen Innes from the railway in the month of December, what quantity remained in Glen Innes, and how much went westward in the direction of Inverell? Of the total tonnage which would go to Inverell by the railway, and which I have estimated at 6,250 tons, the quantity that would go from Glen Innes would be 2,750 tons. I could not answer the question you have just asked, as I did not make particular inquiries on that point.

286. Do you think the bulk of the 514 tons remained at Glen Innes? I think the great bulk of it would go to Inverell, because a large proportion of the goods for Glen Innes is brought by teams from Grafton.

287. Will you now give some particulars with regard to the traffic from Inverell to Glen Innes? From August, 1890, to April, 1891, the quantity of wool received at the Glen Innes Railway Station was about 8,000 bales, equal to 1,500 tons. In addition to this quantity about 1,000 bales of wool are annually sent by teams from the western districts through Glen Innes to Grafton, equal to 200 tons. There were also brought to the Glen Innes Railway Station 300 tons of tin ore, 100 tons of tallow and hides, and 250 tons of maize, wheat, &c., making a total of 2,450 tons. This traffic, I think, would fully treble itself the very first year a line was opened from Inverell to Glen Innes, and I will give my reason for this opinion. Inverell being a very fine wheat-growing district a large quantity of wheat would come from Inverell to Glen Innes. A good portion of this wheat would remain in Glen Innes. Some of it would find its way north of Glen Innes, and some would no doubt go to Queensland. If a line were constructed from Glen Innes to Inverell at the present time, I may state that I myself would be a buyer annually of about 40,000 bushels of wheat, equal to 1,071 tons. At this moment I have a man at Inverell buying for me, and my instructions to him were to purchase all the available wheat he could get. This wheat has at present to be carried from Inverell to Glen Innes by team, at a cost of 30s. per ton. If a line were constructed from Glen Innes westward the Grafton traffic would be a feeder to that line. A large quantity of sugar is bought on the Clarence every year by the people of Inverell and the western districts. They can buy their sugar on the Clarence under more favourable circumstances than they can in Sydney. I myself, during the last two years bought about 120 tons of sugar on the Clarence, and I am only one out of a good many business people. If I can purchase to better advantage on the Clarence, other people can do likewise, and therefore a lot of that traffic must come from Grafton. No matter from what point on the northern line the railway is constructed to Inverell, I take it that this particular traffic must go through Glen Innes, and I consider, therefore, that it would be a feeder to the railway if constructed from Glen Innes to Inverell. If a line were taken from Guyra or Uralla to Inverell, this sugar would not be sent to Inverell and the western districts, *via* Guyra or Uralla; but it would be sent direct from Grafton to Inverell, and landed there at a cost of £4 or £4 10s. per ton.

288. Have you formed any estimate as to the probable passenger traffic on the proposed railway? I have not. In looking at the scheme from a commercial point of view, I consider that a line from Glen Innes to Inverell would be better than from any other point on the northern line for three reasons:—First, because the line would be constructed at a cheaper cost from Glen Innes, which is the nearest point to Inverell; second, because there would be more traffic from Glen Innes than from any other point; and third, because it would give the greatest good to the greatest number.

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289. What rate do you pay at present per ton for goods to and from Inverell? About £2 per ton from Glen Innes to Inverell, and about 30s. return.
290. If a railway were constructed, you would not expect to pay that rate of carriage? I would not.
291. What do you think would be a fair rate to charge by rail? I consider that according to the present merchandise rate on the New South Wales railway, 15s. per ton would be about a fair average. Some goods would be carried as low as 4s. or 5s.; other goods, third-class goods, which comprise fully two-thirds of the merchandise coming to any town—goods packed in cases—would cost £1 6s. 8d. freight from here to Inverell, reckoning the line to be 45 miles long.
292. Taking your own figures, the inward and outward traffic on the line would amount in round numbers to about 9,000 tons? About that.
293. At 15s. per ton that would come to £6,750? Yes.
294. So that according to your estimate the goods traffic for the first or second year would be about that sum? Yes; that is my calculation.
295. If the Railway Commissioners have estimated the goods traffic at £4,290, you think they are about £2,000 under the mark? I do.
296. You say a large quantity of goods come up by way of Grafton? Yes; I have on an average fifteen teams constantly employed between Glen Innes and Grafton. In the summer time there are about twenty-five, and in the winter time about ten.
297. Why do you bring up your goods in that way? I can land them cheaper at Glen Innes by teams than I can by railway along the northern line.
298. About how much cheaper? I am getting goods landed at the present time for £3 10s. a ton, and the rate by the railway, with the exception of a certain class of goods, such as salt and wire, according to the lowest classification, is £5 per ton, taking a truck.
299. *Chairman.*] For the same class of goods you have to pay £3 10s. from Grafton, as against £5 per ton by the railway? Yes.
300. *Mr. Trickett.*] Do you bring the greater portion of your goods that way? I think, as nearly as possible, an equal portion. I get a larger tonnage by rail for the simple reason that I do a large trade in rock and Liverpool salt, which is carried by rail from Newcastle. That is carried through to Glen Innes at £2 8s. 9d. per ton. I buy 50 or 100 tons at a time, and bring it by rail. But for this I should nearly have three times as much goods from Grafton to Glen Innes as are carried by rail.
301. The goods you bring up from Grafton by road are sent from Sydney by steamer, are they not? Yes.
302. They come to your store, and a great quantity of them are sent on to Inverell and the western districts? Yes.
303. If the railway were constructed from Glen Innes to Inverell, would it not suit the storekeeper at Inverell to get his goods direct from Sydney right away to Inverell? No; for the simple reason that the storekeeper at Inverell would get his goods from Sydney as far as Glen Innes; but the thing is, it would still probably show a loss.
304. The freight would be more? Yes.
305. Would it be so much more that it would not be better to avoid the two or three handlings? Perhaps it would not be very much more, but still there would be a difference.
306. But still the storekeeper would save the handling, and he would also save your profit as the middleman? Yes; perhaps he might do that.
307. Would that not be another source of traffic to Inverell? Yes; probably by getting goods in the way you suggest there would be less carrying done from Grafton to Glen Innes if the line were opened.
308. With regard to the Glen Innes district—I suppose, as an old resident, you are able to speak as to its prosperity or otherwise? I think Glen Innes is holding its own with most districts in New South Wales.
309. In your own business, do you think there are many losses? No; not very many.
310. Any heavy losses? No.
311. With regard to those who live on the soil, do you find them to be people who do not pay? The farmers about our own district are in a very sound state; so much so that I think there are fewer mortgages to business people and the banks than is the case in other districts in the colony. The property is their own in most cases, and there are very few of them involved.
312. Seeing that there is no market for your goods in this district, how do they get their profit and live? Well, we have a small market. There is a small market for what we grow, but certainly not a market for all, and we have a surplus. They seem to live and do very well, and, as has been stated by a previous witness, a good many of them go in for raising sheep and cattle, and so forth, and, besides raising stock, they go in for a little cultivation. They do not grow half as much as they would do if they had a good market. It is no use doing so, because the surplus they would grow would be of no very great benefit. We are too far away from the centres of population. It is not a profitable speculation. If a farmer has chaff or oats, and has to pay a high rate of carriage, it would not pay him to send it 300 or 400 miles away to a market.
313. Knowing the district well, are you able to say whether the trend of the business from Inverell, or the bulk of it, is now and has been for some time past towards Glen Innes? Yes; I am certainly able to say that.
314. The greater portion of it? Fully three-fourths of it come this way.
315. The distance between Glen Innes and Inverell, and Guyra and Inverell, is much about the same? I think it is about 55 or 57 miles by road from Guyra to Inverell, and about 42 or 43 by road from Glen Innes to Inverell.
316. I suppose there is no comparison between the trade done by Guyra with Inverell, and the trade done by Glen Innes with Inverell? Not the slightest comparison.
317. When this line was submitted to the Public Works Committee, one feature in its construction was the idea that it would open up a considerable trade with Queensland;—considering that there are duties on the Queensland border, do you think there is any force in that argument? All thinking men in the colonies agree that federation must come sooner or later, and when that takes place we may expect free trade between the colonies; and I maintain that there will be a large trade done between this portion of New South Wales and Queensland. It must of necessity come about.
318. But not under the existing tariffs? Under existing circumstances I do not think there will be a large trade.

Mr. J. F. Utz. 2 May, 1891.

319. If a line were constructed from Glen Innes to Inverell, how far on either side do you think the people would use the railway for the purpose of trade and passenger communication? I think that on the south side they would use it for a distance of between 30 and 40 miles from the line, and on the northern side for a distance of from 70 to 100 miles, extending right to the Queensland border. Letters I have read show that from the moment the line was opened settlers in Queensland would trade with New South Wales. It is about 120 miles from Glen Innes to Goondiwindi, and therefore the trade on the northern side of the line would extend over a far greater area than that on the south side. Goondiwindi is about north-west from Glen Innes.

320. Do you know the road between Glen Innes and Inverell pretty well? I do.

321. What has been the state of the selectors and small holders along that portion of it which is suitable for small farms; have they increased during the last few years, or have they been gradually disappearing? They have increased.

322. They have not been selling out? In one or two instances they have sold out, but for the reason that their holdings were a little too small for them. They sold out to the squatter, and if they did not take up other land on the same station they went to an adjoining one and selected, perhaps, two or three times their former area. They have not left the district.

323. Would railway communication be the means of improving their position? I believe it would.

324. It would not operate to increase the value of the land, and thus induce them to sell out at once, and go away? I do not think so. I do not think they could better themselves in any other part of New South Wales.

325. Has land jobbing extended in this direction and led to the cutting up of holdings into small blocks? No land jobbing has been going on that I am aware of, nor has the land been subdivided into small blocks for speculative purposes.

326. Have you considered this railway as a factor with regard to coast extension at any future time? I have considered that matter.

327. What are your views on the question? My views are the same as those of most people in New South Wales. We consider that the table-lands of New England will some day have to be connected with the coast at a nearer point than Newcastle. Wherever the point of connection may be will be a matter for further decision, but there is no doubt the coast will be connected with New England at a point between Guyra and Tenterfield. This must come about sooner or later.

328. Looking on this railway on its own merits, apart from the connection with the coast, do you think it is a desirable line to construct? I do.

329. And that ultimately even without any extension to the coast it would pay? I think so. I do not think there is the slightest doubt about it.

330. Have you formed any opinion as to the best route for a railway between here and the coast? No; I cannot say that I have formed any definite opinion.

331. *Chairman.*] Do you know the country between here and Grafton? Yes.

332. Were you not at one time favourable to the construction of a line of railway from Glen Innes to Grafton? Yes.

333. Are you aware that the estimated cost of such a line is about £2,000,000? I heard that it was something like £1,500,000.

334. Have you heard that the railway authorities consider that they have discovered a cheaper and better route which goes through better country, and with easier grades from Guyra to Grafton, *via* the Don Dorrigo Scrub? I have not heard so.

335. Do you think the country would be justified in incurring a large expenditure on a line between Glen Innes and Grafton? I say nothing about a line from here to Grafton, but I say that a line will eventually be constructed to the waters of the Clarence, and that whether it is taken from Glen Innes or Tenterfield it will equally suit this district.

336. If the market of the people at Inverell and west of Inverell is not to be in Queensland, but is to be south, would it not be more to their interest to tap the northern line further south than Glen Innes? I do not think so.

337. It would save mileage, would it not? It would save a little mileage.

338. But according to the differential rates it would not make much difference? No.

339. I suppose if a line from Glen Innes to Inverell were constructed, the people between the two places would consider that they had the same right as you have over the Armidale people—that is, of paying only the same freights? Yes.

340. Then where would the revenue come from to carry on this line? Under the differential-rate system it appears that the Glen Innes people only pay the same railway freight from Sydney as the Armidale people? Yes; it is so right up to Wallangarra, on the Queensland border.

341. Do you think the Inverell people would be prepared to pay a different rate? They would have to pay for the haulage from here to Inverell.

342. But if no additional charge is made between here and Tenterfield, why should an additional charge be made between here and Inverell? The same argument would apply to other parts of the colony where there is no differential rate on branch lines. By applying the system of differential rates to the line between Guyra and Wallangarra the Railway Commissioners are aiming at the Grafton traffic.

343. Do you think the Inverell people would be willing to pay 15s. a ton for goods by rail between Glen Innes and Inverell? Yes; I think they would be quite willing to do so.

344. If the traffic from Inverell all went south, of what benefit would the railway be to Glen Innes,—the traffic would merely pass through? The benefit to Glen Innes would be that there would be an interchange of products between the two places. Inverell would send us wheat, and we would send in exchange potatoes, oats, hay, and other root crops which cannot be grown successfully in the western districts. In that way our farming community and the district generally would be benefited.

345. Do you know anything about the country between Guyra and Inverell? No; I have not been along that route.

346. *Mr. O'Sullivan.*] One of your arguments appears to be this, that just as this line to Glen Innes taps the land at Inverell, 40 miles away, so a line of railway at Inverell would tap the trade far back in the interior;—now, how far back do you think it would tap the trade from Inverell westward and north-westward? As far as Moree, or between Warialda and Moree, undoubtedly. I am not quite certain of the distance

distance between Moree and Narrabri, but I think it is nearly the same as between Moree and Inverell, and I think a railway at Inverell would tap the Moree trade. Mr. J. F. Utz. 2 May, 1891.

347. And the Goondiwindi trade? Yes.

348. Are you not aware that there is a strong agitation for a line of railway from Narrabri to Moree, which must eventually go on to Goondiwindi? I am aware there is an agitation for a railway from Narrabri to Moree.

349. And as that line will probably be granted at no distant date, is it not probable that those districts will be served by their own railway? If that line is granted to Moree, no doubt that will be so. If the line to Inverell is not carried further westward, then undoubtedly the Moree trade will go to Narrabri if the Narrabri railway is extended to Moree; but the Goondiwindi trade would, under no circumstances, go to Narrabri.

350. You think that the Goondiwindi trade must go to Inverell, though it is 120 miles away? Yes.

351. How far would it be away from Moree? It would certainly not be so far away as it is from Inverell.

352. You are aware that there are a number of large estates between Glen Innes and Inverell through which the proposed railway would pass? Yes.

353. Have you any reason to believe that they would be cut up and sold in small properties? I have every reason to believe so.

354. Why? I have it from the people themselves. I have put the question to every one of the gentlemen who own large holdings on the line, and they told me they would be only too pleased to sell or lease their land.

355. How much per acre do you think they would get by leasing it for grazing or agricultural purposes? It would depend entirely upon the quality of the soil and the position of the land.

356. Give us an average? I should say from 5s. to £3 an acre, rent. There is land in our district rented by ordinary farmers at 10s. an acre.

357. Do you think farmers would pay a rental of £2 a year an acre for the land in small farms? It would entirely depend upon circumstances—upon the quality and position of the land. Within a few miles of Glen Innes or Inverell a farm would certainly be worth £2 10s. an acre, while in other places—say, for instance, half-way along the line, it might not be worth more than 5s. an acre.

358. Take the properties of King's Plains, Newstead, Inverell, and Furracabad;—is the land upon those estates worth £2 an acre? Yes; I think there are farms close to the town here, small portions of the estate, worth as much as £2 10s. per acre.

359. That would be exceptional? Yes. I refer to small farms, such as market gardens, and places of that description. I do not say there is much land worth a rental of £2 10s. an acre; but I say the price would range from 5s. to £2.

360. Would the advantages conferred by the construction of a railway be so great as to induce these large landed proprietors to cut up their estates and sell them as small farms? Yes; I think the inducement would be sufficient.

361. You think they would get a better return for their money? Yes.

362. Which town trades with Emmaville? Glen Innes.

363. How far is Emmaville distant from Glen Innes? About 28 miles in a northerly direction.

364. Are there many mining centres served from Glen Innes? Yes; Bear Hill, Kookabookara, Dalmorton, Glencelgan, and the Gulf.

365. These mining centres are feeders for the town of Inverell, are they not? They are feeders for the town of Glen Innes.

366. Some of them are feeders for the town of Inverell? Some of them are. Emmaville, for instance, would partly be a feeder for Inverell. As they would take breadstuffs from Inverell, in that way they would probably be, to some extent, feeders for Inverell.

367. Would any trade, then, from Inverell go a portion of the way on the railway to Emmaville? Yes.

368. Therefore we may look upon Emmaville as a feeder to the railway? Yes.

369. Are there any other centres of that character that would feed the railway to Inverell? There are all those mining centres I have mentioned, but I do not know of anything else, except that fat stock would come from Inverell to these places.

370. The mining centres you have mentioned are feeders for Inverell, inasmuch as they would get their breadstuffs from there? Yes.

371. They would be markets for the Inverell meat and flour? Yes.

372. And considerable local trade would be done in that way? Yes; a considerable local trade would spring up.

373. Therefore, these mining centres, whether on the eastern, northern, or north-western side, would all be feeders for Inverell in the way of breadstuff traffic? Yes; every one of them.

374. Have you ever considered the proposal to establish a large harbour at Byron Bay in connection with the New England traffic? Yes; we have considered that.

375. Supposing a line were constructed from Lismore to Tenterfield, and at the same time you had a line to Grafton, which of those two lines would serve the district of Glen Innes and Inverell better? Certainly the line to Grafton.

376. Then if a line were taken from Guyra through the Don Dorrigo Scrub to Grafton you would be more likely to use that line for the produce of this portion of New England than the Tenterfield-Lismore line? Yes, I think so.

377. Do you know the length from here to Byron Bay, and the length from here to Grafton *via* Guyra? I am not thoroughly acquainted with the respective distances. I know it approximately, but not accurately.

378. Why do you say then, that Grafton would suit you better? I know for certain that Grafton is much closer to us than is Byron Bay.

379. Is there not likely to be a very much larger population in the Richmond and Tweed River districts than there ever can be about Grafton? I daresay the country in the Richmond district is more extensive than that about Grafton. It is a younger district, and no doubt there will eventually be a large population there.

380. As a matter of fact is there not a much larger population there now than about the Grafton district? Taking the Richmond and Tweed districts I daresay the population there is larger.

381. And it is a growing district? Yes, I believe so.

distance

Mr. J. F. Uts. 382. It is a district where no wheat and flour are produced? That is so.

2 May, 1891. 383. Would not that be a more likely place to afford a market for the wheat grown at Inverell? Yes; it would be a very likely place as the population increased. It will undoubtedly become a market for Inverell breadstuffs.

384. And in return these districts, no doubt, will take a number of their products? There is not the slightest doubt.

385. Suppose that at Byron Bay a harbour were constructed capable of accommodating ocean-going ships, which would take wheat, wool, and other produce away to other parts of the world without touching at Sydney, would it not be to the advantage of the people of this region—that is, Glen Innes and Inverell—to ship at Byron Bay, rather than send their produce on to Sydney? Yes; it would certainly be of greater advantage to ship at Byron Bay than to send to either Newcastle or Sydney.

386. Therefore, the question of the Byron Bay harbour is one which materially affects the construction of this railway? Yes.

387. Let us take the Grafton proposal,—ocean-going vessels cannot now go to Grafton? No. Coasting steamers can, but not ocean-going vessels.

388. Is Grafton, therefore, likely to become a port from which you could ship your wool straight to London, or your wheat straight to other parts of the world? I think so. I think it can be made a port very nearly, if not quite, equal to Newcastle.

389. You look forward to the establishment of a port on the coast as a matter likely to accelerate the progress of the district? I do.

390. Do you export any fruit from this district? A little; not very much. Fruit-growing is just about starting. Several orchards have been planted within the last year or two.

391. Is there likely to be a market for fruit in Queensland? Yes; Brisbane would be a good market. There are a few orchards in Tenterfield, and all the fruit from there is sent into Queensland.

392. As there is no duty on flour in Queensland, why is not the wheat from Inverell sent there now? The land carriage kills the whole thing. The carriage from Inverell to Glen Innes is too great.

393. Then, if a railway were made, which would mean speedy and cheap means of transit, it is probable that a large wheat trade might be opened up with Queensland when there are dry seasons in that colony? There is not the slightest doubt about that.

394. *Mr. McCourt.*] Is the fat stock of this district sent by rail to Sydney? Yes; a large quantity of fat stock is trucked at Glen Innes Station and sent to Sydney.

395. Would fat stock from the New England district be sent from Inverell over the proposed line? Yes.

396. That would be an additional source of revenue to the railway? Yes.

397. Is the quantity of fat stock sent from Inverell to Sydney large? Yes; Inverell is one of the finest districts in Australia for fattening purposes.

398. In your estimate of the traffic of the railway, you did not take the carriage of this fat stock into consideration? No; I simply included the merchandise traffic.

399. Do you know on what tonnage the Railway Commissioners based their estimate of revenue? No.

400. Do you think it is based on what they term a through rate? Probably it is.

401. Would it amount to 15s. per ton, even if the differential rates did not come in? It would amount to 15s.

402. The goods would not be sent from Glen Innes to Inverell, but they would be sent from Sydney right through to Inverell? Yes.

403. Therefore, the 44 miles would not cost as much? Not quite 15s. per ton; it would probably be an average of about 12s.

404. On the through rate, and not counting the differential rates? Exactly.

405. Do you know the country between Glen Innes and Inverell? I do.

406. Do you know where the line was surveyed? Yes.

407. Would the railway between Glen Innes and Inverell carry much traffic from a distance of 20 miles north and south? Yes; from farmers and selectors alongside the line for that distance. I maintain that from the moment you started the line from Glen Innes to Inverell, traffic would come to the railway from a distance of 40 miles south, and from 70 to 100 miles north.

408. Would not the traffic from a distance 40 miles south go to Guyra? I do not think so.

409. I do not mean at the terminal point? Probably within 15 or 20 miles the traffic might go to Guyra, but as you go further north towards Inverell it would suit the people better to come to this line, because it would be nearer to them.

410. And the same applies to the north? Yes.

411. Have you been along the surveyed line? I have not been right along it, but I have touched the line here and there.

412. Have you been along the worst parts of it? Yes.

413. Is it not a fact that on each side of the line, north and south, it is hemmed in by large mountains and hills, so that it is not accessible to the people on each side? That is not a fact.

414. At no portion of the line? Yes; at one portion. There is only one great mountain, and that is just about Swanvale. Both at the Glen Innes and the Inverell ends the country is open.

415. There is nothing to prevent the people from getting to the line from the north and south? No.

416. No ridges or mountains? No; nothing to prevent the traffic.

417. *Chairman.*] What about the Sugarloaf, at Wellingrove;—is not that rough country? On the worst part there is nothing to prevent any one sending their goods by team to the railway, even across the Sugarloaf.

418. *Mr. McCourt.*] Would it not cost the country a great deal for roads? I do not think so. As a rule the Government do not spend much money in farming centres.

419. You said that 1,500 tons of wool came from Inverell? Yes.

420. I presume that would go Sydney way? Yes; it was sent to Sydney. The figures were obtained from the railway.

421. That wool would not go to Queensland, in any case? Certainly not.

422. Would it not be better for those wool-growers if a line were made from Inverell to Guyra, so as to save them railway carriage over the 35 miles between Glen Innes and Guyra? I do not think so.

423. You think it would be better for them to send their wool round by Glen Innes and pay the 30 odd miles'

miles' extra freight? Yes. As a matter of fact the Inverell people and those who send their wool to Sydney are, by a large majority, in favour of the Glen Innes line, and they must know best what is to their benefit. Mr. J. F. Utz. 2 May, 1891.

424. With regard to wheat, is it not a fact that at present it can be sent from Inverell to Sydney cheaper than to Toowoomba? Yes, I believe that is the case on account of the Queensland railway rates being higher than those of New South Wales.

425. And is not Sydney a better market than Brisbane? No, I do not think it is. I think that the Toowoomba and Brisbane markets are better as far as prices are concerned. Undoubtedly prices are better in Queensland than in Sydney.

426. You said that the large estates through which the proposed line would run would be subdivided;—is it not a fact that one large estate was subdivided some years ago, and has not yet been sold? It is a fact that the Furracabad Estate was subdivided, and the land has not been sold because they asked too high a price for it. Land was sold here a few years ago within 2 or 3 miles of the town at £10 an acre. I consider that the price asked was too high.

427. They wanted £10 an acre? Some of it was sold for £10 an acre.

428. What is the extent of the Furracabad Estate? About 30,000 or 40,000 acres.

429. You said just now that the land through which the railway would run would be cut up and let at from 5s. to £2 an acre? Yes.

430. What would they expect for that land if they sold it;—would they not expect £10 an acre for it? Not for land with a rental of 5s.

431. What would they expect for land with a rental of £2 an acre? Certainly they would expect from £8 to £10 for that. It would be near the town.

432. Would they sell land which they could rent for £2 an acre for £8? Certainly not. They would expect to get, perhaps, from £15 to £20 an acre for land rented at £2.

433. And what would be the value, to sell, of land rented at 5s.? About £2 10s. or £3.

434. And you think farmers could be found to buy this land if it were offered for sale? I think so.

435. In large quantities? Yes; that is my opinion.

436. Is the Furracabad Estate very close to the town? It is within 3 or 4 miles of Glen Innes; some of the land is eight or ten miles from the town.

437. Would not the land so close to town be of greater value than the land through which the railway will run, and ought it not to sell at a higher price;—is £10 an acre too high a price if the other land will bring what you say it will? Some of the land, I daresay, would be worth £10, but the greater part of it is too far away from the town to bring such a price.

438. Is it a fact that land in this district has gone out of cultivation and gone into grazing? Some of it is going out of cultivation; but that is owing to the fact that there is no market for the surplus produce grown. The farmers have got tired of keeping their produce from one year to the other, and they prefer to lay the land down in English grasses, and feed stock.

439. And if the railway were constructed they would have a market? Yes; and there would be a great quantity of produce grown here which is not grown at present owing to the want of a market.

440. The railway would give access into the western districts, and thus increase production round Glen Innes? Undoubtedly so.

441. Is not the starting point to the coast a factor in the consideration of a railway from Inverell? I do not think so.

442. If the best point of junction with the coast is found to be at Guyra, would it not be better to construct the railway from Inverell to Guyra? I maintain it would not be, in view of the establishment of a harbour at Byron Bay. I consider that it would be better for the trade of this part of New England to go to Byron Bay, then *via* Guyra to Grafton, taking into consideration the fact that there would be a larger population in the Richmond district than there ever will be on the Clarence, and that trade will increase more rapidly in the Richmond and Lismore districts, which would thus become a better market for us than the Clarence.

443. I suppose if a line were constructed from the coast this district would be a sanatorium for the people there? Yes, I think it would be availed of for that purpose on account of its climate. I have not the slightest doubt that in the summer time people will come to New England for a few months. As a matter of fact, people from Brisbane and other parts of Queensland are already beginning to come here in summer.

Mr. Christopher Legh, selector, near Glen Innes, sworn, and examined:—

444. *Mr. O'Sullivan.*] What is your occupation? I am a selector, living about 8 miles to the east of Glen Innes. Mr. C. Legh. 2 May, 1891.

445. Have you a good knowledge of the Glen Innes and Inverell districts? I lived in Inverell from 1864 to 1877, and I have lived in Glen Innes from 1877 until the present time. I have, therefore, been in the district for twenty-seven years.

446. Having had a long experience of this region, we may consider that you have a considerable knowledge of all facts with regard to it? I think I have a tolerable knowledge.

447. What is your opinion with regard to the proposal to construct a railway from Glen Innes to Inverell? I think it is the only route that will benefit the Inverell people and the New England table-land to the fullest extent.

448. Why do you say it is the only route? Because I am aware there are two or three other routes proposed, and I think that neither of those other routes would benefit the people of Glen Innes and Inverell—I am speaking of the table-land of Inverell—to the fullest extent.

449. What are your reasons for preferring the Inverell-Glen Innes route? In the first place, it is shorter; in the next place, it places the people of Inverell in communication with the Queensland market, as well as the Sydney market, for their main production, which is wheat; and it also places them in the best communication with the coast in the event of future railway construction in that direction, no matter what route is adopted to the coast.

450. You appear to think that a line from Inverell to Glen Innes would give the residents of the Inverell district a better command of their natural market to the north, and also a fair command of the market in the south? Exactly.

Mr. C. Legh. 2 May, 1891.

451. And for that reason you prefer that the railway should come to a point mid-way? Yes.
452. Is there a large population between Glen Innes and Inverell? Not a very large population at the present time. There are a large number of farmers westward from Glen Innes for about 8 or 9 miles, between here and Wellingrove; then when you come within 12 miles of Inverell you again find a large selecting population.
453. Are you acquainted with the large estates between here and Inverell? I managed Newstead run for thirteen years. That is one of the large estates.
454. Have you any reason to believe that these estates will be cut up if the line is constructed? I think it would be to the advantage of the proprietors to do so, and the owners of King's Plains, Waterloo, and Newstead Estates have told me that such is their intention.
455. Then you can speak with some confidence as to the prospect of its being done if the railway is carried out? I think they would be mad not to do so. At present they can only run sheep on their land, and if they can get an agricultural settlement upon it, it is manifestly to their advantage to encourage such a thing. If I were in their position I should do so.
456. What is your opinion with regard to the prospect of commercial relations between Inverell and Queensland with regard to the supply of wheat? Inverell is a very large wheat-growing district, its capabilities in that way being almost unlimited. At the present time the people there have only a local market for their wheat. The price of wheat at Inverell is from 3s. to 3s. 6d. They can grow wheat at 3s. to pay them, because they can use a stripper there, and the clearing of the ground is not so costly, on account of the nature of the timber. Clearing ground on New England table-land is very expensive, because they have to drag the timber off instead of burning it. At Inverell they can grow their wheat at from 3s. to 3s. 6d. If they take that wheat northward towards Queensland they meet a market at Glen Innes, at Deepwater, and at Warwick, and they can also land their wheat at Toowoomba at a price equal to that at which it can be landed there from Brisbane.
457. Do you mean to say that they land wheat at Toowoomba from Brisbane? Wheat landed at Toowoomba from Brisbane costs about 4d. a bushel carriage, according to the Queensland freights.
458. Is not Toowoomba near the Darling Downs, which country is cultivated in favourable seasons? Yes; but the Darling Downs country does not cultivate sufficient for the consumption of Queensland.
459. What reason have you for making that statement? According to the *Queensland Statistical Register* for 1889, Queensland imported 109,588 bushels of wheat. In 1890 she imported 310,000 bushels. In 1889 they produced 2,340 tons of home-grown flour in Queensland from six mills, and they imported 41,371 tons of flour in 1889. So that by far the larger proportion of their breadstuffs was imported, viz., 41,371 tons of flour and 109,588 bushels of wheat.
460. Can you remember if the year 1889, to which these figures apply, was a bad season in Queensland for wheat growing? They grew an average of 15·88 bushels. It was not a bad season.
461. Is not that a pretty fair yield for a warm country? It is 5 bushels over their average. Their average for ten years ending 1889 was 10 bushels.
462. But in a good season they imported over 41,000 tons of flour? Yes.
463. Is it possible that this was only required for the coastal districts of Queensland? From Toowoomba they take the train and go right up to Charleville. It takes all that district, and I believe the Inverell wheat could even reach Brisbane.
464. Cheaper than the Toowoomba wheat? Yes; because Inverell has a larger average yield. They grow there 18 or 19 bushels to the acre, and on the Darling Downs, although their average is 10 bushels, the yield is very precarious.
465. But Toowoomba is very much nearer to Brisbane than is Inverell? I do not say they would do it cheaper, but for five years out of ten wheat production on the Darling Downs almost totally fails; and in those years the export from Toowoomba to Brisbane would be nothing.
466. We may suppose that when the wheat failed on the Darling Downs, Inverell could command the Brisbane market? Certainly.
467. And even in the favourable seasons she could compete with the Darling Downs? She would get a market; I do not say she would undersell them.
468. But she would supply a portion of the 41,000 tons of flour imported? Certainly. I should like to give the Committee, from the *Queensland Statistical Register*, page 303, the average yield of wheat in Queensland for ten years ending 1889. In 1880 their average was 17·68 bushels; in 1881, 3·62 bushels; in 1882, 12·08 bushels; in 1883, 4·30 bushels; in 1884, 16·17 bushels; in 1885, 5·11 bushels; in 1886, 3·13 bushels; in 1887, 22·10 bushels; in 1888, 0·89 bushels; in 1889, 15·88 bushels. For five years out of those ten the yield was under 5 bushels to the acre.
469. Under these circumstances, why is it that Inverell does not command that market now, considering that there is no duty on flour in Queensland? Because you could not carry the wheat from Glen Innes to Inverell by road. The cost of carriage from Glen Innes to Inverell by road would kill any such attempt.
470. The carriage on 40 miles of road would mean all the difference between profit and loss? Certainly.
471. What is the cost of carriage from Inverell to Glen Innes per bushel at the present time? I do not exactly know, but I should think it would be 4d. or 6d. a bushel by road. Of course, by rail it would come here for about 1½d.
472. Would that 4d. per bushel extra completely shut out Inverell wheat from Queensland in dry seasons? It would be a very great handicap.
473. Considering that the wheat used in Brisbane would probably be brought by sea from South Australia and Victoria, where it would cost 3s. or 3s. 6d. a bushel, could not Inverell pay 4d. a bushel and compete with those places? The added railway freight would be a great handicap. The price of wheat at Brisbane is about 4s. a bushel, and at Inverell about 3s. a bushel. If the railway were constructed from Inverell to Glen Innes it would cost, according to our present rates and the present Queensland rates, 1s. a bushel by rail to land Inverell wheat at Brisbane. This would bring the cost of the Inverell wheat at Brisbane up to 4s. a bushel, the same price that they are getting for sea-borne wheat at Brisbane. I have calculated, from the Queensland and New South Wales railway tariffs, the cost of the carriage of wheat from Inverell to all the stations, as far as Brisbane, that would be served. I would first like to make a statement as to the population of Queensland. In 1880, the population of that colony was 226,077. It had increased in 1890 to 406,658. At this rate of increase we may expect the population of Queensland

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in ten years' time to very nearly equal the present population of New South Wales; and, therefore, this would be an important factor in considering the question of a market for Inverell. I have shown that the average wheat production on the Darling Downs, which is the only wheat-producing country in Queensland, was 10 bushels per acre for ten years, and that in five years out of those ten the crop was more or less a failure. The cost of wheat at Inverell is from 3s. to 3s. 6d. per bushel, and the carriage by rail from Inverell northwards would be as follows:—To Glen Innes, 53 miles, by the new line, 5s. 8d. per ton, according to the A rates from Sydney; that would be 1·83d. per bushel; it would reach Deepwater, 76 miles, for 7s. 10d. per ton, or 2·54d. per bushel; it would reach Tenterfield, 110 miles, for 10s. 7d. per ton, or 3·43d. per bushel; Wallangarra, 120 miles, 12s. 4d. per ton, or 4d. per bushel; Stanthorpe, 160 miles, 18s. 7d. per ton, or 6·02d. per bushel; Warwick, 170 miles, 19s. 10d. per ton, or 6·43d. per bushel; Toowoomba, 252 miles, 28s. 9d. per ton, or 9·32d. per bushel; Brisbane, 353 miles, 36s. 6d. per ton, or 11·83d. per bushel.

474. You think that, although it would cost 1s. per bushel to send Inverell wheat to Brisbane, you could compete in the Brisbane market against the sea-borne wheat? We could get the same price. On this point, Messrs. Scarr and Price made a mistake in their report. They say, at page 14, that Inverell cannot compete at Toowoomba with sea-borne wheat from Brisbane, and they show a difference in favour of Brisbane of 3·35d. per bushel; but they leave out of account the fact that the wheat starts from Inverell at 3s. per bushel, and from Brisbane at 4s.

475. *Chairman.*] You are sure that wheat can be produced in the Inverell district at 3s.? At 3s. or 3s. 3d. That is ruled by the Sydney price. The price of wheat in Sydney for the last three months, according to the papers, has been 3s. 8d. and 3s. 9d. The cost of delivery from Inverell to Sydney, according to the special rates, would be, if it went by Guyra, 5·32d. per bushel, and if it went by Glen Innes, 5·65d. per bushel, so that it would net about from 3s. to 3s. 3d. That would rule the price, so that the price at Inverell would be 3s. or 3s. 3d., and as a fact that has been the price for years past.

476. Is there any appreciable difference in the price of wheat at Brisbane and at Sydney in the event of a rise in either market;—suppose, for instance, the standard price for wheat at Sydney was 3s., and the market went up 3d., and the standard price at Brisbane was 4s., would there be a corresponding rise in the Brisbane market? Yes; because in both cases the wheat is sea-borne.

477. If the price at Inverell rose to 3s. 3d., owing to a rise in the Sydney market, would a similar increase in price take place at Brisbane? Yes.

478. *Mr. O'Sullivan.*] I should like to draw your attention to the fact that in the year 1889, in the Darling Downs district, there were 19,399 acres of wheat cultivated, while in the combined districts of Inverell, Glen Innes, and Tenterfield, during the same year, there were only 7,731 acres cultivated;—does not that go to show that Toowoomba, in a fair season, must dominate the Brisbane market, considering its closer proximity to Brisbane? That question is answered by the figures in the *Queensland Statistical Register* for 1889, page 300. Messrs. Scarr and Price take the acreage of wheat growing on the Darling Downs, and they make a statement that 14,242 acres were grown there, as against 10,185 acres in Inverell, Tenterfield, and Glen Innes. Queensland statistics show that of that 14,242 acres 11,398 were affected by rust, and that of this quantity 5,673 were actually cut for hay.

479. Therefore, notwithstanding these statements in the report of Messrs. Scarr and Price, you, having a later and better knowledge, contend that even in favourable seasons Inverell must command a share of the Brisbane wheat market, in view of the fact that in one year 41,000 tons of flour were imported? Certainly.

480. Even under the most favourable auspices for Toowoomba? In fair years I think they will get a share of the traffic, and in bad years in Queensland, which number five in every ten, they ought to command the whole of it.

481. *Chairman.*] Is there never a failure in the Inverell crops? I should like to give evidence about the crops in Inverell. I lived there for many years, and I never saw but one failure, and that was in the bad year—1888. With regard to Messrs. Scarr and Price's report, wheat growing in Queensland is chiefly confined to three districts—Allora, Toowoomba, and Warwick. The *Queensland Statistical Register* for 1889, page 296, shows that in that year, in Allora, 2,590 acres were cut for grain; in Toowoomba, 783 acres; in Warwick, 4,679 acres, and in other places, only 387 acres. At page 298, the *Statistical Register* shows that in 1889, Allora produced 32,531 bushels; Toowoomba, 10,252; Warwick, 82,607; and other places, 8,937. These figures show that in Queensland wheat growing depends principally upon the three places just named.

482. *Mr. O'Sullivan.*] Putting aside the Queensland market altogether, and bearing in mind the rapid growth of population in the coastal districts between the Macleay and the Tweed, is there likely to be a good and lasting market there for the wheat and flour of the Inverell district? I think so.

483. Therefore, if a railway were taken to any point on the coast—either to Grafton, or from Tenterfield to Lismore—the wheat and flour from the Inverell district would be likely to find a very large market there? Yes; I think there is now a population of between 40,000 and 50,000 on the Clarence and Richmond.

484. And that population is now supplied by imported wheat? Yes; from Sydney.

485. Therefore, the Inverell district being so much nearer, and having a speedy and cheap means of transit, would be likely in the future to command the market of those districts? Yes; the Inverell district is the natural granary of the Clarence and Richmond, and the proper granary of Queensland, or at least a corner of Queensland.

486. But you look to the districts I have mentioned as well as Queensland for your market? Certainly.

487. Are there any grinding mills in Glen Innes or Inverell? There are two at Glen Innes. Mr. Utz has a very large one in full working order.

488. *Mr. McCourt.*] Where is the surplus wheat from this district sent now? We have no surplus wheat at Glen Innes. Glen Innes is not able to supply its own market at present.

489. What do they do with the Inverell wheat? Inverell is supplying its own market, and also sending a considerable quantity of flour to Goondiwindi, north-west.

490. None goes to Sydney? None from Inverell.

491. But suppose they grew an extra quantity of wheat here, would not the Sydney market be as good as the Brisbane market? It would be an alternative.

492. Would there not be a difference in the freight of nearly 6d. per bushel in favour of Sydney? I think not.

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493. What difference would there be? Inverell would still get from 3s. to 3s. 3d. per bushel. The cost of freight from Inverell to Brisbane is now about 1s. per bushel. Since Messrs. Scarr and Price made their estimate the Queensland rates have been raised.
494. What would be the cost of freight from Inverell to Sydney? About 5½d.
495. Therefore, that would be 6d. per bushel in favour of Sydney? Yes; but wheat is higher in Brisbane usually than it is in Sydney.
496. Brisbane is a better market than Sydney for wheat? Yes. From what I can gather, when the price is 3s. 9d. in Sydney it is about 4s. in Brisbane.
497. Then, there would still be a difference of 3d. in favour of Sydney, taking the lesser freight into consideration? Yes.
498. There would be a good market in Sydney, and, therefore, would not the wheat from these districts go to Sydney in any case? Not all of it. I have already pointed out that in Queensland they have very bad seasons, and in those years the price would be very much higher than in Sydney, and going north from Inverell to Queensland you pass places—such as Glen Innes and Deepwater, which includes Emmaville, Castle Rag, and other places—where there is a demand for wheat. Going north you are passing markets all the way. On the other hand, if you go south from Inverell, you pass Armidale and Tamworth which are large wheat-growing districts and supply their own markets, and when you get past Tamworth you come within the influence of the coast-borne wheat from Newcastle and Sydney. Going north you have markets all the way up as well as in Queensland.
499. But Sydney itself would be a better market in ordinary seasons than Brisbane? Yes; I should think there would be a difference of 3d. a bushel.
500. Therefore, in ordinary seasons, wheat would go from Inverell to Sydney? Of course, Sydney would be a large market for this district—we always contemplated that; but when I lived in Inverell, the view was that in Queensland they would get an alternative market.
501. Suppose the connection were at Guyra, how would that affect the northern market? It would cost the farmers about 1¼d. per bushel more to send their wheat that way to Brisbane.
502. Just bringing the price, according to your figures, under the Queensland price? Yes; the additional 40 miles' railway carriage would make a difference of 1¼d. per bushel in the cost of sending wheat from Inverell to Queensland.
503. And if the junction were at Guyra, would the cost of carriage of the Inverell wheat to Sydney be less than if it were sent *via* Glen Innes? It would make a difference of about one-third of a penny. The cost from Inverell to Sydney, *via* Guyra, would be 5·32d., and the cost *via* Glen Innes 5·65, or about one-third of a penny, at "special rates."
504. The adoption of the Guyra route would not affect the quantity of wheat going to Sydney or Brisbane? Certainly it would.
505. In what way? It would make it 1¼d. dearer to get to Brisbane.
506. But it would make it cheaper to get to Sydney? Only ¼d.
507. Even then there would be 2d. or 3d. a bushel in favour of Sydney? In ordinary seasons it would cheapen it ¼d. to Sydney by Guyra, but it would increase the cost by 1¼d. to Brisbane.
508. Which would get the volume of trade, Brisbane or Sydney? Looking to the future development of Queensland, and to the large increase of population there, it is impossible to say which would get the volume of trade. It would go, of course, where the best price could be obtained. What the Inverell farmers look at is not that they will get this 2d. or 3d. more in Sydney, but that they will get an alternative market in Queensland.
509. You cannot say, then, which place will get the volume of trade? I could not say. In bad years in Queensland, which may be reckoned as five out of ten, the most favourable market would be Queensland.
510. In estimating the difference in the cost of carriage *via* Guyra from Inverell, have you borne in mind that the line between Inverell and Glen Innes is about the same length as that between Inverell and Guyra;—I mean the newly surveyed line? There is a difference of 3 miles.
511. Did you take that into account? I take the distance from here to Inverell as 53 miles.
512. In their amended Report, the Railway Commissioners show that there will be an annual loss of over £13,000 on the proposed line;—in view of that fact, would you say that it ought to be constructed? I do not think there will be such a loss, though there will be a loss.
513. Have you gone into the question of what the loss will be? Mr. Utz has already given particulars on that point, and I think his evidence pretty well agrees with my view on the matter; but I look to a very great prospective increase, and I have a statement in confirmation of that view which I should like to put before the Committee. In 1886, the railway returns for the whole colony of New South Wales show that a tonnage of about 3,500,000 is carried on the different lines. If you deduct from that about 1,250,000 coal tonnage from Newcastle, which is only local, it will leave about 2,000,000 of goods tonnage over New South Wales railways, or about 2 tons per head of the population. Taking the population of Inverell and the surrounding districts which would be affected by the railway at 12,000, and taking the railway tonnage at 2 tons per head—Inverell is a very rich district, as good as any in the whole colony, and I see no reason why its railway tonnage should not be as great as any other part of the colony—that would give a total tonnage of 24,000 tons. Estimating the freight on this, not at 15s. per ton, but at 10s. a ton, from here to Inverell—which is about 3d. per ton per mile, the average for goods traffic—the result would be a railway revenue of £12,000 per annum on this line, instead of £4,200 as estimated by the Railway Commissioners. According to those figures, £8,000 would have to be taken from the estimated deficiency of £13,000.
514. *Mr. Trickett.*] You could hardly average the tonnage in that way, considering the great amount of goods traffic of all kinds around Sydney? Inverell is a very rich district, and I think the people there would be as likely to take as much tonnage as those in any other part of the country. The large tonnage about Sydney is only carried a short distance.
515. What business do you carry on? I am occupying selections, together with my family. I formerly farmed a good deal of land, but now I am chiefly grazing.
516. Are you farming now? Not now.
517. Did you find that farming did not pay? When I first came here I had about 80 acres under cultivation, and I contemplated farming on a larger scale, because I have a family of sons; but I have abandoned that intention, because I do not find that farming is a payable thing in this district. It might pay you if

you

you could work your own ploughs, but I should have to pay wages. I laid down the ground I had in English grasses. Mr. C. Legh. 2 May, 1891.

518. And it is generally admitted here that land has gone out of cultivation into grazing? I think the returns show a large increase in cultivation during the last eight or ten years, but I think a great deal of that has been new ground, which has been broken up and worked for a bit and then laid down in grass.

519. How far are you from the railway station? Eight miles.

520. Was it the cost of conveying your produce to market that caused you to abandon farming? I found that wheat-growing did not pay me. We had a variable harvest, and Glen Innes is not a great wheat-growing district for several reasons. I could grow potatoes which would pay very well, but there is only a local market for them.

521. Other farmers must have been affected as you have been? Yes.

522. And they have altered their mode of making a livelihood? I think the farmers in this district who have combined grazing with farming are doing well, while those who depend entirely on farming are not making much more than their wages.

523. Both you and Mr. Utz agree that if the proposed line were constructed, the owners of the large estates along the route would probably subdivide them for the purpose of sale or lease? I think so.

524. What price per acre do you think they would ask for the land. You have managed one of these stations; what price do you think it would pay them to ask for the land in preference to keeping it for grazing purposes? Taking the agricultural and pastoral land together, I should think that if they got on an average £2 an acre, it would pay them better to cut it up and sell it in small farms.

525. Mr. Utz said he thought they could get a rental of from 5s. to £2 an acre per annum. What do you think of that estimate? I think that for some of the best pastoral land they would get a rental of from 5s. to 10s. I should not like to rent land at £2 an acre.

526. You think that estimate is excessive? There are some choice spots between Glen Innes and Inverell, upon which it would be hard to place a value. It would depend entirely upon the access to market. If I were offered £2 an acre I should sell, rather than keep the land for grazing.

527. *Mr. O'Sullivan.*] You said you would give 10s. an acre for grazing land? That would be the best.

528. How many sheep per acre would that land carry? I should not use the land for grazing sheep; I should fatten cattle upon it. It would be land such as that close to Inverell, which butchers use for fattening purposes.

529. Then it would be a few exceptional bits fitted for fattening cattle, for which you would be prepared to give a rental of 10s.? Yes.

530. What about land required for grazing sheep—ordinary sheep country? Land that would feed one sheep to the acre ought to return you about 2s. an acre clear rental. Ordinary sheep country would be very good which would return 2s. an acre.

531. Under these circumstances, do you think the large landed proprietors would cut up their estates and sell when they can get 5s. per sheep every year? They do not make 5s. per sheep.

532. They make between 4s. and 5s. from the wool? They have to pay expenses out of that; that is not the net return.

533. A good many net from 4s. to 5s. a sheep? After they take off the interest on the purchased land, and the expense of carrying on the station, I do not think they net 4s. or 5s. per sheep.

534. Were not all these old estates bought and paid for years ago? A good many were paid for, but some are not; some owe money still.

535. Notwithstanding all these facts, you hold the belief that they may yet cut up their estates? I am sure they will cut up their estates.

536. Is there anything else you would like to say? I should like to mention one thing. A question was asked as to the traffic which would come from beyond Inverell. There was a gentleman here the other day—Mr. M'Farlane, of Myall Creek, 35 miles west of Inverell—who has hitherto sent all his loading to Tamworth, and received his return supplies from there. He says that directly the railway is opened to Inverell, his traffic will all go there. It will be cheaper for him to send it to Inverell.

537. *Chairman.*] What is the character of the country between Inverell and Guyra? I have frequently ridden over that country. After you leave Guyra for some 10 or 15 miles westward, there is very good basaltic country, occupied by farmers who are accommodated by the main northern line at Guyra. After you leave that point going westward, you get into second and third class pastoral country. Then in the vicinity of New Valley and Tingha the country is of a miserable description, but when you get within about 8 miles of Inverell, you find good basaltic country again.

538. Having read Messrs. Scarr and Price's report on the different proposed routes, do you generally agree with their conclusions as to the nature of the country? Yes; I think they give a very fair description of it.

539. And with regard to the Guyra route in particular? I thought that was a little overstated; but as to the others, I think the description given was very fair.

540. Is there anything else you would like to state? I was asked if I thought £13,000 a year would be too much to lose on the railway from Glen Innes to Inverell. I wish to point out that whatever the loss might be from Glen Innes to Inverell, the loss would be much greater from Guyra to Inverell, because, if the railway went between those two places, considerable traffic would still go from Inverell to Grafton by road.

541. *Mr. McCourt.*] You would not get the Tingha traffic? It is very small.

542. Are there not 2,500 people there? They are nearly all Chinamen.

543. Would they not travel? When they travel they walk and hump their swags along the road.

544. I believe you wish to correct a statement in your evidence? Yes. I was asked what was the cost of the carriage of wheat by road from Inverell to Glen Innes, and I said I thought about from 4d. to 6d. That was on the spur of the moment. I have since made inquiries, and I have seen a contract, and I find that the lowest cost of carriage from Inverell to Glen Innes for wheat is 30s. a ton, which, taking 37 bushels to the ton, makes 9½d. per bushel. Therefore, instead of from 4d. to 6d., I should have said 9½d.

Mr. William Woods, dairyman and farmer, near Glen Inner, sworn, and examined:—

Mr. W. Woods. 2 May, 1891.

545. *Chairman.*] What is your occupation? I am a dairyman and farmer.
546. *Mr. McCourt.*] Where do you live? Four miles from here in an easterly direction.
547. How long have you lived in this district? Eight years.
548. Do you know anything of the country along the proposed line of railway? Only for about 14 miles.
549. What sort of farming do you carry on? I grow potatoes, corn, and hay, and keep cows for dairy purposes.
550. Where do you sell your produce? Principally here, and at Emmaville.
551. Are there any other farms in your neighbourhood? Yes; there is another farm close beside me, with a cheese factory and large dairy.
552. Where does that farmer send his produce? To the same market.
553. Do you make farming pay? Yes; I have made it pay pretty well since I have been here.
554. Do you think others could make it pay, too? I do not know that. I think a good many could. The market is too limited.
555. Have you any special facilities for carrying on farming, such as a large family, or anything of that sort? Yes; I have a large family, who are able to work at dairy operations.
556. Is the farm your own? Yes.
557. Of what area is it? Between 1,200 and 1,300 acres.
558. That would be a large farm here? Yes.
559. Could you farm successfully on, say, half of that area? Possibly, I could do so, but we have a very limited market. A man in this district wants a good lot of ground to graze some stock upon as well as farming. I do not farm as much now as I did the first few years I was here, because we have no market for farm produce now.
560. Do you think that if the large estates in the district were subdivided and sold, they would find purchasers? I fancy so.
561. At what price do you think, for fair farming land? I believe the land would be worth from £2 10s. to £3 per acre.
562. What would you reckon a fair rent for that land? I do not think that a man could give more than from 5s. to 10s. an acre for it, according to its quality and situation.
563. Would land purchased at 50s. an acre give 10s. an acre rent? From 5s. to 10s., according to situation.
564. Would any man sell land for 50s. an acre if he could get a rental of 10s. an acre for it? I do not suppose he would. A good deal, of course, depends upon the quality and situation of the land.
565. You say that these estates would be sold at 50s. an acre freehold, and at the same time, you say that the land would bring a rental of 10s. an acre? I do not say that it would all bring that rent, but I say that it might bring from 5s. to 10s., according to quality and situation.
566. Do you think a man could pay 10s. an acre rent for land and make farming pay? Not for the general run of land; he might in some cases.
567. Exceptional spots? Yes.
568. Have you tried fruit growing? Yes.
569. How did you succeed with that? I have done very well with it, so far. Mine is only a young orchard. I have planted it since I have been here, but the result so far has been very good.
570. Are there many other people in the neighbourhood who have gone in for the same thing? Not just about here. There are other people in the neighbourhood of the town going in for fruit growing, but not about my locality.
571. Have you anything special to state with regard to the proposed railway? All I have to say is, that I believe that if it were constructed it would give us a good outlet to the western districts.
572. That is your object? Yes.
573. Would you get a market there for your produce? Yes; for our potatoes, chaff, and oats.
574. That being so, I suppose if a railway were constructed a greater quantity of land would go into cultivation here? Yes. A good deal of the land I have had under cultivation is now used for grazing cattle.
575. The land to the eastward of the town would go into cultivation? Yes.
576. Does dairying pay? Yes.
577. Is it carried on in the district to a large extent? Yes; a good deal is carried on.
578. Of course, butter would not give much freight to the railway? No, not much.
579. Would you send the butter westward, too? Sometimes we would, because they cannot always make butter out west. The railway would give us a good opening there for butter and cheese. I make a good deal of cheese as well as butter.
580. With regard to the land contained in your farm of 1,200 acres, do you think a man could make a living on 100 acres of it? I daresay he could if he cultivated it and managed it in a certain way, and if he were close to a township.
581. What do you call close to a township? Within 2 or 3 miles.
582. And your land is not within that distance? No.
583. But take land 10 miles from here? I would not like to go on 100 acres to make a living out of it.
584. How much do you think a man could make a living out of if he went, say, 10 miles away along this proposed line? I should think about 640 acres. A man could carry on both grazing and cultivation profitably.
585. And you think men are to be found here able to purchase 640 acres at, say, £2? They would not be found about here, but they would soon come from other places. I came here myself, and I know a great many more have come.
586. A great many people have come here? Yes.
587. Have any gone away? I do not know of any. Two of my own nephews came here twelve months ago and bought a large farm.
588. Where did you come from? Victoria, originally. I have been pretty well across New South Wales, and this is the best district I have been in for carrying on farming operations in a proper way. The climate is good, and you can grow almost anything if you have facilities for disposing of it.
589. You want a western market? Yes.

590.

Mr. W. Woods. 2 May, 1891.

590. If there were a railway eastward to Grafton would that give you a market? I think it would to a certain extent, but I think a line to the westward would serve the farmers best. The land about the New England district carries a very weighty crop, and we are not afflicted here with droughts or floods as they are in some other parts of New South Wales. In the absence of a market we do not feel justified in going to the expense of machinery to put the land under cultivation, and we make a living out of stock.
591. Are there any butter factories in the district, or is the butter all hand-made? It is all hand-made. There are two cheese factories here.
592. Carried on by companies? No; they are owned by individuals who carry on cheese-making on the American principle.
593. You would not carry on farming unless it paid you? No. I only grow now what is consumed on my own farm.
594. As the proposed railway will involve the country in a loss of about £13,000 a year, do you think it ought to be constructed? Yes; because it would bring population to the district, and in a very few years it would pay working expenses and interest. That is my opinion, from the experience of railways in other places.
595. You think it will induce people to come here? Yes, and settle on the land.

Mr. Thomas O'Malley, farmer and dairyman, near Glen Innes, sworn, and examined:—

Mr. T. O'Malley. 2 May, 1891.

596. *Chairman.*] What is your occupation? I am a farmer and dairyman.
597. *Mr. Trickett.*] How long have you been in the district? Thirty-three years.
598. Have you been farming all that time? I have been farming for thirty years; I was carrying for three years.
599. Where is your farm? Within 2 miles of Glen Innes, on the Northern Road.
600. What is its area? About 1,500 acres.
601. Is it your own property? Yes.
602. What do you carry on it? Three hundred or 400 head of cattle.
603. Is it fully stocked? Yes.
604. Are you able to sustain that quantity pretty well all the year round? Not altogether in the winter time. I get rid of the stores as much as possible.
605. Where do you distribute them? A good many buyers come from Inverell, sometimes. I reduce my stock during winter. The last I sold went to Inverell.
606. Do you cultivate any part of your land? I do not cultivate a great deal now. I used to cultivate 100 acres, but now I only cultivate what provides for myself.
607. When did you cease to carry on cultivation? During the last three or four years.
608. For what reason? There was no market.
609. Where was the market before? Well, we had not so many farmers then about the district, and we could always sell. Vegetable Creek was our market when the tin-mines broke out.
610. The population has not increased in proportion to the producing power of the district? No.
611. Do you cultivate any part of your land now? I cultivate about 20 or 30 acres. I grow hay and potatoes merely for my own use.
612. If railway communication were established between Glen Innes and Inverell, do you think farming would go on in that direction? In some things it would. We could supply them with potatoes and oats.
613. They cannot grow those things out there? No.
614. Do you think farming would increase out there? I am sure it would. I have relations at Inverell, with whom I have had frequent conversations on the subject, and they tell me if they could find a market for their wheat and other things, they would produce largely, as Inverell is a grain-growing district.
615. What are they doing now? They are doing the best they can—growing wheat and corn.
616. Are they able to dispose of all they grow? No; some of them still have last year's wheat on hand.
617. What is the reason they are not able to sell all they grow? They have not got a market.
618. You mean that the expense of sending their produce to market is too great? Yes; they cannot send it away and make a profit.
619. We had it in evidence this morning from Mr. Utz that he has an agent at Inverell at the present time, commissioned to buy up all the wheat he can get in the district? That may be the case, but I am referring to last year's crops. I have not spoken to any of them this year, but last year, one man living on the other side of Inverell, told me that he had 300 bags of wheat in the house and could not get rid of it.
620. What was his complaint? The want of a market, and facilities for getting his wheat away.
621. Suppose he could get it away, where do you think his market would be? There is a market here, and a market also in Queensland.
622. How do you know there is a market in Queensland? Because they got some wheat from here last year.
623. To any extent? Not to a great extent, because the carriage was too heavy. I even supplied them in Queensland myself with potatoes last year.
624. Do you know where the potatoes went to? To Warwick and Toowoomba.
625. Did you get a good price for them? Yes; £4 15*s.* per ton.
626. Did the wheat go to the same place? That I could not say.
627. Do you work the farm yourself, with your family? Yes.
628. You have no hired labour? I keep only one man.
629. It is all fenced, I suppose? Yes.
630. And what do you do with your stock—do you dairy at all? Yes; I make butter and cheese.
631. Where do you sell your dairy produce? I have sold my butter for the last fifteen years at Vegetable Creek. I have had a fixed purchaser there.
632. Have you acquired this farm since you have been in the district, or did you have any money when you started? I had not a great deal. I started first with 50 acres.
633. Then your property has grown up by your own exertions to its present extent, and you are free from encumbrance? Yes.

Mr. T. O'Malley. 2 May, 1891.

634. Is it well improved? Yes; it is fenced and cleared, and there is a good house on it.
635. What is about the value of the house? The house alone cost me about £250.
636. What family have you? I have reared eleven children.
637. So that altogether you are pretty well satisfied? Oh, yes, I am quite satisfied, so far.
638. Is yours the ordinary run of land, or is it peculiarly good? It is very fair land. About 300 acres of it is plain land, and the rest is timbered land.
639. It is average land? Yes, good average land.
640. There is plenty of land in the district of the same description that would be available for the same sort of farming? Yes, plenty.
641. You have heard it stated here that farms would possibly bring a rental of from 5s. to £2 per acre per year. Do you think that anybody could afford to pay 40s. per acre rent and make a profit? No, not about here. That price might possibly be paid for an exceptionally good piece of land in the vicinity of the town, such as that used for Chinese gardens.
642. What do you think would be the highest rent a man could pay for a holding 200 or 300 acres in extent? For good cultivated land he could afford to pay 10s. an acre if he had a market for his produce.
643. Within what distance of the town? Four or six miles.
644. And within the same distance of the railway, I suppose? Yes; so that he might get access to market.
645. Do you know much of the district between here and Inverell? Yes; I know it all, nearly.
646. Do you think that the holders of the large estates between Glen Innes and Inverell would be inclined to subdivide them into small holdings for agricultural purposes if the railway were constructed? I would subdivide them if they were mine. I am sure the owners would be glad to get 10s. rent for the land instead of using it for grazing sheep.
647. If it were subdivided for leasing do you think they would get tenants? I am sure they would.
648. And you think they would be inclined to subdivide? I think so; I have heard the owners say so, at any rate.
649. If a railway were constructed from Glen Innes to Inverell, can you foresee that a good revenue would result in the way of goods and passenger traffic? I can foresee that a large population would be attracted along the route, because the land is good, and plenty of people would be glad to get it. There would be traffic both ways. We should have a market in the west for our potatoes and other produce which at the present time is conveyed by teams as far as 200 or 300 miles in that direction.
650. The Departmental estimate of the working expenses of the railway is £7,000 a year, and the interest on the cost of construction may be put down at £15,000, making a total of £22,000. Their estimate of revenue is £8,200, leaving a deficiency of nearly £14,000 a year. Do you see any probability of that deficiency being reduced? I could not say; I have not gone into the matter.
651. Without going into details, do you think the construction of a railway would increase the trade between the two places? Yes; I am sure it would do so to a large extent, because along the line is some of the best land I have ever seen, and I have been five years in Queensland, and thirty years in this district. All along the route, and especially at King's Plains, there is some of the finest land I ever saw.
652. From your long experience of the district, can you say that during the time you have been here it has been gradually progressing? Yes. It is not so good now as it was a few years ago—the tin-mines are slackening off in places.
653. But since you have been here, has the district gone on gradually improving as regards agricultural and pastoral development? Yes. Agriculture has not improved here during the last few years, but there has been no falling off in grazing which has, in fact, progressed.
654. And agriculture has fallen off for want of a market? Yes; that I can safely say, because I myself formerly cultivated 100 acres, and now I only cultivate sufficient for my own use, the reason being that I cannot convey my produce to market.
655. And you think a railway out west would effect an improvement in this respect? Yes, I think so.

Mr. John Archibald McIntyre, owner of Waterloo Station, near Glen Innes, sworn, and examined:—

Mr. J. A. McIntyre. 2 May, 1891.

656. *Chairman.*] What are you? I am owner of Waterloo Station, 12 miles west of Glen Innes.
657. On what is known as the Swanbrook line, or the Wellingrove line? The Swanbrook line.
658. How long have you been resident in the district? Thirty years.
659. Have you been engaged in grazing pursuits all that time? Yes.
660. What is the area of your holding? The area of the secured land upon my property is about 14,000 acres.
661. Is there any land in addition to that? There are about 6,000 or 7,000 acres of Crown land.
662. How many sheep do you run? I have at present about 24,000.
663. No cattle? About 300 head of cattle, and seventy horses.
664. Where do you find a market for your wool? I send it to London, *via* Newcastle.
665. Is it brought into Glen Innes? Yes.
666. If this line were constructed would you tap it near your own residence, or still come into Glen Innes? If the line took the Swanbrook route, and there was a platform, I should certainly tap it near my own residence.
667. If the Wellingrove line were constructed how far would you be from the nearest point on that line? About 7 miles, and without a macadamised road. The Swanbrook line goes through my run.
668. Do you refer to the original Swanbrook survey, or the amended survey? Both.
669. They run pretty close together from Swanvale to Inverell? Yes; they meet at the boundary of my run.
670. Then the amended survey would go right through your estate? Yes.
671. And you would tap the line on your estate? Certainly.
672. Have you any knowledge of the nature of the country north and south of this proposed line? Yes, I have a very good knowledge of it.
673. Is the land to the north of the line better than that running directly between Inverell and Glen Innes? The line runs nearly on the edge of the good country. Most of the good country lies to the south of the line.

674.

Mr. J. A. McIntyre. 2 May, 1891.

674. Is there any good country to the north? Not much.
675. How far south does the good country run? South of the red line on the map it would run, perhaps, 20 miles.
676. Do you think the producers 20 miles south of your place would send their produce to this proposed line, or would they send it to the northern line, at some point south of Glen Innes-Guyra—for instance? They would send their produce to the Glen Innes line. At the present time they send to Glen Innes.
677. What sort of country is there on the Wellingrove-Swanbrook line? For 10 miles on each side there is good country—good agricultural country.
678. Would the people 10 miles north and south of the Wellingrove-Swanbrook line use that line, or would they tap the northern line at a point either north or south of Glen Innes? They would use the proposed line.
679. How far west do you think the influence of the proposed railway would extend? I think as far as Goondiwindi and Warialda, and all round that way.
680. Where do the Warialda people send their goods now? To Tamworth.
681. Do you know the distance between Warialda and Tamworth? I should think it must be about 80 or 90 miles.
682. And how far is it from Warialda to Inverell? 42 miles.
683. So that they would have to go 40 miles instead of 80? Yes.
684. But if their market was south they would have a considerably longer railway journey? Yes, they might have.
685. Would not that counterbalance the 40 miles less of road traffic? I have heard squatters in that direction say they would send their stuff *via* Inverell. At present they get a good deal of their stores from Glen Innes.
686. If you were a pastoralist living in the Warialda district, knowing the rates and the costs, would you send your stuff to Inverell? I have not studied the cost.
687. Do you think the people who told you they would send their produce to Inverell had studied the cost? I think so.
688. Do you know the distance between Tamworth and Inverell, *via* the Great Northern Line, and this projected line? No.
689. The distance is nearly 200 miles. Do you think 40 miles of reduced road carriage would counterbalance the 200 miles of extra railway carriage? I think it must be so, since the squatters about Warialda expressed themselves as I have stated.
690. For how far west do you think trade would gravitate towards Inverell? I heard a statement made to-day to the effect that one of the largest squatters in the Warialda district would send his stuff to Inverell.
691. Do you think that is reasonable? I think so. He is a Scotchman, and would not do anything to hurt himself.
692. In regard to Goondiwindi, which way does that trade go now? Into Queensland.
693. And you think that if this railway were constructed it would be influenced by it and would come to Inverell? I am sure it would.
694. You think that the wool and the return stores would all go *via* Inverell? Yes, I have heard the pastoralists say so.
695. Has there been much increase in the production of wool out in the western districts of late years? Yes. The country has of late been more fully stocked than formerly.
696. Are you producing more wool now than you did some years ago? Yes; twenty years ago I used to produce 200 bales, and, now, with less land, I produce 300 bales.
697. You have improved the estate to that extent? Yes, I have to stock more heavily.
698. As a grazier, what is your opinion as to the beneficial effect or otherwise of running sheep over land? It improves the land, especially paddocking.
699. Is there a difference of opinion among pastoralists on that point, or do you think they agree? I think they agree on that point, in this district at any rate.
700. How do you send your stock to market? I send store stock. It pays me better to sell stores to the western people, and they fatten.
701. How do they send stock to market? By railway from Narrabri, and also from places on the other lines.
702. If this line were constructed, do you think there would be any considerable quantity of fat stock sent by it? Yes, a great quantity. I would often send some myself.
703. Where would be your market for that stock? Sydney and Brisbane.
704. Do you do any Queensland trade? I have never done so, but stock is sent to Queensland from adjoining stations.
705. Only occasionally? Yes, only occasionally.
706. You have heard the estimated cost of this line; do you think that within a reasonable period it would be likely to yield sufficient revenue to pay working expenses and interest on the cost of construction? Yes, I am quite sure it would. I offered, if the line were constructed by a syndicate, to take a large number of shares in the company.
707. I suppose a syndicate would construct the line much more cheaply than the Government? It should not be able to do so.
708. Do you know the route which it is proposed that the new line *via* Wellingrove shall take? Yes.
709. It is rather difficult country, is it not—some portion of it? I am not an engineer, but it does not seem difficult to me.
710. Is not the country towards Wellingrove, and also down to Swanvale, very mountainous? Oh no, it is not very mountainous. It is not to be compared with the Moonbi, and other places I have seen railways pass through.
711. If your market is Sydney, would it not be to your interest to have a line which would connect with the main trunk line further south than Glen Innes? It might suit me individually, but I do not think it would suit the Inverell farmers.
712. You think they would prefer to tap the trunk line at Glen Innes? Yes.
713. Why should they do so if their market is to be south? Part of their market may lie south, but the best produce market is to the north.
714. In Queensland? Yes.

715.

Mr. J. A. McIntyre. 2 May, 1891.

715. You heard the evidence of Mr. Legh, to-day, in reference to the production of wheat on the Darling Downs? Yes.
716. Have you given any attention to that matter yourself, and do you know whether or not the conclusions arrived at by Mr. Legh are correct? I have been in Queensland, and I saw some farmers there, and they told me that they had only a crop occasionally.
717. And you believe the people of Inverell have a chance of having even a better market in Queensland than they have in Sydney? Yes, I think so.
718. And on that account Glen Innes would be the best place for them to tap the northern line? Yes, it would be more central.
719. If this line were constructed, do you think the large land owners would be likely to cut up their holdings, and let them or sell them? I, as one, would be happy to sell.
720. At a price? At a fair price, and I have heard many others speak in the same way. In fact I have only been waiting for the construction of the railway, to break up my estate.
721. Then you desire the railway, not as a means of getting your produce to market, but so that you may cut up your estate, and sell at a fair price? I am prepared to sell or hold.
722. Have other land owners expressed the same views as yourself? Yes; the owners of King's Plains and Newstead have said so, and I think I have heard Mr. Campbell, of Inverell, speak in the same way.
723. It would hardly be fair to ask you what you consider a fair price for your land? It would all depend upon the quality of the land. Some of it is not worth more than the price I paid for it, viz., £1 an acre, while other portions are worth £6 and £8 an acre.
724. Is yours an average holding so far as quality is concerned? Yes.
725. Is the country out west of Inverell better or worse than the country between Inverell and Glen Innes? For grazing it is better, and as regards agriculture it has not been very well tried. The rainfall there is not so good as it is towards the mountains.
726. Is west of Inverell a good wheat-growing district? Yes, for 20 miles round Inverell west, it is a very successful wheat-growing district.
727. Do you know the estate of Furracabad? Yes.
728. Is that good average land, similar to your own estate? Yes, it is good average land.
729. What, in your opinion, is the reason that the land on that property has not gone off better than it has done? I think they were asking too much for it.
730. They wanted more than a fair price? Yes.
731. Do you think it would have gone off if they had been prepared to take a less price? There seemed to be lots of buyers on the day of the sale.
732. How do you get your stores—from Glen Innes? I mostly buy in Glen Innes, but I sometimes get goods from Sydney or Newcastle.
733. Do you get any *via* Grafton? I have not done so of late years.
734. You have not sent any wool that way either? No.
735. Have you ever tried it? Before the railway was constructed to Glen Innes I always sent my wool that way.
736. And now you find it better for many reasons to send it direct by rail? Yes, I get more on board one ship. I ship at Newcastle.
737. Do you know whether there is much loss of stock in dry seasons out west from Inverell—at Goondiwindi and other places? Yes; that is the case in extremely dry seasons. A few years ago they lost a great deal of stock.
738. If this line were constructed to Inverell would it enable them to get feed in times of drought? Doubtless it would. We received a great many of their stock during times of drought.
739. The railway to Glen Innes would afford them means of moving their starving stock into grass country? Yes. The railway would enable starving stock to be brought from grassless and waterless country into the mountains.

Mr. Patrick Walsh, farmer and grazier, Ben Lomond, sworn, and examined;—

Mr. P. Walsh. 2 May, 1891.

740. *Chairman.*] What are you? I am a farmer, residing at Ben Lomond.
741. *Mr. O'Sullivan.*] What is the size of your holding? 1,200¾ acres.
742. How long have you occupied it? I have been at Ben Lomond over fifteen years, but my holding was not so large when I went there. I increased it by selection. I selected in 1881.
743. You have now selected up to the limit? No; I cannot get the full area.
744. Have you made farming pay? I only farm on a small scale.
745. And you are really a farmer and grazier? Yes.
746. I presume you have made it a success? Well it was better some years ago than it is at present as regards agriculture.
747. What is the cause of the difference? The heavy carriage to market. We have only a local market.
748. But you had heavy carriage in the earlier days, had you not? The produce was bought at the door in those days. There was a greater consumption for the stuff. There was more horse work then.
749. Then the introduction of the railway has disposed of your fodder trade? Yes; in that way it did not benefit agriculture much.
750. I presume, like all country districts, you suffer up here from the importation of cereals? Yes.
751. And possibly that has lessened your market? We suffer from want of exportation as well as from importation.
752. Do you know the country between Glen Innes and Inverell? I have travelled over it, but I am not well acquainted with it.
753. Do you think a railway between those two places would be justifiable in view of the fact that, according to the estimate of the Railway Commissioners, it would involve a loss of at least £13,000 a year? It would create a better market for the farmers about this district. They cannot grow potatoes very well at Inverell.
754. Then on the one hand it would be beneficial to the farmers around Glen Innes by opening up market for their root crops, and on the other hand it would be beneficial to the farmers of Inverell by opening up a market for their wheat? Yes.

Mr. P. Walsh. 2 May, 1891.

755. So that there would be a pretty fair traffic each way? Yes, there would be an exchange of commodities—there would be a market open for the farmers of each district.
756. Is there a large stock trade out this way? Yes, chiefly cattle.
757. Where is the stock trucked? At Glencoe and Glen Innes.
758. Where are they sent to? Maitland and Sydney.
759. Do you think the taking of a railway to Inverell would open up a stock trade which now goes further south, and would therefore bring revenue to the railway? It would create a great stock trade.
760. Do you think stock-owners would truck at Inverell instead of taking their stock to Glencoe? Yes.
761. Therefore that would be an item which the Commissioners for Railways have possibly not taken into account? Yes.
762. Do you know of any farmers in this district, or elsewhere, who would be likely to go upon the lands between Glen Innes and Inverell if they were thrown open for settlement? Yes, hundreds. I have known men to come up here and wait for weeks and weeks looking for land, but it has been locked up in the leasehold areas, and, of course, they could not get it.
763. Where did they come from? Some from South Australia, some from Victoria. I have known them to be up about Ben Lomond for weeks looking for land.
764. They came to look for selections? Yes.
765. And not finding them they went back? Most of them went back—some did settle down.
766. Do you think they are a class of men likely to come up here and buy freeholds or take up leaseholds? I am sure they would do so.
767. You believe they think so well of this district that they would be glad to come back and take up land on fair terms? Yes; I am certain of it.
768. Do you carry on dairying? Not much. I milk about twenty cows.
769. Could you produce fodder here that might be required in the western districts in time of drought? Yes.
770. And I presume all the other farmers round the district would do the same? Yes.
771. And it is possible that a very large fodder trade would be opened up with Moree and the back districts in dry seasons? Yes; there would be a large trade between here and Inverell and the west. When there is a drought there we always have a regular rain here.
772. That is another probability, I take it, that does not appear to have been considered by the Commissioners in their estimate? I do not think it has been.
773. Are there any lands down here with grass and water in dry seasons upon which starving stock from the back could be grassed? Yes. I never saw a summer here yet when there was not more grass than the stock could eat.
774. If the people west of Inverell could remove 200,000 or 300,000 sheep that might otherwise die, and bring them to these grass lands, you think they could be maintained here in a dry season? Yes, I have seen it proved at Ben Lomond.
775. In that way this railway might be of great assistance by saving national wealth? Yes.

Mr. John Alexander Price Selkirk, Manager of the Australian Joint Stock Bank, Glen Innes, sworn, and examined:—

Mr. J. A. P. Selkirk. 2 May, 1891.

776. *Chairman.*] What is your occupation? I am manager at Glen Innes of the Australian Joint Stock Bank.
777. *Mr. McCourt.*] How long have you occupied that position in the district? Ten years.
778. You have a pretty good knowledge of the district? Yes, I think I have.
779. You consider the district to be in a sound condition? Yes.
779½. Are the farmers and settlers in a good position? Yes; they are fairly solid men.
780. Taken as a whole? Yes. There is no doubt they are largely handicapped, owing to the absence of a market. They can grow a great deal more than they can find a market for.
781. How do they make their money—by what industries? The potato industry is a very large one here. Our potato crops show about the best average in the colonies, and the hay crop is also very good; and as regards wheat, although we have a very good yield, the quality is not first-class. Still, the yield is very good, and the hay crops of the district are as good as any that could be found in the colonies, and, I think, as heavy.
782. You think the farmers want a market westward? There is no doubt a very good market could be opened up westward.
783. Is that the great want here? It is no doubt a great want. The western districts in dry times could be supplied with a great deal of produce from here. We have sent hay in bales to the west by dray.
784. How often—as a regular thing? No; in bad seasons.
785. Once in five or seven years? More frequently than that.
786. Do you often have bad seasons here? Not here, but in the west.
787. The seasons are pretty regular here? Yes, very regular.
788. As a bank manager, I suppose you have a knowledge of the price paid for land here? Yes.
789. What do you think is a fair average price for fair agricultural land? The price will, of course, vary according to the proximity, or otherwise, to the town.
790. Say within 10 miles from the town? Within 10 miles of the town we have seen land sold at from 30s. to £3 an acre.*
791. Cash? Yes. We have seen exceptional cases of much higher prices. In one instance, from £10 to £12 an acre was paid for selected land 12 miles from the town.
792. Do you know the Furracabad Estate? Yes, well.
793. Why was not that sold? I think the prices put upon the land were too high to commence with, and I know of my own knowledge that a great many men who came here were grieviously disappointed at the limited market, and at finding no outlet. I know of one case where a Victorian came here and offered to take 1,000 acres at £5 an acre; the land being situated about 6 or 7 miles from the town, but the price asked was £6, and they would not take less.
794. Was not the land offered on peculiarly easy terms? I do not know that the terms were very easy. Though they look easy, I do not know that they are so. I think it took about twelve years to complete the purchase, the rate of interest being 7½ per cent., and the payments made half-yearly. 795.

* Note (*on revision*):—Within 10 miles of the town the price would be from 30s. to £20 per acre.

Mr. J. A. P. Selkirk. 2 May, 1891.

795. And those terms did not induce people to buy? No.
796. Do you think if the land along the proposed railway were cut up it would find purchasers? I do, undoubtedly.
797. So far as your knowledge goes, the people here are all fairly well off? Yes.
798. Taking your numerous customers? Exactly.
799. Is the business, generally speaking, good or bad? I think that the business here is quite as good and as stable as the business of any other town on the northern line. In fact, I know that the business of the leading commercial houses in Glen Innes to-day, is quite as good, and I think better, than it was even when the railway was under construction, and when there was a large floating population, and a great deal of money being paid away.
800. Are any people leaving the town because they cannot succeed in business? I know of none.
801. How many banks are there in Glen Innes? Three. The Commercial, the Bank of New South Wales, and the Joint Stock.
802. Are they all satisfied with the business, so far as you know? Yes.
803. And have they all good substantial premises, as if they intended to stay? Yes, decidedly.
804. You are aware that the Railway Commissioners estimate that there will be a loss of £13,000 on this railway, if constructed. Do you think, in view of that fact, it would be good policy to carry out the line? I think the estimate of the Commissioners is very excessive.
805. How do you arrive at that conclusion? There is no doubt that the trade that would be opened up between Glen Innes and the west would be very extensive. We should tap the Queensland border right away to Goondiwindi. I have seen letters from people round Goondiwindi, wanting to arrange to send their wool this way, and even to send it by road to Grafton. If a railway were constructed from here to Inverell, it would at once take the whole of that traffic, and the quantity of wool taken over the line would be very great indeed. There would also be a very large traffic in stock.
806. There is a good road of 50 miles between Glen Innes and Inverell—would that make any difference? No; I think the traffic would all come by rail.
807. Is the prosperity of Glen Innes largely supported by the mining population in the district—more so than by agriculture? No; I cannot say it is at the present time. Some years back, no doubt, it was largely dependent on mineral resources, but I am afraid that if it had to depend on mineral resources now, it would be in a very bad state.
808. There is not much mining now? No.
809. What is the reason,—are the mines worked out? I think it is owing to want of development. I do not think the mines are exhausted by any means. In my opinion there is any quantity of rich mineral land yet to be opened up in the district.
810. Do you think that the point of connection between the main line and the coast, say, at Grafton, or elsewhere, should be a factor in determining the direction of the railway from Inverell? No.
811. Do you think the best route can be found from here to the coast? I believe so.
812. Have you a knowledge of the country? I have not a knowledge of the country, personally.
813. Are you aware that Messrs. Scarr and Price have recommended the line from Guyra to the coast as the best? Yes.
814. If that is found to be the best line to the coast, do you not think that the railway from Inverell ought to go to Guyra? No, I do not, because we have the Queensland market to depend upon, and that is a market which is largely looked forward to by the farmers of Inverell. They look upon that as their principal market.
815. What for? For fruit, and also for grain. Even if they have to go by bullock dray from here to the coast they can do it cheaper than by going by land to Sydney.
816. But it is cheaper to send wheat to Sydney than to Brisbane from Glen Innes? I do not think so.
817. Is fruit largely grown in this district? It is not very largely grown in this district. It is grown more largely at Inverell than here. A large area is, however, being laid out in orchards in Glen Innes. There is one orchard on the Furracabad property 30 acres in extent, and many smaller ones.
818. If a railway were constructed to Inverell do you think agriculture would increase largely in the district? I do, undoubtedly. I have known many men from Victoria and South Australia who have been prevented from settling in the district owing to the want of an outlet for their produce.
819. Would there be any considerable passenger traffic westward from here? There is no doubt there would. There is already a considerable passenger traffic by coach.
820. What are the industries of this district? Immediately in the vicinity of Glen Innes there are three flour mills; there are two tanneries, a soap factory, three dairy factories, and a brewery.
821. Where are the dairy factories? There is one about 7 miles away, and two others.
822. Are they carried on by individuals? They are not in the hands of companies; but they go in for as many as 70 or 80 cows. Then, at Dundee we have three wool-scouring establishments. Dundee is about 16 miles from Glen Innes, on the northern line. Of the wool put through at these scouring works, by far the greater portion comes from Inverell and the west. They put through something like 1,500 bales in the year, which quantity would no doubt be largely increased if there were greater facilities for transport.
823. Are all the flour mills working? No; two out of the three are in full work.
824. Do they work all the year? No.
825. Where does the wheat come from? Sometimes it has to be brought from Sydney. At the present time it is being bought up in the Inverell district. All the available local wheat is also being purchased, and wheat is being brought from Tamworth.
826. Would the construction of this railway cause wheat to come from Inverell in larger quantities? There is no doubt of it. At present you cannot bring wheat from Inverell to Glen Innes under about 9d. a bushel, which is rather a heavy tax.

Mr. Patrick M'Cormack, hotel proprietor, Glen Innes, sworn, and examined:—

Mr. P. M'Cormack. 2 May, 1891.

827. *Mr. Trickett.*] I believe you are an hotel proprietor, and have been many years in the district? Yes; I have been twenty-seven years in this district.
828. And how long in Glen Innes? I have been residing in Glen Innes for about thirteen years.
829. And you have seen the place almost from its infancy? It was a very small place when I first came here.

830,

Mr. P. M'Cormack. 2 May, 1891.

830. And it has been fairly progressive up to the present time? Yes.
831. What do you think is its present state, as compared with the last three or four years? I think Glen Innes is steadily improving year after year. The population continues to increase, and that is a sign of prosperity.
832. And are all the buildings that are going on of a permanent character? Yes.
833. Have you yourself found it a fairly prosperous place? I have, indeed. I came to Glen Innes carrying my swag, and I am now a proprietor of a large hotel. I have been fairly prosperous and am well satisfied.
834. Have you an intimate knowledge of the route of the proposed railway? Yes; I have travelled over it for many years, and know every inch of it.
835. Is the population very scattered? Yes, the population is scattered; but some years ago there was no one at all on the land, while now a very fair population of farmers reside along the route.
836. On that portion of it which is available for farms? Yes.
837. What do you think of the character of the land;—is it suitable for farming? I think it is second to none in Australia. I have seen a great deal of Victoria and Queensland, as well as of New South Wales, and I consider that the Glen Innes and Inverell district is equal, if not superior, to any that I have ever seen. I lived in Victoria, and saw a great deal of farming carried on there, and I consider that the land of these districts is equal, if not superior, to any land in Victoria.
838. What kind of products are grown? All sorts of products, both cereals and fruits.
839. In your opinion, what proportion of land along the route of the proposed railway is suitable for agriculture? Three-fourths of it.
840. The greater part of it has been alienated, has it not? Yes; the land was too good to leave idle, with the opportunities they had of taking it up.
841. If the large estates were cut up and thrown open for settlement, do you think people would come to the district and take them up, if they could get them at a fair price? Yes; I think people would be only too glad to get the land, and it would pay the land-owners much better if they could get 10s. or even 7s. 6d. an acre rent, than it pays them to stock the land all the year round.
842. Is it not a usual thing for people who have holdings to lease land for agricultural purposes? Yes; in this district there are several holdings leased for agriculture. People come to the district, and find that the land is all alienated and they have to rent it.
843. And have the people who have taken up the land on lease been fairly prosperous? Yes; until they have been able to purchase land of their own. I have known several here who have rented land, and afterwards, as they got an opportunity, purchased or selected, as the case might be.
844. The experience in many parts of New South Wales is that as people get on with these small holdings they sell out to the squatter, and go into the towns or to Sydney;—has that been the experience in this district? I have not known many to do that in this district.
845. Not many? There are some, of course. They are free agents, and are allowed to do just as they like. There are very few, indeed, in this district who have sold out and gone away.
846. Do you come in contact with many of the farming population? Yes.
847. Do they appear a contented people? They are very contented. The farming population here are about as contented and happy as any I have known.
848. The same description of produce that is grown in the vicinity of Glen Innes cannot, I believe, be grown near Inverell; for example, potatoes and oats they cannot grow in the Inverell district successfully? They may grow potatoes in wet seasons, or have early crops, but oats they seldom, if ever, grow, except for the hay. They generally go in for a class of oats they call black oats, of which they get a great many crops from one sowing.
849. Wheat can be grown in the Inverell district which cannot be grown about Glen Innes? Yes; the climate and soil of Inverell are more fitted for wheat-growing. At Inverell they produce a better quality of wheat. We may have a larger average yield, but the quality is not so good.
850. If a railway were constructed, do you think it would increase the growing of products in these respective districts, and create an interchange of trade? It would, most decidedly. The railway coming from Sydney to Glen Innes had the effect of increasing the population to a considerable extent.
851. As a business man, I would ask you if the increase of population and of production would be sufficient to justify the construction of a railway, the annual expenditure on which would be about £22,000 for interest and working expenses? Whether the railway would be profitable or not would depend in a great measure upon how it was managed. In my experience, I have seen railway extensions to places with a smaller population, which have been profitable.
852. Have you thought out in your mind how the railway in this case is going to produce a fair return? My idea is that the railway would bring an immense trade from the west of Inverell. There is a large extent of country there with which I am well acquainted. In my early days I was stock droving there, and I have been a good deal over that part of the country. There is magnificent land there, upon which a large population would be settled if facilities for transport were afforded.
853. But at the present time, have you opportunities of judging as to the interchange of trade between Glen Innes and Inverell? Yes; I know a good deal about the Inverell district, and if the railway were constructed, there is not the slightest doubt that the consequent increase of population would create a large traffic.
854. Do not the coaches to and from Inverell stop at your hotel? Yes.
855. How many coaches are on the line? In the winter time, two coaches a day—one in the morning, and one in the afternoon, carrying the mail.
856. That is from Glen Innes to Inverell;—how many come back? The same number.
857. What amount of traffic is done in the way of passengers? A very fair traffic.
858. What is the fare each way? £1 single, and 30s. return.
859. How many people do the coaches hold? One coach will hold twelve passengers, and the other two coaches hold eight and six respectively.
860. How many passengers do the coaches usually carry? Sometimes they go empty, and sometimes they go full.
861. Do you think there would be an average of six a day each way? I have not made a calculation.
862. I suppose, if the railway were open, the public would want to be carried much cheaper than at a single

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single fare of £1? Yes; of course the traffic would be much greater. I have seen the time when the passenger traffic right through from Tamworth, and even from Quirindi, was carried by coach to Queensland, and now it would take a great many coaches to carry the traffic.

863. Have you had any talk with the people as to what rate per ton they would be prepared to pay for their goods by rail from Inverell to Glen Innes? I have not.

864. Has that subject been at all discussed? Yes; I think so, amongst the business people.

865. Mr. Utz, in his evidence, said that he thought 15s. a ton would be a fair rate;—from your knowledge of the business people here, do you think they would be prepared to pay that rate, seeing that they are now paying 30s.? Yes; for the class of goods I should get I should be very glad to pay 15s. per ton.

866. Do you know the various routes that have been surveyed from time to time? Yes; every one of them.

867. Which do you think is the best? My opinion is that the line termed the Swanbrook line goes more in the direction of the best agricultural country. It is called the southern line on the survey.

868. But that Swanbrook line goes round by Wellingrove? Yes; the reason of that was to avoid the Waterloo Range, and get an easier grade.

869. For how far on each side of that surveyed line do you think the people would avail themselves of the railway? On the northern side there are about 10 or 12 miles of good agricultural country, and for that distance the people would avail themselves of the line; on the southern side the area of good country that would be served would be about 20 miles.

870. We have it in evidence that people would even come to the railway from the Queensland border, west of Inverell? Yes; I am certain they would. I know several squatters who come to Glen Innes now on their way to the south, in preference to any other route. They have always said that if a line were constructed to Inverell they would use it. One of these gentlemen is a squatter living 30 miles to the south of Goondiwindi, at a place called Welltown, where he has a station carrying about 200,000 sheep.

871. Did he tell you that it would suit him better to bring his wool *via* Glen Innes to Sydney than to take it to Brisbane? Yes.

872. Did he look upon it as a saving in expense or as a saving in transhipment? He looked upon it as a saving in expense.

873. Is the nature of the country along any portion of the line such as to prevent access to the railway? No; there would be no such difficulty.

874. Platforms could be erected at various points along the line which could be easily approached from the country on either side? Yes.

875. Do you know Tingha? Yes.

876. That is pretty close to Inverell? It is 15 miles south of Inverell by road.

877. If the railway were constructed, do you think the people of Tingha would send their tin and other goods by way of Inverell? According to the last survey, the people of Tingha would be about 8 miles from the Glen Innes-Inverell line, at a place called Elsmore.

878. *Chairman.*] Are you sure of that? I am positive. I have travelled the district hundreds of times. Tingha does not lie direct south of Inverell, but south-east. It is exactly the same distance from here in a direct line as Inverell.

879. *Mr. Trickett.*] And Tingha is distant from Guyra about 40 or 50 miles? I could not tell you exactly.

880. Do you think it would suit the Tingha people better to cart their stuff to Inverell, which is only about 10 miles, than to Guyra, which is between 40 and 50 miles? The people of Tingha get all their stuff now from Glen Innes, and they send all their tin here. Wright, Heaton, & Co. have closed their office at Guyra, where they had it for years. They have only closed it within the last two or three days.

881. I suppose that is because the road is better from Tingha *via* Inverell? I do not know.

882. If this line were constructed, do you think it would open up a trade to the east of Glen Innes? There would undoubtedly be a great deal of trade done with the east.

883. The gentleman who reported on this line seems to have regarded it only as portion of a line to the coast, and to think that its only chance of success would be to carry it on to the coast;—do you agree with that, or do you think it would pay on its own merits? I quite agree that it should form part of a railway system to the coast.

884. Do you think it would pay without that extension? Yes, undoubtedly; because it would open up a great trade in the west. The western trade is what the farmers require, and particularly in bad seasons.

885. Has Inverell gone back of late years, or has it gone ahead? It has gone ahead very much.

886. I suppose you think it would go ahead much more if it had a railway? Undoubtedly.

887. Do you come in contact with many people who come here for the purpose of taking up land? Yes, a great many. There are many inquiries now about land.

888. And do they generally determine to take it up? There will be a great demand for land if it is surveyed about the railway. They are all waiting for that. It would be no use for them to attempt farming now unless they saw a prospect of a market.

889. Do you know anything about the mining industry? Yes.

890. Of what does it consist? Of all sorts of minerals—tin, silver, gold, bismuth.

891. Which is the nearest mine to the proposed line of railway? There is a tin mine working within 7 or 10 miles from here.

892. Are the mines payable? There is one called the Holdfast, in which there has been a new development, and where it is reckoned that next month forty or fifty men will be working.

893. Do they treat the tin locally, or send it away? They send it away.

894. What other mines are there? There are silver mines all round, and a number of mines have not been properly developed. There is a bismuth mine which has been successfully worked for the last twelve years. It is not going on just now; it has become rather expensive to work. It is worked by Messrs. Vickery and Hoffnung, of Sydney.

895. Altogether, so far as your knowledge goes, the district is a progressive one, and the population is likely to increase? Yes.

Mr. James Healey, auctioneer and commission agent, Glen Innes, sworn, and examined:—

Mr. J. Healey. 2 May, 1891.

896. *Chairman.*] What is your occupation? I am an auctioneer and commission and general produce agent, carrying on business at Glen Innes.
897. How long have you been in Glen Innes? About nine years.
898. Are you the only auctioneer and produce agent here? No.
899. How many auctioneers are there? About eight or nine.
900. Do you hold regular sales of produce? Yes; once a week. I have only been carrying on my present business for three years, though I have resided in the district much longer.
901. Do you do the largest business as auctioneer and produce merchant? That I can hardly say. I am fairly satisfied with the amount of business I do.
902. You think you do your fair share, or an eighth or ninth part? Yes; I am perfectly satisfied.
903. Do you know the country between Glen Innes and Inverell? Yes.
904. Have you frequently travelled over it? Yes.
905. Does much produce come from Inverell to Glen Innes? Maize, principally. That is what I have to deal with.
906. They do not grow maize at Glen Innes? They grow some.
907. Does it grow successfully in Inverell? Yes.
908. What quantity of maize in the year do you get from Inverell? During the last five months, which will about cover the whole of the maize season for the year, I have had from Inverell something over 600 bags.
909. Are you the sole consignee of maize? No.
910. How many other people get maize from Inverell besides yourself? Mr. Grover, Mr. Rule, Mr. Utz, Mr. Potts, Mr. Healey, and others.
911. Would the quantities consigned to each of these be equal to that sent to yourself, more or less? Some of them may have even more.
912. Can you give us any idea of the total quantity of maize received from Inverell during the year? I do not think I could, for this reason—that the maize I get myself is for our own consumption, and orders round about.
913. Do the other gentlemen send the maize out of the district? They use it for their own consumption as well, but some may be sent away by rail, though as to this I cannot speak.
914. Then the production of the Inverell district as regards maize, is merely for the supply of their own requirements and the requirements of Glen Innes? Yes; and the district generally.
915. You cannot tell us whether maize may go by rail further south or not? I should think that during the last twelve months the quantity of maize brought from Inverell to Glen Innes must have been something like 314,000 bags.
916. That would all come by the proposed railway, if it were constructed? Yes, every bag.
917. What other produce comes from Inverell to be consumed locally at Glen Innes or sent further on? Wheat, principally.
918. How much wheat has come during the last twelve months? That I cannot say, because I have not touched wheat.
919. Can you speak as to any other kind of produce? No.
920. Is there any timber out that way? No; we send timber there.
921. You get wheat and maize from them, and what do you send them in return? We send them some thousands of feet of cedar which grows on the eastern range, within about 20 miles from Glen Innes.
922. Does it come in the log or cut up? Cut up.
923. What quantity? I should think 20,000 or 30,000 feet at the very least.
924. What else do you send to Inverell? Oats.
925. Do they not grow oats themselves? They do; but not as well as we do.
926. What quantity of oats did you send from this district to Inverell last year? Perhaps we did not send as much last year as in previous years—in dry seasons, for instance. About two years ago, when the drought was on, a large quantity of oats and chaff went to Inverell.
927. Last year would be an average year in regard to the quantity sent? I should think a few thousand bags of oats went.
928. Anything else? Yes, potatoes.
929. What quantity of potatoes do you think went Inverell way last year? I should think 150 or 200 tons.
930. Any other produce? Chaff, principally; and chaff, of course, is chiefly sent there in dry weather. Some two years ago, enormous quantities were sent. What militates against the sending of stuff, is the wet weather.
931. Are the roads very bad in wet weather? Yes, very bad.
932. Is that owing to very severe grades, or because the roads are not metalled? Because the roads are not metalled. They are better now; but I am speaking of the last eighteen months or two years. About that time the road was almost impassable, and I have had loads of chaff capsized.
933. Is there anything else that would go out to Inverell if the line were constructed? Not that I know of, unless it may be stock.
934. Where from? Interchanging—sheep coming and going, and other stock.
935. Do you think they would use the railway for that purpose? Yes.
936. Do they not usually travel sheep for short distances by road? Fat stock they would put on the railway.
937. You would not send fat stock out there? No; but they would bring it here.
938. Looking at the interchange of products between Glen Innes and Inverell, and the quantities you have mentioned, and considering that the Railway Commissioners estimate an annual loss of over £13,000, do you think it fair that the general taxpayers of the country should be called upon to bear this loss? There might be a loss in the first instance, but I do not think the Railway Commissioners have correctly estimated the amount of traffic.
939. Do you know where the official of the Railway Department charged with the duty of collecting the statistics obtained them;—did he obtain any from you? No.
940. Do you know how he did obtain them? I understand that he simply collected what was carried by the railway.

941.

Mr. J. Healey. 2 May, 1891.

941. You do not know if the Commissioners, or anyone connected with the Railway Department, made any minute investigations as to the quantities of goods and produce sent to and from Inverell? They made some inquiries, but no inquiries were made of me, and neither the Railway Commissioners nor their officers knew the amount of business I was doing.
942. Do you know whether the officers waited upon any of the residents of Glen Innes, and obtained statistics upon which to base their calculations? I could not say.
943. You have not heard of their having done so? No; I simply knew that they were here collecting evidence, and I was under the impression that they were simply obtaining it from the Railway Department.
944. Do you know anything of the timber resources of this and the adjoining districts? Yes.
945. Is there any timber within 50 miles good enough for bridges and sleepers? Yes, within about 25 miles from here, east.
946. There is none on the route of the proposed railway? I do not think so.
947. Or north or south of it for 30 or 40 miles? I do not think so.
948. Then any timber required in the construction of the line would come from the east of the northern line? Yes.
949. And there is timber there of eleven kinds suitable for bridge work and sleepers? Yes, timber of all kinds. You will see there blue-gums upwards of 100 feet in length, and with a barrel 6 feet through, and not a limb on them.
950. Do you know anything of the country between Inverell and Guyra? No.
951. Have you been down to Grafton from Glen Innes? Yes.
952. It is very rough country? Yes; along the main road.
953. Are you an advocate for the construction of a line from Glen Innes to Grafton? No. If I were asked to-morrow, as a citizen, to give my vote, I should give it against the Grafton line.
954. As an unjustifiable waste of public money? Simply because the time is not ripe for such a railway.
955. Suppose a good route could be obtained from Guyra, *via* the Don Dorrigo Scrub, to Grafton, going through good country? If the cost were not too great I should certainly give my vote for it. Wherever the cheapest route could be obtained to the seaboard, I should be perfectly willing to see the line go that way.
956. Do you think that if a line were constructed from the coast to the table-land there would be a large interchange of products? I think so.
957. What would you supply them with from the table-land? As far as we are concerned we can grow potatoes in any quantity, and they cannot do that on the coast. We could supply them with any quantity of potatoes, and also with oats, and wheat would be sent from the Inverell district.
958. What would they give you in return? They would give us maize and sugar, principally.
959. Your requirements in the sugar line would soon be met, I suppose? Well, if a line were constructed from the seaboard, the population would increase considerably, and there would be a greater interchange in every way.
960. You think that the time has not arrived, at all events, for any communication between the coast and the table-land? No.
961. Do you think it likely that this district and the Inverell district will find a market for their produce in Queensland? Yes; we send a great deal of stuff across the border to Queensland, but the border duty kills us.
962. There is no duty on wheat? But there is on potatoes.
963. With regard to wheat, Inverell being a wheat-producing district, do you think that if a railway were constructed it would be able to compete with the Darling Downs in Queensland? Yes; I believe it would in many seasons.
964. Do they not produce potatoes on the Darling Downs? They cannot rely upon them as a crop. I lived in Roma for four years, and since I came here to live I have been doing business with men in that line.
965. What quantity of potatoes do you send into Queensland in a year? Not a great quantity. As I have already said, the border duty is an obstacle. It is only when they cannot get them at all in Queensland that they send here for them.
966. Then, under existing tariff difficulties, unless they have a very bad season in Queensland, there is no market there for your potatoes? No.
967. Roma is situated in the centre of the Darling Downs district, is it not? No, further west.
968. How many miles from Toowoomba? About 250 miles from Toowoomba, in a north-westerly direction, and about 400 miles from here.
969. Have you supplied any of the intermediate places, such as Warwick, Toowoomba, and Stanthorpe? Yes.
970. Do you supply them every year? Every year I have sent more or less. To Warwick and Stanthorpe I could send supplies more or less every year, and I could only send them occasionally to Roma, when there was a very bad season.
971. What other produce could you send there? That is about the only line I do myself.
972. Is there likely to be any return traffic from the Darling Downs? No; except stock.
973. You have heard it asserted that traffic as far west or north-west as Goondiwindi would be attracted to Inverell if the line were constructed;—do you agree or disagree with that? I agree with it.
974. Have you ever been out Goondiwindi way? Yes.
975. And Warialda? Yes.
976. And Moree? No.
977. Do you think the Warialda traffic would gravitate to Inverell? Yes.
978. Where does it go now? A good deal of it comes this way.
979. And the rest of it finds its way direct to Tamworth? Yes.
980. In view of the long railway journey from Tamworth to Inverell, *via* Glen Innes, do you think they are likely to come here? I think so.
981. Do you think the traffic from Moree would come here? Well, there are many men who would prefer a long ride in a comfortable railway carriage to a shorter ride by coach.
982. But is it not much the same distance by road from Moree to Inverell as it is from Moree to Narrabri? I do not know. I have often sent produce round by Narrabri to Moree from here.

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983. If you had an order for produce, and the railway were constructed, instead of doing that would you send it *viâ* Inverell? Decidedly.
984. With regard to the flour mills, of what size are they? Mr. Utz's mill is capable of grinding from 90,000 to 100,000 bushels a year.
985. Where is he going to get the wheat from? Principally from the Inverell district, in the event of a railway.
986. Where will he send the flour to? The best market.
987. Would it pay him better to send it south or north than to keep it for the local market? It would just now. If he had a few hundred tons he would do very well by sending it right into Sydney.

Mr. Edward Grover, mill proprietor, Glen Innes, sworn, and examined:—

Mr. E. Grover. 2 May, 1891.

988. *Chairman.*] What is your occupation? I am a mill proprietor, having a saw-mill and a flour-mill; and I am also a builder and contractor.
989. *Mr. O'Sullivan.*] Are you working your flour-mill? Yes.
990. Where do you get your wheat from? It is mostly local wheat.
991. Grown in the Glen Innes district? Yes; I get some from Guyra and some from Dundee, but it is mostly local wheat.
992. Do you receive any from Inverell? I have not done so.
993. Where do you sell your flour? Locally.
994. Do you ever send any towards the coast, or towards Queensland? No.
995. Is the local consumption large enough to keep two mills going? No; my mill is not always going.
996. And there is a third mill not going? Yes.
997. I suppose the mining camps around here are good customers to you when they are working? Yes; they have been when they have been working.
998. Are they not customers now? No; not to a very great extent. I employ men in the timber line, and they are largely my customers for the flour-mill.
999. Where do your men get the timber? We cut up the logs.
1000. Where do they get the logs? They come from a radius of 20 miles, mostly to the east of this line.
1001. On the Grafton side? Yes; to the north and south of the Grafton line.
1002. Do you send any of that timber to Inverell? I have never sent any to Inverell.
1003. What kind of timber do you get? Stringybark, mostly.
1004. Is there an abundance of stringybark? Yes.
1005. Have you any ironbark? There is no ironbark within a radius of 50 miles.
1006. Is this timber suitable for railway purposes? I should say so, but I could not say confidently.
1007. How many men do you employ getting timber? I buy the logs. The bullock-drivers bring me the logs, and they employ the men. There are sometimes eight or ten teams going, and sometimes less. They bring the logs into the yard, and I buy the timber by measurement.
1008. Then these timber-getters work for themselves? Yes.
1009. And sell the logs to you? Yes.
1010. And have you sufficient local consumption to utilise all the logs they bring you? All the logs they bring to me I take.
1011. How long have you been in business as a miller? I have been in business in Glen Innes for nineteen years.
1012. Some time ago the farmers of this district produced a great deal more wheat than they do at present, did they not? They did.
1013. What is the reason for the falling off? Bad crops and low prices.
1014. Are you afflicted with rust in this district? Very little.
1015. What caused the bad crops? Bad seasons—bad weather when getting the wheat in? If we get wet weather just as the wheat has ripened it hurts the crops.
1016. Is there no chance of converting it into wheaten hay? Yes; it is often cut for wheaten hay.
1017. Is there much demand for that? Sometimes.
1018. Do you sell any wheaten hay? Yes; we sell it cut into chaff.
1019. Where? Locally, unless there is a demand from other places, and then we send it away.
1020. You often have a very large demand from the west, do you not, in a dry season? Yes.
1021. Their misfortune is your profit? Yes.
1022. Does this occur every dry season? Yes; nearly always.
1023. That in itself might be a considerable item of railway revenue in a dry season? Yes; in a dry season there is a market for us, more particularly in hay.
1024. In a dry season, the chaff and hay you would send out to the western district would be a very considerable item in the railway traffic? Certainly.
1025. Do you carry on any other business besides milling? Yes; I am a builder and contractor.
1026. Is that business pretty brisk here now? Not now.
1027. Any contracts out lately? There are none at present. I utilise the timber I saw in my building operations.
1028. But building has been pretty brisk here for a small town, has it not? It has been, but not quite so much during the last year or two.
1029. I believe you formerly resided at Wandsworth, on the proposed Guyra route? Yes; at Limestone Creek. I built the mill there which I have here now, and I stayed there four years.
1030. Why did you remove from there? There was not sufficient trade.
1031. What kind of country is it along there? It is more a sheep country.
1032. Any farming? There is some farming. When I was there there was not much farming.
1033. I suppose there must have been some good timber out there, or else you would never have started the mill? There is good timber there, close to the town—stringybark, and other timber.
1034. Did you supply Inverell then? No; it was too far away.
1035. How does the land along the proposed Guyra route compare with the land along the proposed Swanbrook route? I should say there is no comparison at all. Along the route from Glen Innes it is all good land for cultivation, and along the other route the land is not of that description.
1036. Do you know Tingha well? No.

Mr. E. Grover. 2 May, 1891.

1037. Do you know the distance from Tingha to the proposed line from Glen Innes, according to the last deviation? No.
1038. You consider that no comparison can be made between the quality of the soil on the two routes? As far as I have seen, there is not. There is good land within 7 or 8 miles of Guyra; but that is, of course, served by the northern line.
1039. Have you been along the route from Glen Innes to Inverell? Yes; several times.
1040. Therefore, you speak of a matter of which you have some knowledge? Yes. When we have bad seasons here for wheat they have good seasons at Inverell, and we would be customers for their wheat, and they would be customers for our hay, chaff, and potatoes, which they cannot grow as well as we can. So far as the Guyra route is concerned, I cannot speak accurately as to the traffic, but the fact that Messrs. Wright, Heaton, & Co. have closed their office at Guyra shows that as regards traffic, the route from Glen Innes must be the more preferable.
1041. *Chairman.*] I think Mr. Wright is the representative of Glen Innes, is he not? Yes; but I do not think he would consider that in a business matter.

MONDAY, 4 MAY, 1891.

[*The Sectional Committee met at Tattersall's Hotel, Glen Innes, at 8·30 a.m.*]

Present:—

JACOB GARRARD, Esq. (Chairman).

The Hon. William Joseph Trickett. | Edward William O'Sullivan, Esq.
William McCourt, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. William Thomas Cadell, grazier, Deepwater, sworn, and examined:—

Mr. W. T. Cadell. 4 May, 1891.

1042. *Chairman.*] What is your occupation? I am a grazier.
1043. Where is your holding situated? We have Deepwater, Annandale, and Myall Downs, on the M'Intyre.
1044. In what direction from Glen Innes are these stations? Deepwater is about 26 miles to the north, and Myall Downs is on the M'Intyre, about 110 miles west.
1045. Of what size are the stations? Deepwater is 195 square miles in extent, Annandale is 43,000 acres, and Myall Downs is 23,000 acres.
1046. Is any portion purchased land? We have in all 26,000 acres freehold. Deepwater and Annandale are in the Eastern Division, and Myall Downs is in the Central Division.
1047. What number of sheep do you run on the three stations? We have 42,000 odd.
1048. Any cattle? We have 5000 head of cattle and about sixty horses, for working the stations.
1049. Where do you send your wool to? Our wool from all the three stations goes down the line to Newcastle.
1050. Where do you tap the northern line? At Deepwater, where there is a railway station.
1051. Does the wool from the other two stations go to Deepwater? We have always had to bring the sheep from the western runs to Deepwater to be shorn there; but this year we are building a shed down west, and they will be shorn there.
1052. And will your wool then come to Deepwater? No; it would come to Inverell if there is a railway.
1053. But without a railway? It will come to Glen Innes, *viâ* Inverell.
1054. If the railway were constructed to Inverell you would tap it there? Yes.
1055. It has been stated in evidence that it is probable the Goondiwindi traffic would come this way if the line were constructed;—do you think that is likely? I think it is most probable. There is a very large station below Goondiwindi called Welltown. They must have 700 or 800 bales of wool, and I believe you would get all that, and there are a great many more around there who would come in.
1056. Where does that wool go now? It goes to Cambooya, in Queensland. No doubt it would come to Inverell if the line were constructed. They always come to the nearest terminus.
1057. How often do droughts occur in your western country—say Goondiwindi, for instance? Pretty frequently—nearly every three years.
1058. And is there any trade from here in chaff or hay? Yes; a very large trade.
1059. Do you shift your stock at all from the west? We have to bring them up to grass on New England.
1060. If the line were constructed to Inverell, I suppose in drought times you would truck them at Inverell instead of driving them? Yes; because they become so weak, and the losses are very great. The railway rates are so arranged as to enable us to shift our stock expeditiously in times of drought.
1061. There is always a good rainfall here, I suppose? Always. I have never known it to fail, and I have been here fourteen years. In the heaviest times of drought since I have been here, there have been thousands, almost millions, of sheep brought from the western country on to New England.
1062. Do you think this district would be able to supply the west with farm produce in times of drought? Yes.
1063. How do the people in the west get their supplies now;—do they grow their own produce? No; they do not do so out much past Inverell.
1064. Is Inverell itself much affected by the drought? Not to a great extent.
1065. *Mr. O'Sullivan.*] What is the character of the country out beyond Inverell in a good average season,—is it good sheep carrying country? Yes, very good. It is a splendid wool-producing country.
1066. What grasses or edible shrubs grow out there? You get blue grass, barley grass, and all the best grasses you can mention. I have counted thirty-two different varieties on that property of ours in a good season.
1067. And are there edible shrubs also? Yes; white bush, and all sorts; cotton bush, also.
1068. Any berrigan and belar? Belar—yes.
1069. How far is your property out there from Inverell? It is exactly 72 miles from Inverell.

1070.

1070. What are the adjoining properties in the same district? There is Wallangra, a very big sheep property, carrying 90,000 sheep; there is the Yallaroi, on which are depastured 80,000 or 90,000 sheep; also Gunyawarildi, on which there must be over 100,000 sheep, including those of selectors; Coolootai, 20,000 sheep; Goornama, 40,000 sheep; and Gragin, which carries about 75,000 sheep. The wool from all these stations would go to Inverell if a railway were taken there. Mr. W. T. Cudell. 4 May, 1891.
1071. Are you in the habit of sending your stock out to your western run in a fine season? I always do.
1072. Do you send sheep or cattle? Sheep and cattle.
1073. And in dry seasons you are in the habit of bringing your stock in from the west to the grass and water of New England? Yes.
1074. *Mr. McCourt.*] Would not the line to Guyra suit you western people better? No.
1075. Why? It would take us by a long and awkward corner.
1076. If you sent your wool to Newcastle, would you not save 35 miles' railway freight by the Guyra route? No; the rates under the differential system are the same—it would not save a penny.
1077. Would the differential rates apply to this branch line? I should think so.
1078. Then where would the revenue come from if the Railway Commissioners would get nothing for carrying goods to Inverell? I do not suppose the differential rates would apply off the trunk line.
1079. Do you think a frozen meat trade would be established here? I think so. We are forming a large company at Tenterfield; but we have so much difficulty to contend with at the other end that it will be some time before we can start.
1080. Which way would you send stock? It would have to come by the Inverell line.
1081. And it would create a large traffic? Yes.
1082. *Mr. Trickett.*] What rate for tonnage do you pay now from your western station to the main line? I am paying £5 a ton from Glen Innes to our station at Myall Downs, which is a distance of 110 miles.
1083. What would the freight cost from your station to Inverell? I suppose it would reduce it to about £3 or a little over.
1084. That would leave a margin of £2 for the remaining distance? Yes.
1085. What would you be prepared to pay by rail from Inverell to Glen Innes? I could not say.
1086. I suppose it would suit you well to pay £1 per ton? Yes.
1087. *Chairman.*] Is there anything else you would like to state? I think it would be a very wise thing to take a line to Inverell, because I am confident it must be a good paying branch.
1088. *Mr. Trickett.*] With regard to the large estates along the proposed railway line, do you think they would be cut up into small holdings? I could not say; but it would certainly be to the advantage of the owners to cut them up.
1089. You yourself, as a large landholder, if you were similarly situated, and had land along the line, would sooner cut it up and let it, or sell it for farms, than keep it for sheep-grazing? Certainly; I should cut it up.
1090. It would be to your pecuniary advantage? Yes; I should make more out of it.

MONDAY, 4 MAY, 1891.

[*The Sectional Committee met at Swanvale at 1 p.m.*]

Present:

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM JOSEPH TRICKETT. | EDWARD WILLIAM O'SULLIVAN, Esq.
WILLIAM McCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. William Young, Postmaster and farmer, Swanvale, sworn, and examined:—

1091. *Chairman.*] What is your occupation? I am a farmer, and I am also Postmaster and pound-keeper at Swanvale. Mr. W. Young. 4 May, 1891.
1092. How long have you resided in the district? About twenty-four years.
1093. What is the extent of your holding? 202½ acres.
1094. How many acres have you under cultivation? About 50 acres.
1095. What are you growing? Nothing but maize, corn, and hay at the present time.
1096. Are you running any sheep? Just about 100 for my own use.
1097. Any cattle? About 50 head of cattle.
1098. Milking or fattening? Milking, about fourteen.
1099. Do you convert the milk into butter? We make butter and cheese, but we have no market.
1100. How do you dispose of what you do make? I dispose of it principally to my neighbours.
1101. Where do you send your produce to? I send the butter to Glen Innes.
1102. And your maize corn? To Glen Innes generally.
1103. Is there always a market in Glen Innes? Generally, and it is the nearest place. It is the general market for us, because it is nearer; and there being a better road we have sent that way.
1104. You have never sent any of your produce further than Glen Innes by the northern railway, either north or south? No.
1105. Do you ever send any to Inverell? I have done so, but not lately.
1106. During the time you have been resident here, has the district gone back in the way of production? Yes; in a great measure.
1107. To what cause do you attribute this? Generally to the want of a market.
1108. Being too far removed from the metropolis, which is your market? Yes.
1109. How do the people live? The farmers, generally speaking, have gone on to the roads to work, and they do any other work they can get hold of.
1110. If this line were constructed, do you think it would lead to a larger amount of production in the district? I have no doubt of it.

Mr. W. Young. 4 May, 1891.

1111. Would the construction of this line, 22 miles to Glen Innes, make such a difference as to give you a profitable return upon your produce? There is no doubt about that.
1112. If a large quantity of produce was grown in this district where would it find a market? At Glen Innes, in the first instance.
1113. But if Glen Innes supplies its own requirements now? If the market at Glen Innes were fully supplied, it would then very likely go into the hands of the storekeepers, and be sent either to Sydney or Queensland.
1114. Do you think Sydney would be the market or Queensland? Queensland, I think; it is the nearer and the better market.
1115. For what kind of produce would the Queensland people be customers to this district? Wheat, maize, and other things.
1116. Do you grow wheat here? Yes; we have done so from the commencement.
1117. How many bushels to the acre? We have had 30 bushels to the acre, and the yield has gone down to 17 bushels.
1118. Do you know that they grow wheat on the Darling Downs, in Queensland? I have heard so, but I have never been there.
1119. Would you be surprised to learn that the acreage under cultivation on the Darling Downs in 1889 was greater than that in the Glen Innes, Tenterfield, and Inverell districts put together? That might be.
1120. You have not given sufficiently close attention to the matter to say whether or not there would be a market in Queensland? I have judged only from the newspaper reports.
1121. And the only other market you would have would be Sydney? Yes.
1122. What does it cost at the present time to send produce from Swanvale to Glen Innes? We carry the produce ourselves, generally speaking, by our own teams.
1123. But it costs you something? It takes a team a day to go in, and another day to come out.
1124. How many tons does it carry? About 2 tons.
1125. What is the time thus occupied worth to you? Six horses and a man, two days and expenses, I suppose would be about £4.
1126. Have you any back loading? Sometimes, not always.
1127. Could you not get it carried cheaper by the ordinary carriers;—what is their usual charge to Glen Innes? About £2 a ton.
1128. Do you know anything of the country about here? Yes.
1129. Do you know that there has been two routes of railway surveyed between Glen Innes and Inverell, one *via* Wellingrove, and the other *via* Swanbrook? Yes.
1130. Which do you think would serve the people best? The one through Swanbrook. The present survey is the best.
1131. The amended survey, which goes up nearly to Wellingrove and then comes down into Swanbrook, would be the best? That is the best surveyed line.
1132. Do you think there is a better one? There is one which has never been tested, and which I consider would be better.
1133. Where is that? It is Young's route.
1134. What direction does it take? From the Glen Innes Station it follows the same direction as Hogg's line as far as the Waterloo Mountain; then it follows Maid's Valley, and joins the Swanbrook line; it crosses the Swanbrook Creek, which it follows down on its southern side, and then it goes along the main road into Inverell.
1135. Are you aware that the line you advocate from Glen Innes to the Waterloo Mountain has a grade of 1 in 40? No; I was not aware of that.
1136. And that a grade of 1 in 40 being very objectionable, the surveyors have gone further north, and nearly to Wellingrove? I know they have done that.
1137. And that they have now got a grade of 1 in 60? Yes.
1138. Although the line is lengthened 9 miles, they have a better grade at a cheaper cost? I do not know about the grade. My route has not been proved.
1139. During times of drought, do you know of any large quantities of stock coming from the western country to the highlands of Glen Innes to feed? I could not speak as to that, because it is a thing which does not come within the pale of my interest.
1140. But do you not live right on the high road? Yes; but I do not interest myself in that matter.
1141. But surely, as an observant man, long resident here, you would know whether or not stock passed along here? I see stock passing, but I could not speak as to the quantity, or say to whom they belonged.
1142. You could not tell us whether there are more going east during times of drought than at ordinary times? No; I could not speak as to that.
1143. Do you know whether, in times of drought, a large amount of fodder goes west from Glen Innes? No, I could not speak with regard to that.
1144. Then you have no general knowledge of the trade between Glen Innes and Inverell and other places west, other than as it affects yourself? That is all. I have no interest myself in what other people have been doing.
1145. Suppose this line were constructed, to what extent would you with your holding be a customer to it? With my acreage, I could not be a customer to any great extent.
1146. You say you have not been able to cultivate, owing to the want of a market, and that this railway would give you a market;—suppose it were constructed to Swanvale, to what extent, approximately, would you be a customer to it? I could not speak as to that.
1147. Do you know that the Commissioners for Railways have gone over the matter and estimate that if this line is constructed there will be an absolute loss of about £18,000 per annum? No; I do not know that.
1148. Do you think the country would be justified in constructing a railway which would result in such a large annual loss? I could not speak as to that.
1149. Do you know anything of the Guyra route? No.
1150. Have you formed any idea as to what would be the produce sent over this line to make it a paying line? No; I have not gone into that, because there has been nothing doing in the district—it has been going backward. People have left the district for want of a market, and during the last ten years it has gone back very materially.

1151.

Mr. W. Young. 4 May, 1891.

1151. Is it not a fact that the tin mines and other mines working about here have fallen off a bit, and thereby reduced your local market? There is no doubt about that.
1152. Would not that be the reason why the people have gone away? No; the farmers have been compelled to leave the district because they could not make it pay.
1153. Driving along the road this morning, the Committee noticed a number of holdings which seemed, at one time, to have been under cultivation, but which are now in a state of ruin;—what is the cause of that? The maintenance men working on the road left their farms and let them go to ruin. They were working for wages.
1154. Is it true that there has been a failure of the fruit crop, through the trees being affected by disease? Yes; that is quite true.
1155. Does that disease still exist in the neighbourhood? Yes.
1156. Then we cannot expect any fruit to be grown here, and to provide traffic for the railway? All those matters have to be begun afresh; the trees will have to be grubbed out and a fresh beginning made. If there was a railway, all that would spring up again.
1157. But the railway would not prevent the disease attacking the fruit trees? If there were a railway made and a market provided, the people would destroy all those things, and go in for fresh growth in every respect.
1158. Then your contention is that the people, finding no market, do not take the trouble to combat the disease that affected the fruit trees? They left everything as it was, and let it go to ruin—in fact, they were at the point of ruin themselves. If they had not an opportunity of getting labour on the roads they would have been at starvation point. Yet there is no finer soil in the world than that in this district.
1159. You cannot give us any idea of what produce would be grown in the neighbourhood, or where the trade would come from to feed the railway? No; not at the present time. To show how difficult it is to find a market, I may say that I sent 80 lb. of butter to Glen Innes and got back only 15s. 6d. from the farmers' market, as they call it.
1160. Are you a surveyor by profession? Yes.
1161. Where were you engaged as a surveyor? I am a colliery engineer, and we did all the surveying in collieries for ourselves; surveying was part of our education.
1162. Have you surveyed the route which you call Young's route? I ran it with a compass.
1163. Have you anything further to state? Yes; I desire to read the following statement: After the first surveyed line was made down Swanbrook Creek, the records of same were lost in the Garden Palace fire. Two surveyors, Messrs. Harwood and Stuart, were sent up to take cross sections to prove the survey, also with instructions to look up a better route if any was recommended. I recommended a line known as Young's route, and offered to show it to them. Mr. Harwood promised he would go over it with me as soon as he finished his job. On 24th July, 1883, I received the following letter from Mr. Harwood:—

Sir, Railway Survey Camp, near Inverell, 24th July, 1883.

With reference to your suggestion of another route for the Glen Innes-Inverell railway, I beg to notify you that as I leave this district in a few days, I shall be unable to ride over the new ground with you.

I have, &c.,
HAMILTON HARWOOD.

This matter lay in abeyance until the occasion of the visit of the Ministers, Messrs. Wright and Dibbs. I then pointed out and explained my route to them. Mr. Wright said he knew the country so well, he was quite satisfied that it was the best line to be found, and on their return to Sydney, Mr. Hogg, surveyor, was sent up to run Young's route; instead of which, for some cause or other unknown, he commenced in Inverell, and tried several routes to get on to King's Plains, but could not succeed. He then returned to Glen Innes, and commenced on Young's route, ran that route to Waterloo Creek, then on to King's Plains, and so on to Inverell. After finishing, he returned to Sydney, and was discharged for not having done the work he was sent up to do. In July, 1887, Mr. Surveyor Francis was sent up to ascertain whether the line laid off by Mr. Hogg could be improved upon. I showed him Young's route, from Swanbrook Creek down Maid's Valley. He ran this route to Glen Innes, and approved of it. On the visit of Messrs. Eddy and Oliver, Commissioners, I pointed Young's route out to them, riding along in company, gave them my estimate—£8,000 per mile—distance 41 miles; same distance as the telegraph line. Mr. Eddy was so satisfied with my notes, that he expressed his opinion that it was superior to the King's Plains' route. On the face of all this, the order to the surveyors doing the present work was not to go over the Swanbrook Creek until they reached Campbell's Plain. There is no comparison between Young's route and the present surveyed route, for on the former there is no particular engineering required—no bridges of any note, only the Furracabad, Beaufort, Waterloo, and Swanbrook Creeks bridges; the cuttings very light on the whole distance, and an easier gradient, with fewer curves than on the present line. Besides, it gives a nearer approach for a branch line *via* Elsmore, Stannifer, on to Tingha, bringing the latter place within 14 miles of a station near Colley's Farm, 10 miles out from Inverell. With all these advantages, I am at a loss to know why Young's route is discarded, as it is well known to all who know the country that Young's route is the best to be found in all cases. The township reserve of Swanvale is situated on the mail line of road from Glen Innes to Inverell, distant 21 miles from Glen Innes, and 23 miles from Inverell. The road enters the reserve at 6 chains from the north-east corner peg, goes across the angle, and out at 2 chains from south-west corner of said reserve. The Swanbrook Creek enters the reserve at middle of eastern boundary, going direct west, out at middle of western boundary, giving a good supply of water at all seasons. The present surveyed line of railway enters the reserve at the north-east corner, between the road and corner peg, distant about 3 chains from the corner; then by a line west through the reserve; and so on, down the north side of the Swanbrook Creek. On the reserve there is a 40-acre block of land occupied by Mr. A. Caldow as a farm, on which are a public-house, store, and butcher's shop; another 40 acres belongs to Mr. D. S. Anderson; also a 2½ acres, on which is a public school, also a public pound; Mr. W. Young, pound-keeper. These are all the improvements at this time. The situation for a large township is first class, only requiring a railway and a platform to set it going. There are seven other farms surrounding the reserve, containing from 100 acres to 700 acres each. The land will produce all kinds of cereals. We have had 30 bushels of wheat per acre—an average of 24 bushels per acre all round; maize, 45 bushels per acre; lucerne, oats, potatoes, and sorghum in abundance; vines, fruits, and vegetables of all kinds. I have made sugar from the planters'

Mr. W. Young. 4 May, 1891.

planters' friend—sorghum. Tobacco will also grow, as we have tested by growing it. The district is the soundest sheep run on New England, neither fluke nor foot-rot being known. Three-fourths of the land between Glen Innes and Inverell is fit for cultivation. The railway reserve of a mile on each side of the line could be occupied as farms, which would materially increase population. Farming is not carried on much here at present. We have no market, and no means of getting to one, for want of railways. The farmers are obliged to take work on the roads, or go elsewhere to obtain a living. Swanvale is directly on the valley of the tin run from Tingha, Stannifer, Newstead, Swanvale, Wellingrove, Emmaville, Tent Hill, and so on to the tableland. It is supposed the tin would lie deep here; yet we have every indication of tin and other minerals in the district. The best zircon country is upper Paradise Creek, and the Swanvale Waters, in Swanvale Creek, and on the ridges north of same, extending from Swanvale to 8 or 10 miles westerly. There have not been less than twenty families removed out of this district within the last four or five years, owing to not being able to make farming pay for want of access to market. Now we are having good roads, and with a line of railway and a station at Swanvale, we would soon have an increase of population in the district.

Mr. Duncan Sinclair Anderson, grazier, Newstead Station, near Swanvale, sworn, and examined:—

Mr. D. S. Anderson. 4 May, 1891.

1164. *Chairman.*] You are a grazier, and one of the owners of Newstead Station? Yes.
1165. What is the extent of the holding? It is divided now between my brother and myself. The area of my portion is over 23,000 acres freehold, the total area being about 30,000 acres.
1166. What number of sheep are you running? About 22,000, and about 100 head of cattle—just enough to work the station.
1167. Where is Newstead situated? About 8 miles from here to the south—between here and Inverell.
1168. Does any portion of the surveyed line of railway run through your property? Yes; for about 10 miles.
1169. Where do you send your wool? To Glen Innes, by dray.
1170. If this proposed line were constructed, would you make use of the railway running through your station to carry your wool? Yes; decidedly.
1171. What amount of wool do you send away annually? I send about 260 bales, and my brother sends about the same. He adjoins me. I suppose there would be a little over 500 bales altogether.
1172. Is your brother's holding about the same size as yours, with the same number of sheep? It is not quite so large.
1173. With regard to return loading, what tonnage would there be a year to your station? Salt is one of the principal articles we use. I use, perhaps, 20 tons of salt a year, and about 20 tons of other loading.
1174. Does all your produce go to Sydney or Grafton? It all goes to Newcastle.
1175. In that case, would not the line from Inverell to Guyra be better for your purpose? I should have to send my wool so much further to the railway. I should have to send it a distance of 15 miles to Inverell. I would sooner send it to Glen Innes by the railway.
1176. Do you know anything of the country beyond Inverell? Yes.
1177. We have it in evidence that if the line were constructed, trade would probably be attracted to it from as far north-west as Goondiwindi;—do you think that likely? Yes, certainly, and we should send a tremendous lot of stuff down there. If we had a line running to the west, I myself, for instance, could grow hundreds, perhaps thousands, of tons of lucerne hay which, in a dry time, I would send west.
1178. Would the making of a line to Inverell, which would save you 15 miles, make so very much difference? Well, perhaps, not so very much.
1179. If the Glen Innes to Inverell line were made, Inverell being the terminus, do you think that would mean the bringing of the Goondiwindi traffic to Inverell? I could not really say that.
1180. But I suppose the trade west of Inverell would, to some extent, be influenced to come to Inverell if the line were made there? Of course.
1181. Do you know where the people of Goondiwindi send their produce now? No.
1182. If the line were extended to Inverell, for what distance would it attract traffic? A very long way, I should say, though the roads are getting better now.
1183. Is the country west of Inverell subject to drought very much? Not for a considerable distance.
1184. It is not so liable to drought as the country out Bourke and Wilcannia way? Oh, no; nothing like it.
1185. In droughty times, is very much stock sent from the west to the table-lands of New England? At one time there was a tremendous lot, but there has not been so much lately, because the country has all been fenced in. Years ago there used to be thousands of sheep sent.
1186. And in the droughty times do you think there would be a demand out west for produce you could grow here? Yes, certainly. For instance, if a railway were running out that way we could grow lucerne hay to any extent, whereas at present we only just grow sufficient for our own use. If we could sell it for £2 a ton down there we would, of course, grow large quantities.
1187. You would only be able to sell it in times of drought? Still we would not be afraid to store. We could make enormous stacks and keep it, because it will keep for any length of time, and we could even send it to Sydney.
1188. You would hardly be able to send it to Sydney, to compete with the Hunter Valley district? We can grow lucerne splendidly here, it is such a magnificent crop. If you have 100 acres under lucerne you can crop it and get perhaps about 200 tons of hay, and then you can feed sheep or cattle on it for the rest of the year.
1189. Would not the enormous lucerne fields on the Hunter put you completely out of the Sydney market? Well they might. I never went into that question very much, but certainly we should have a great outlet to the west.
1190. Do you know the route which has been surveyed for the line between Inverell and Glen Innes? I only know it when it comes on to my own land from Waterloo.
1191. The original line, known as Hogg's line, or the Wellingrove line, was 43 miles 37 chains in length, with a grade of 1 in 40, which was found to be very objectionable, and another line has been found forming a combination of the Wellingrove and Swanbrook lines, with a grade of 1 in 60, but increasing the length by 9 miles, though at the same time reducing the total cost very considerably;—do you think that that route, *via* Wellingrove and Swanbrook, would be as good a route as any between Glen Innes and Inverell? Yes, I should say so.

Mr. D. S. Anderson. 4 May, 1891

1192. What does it cost you to send your wool to Glen Innes? About 1s. 6d., and sometimes 1s. 3d. per cwt.; but for back loading I have to pay 2s.
1193. You have been in the district some time? Yes, I was born here, but I was at home for about twenty years.
1194. Do you think the district has gone back or advanced of late years? I think it has gone back.
1195. To what cause do you attribute that? The farmers did not seem to be able to make a living. Although they could grow anything, there was no market. One year there would be an enormous quantity of wheat grown, and there would be no market for it, while another year very few would grow wheat, and they would make a good thing out of it. And it was the same with corn. One year it would be 5s. a bushel, and then next year, because a large number grew corn, it would be as low as 2s. a bushel.
1196. Not because of the failure of the crops, but on account of the distance of the market? That is all. This country will grow anything you like.
1197. How often do they have a failure in crops? I never knew a failure in crops. The only time I ever knew of poor crops was in 1888, which was a very exceptional season.
1198. The retrogression then has been owing to the want of a market? Yes.
1199. Do you think that the making of this railway would give them a market? I think so. For instance, if the railway were constructed, within a very few years all the land down here would be in farms. I own all the land down here, and I would only be to glad to rent it at 10s. an acre. I should only be too glad to let it in farms to anybody who wanted it.
1200. What do you think would be a fair value per acre for the land you would be prepared to lease? I could hardly say. I should be very glad now to rent land at 10s. an acre, as much as they liked to take.
1201. The best of the land? Hardly some of the lucerne flats, but the ordinary good land. If any one would say "I will take 5,000 acres down Swanbrook way at 10s. an acre a year for so many years," I should say "Certainly, I shall be glad to let you have it."
1202. Is there always abundance of water? Always.
1203. *Mr. O'Sullivan.*] Do you think you are likely to obtain any offer for this land at 10s. per acre rent? I think so. If there was a railway, I am sure I should. If one could get 10s. an acre rent for the land it would not pay him to graze over it, and with a railway it would pay any one to rent land here at 10s. an acre.
1204. And the land you refer to is suitable for farms? A great deal of it is beautiful land—there is no better.
1205. What do you estimate is the profit per acre for grazing out this way at the present time? Only about 4s. a sheep.
1206. Therefore, if you could let the land at 8s. an acre it would pay? Yes. Whatever one could get which would pay him better than grazing sheep, he would, of course, gladly take.
1207. *Mr. McCourt.*] Would it not pay you better to sell the land right out? I do not know, I am sure. I might cut it up; but it is a very old property and I was born here.
1208. As a rule people do not care to rent land? If there was a railway here I think they would. Of course now there is no enterprise.
1209. Would not a farmer do better by buying the land; would he not be a better farmer if he could buy the land? Not if he could get a lease for five or six years. The advantage of a lease is that a man is not bound to one particular place.
1210. Then your experience is that a man would rather rent land than purchase it? I would not say that, but I think he would just as soon rent it. At the present time, and as things are now, a man would sooner rent land than take it up in freehold, because in the latter case it might absolutely break him, while in the other case it might not, as if he were not doing well he could throw it up at the end of his lease.
1211. You would not cut up your land for sale? No; I do not think so. I might. It would depend on the price. It is a difficult question to answer.
1212. You would not be inclined to do so? If a railway came on my land I would sell along the railway.
1213. If the railway were constructed, and you subdivided the land on your estate along the line, what do you think you ought to get for it, on an average, per acre? I suppose about £4 an acre for good land. Of course a lot of it is rather stony. The good land—the land round here, I should be willing to sell for £4 an acre, if they would take the lot of it.
1214. In farms? Yes; in farms.
1215. All along the railway frontage? Yes; it would pay me well enough.

Mr. Andrew Caldow, hotel proprietor, Swanvale, sworn, and examined:—

Mr. A. Caldow. 4 May, 1891.

1216. *Mr. Trickett.*] You are an hotelkeeper, living at Swanvale? Yes.
1217. How long have you been here? Nearly four years.
1218. Where did you live before that? Down the M'Intyre, about 16 miles north of Inverell.
1219. Did you live there long? Six years.
1220. Then you have been ten years in the district? Yes.
1221. What business did you follow when you were on the M'Intyre? Farming and grazing, combined.
1222. Did you have a freehold or a leasehold? A freehold.
1223. Have you it now? No; I sold it.
1224. For what reason did you sell it? I seemed to get behind, and I had to sell it. I had to borrow a little too much money to secure it.
1225. What was the extent of the holding? About 2,500 acres.
1226. Were you grazing on it or farming? Both.
1227. What used you to grow? Wheat, principally, and I grazed sheep.
1228. What used you to do with the wheat? Sell it in Inverell.
1229. Did you get a ready market for it there? Sometimes; not always.
1230. What did they do with it there generally? It was mostly sold in the neighbourhood.
1231. What do you think of this contemplated railway;—do you think it would be a benefit to the district;—would it have been any help to you in your business, when you were north of Inverell, if there had been a railway? Yes.
1232. Can you give us any reason of your falling behind hand? I bought a place which was too much for me, and it is an uphill game when you have a lot of interest to pay.

Mr. A. Caldow. 4 May, 1891.

1233. Had you to employ labour? Not a great deal; but a little.
1234. You fancy if it had been a smaller and more compact holding, you could have got along? Yes, I believe I could; if I had bought what suited myself, and what I could have paid for.
1235. Has it been the general experience about Inverell that, with smaller holdings, men have been able to hold on? According to the amount of their capital.
1236. As a rule, have farming and grazing been remunerative about Inverell? I do not think they have been very much since I came here ten years ago; they do not seem to have been very prosperous.
1237. Is the reason for this, that they cannot get their produce to market? I suppose there are not enough people to consume what is grown. It is very hard to answer a question like that.
1238. They have not a sufficient outlet for their produce? No.
1239. If a railway were constructed from Inverell to Glen Innes, giving them direct communication with the principal markets of the colony, do you think that would improve their position? I have no doubt it would; they want something.
1240. Having been in Swanvale for four years, can you tell us what the goods traffic is like along this road? I really could not tell you.
1241. How many teams are there in a day or a week? I should think there were about forty teams a month each way, or eighty teams in all.
1242. What would be the average tonnage? Some teams carry 7 tons, and some 3, 4, 5, and 6 tons. The average would be about 5 tons.
1243. Are they generally fully loaded? Five tons would be an average both ways.
1244. Is there much carrying done privately, independently of these teams? There is a little, of course, but not much.
1245. Do you think the private carrying would come to 1,000 tons a year? I have no doubt it would.
1246. Can you tell us what the passenger traffic is? About eighty passengers a week both ways, or forty each way.
1247. People travelling between the two places? Yes, principally between Glen Innes and Inverell, on business. There may be more than this number in some weeks, while in other weeks there would not be so many.
1248. In addition to that is there much buggy or private traffic? Yes; there is a good deal.
1249. Have you done fairly well during the four years that you have been here? Yes, I have done a fair business.
1250. Has it improved or gone backwards? I could not exactly say. I am not making much money, I must admit.

TUESDAY, 5 MAY, 1891.

[*The Sectional Committee met at the Court-house, Inverell, at 10 a.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM JOSEPH TRICKETT. | EDWARD WILLIAM O'SULLIVAN, Esq.
JAMES EBENEZER TONKIN, Esq. | WILLIAM MCCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. John Parson Pauley, Mayor of Inverell, sworn, and examined:—

Mr. J. P. Pauley. 5 May, 1891

1251. *Chairman.*] You are Mayor of the municipality of Inverell? I am.
1252. How long have you held that position? Since February last.
1253. How long have you been an alderman? This is the sixth year.
1254. And how long have you resided in Inverell? Nine years last Christmas.
1255. Can you give us some information in regard to the population of the district? The municipal district extends about 8 or 10 miles from Inverell. The number of inhabitants in 1875 was 1,000; and in 1890, 1,700. The ratable value of the property in the municipality in 1875 was £110,000, and in 1890, £271,000.
1256. What were your rates for last year? I think about £1,000.
1257. Of what did they consist—the ordinary municipal rate of 1s. in the £? Yes.
1258. No lighting rate? No; only the municipal rate.
1259. Is the municipality in debt or solvent? It is solvent at the present time.
1260. Is there any debt owing? Yes, there is a debt of £5,000.
1261. What was that raised for? For improving the streets and the roads leading to the township.
1262. Are you in business in Inverell? Not at present.
1263. You know that there has been an agitation for this railway for years past? Yes, I am aware of that.
1264. Do you know the different routes that have been suggested? Not very well.
1265. Do you know the routes that have been suggested between Inverell and Glen Innes? Not very well. I have spent most of my time in the town, except when I have made periodical visits to Sydney, going through Glen Innes.
1266. Do you always travel through Glen Innes when you go to Sydney? I have done so of late years. Formerly I used to go to Uralla, and before that to Tamworth.
1267. Why was that? Because it was the nearest mail coach road.
1268. The same fact exists now—that is the shortest way to Sydney? But it is easier to reach the main line by going to Glen Innes, the distance being much shorter.
1269. Do you think the line should be constructed from Glen Innes to Inverell, or from Guyra to Inverell? I think it should be constructed from Glen Innes to Inverell.
1270. With what part do the people trade—with Sydney, Newcastle, Brisbane, or where? Sydney and Newcastle, principally. A large quantity of goods come here from Grafton, and wool has gone from here to Grafton.
1271. There is no line to Grafton? They carry by teams all the way, and some find it an advantage to do that.

1272.

Mr. J. P. Pauley. 5 May, 1891.

1272. If the market is in Sydney, and the line were constructed from Uralla, or even from Guyra to Inverell, would not that save the Inverell people a long detour in railway travelling? It would save them a little, I suppose.
1273. Is not that a very great consideration in getting to market? I think the principal market for this place should be at Grafton. At Grafton we get a sea-port, and access to the markets of the world, and there is a large extent of agricultural country here that has not been put under cultivation for want of a market.
1274. But the line under consideration is from Glen Innes to Inverell, not Grafton? Ultimately, I have no doubt we shall have a line from here to Grafton, and then Glen Innes will be in the direct route from here to Grafton.
1275. Are you aware that the most feasible route to the coast, say at the Clarence, is from Guyra, through the Don Dorrigo Scrub? I was not aware of that.
1276. You are aware that some time since a proposal was made to construct a line from Glen Innes to Grafton, at a cost of some £2,000,000? Yes.
1277. Do you know anything of the nature of the country between Glen Innes and Grafton? Only from hearsay.
1278. Are you aware that between those two places there is very little country to contribute to the support of a railway? I believe there is a lot of good timber in that country which would be very useful here.
1279. Have you had an opportunity of perusing Messrs. Scarr and Price's report on this question of railway extension? I have seen portions of it.
1280. If it is eventually decided to give the table-lands of New England connection with the coast from Guyra *via* the Don Dorrigo Scrub, would it not be better for Inverell to be connected with Guyra rather than with Glen Innes? I could not say. I always looked upon the Glen Innes route as the most feasible route for the Inverell railway.
1281. Taking your statement, that the Clarence, for instance, is the point you are aiming at, and it is more likely to get a railway *via* Guyra than *via* Glen Innes, would it not be better for you to be connected with Guyra than with Glen Innes? You see, our market would be more north than south.
1282. Where is your market in the north? Queensland.
1283. What are you going to supply Queensland with? Breadstuffs.
1284. Are you aware that they grow wheat on the Darling Downs? Not in sufficient quantities to meet their requirements; they have to import a great deal.
1285. Do you supply them now? Only to a limited extent. We send supplies of wheat to the western country, and, in fact, send some into Queensland, but not much, as the cost of carriage is too great.
1286. The carriage between here and Glen Innes? No; going west and north.
1287. But in speaking just now of the Queensland trade, did you mean the Queensland trade out Goondiwindi way, or the trade on the Darling Downs? All the Queensland trade we do now is out Goondiwindi way.
1288. This railway would make no difference to that? No. But if we got a railway we could get into Queensland, and a line to Glen Innes would be much nearer than a line to Guyra.
1289. If you are aiming at Goondiwindi for a market, this railway would have no bearing on the subject at all? But we could get on the railway and could go into Queensland, where large quantities of breadstuff are imported.
1290. You say you look to Goodiwindi as a market for your produce? I say that we are sending some there at the present time, and have done so since I have been here.
1291. This railway would have no effect upon that at all? No.
1292. You expect to compete successfully for the Queensland trade as far as Toowoomba, for instance, on the Darling Downs? I think we could if we had railway communication.
1293. And if the line were taken to Guyra instead of to Glen Innes you would have so many more miles to travel? Yes.
1294. As a matter of fact, your market at present is Sydney, is it not? No; we have no market at Sydney, and cannot get there.
1295. You do send some produce Sydney way, do you not? Not cereals, or, at any rate, very little. I believe some corn went down, but I am speaking of wheat, principally, and flour.
1296. Has this town very much improved during the last few years? Very much.
1297. How many banks are there? Three.
1298. How long have they been established? I could not say how long the Bank of New South Wales has been here. I think the Joint Stock Bank has been here for twelve years, and the Commercial Bank was here a little before that. The New South Wales Bank is the oldest.
1299. There have been no new banks starting business here lately? Not in the last few years.
1300. Have many houses been built of late years? Yes; a good many.
1301. Was the increase of population between 1875 and last year, which you mentioned just now, the natural increase, or did it come from outside sources? It may be called the natural increase.
1302. Have many people come from outside? There are always people coming and going.
1303. Do you keep them when they are here, or is there an equal number going away? The town has been increasing.
1304. Not going back? No; it has been steadily increasing.
1305. Was there ever a larger population in the town than there is now? I do not think so; not in my time, or to my knowledge.
1306. Do you know anything of Tingha? I know Tingha.
1307. That has gone down considerably, has it not? Yes; there is not nearly the population there that there was.
1308. Has Bingera gone down? I was never in Bingera.
1309. And down about Bundarra, have the places gone ahead or gone back? Bundarra, I think, is pretty well at a standstill; if anything, it has gone back.
1310. Are there any other towns in a similar position? I could not say.
1311. What were you engaged in when you were in business? I was a miller.
1312. Do you know anything of the capabilities of the Darling Downs, as regards wheat production? I do not. I have been told that it is usually very dry there; that they do not get a good rainfall, and cannot depend upon their crops.

1313.

Mr. J. P. Pauley. 5 May, 1891.

1313. How many mills are there in Inverell? Three.
1314. Are they working all the year round? There are two working at the present time, and one is idle. The cause of that, I believe, is that in the mill I had I put in a roller plant, which has run the stone mills out of the market. I may say that the roller mill has been running for the last three or four months, night and day.
1315. Where do you send your flour to? It is consumed locally, and some is sent to Tingha, and some to Warialda, and out west.
1316. Your market is chiefly local and westward? Yes.
1317. None goes eastward? Very little.
1318. None to Glen Innes? A little has gone there during the last week or two, but that is all. Before the railway was extended north to Glen Innes I used to send a good deal there.
1319. Do you think that if a railway were constructed to Inverell there would be a large increase in the acreage put under wheat? I do.
1320. What does it cost to get wheat to Sydney now? It costs from 7½d. to 9d. per bushel to get it to Glen Innes, and if we had the railway to Inverell it would not cost more than that to get it to Sydney.
1321. What is going to support the railway if you do not expect to have to pay anything extra for carriage? They carry wheat and flour very cheaply. I think they take it down to Sydney from Glen Innes for about 6d. or 7d. per bushel, and the carriage for 44 additional miles would be very little.
1322. Are you aware that the Railway Commissioners estimate a loss of £13,000 a year on the railway, if constructed? I do not think there will be any loss myself.
1323. When the railway officials were here, did they make any inquiries from you with reference to the probable traffic? No.
1324. Do you know if they made inquiries from any other person? They had several inhabitants before them, and had some information given them.
1325. Do you not think it likely that the Railway Commissioners inquired very carefully into the probable traffic? I have no doubt they did; but if a railway were constructed a great deal more wheat would be grown here, and the branch line would add greatly to the traffic on the main trunk line.
1326. Suppose the estimate of loss made by the Commissioners is correct, so far as the first year's working is concerned, how long do you think it would be before the loss would be completely wiped out? I was speaking to a farmer yesterday, who has about 400 acres under wheat this year, and he said that if we had a railway he could just as well cultivate 1,000 acres as 400 acres, and there are other farmers in the district capable of doing the same.
1327. Would you say that the loss of £13,000 would be wiped out in two or three years? I fancy, myself, that the railway would pay from the start.
1328. You think the Commissioners, then, have under-estimated the revenue? I think so.
1329. Have you collected any figures which would go to disprove their estimate? No; I speak from an impression which I have.

Mr. Edwin Grainger, Manager of the Bank of New South Wales, Inverell, sworn, and examined:—

Mr. E. Grainger. 5 May, 1891.

1330. *Chairman.*] You are Manager of the Bank of New South Wales at Inverell? Yes; I have occupied that position for sixteen years.
1331. *Mr. Trickett.*] I suppose you have seen a great advance in the district during that time? Yes; very great.
1332. Have you any figures that would indicate the progress of the district? Yes. I came here in 1875. The ratepayers of the town in that year numbered 250. It was then a municipality. The ratable value was £110,000. In 1890 the number of ratepayers had increased to 553, and the ratable value of the property had increased to £271,000. When I came here first there were two banks in the town, employing, together, five hands. To-day there are three banks, employing eleven hands.
1333. All those banks are erecting permanent buildings of considerable value, are they not? Yes.
1334. Could you tell us what each building cost? Our own building cost £7,000; the Commercial, I think, cost £5,000; and I do not know what the Joint Stock building will cost.
1335. The Joint Stock are contemplating building, are they not? Yes. As further evidence of the growth of the town, I may say that when I came here in 1875 there was only one solicitor, and now there are five, and there was only one doctor, and now there are three. Then as to the increase in the value of land—when I came here the best blocks in Inverell were fetching £4 a foot. I gave £4 myself for the land known as Mr. Gordon's corner. Recently, one of the best blocks, that immediately opposite, was sold for £30 a foot. I may say that when I came here the output of tin, mostly raised in the vicinity of Tingha, was from 90 to 100 tons per week. At the present time the output is about 18 tons per week, not raised in the vicinity of Tingha only, but a considerable portion raised in the vicinity of Inverell.
1336. Do you attribute the falling off in the yield of tin to the fact of the Tingha mines being worked out, or to want of enterprise? These were alluvial deposits, and have evidently been worked out. They have been worked for twenty-two years, yielding, on an average, of from 50 to 60 tons per week, and therefore a vast quantity of tin has been removed, and this, of course, has made a very great impression on the alluvial beds; but the tin leads are evidently drifting towards Inverell rather than towards Tingha, as the Committee will see if they take a ride out a short distance from Inverell.
1337. You have given us some figures as to the prgress of the town;—what has been the progress of the district surrounding Inverell? Between 1875 and 1880 the district was highly prosperous, owing in a great measure to the large output of tin. This output has been gradually decreasing year by year, and with it the prospect of the farmers outside the town have diminished also. A large population was necessarily employed in getting the tin, and by the withdrawal of that population the demand for cereals has been greatly decreased.
1338. Are there any indications that the mining industry, either as regards tin or other minerals, is likely to revive? It is impossible to say. Sometimes it has been depressed, and by sudden finds things have improved temporarily.
1339. Is there any prospecting going on for minerals or precious stones? There is always a considerable amount of prospecting, but with very little success lately.
1340. That being so, what are your views as to the future prosperity of the district in regard to the pastoral and agricultural industries? I think the district has a very great future before it by connection with the northern line.

1341.

Mr. E. Grainger. 5 May, 1891.

1341. The Committee, as they came along the road, observed that small holdings had disappeared rather than increased;—how do you account for that? Since 1880 there has not been the same demand for cereals as there was previously.
1342. Not the same local demand? No.
1343. If this district were connected with the main line of railway, do you think the farmers would be enabled to compete in wheat production with other districts of the colony? Not only to compete, but to beat them out of the market, simply on account of the yield.
1344. What is the average yield of wheat here? For very many years it has been considered that 20 bushels per acre is the average, and if we could get 4s. a bushel, we must necessarily be able to beat the men that can only produce 12 or 15 bushels to the acre, and sell at the same price.
1345. The distance from the market would regulate that in some degree? Assuming that all other things are equal, land producing 20 bushels per acre would be much more profitable to farm than land producing only 15 bushels.
1346. If there was a good wheat-producing district half-way to Sydney from here it would, of course, militate against your profit, would it not, because the farmers there would have to pay only half the carriage? We look so much to Queensland for the consumption of wheat. We say, naturally, if New Zealand is enriched by Queensland money, we are entitled to be enriched in the same way.
1347. Would you explain how you work that out? Queensland pays £600,000 or £700,000 to New Zealand for wheat, which she imports largely from there. If we can intercept that money, and bring it to New South Wales, we shall be enriched to that extent.
1348. I suppose you apply the same argument to Adelaide? Precisely, or Melbourne.
1349. Does any Adelaide flour come here? I am not aware of it.
1350. It comes to Glen Innes? At Glen Innes they purchase largely from Inverell.
1351. Is your rainfall good here? The average is about 27 inches.
1352. And is it regular? Very regular. The altitude produces a certain regularity.
1353. Has the dying off of the farming industry, which we noticed between here and Glen Innes, occurred also in other districts around Inverell? Yes.
1354. For the reasons you have given? Yes.
1355. Have you thought out what rate per ton the farmers could afford to pay if the railway were constructed between Glen Innes and Inverell? My thoughts have always been directed to Queensland, and knowing a little of Queensland, I have thought that the farmers could afford to pay 6d. a bushel, or £1 a ton, for railway carriage from Inverell to Warwick. I look upon Warwick as being the great distributing town.
1356. How far is that from the Queensland border? I think about 70 miles. It is about 200 miles from here. I assume that if you can get wheat from Glen Innes to Sydney for 6d. a bushel, you can get it half the distance for a shade less money.
1357. Do you know anything about the wheat grown on the Darling Downs, and whether the crops there are reliable or otherwise? I have carefully read the statistics for very many years, and I am aware that in Queensland they have at no time produced more than 300,000 bushels. Last year I think they produced less than 150,000 bushels.
1358. Do you regard the crops there as uncertain? Most uncertain. Queensland, with a population of 426,000, would require 2,500,000 bushels, reckoning the consumption at 5½ bushels per head.
1359. A great deal of that consumption would be near the coast towns and Brisbane;—do you think that the wheat you produce here could compete with the sea-borne wheat in the Queensland ports? I think so. The average price of wheat in Brisbane is 5s. For some considerable time we should be content to reach Warwick, and our produce could be distributed from there to the west without competing with the Brisbane and other coastal markets.
1360. Then I understand you look for the chief outlet for your wheat to the north? Undoubtedly.
1361. If the railway were constructed, do you think there would be a probability of a wool trade from the southern part of Queensland? I think the sympathies of the southern part of Queensland are very much in our favour. I was in Queensland at Christmas time, and occasionally I ran down to Goondiwindi, and I know that the sympathies of the people are very much in favour of New South Wales. A line constructed to the coast from any point between Tenterfield and Glen Innes would attract a great amount of that traffic.
1362. Of course it would only attract it if the rates were sufficiently low? Our rates being so favourable would undoubtedly serve to influence the traffic.
1363. Do you know whether a good deal of wool from that part of Queensland is first sent to Brisbane, and then shipped to Sydney for transhipment to London, instead of being sent direct from Brisbane to London? I cannot speak as to that.
1364. What is the state of trade in and about Inverell—are the people fairly prosperous and solvent? It is a very solvent place. I do not think the people live as expensively as they did ten years ago. I think they have curtailed their expenses, and met the situation.
1365. Do you know if there are many people selling out and leaving the district? Within the last seven or eight years a number of farmers have left—small men.
1366. Simply for the reason that you stated before? Exactly; and I believe there are many hundreds of acres in the district cleared, fenced, and improved, but which are not under cultivation—I know of hundreds of acres myself—simply because there is no demand for the produce.
1367. Is Inverell a healthy district? Particularly so.
1368. Have you made any study of the various proposed routes to connect Inverell with the Great Northern Line? I have had a great deal to do with each one.
1369. Would you tell us, first, which one you favour? I am most pronounced in favour of Glen Innes, and have been so for the last twelve years.
1370. Would you briefly tell us why you prefer that to any of the other lines? In the first place, if you construct a line to Guyra, Uralla, or Kentucky, you will be constructing a line which will oppose the existing railway. The existing railway carries all our freight, and if the line pays, at the present time, 2 or 3 per cent.—that is to say, if the section from Glen Innes to either of the points I have just named pays 2 or 3 per cent.—you will deprive it of that dividend by the construction of a line to either of the more southern stations mentioned; you at once make it a non-paying line for the whole of the

Mr. E. Grainger. 5 May, 1891.

Inverell traffic, which, if you construct a railway to Guyra, Uralla, or Kentucky, must be directed or influenced to one of those stations.

1371. With regard to the bulk of the goods going from here to Sydney at the present time—which way do they go? Entirely through Glen Innes.

1372. And which way do the goods for Inverell from the south come? Entirely through Glen Innes.

1373. Is there a reason for that in the fact that the road between Glen Innes and Inverell is much better than that between Guyra and Inverell? There is a good deal of traffic between the two towns apart from that, and it is a shorter distance by road from Glen Innes to Inverell. People get their goods much more expeditiously and with fewer breakages. The distance between Glen Innes and Inverell is 42 miles by road, and the road from Guyra to Inverell is quite 10 miles longer. Then we seem to have been identified more with Glen Innes; all our sympathies and interests seem to be the same.

1374. In speaking of this line to connect Inverell with the main trunk line, do you attach much importance to the subsequent coast traffic with one of our own ports, say Grafton or Byron Bay? We think it impossible to continue without a port between the Tweed and Newcastle. A port must come, and we think that by connecting at Glen Innes we shall reach that port.

1375. Have you considered which would be the best place for the port—the Clarence or Byron Bay? Our thoughts have been concentrated on Glen Innes, and we have left it to the Minister for Works to find out the best port. We do not attempt to say either one or the other.

1376. You are not sufficiently acquainted with that country to give an opinion? I am not.

1377. Is there a considerable passenger traffic between Glen Innes and Inverell? Yes; and I believe that more than two-thirds of that traffic comes by coach. The other third comes by buggy and horseback. It is not always convenient to get into a coach at 12 o'clock at night, and if you have other facilities you prefer to avail yourself of them.

1378. I suppose you think that the number of people travelling would be very largely increased if the railway were constructed? I am quite sure.

1379. Not only for the reason you have stated, but also because of the cheaper cost which would induce a man to travel, perhaps, half a dozen times where he would otherwise only travel once; and also because he would be able to get to Glen Innes and back in one day? Yes, I am sure a railway would greatly promote travelling.

1380. Do you think it would promote any other kind of traffic between the two places besides that which at present exists? I am quite sure that a considerable quantity of wool that now goes down to Tamworth would come to Inverell, and the whole of the northern line would get the benefit of it in the shape of additional freight.

1381. Wool sent from Warialda and Bingera would go through Inverell? Yes.

1382. And then there would be extra freight to be collected for the longer length of railway carriage? Yes; and less road carriage.

1383. And, therefore, the railway revenue would benefit? Yes, it would be greatly augmented. I have a place myself on the other side of Warialda, and I should never think of taking the wool to Tamworth, as I do now;—it would pay me better to bring it here.

1384. Having a small sheep property you would send your wool here? Yes.

1385. And I suppose it would suit other graziers to do the same? Yes, largely.

1386. Knowing something of grazing, do you think that in bad seasons to the west of Inverell stock could be brought to Inverell and sent by rail to better feeding country in the east? Yes; I am sure the railway would be very largely availed of for that purpose.

1387. Have you ever heard any graziers express that opinion? No; but I have seen stock travelling in this direction in thousands in the very bad times. We never have very bad times about here, and if sheep in very bad times could be picked up out Warialda way and transhipped almost immediately to Glen Innes, it would be the means of saving, I daresay, very many thousands.

1388. On the other hand, would much food be brought westward from Glen Innes and the surrounding districts in bad seasons? In very bad seasons at the present time, hay and other produce are sent down to Goondiwindi and other places, and if we had railway transit of course the traffic would be increased.

1389. To a very large extent, do you think? To a considerable extent.

1390. We notice that a great deal of property in this district is held by large landowners, and that being so, how do you look forward to any great increase in the agricultural holdings? To my knowledge several landholders in this district would be prepared to sell. Two or three have told me that if they could cut up their estates and sell to advantage they would do so in a moment. But even assuming that they would not, if they could get 10s. an acre rental for the use of agricultural land—and it is nearly all agricultural land of the highest order in this district;—they would prefer to rent their land for agriculture rather than graze sheep upon it.

1391. I suppose it amounts to this: that if the rents they could get were greater than the profit per sheep per acre they would let the land? Yes.

1392. How many sheep to the acre does this land carry on an average? They are very careful about here; they do not care to put on more than one sheep to the acre, I think.

1393. If they could get a rental of 10s. or even 7s. 6d. an acre, that would pay them much better than carrying a sheep to the acre? Yes; four times better.

1394. Therefore you think there is every probability that they would let their holdings? It almost amounts to a certainty.

1395. Are the capabilities of the district good in other branches of agriculture besides wheat? I am assured by agents in Sydney that the corn grown in this district is equal to, if not superior to, the Tumut corn, which fetches the highest price, and is recognised as being the best in the colony. Very large quantities of corn are grown in this district.

1396. Do English fruits thrive well here, as well as the grape? Remarkably so.

1397. Independently of any sentimental view of the question, you, as a long resident here, and also as one having an interest in the colony, can conscientiously recommend that railway communication should be extended from Glen Innes to Inverell? Yes; I am most emphatically of that opinion.

1398. Would you go so far as to say that directly the railway was constructed, it would pay interest and working expenses? The district is very full of hope at the present time, and the moment it is known that the railway will be constructed, the large cleared areas will be placed under cultivation. We are very sure we can enter successfully into the Queensland market, and that very assurance would induce people to cultivate

Mr. E. Grainger. 5 May, 1891.

1399. Is there much building going on in the town, irrespective of the premises being erected by the banks? Yes; West Inverell has been built entirely within the last three years, and there are forty or fifty houses there.
1400. Within what radius from Inverell would trade be drawn to the railway station, if the line were constructed? In a north-westerly direction I should say from a distance of 125 miles; a great amount of business would come from Goondiwindi and those places. With regard to the west, I would not put the distance at more than 60 miles, because the traffic of the country beyond that would come under the influence of the Narrabri line.
1401. Does the trade for that distance of 60 miles from Inverell come through here now, or does it go to Narrabri? We have a portion of it. It depends a great deal upon the price. For instance, if we can land flour at Warialda and those places at 5s. per ton less than the Tamworth people, we get the trade.
1402. But the wool trade would be drawn this way? Yes; I am quite sure it would.
1403. Looking at the country embraced in the 125 miles north-west, and 60 miles west, does it comprise good runs and properties that would bring much revenue to the railway in the way of wool and other traffic? Yes; there would be a considerable amount of traffic; but as to this, Mr. Sinclair will be able to give you particulars.
1404. But of your own knowledge you are aware that there are very large properties comprised in that area? Yes.
1405. And they would bring a large amount of traffic to the railway? Yes; most unmistakably.
1406. Undoubtedly that trade would come this way? It would be impossible for it to go any other way, because the people would save £1 or £2 a ton.
1407. Has your bank any stations out in that direction? No.

Mr. William Gilholme, farmer, Gum Flat, near Inverell, sworn, and examined:—

Mr. W. Gilholme. 5 May, 1891.

1408. *Chairman.*] What is your occupation? I am a farmer.
1409. *Mr. O'Sullivan.*] Where is your farm? At Gum Flat, 10 miles west from Inverell.
1410. What size is it? Nine hundred and fifty acres altogether. I am speaking for my two sons and myself—we all live together.
1411. How long have you been farming out there? Nineteen years come July.
1412. And have you made it pay? I am here and I am out of debt, but that is all I can say about it.
1413. Where has your market been? Inverell is the only market we have.
1414. Have you never sent your wheat on to Glen Innes, Armidale, or Tamworth? No.
1415. And you have a local market there for all you can produce? I may answer that in this way. All we do grow now we get quit of somehow, but we grow only a very small quantity. We simply grow as much as will feed the family—get a few clothes, and a bit of tea and sugar.
1416. How many acres are you cultivating? About 100.
1417. And you are grazing over the remainder? Yes.
1418. Is it all wheat that you grow? No; we grow wheat and maize, and a few potatoes, and pumpkins, and so on.
1419. Can you grow good potatoes and other root crops here? Yes; the potatoes are very good. We can grow some very good turnips, and some very good mangold wurzel, and the like of that.
1420. Is yours chocolate soil? Part of it, and part is black soil.
1421. Is the chocolate soil suitable for the growth of vegetables? Yes.
1422. Is the black soil suitable for the growth of wheat? There is not much difference in the crops. The great difference is in the expense of working. The chocolate soil is much easier worked than the black soil.
1423. I notice that in the district you seem to have alternate bands of black and chocolate soil; are they equally good for the production of wheat? Equally good.
1424. I gather from your evidence that agriculture is not so progressive here as it might be? It is not.
1425. To what do you attribute that in a rich district like this? It is simply for want of a market, and nothing else.
1426. You believe that if you had a speedy and cheap access to a market, agriculture would be far more profitable than it is now? Yes.
1427. Do you know of any farmers who are selling out and leaving the district? Yes.
1428. Many? Yes.
1429. About what percentage of them? About 7 per cent.; I think they are rather squeezed out than selling out.
1430. Why? Simply because they have got into debt, and cannot keep the interest up.
1431. What is about the usual size of farms about here? From 40 to 640 acres.
1432. You are in the Eastern Division, and 640 acres is the limit of selection? Yes.
1433. How far are you from the Central Division? A very short way.
1434. In the Central Division I presume the farms are larger, say 2,560 acres? Not as far as my knowledge goes.
1435. Have you a wide knowledge of this district? Yes, I have been over the most of it.
1436. Does the chocolate soil, the good agricultural soil, extend far inland? Yes.
1437. How far does it go? It goes south, as far as I have been in that direction—that is beyond Gramen, 15 or 16 miles away, and nearly on the border of the mineral country. We can go in some places 7, 8 and 10 miles, and get equally good cultivation land, but when we go further than that we get into what I would call third and fourth rate agricultural soil; nevertheless, the land is very valuable, and small pieces have been sold.
1438. But the best of the agricultural country extends westward, does it not? Yes, and to the south and north, and I should say from Glen Innes on the east to Warialda on the west.
1439. How far is it from Inverell to Warialda? About 40 miles; it is 85 miles from Glen Innes to Warialda.
1440. You say that Warialda is 40 miles distant from Inverell;—does the agricultural soil extend beyond that in a north-westerly direction? The land beyond Warialda would have to be irrigated before it could be productive. The soil down on the Big River and in that direction is more porous, and requires much more moisture, and they have hardly as much rain there as we have here.

Mr. W. Gilholme. 5 May, 1891.

1441. Then although there is good soil out there, 40 miles from Inverell, it is not reliable agricultural country owing to the small rainfall? No, I do not mean that. There is not such a small rainfall as that, but the land is more porous, and it is a flat country.
1442. The rainfall in the Inverell district is sufficient to allow you to rely upon agriculture if you have a market? Yes.
1443. In the event of a railway being brought to Inverell, do you think that the large estates between here and Glen Innes would be likely to be taken up by farmers if they were let out on lease or sold in small freeholds? Yes, I believe they would in a very short time. If the owners of these estates were to subdivide them they would sell very readily. Hardly a week passes but there is some man here looking for land. There was one here to-day from the Hunter; I had breakfast with him this morning.
1444. Where do you think the men would come from to take up these farms? They would come from the east, north and south; they would come from everywhere.
1445. From other parts of New South Wales, and from the other colonies? Yes.
1446. You think, therefore, that there is ample scope in this district for hundreds more farmers if you had access to a market? Yes. Reckoning the consumption of wheat per annum at 5 bushels per head of the population, my judgment tells me that this district could feed the whole of New South Wales.
1447. Do you send any of your wheat or flour out west past Warialda? I have not done so.
1448. Do you know of other farmers who have sent their wheat and flour out there? It is flour they take out there, not wheat.
1449. Then there is evidence of a trade already existing out in that direction? If they get money at all they have to be satisfied with it, whether it pays or not? It is no use talking about its paying, because it does not pay at the present time.
1450. *Chairman.*] Yet you are alive? Yes; but that is all.
1451. *Mr. O'Sullivan.*] Where do the farmers purchase their agricultural implements? A great many of them come from America, and some from Victoria.
1452. Are there none made in the district? Some have been made during the last few years. There is a firm here who have been making a few ploughs and a few harrows.
1453. What does it cost to clear land in this district? I have known some land cost £7 10s., and I have known other land cost £2. I should say that £3 10s. is about the average cost per acre.
1454. Do you think a man could pay 7s. per acre per annum for leased land and make it pay by devoting it to agriculture—that is, provided there was a railway? Yes; if we had a railway and access to a market—and our principal markets would be on the coast and in Queensland, as far as Toowoomba—I believe we could compete against the world, and pay 7s. and even 10s. an acre rent for land.
1455. Do you know of any Inverell wheat or flour that has been sold in Queensland? No; I have never heard of any being sold there.
1456. Do you consider that the 40 miles of road between here and Glen Innes prevents that trade from arising? Yes; because the cost of carriage from here to Glen Innes is from £2 to £3 per ton.
1457. If the wheat or flour were carried at a reasonable rate, there is a possibility that the farmers here would find an ample market, either on the north coast of New South Wales or in the colony of Queensland? I am perfectly sure of it. I am quite certain that, even with our freetrade policy, we could compete with them.

Mr. Joseph Taafe, farmer, near Inverell, sworn, and examined:—

Mr. J. Taafe. 5 May, 1891.

1458. *Chairman.*] What is your occupation? I am a farmer.
1459. *Mr. Tonkin.*] What is the size of your holding, and where is it situated? It is about 100 acres in extent, and is 12 miles west of Inverell.
1460. Have you been farming long? Yes; I have been seven years in the same place.
1461. How much land have you under cultivation? Thirty acres.
1462. What do you generally grow? Wheat and maize.
1463. Do you grow oats? No.
1464. Or any root crops? No. I grow some grapes, and cultivate fruit trees.
1465. What is the average yield of wheat per acre? I have never had less than 24 bushels to the acre.
1466. How many years did you have wheat in? Three years.
1467. You have only grown wheat three years out of twelve? Yes; the ground was very dirty when I came in, and it took a couple of years to get it anything like clean enough to put wheat in.
1468. What does the wheat cost you to grow? The ploughing costs about 30s. an acre; the seed, 1½ bushels at 3s. 6d., 5s. an acre; and stripping, including bagging and getting the wheat ready for market, costs 10s. an acre; that would be £2 5s. an acre.
1469. Is that the total expense? That is about the total expense connected with the growing of wheat.
1470. Is not 30s. rather high for ploughing? Well, it has to be ploughed generally twice.
1471. That includes sowing? Yes.
1472. Is £2 5s. an acre the cost to place it in the shed? Yes.
1473. And from each acre you get 24 bushels? Yes.
1474. Then you can grow wheat, according to your statement, for about 2s. a bushel? Yes; that is the actual cost.
1475. What can you afford to sell the wheat for, so as to make a profit sufficient to live upon? Three shillings a bushel ought to pay if you can get cash and a ready sale for what you grow. But if you have to keep it in the shed for a whole year, and let the mice get at it, and if you cannot sell it at any price—as is generally the case here—it would not pay.
1476. Where have you generally sold your wheat? I have sold most of mine in the town of Inverell.
1477. What does the corn cost you to grow? It costs double the expense and labour as compared with wheat.
1478. And what are the returns for corn? A little less than those from wheat. It is generally sold at about 2s. 6d. a bushel, and sometimes for 3s. 6d.
1479. How many bushels do you get? In this district we get about the same average as we do of wheat. The average is supposed to be higher, but I have seldom seen it higher than wheat. About 25 bushels to the acre would be the average yield of corn throughout the district.

1480.

Mr. J. Taafe. 5 May, 1891.

1480. Have you a better market for corn than you have for wheat? No; but it is necessary to grow a certain amount of corn in order to supply the district, as it cannot come from other places.
1481. But otherwise the profit on corn must be a great deal less than that on wheat? Yes; but a man must do a great deal of the work himself. If he had to employ labour he would not be in such a good position.
1482. Has a man not a right to be paid for his labour if he works himself? Yes.
1483. Do you ever go in for dairying? Yes; we have a small dairy.
1484. Is there a butter factory in this district? Not that I know of.
1485. Have you taken into consideration the advantages of a butter factory? No; I have not considered the question.
1486. Is this a good district for dairying? Very fair, I think.
1487. Do cattle do well here? Very well, indeed.
1488. Do you make any butter for sale? Yes; regularly. We milk about eight or ten cows a day.
1489. Where do you sell the butter? Chiefly to the neighbours around, and at times in the town.
1490. What do you average for your butter? About 1s. a lb.
1491. That pays you very well, does it not? Yes; it helps to keep things going.
1492. Could you not increase your number of cows, and do better that way than by growing wheat? Yes; but in that case the market would get overstocked, and butter would become so plentiful that you could hardly sell it.
1493. But is there not always a market for butter? A very poor market, if the butter is at all plentiful.
1494. Have you studied the railway question? Yes; I have thought about it very deeply as far as I have been able.
1495. Do you think that if a railway were brought from Glen Innes it would give you better access to a market, and a better prospect of making money at farming? I am quite positive it would.
1496. You have never sent any produce out of this district, have you? Like water, agriculture in this district soon finds its level. It will only go up to a certain point, until there is an outlet. As soon as it gets to a certain pitch there is no sale, and we are blocked out of the market.
1497. Have you ever sent produce from here to any other part of the country? I have not done so, but I know of plenty who have.
1498. Then you do not know yourself whether you could afford to send stuff from here to Glen Innes or to any portion of the colony connected with a railway line? I know it would not pay to send it to Glen Innes by team, except on occasions when the price was very high.
1499. Do you know the price of wheat in Queensland? I hear it is 5s. a bushel in some parts of Queensland.
1500. If that is so, could you not afford, at the price at which you say you can grow wheat, to cart it by team from here to Glen Innes, and send it on to Queensland by train? I do not think so.
1501. You say you are satisfied with 3s. a bushel, and it would not cost 1s. 6d. per bushel to send wheat from here to Queensland—would it? The usual charge has been 4s. per cwt. for carriage from here to Glen Innes. That would very nearly equal the price of the wheat itself.
1502. We have just heard that the price was 2s. per cwt.? I have never heard of it being so low as that; 4s. per cwt. has been paid for years since I have been here.
1503. We hear that it can be carted from here to Glen Innes at 1s. per bushel;—if it could be taken from Glen Innes into Queensland to a market for 6d. per bushel, that would be 1s. 6d. added to the original cost of 3s., and would leave you 6d. profit above what you are satisfied to sell the wheat for at Inverell; you would get 3s. 6d. instead of 3s. for your wheat? I have never known any quantity of wheat to be taken away by teams, and disposed of at a profit, unless it was in times when the price was very high.
1504. You said just now that you would be satisfied to sell wheat at 3s. per bushel, at which price, according to your statement of the cost of production, you would get a profit of 1s. per bushel? In some seasons I would not be satisfied to sell at 3s.
1505. Why? Because if there was a low average crop the price would be high, and I would want a little more.
1506. But you say that your average yield is 24 bushels to the acre, and that the total cost of production, with the wheat put into the barn, bagged, and everything, is £2 5s. an acre, which would be about 2s. a bushel; so that if you get 3s. a bushel you will be doing very well? 3s. a bushel, generally speaking, will pay for wheat here, and is a good average profit, considering the expenses connected with growing the wheat.
1507. Then if you got 5s. for it in Queensland, and you could deliver it there for 1s. 6d., even without a railway to Glen Innes, that would leave a profit of 6d. a bushel, which ought to be sufficient to enable you to carry on farming? It might enable me to carry on farming as it is, but the construction of a railway to Glen Innes would make farming about ten times more extensive in the district, and twice as profitable. We want a little more profit than we are now getting. At present it is only a hand to mouth existence.
1508. If you are satisfied with 3s. a bushel, can you tell me why you have not got more land under cultivation than 30 acres? There is no real reliance on a market without a railway, and that is the reason why half the land which is cleared is not under cultivation.
1509. Do you think your little bit of cultivation of 30 acres would make much difference to the consumption of wheat in this district? It is the same all round the district. If a few men went in to cultivate all they could grow they would swamp the market.
1510. Do you know who is the largest farmer in this district? Mr. M'Clymont or Mr. Eddy.
1511. Besides wheat, corn, and potatoes, do you grow anything else that is marketable? Yes, grapes. I have about 3 acres under grape crop.
1512. Do you sell the grapes, or make them into wine? I sell them chiefly, but I make a little wine.
1513. You sell the grapes at Inverell, I suppose? Yes; to the neighbours around.
1514. You have not sent any away? No.
1515. What price do you get for them? 2d. a lb.
1516. Have you ever tried to grow anything else in this district;—have you tried tobacco, for instance? Yes; I understand tobacco growing very well.
1517. Is this district suitable for the cultivation of tobacco? Yes, it is well suited for it; but the thing is, you are not allowed to manufacture tobacco. That has crushed its cultivation, as far as I am concerned.

Mr. J. Taafe. 5 May, 1891.

1518. Why are you not allowed? I believe there is an excise duty on it.
1519. Have you ever tried to manufacture it? Yes; I grew it a few miles out for Mr. Pigott.
1520. What sort of a crop did you have? A very good one.
1521. Was it a payable crop? Yes.
1522. Is there any quantity of tobacco grown in the district? Not since the excise duty was put on.
1523. Was there much grown before that? Yes; it was beginning to increase, and would have done so.
1524. How long ago is it since the excise duty was put on? I think it must be about four or five years ago.
1525. How many acres were under crop at that time? The industry was just about starting. Mr. Pigott was the first man to grow tobacco here. I suppose there were about 7 or 8 acres that I know of.
1526. And there is not as much now? No; there is hardly any.
1527. What did they do with the tobacco they grew? They sold it in the district, and some of it was even sent to Sydney and sold at a good profit.
1528. Was there a tobacco factory established here? On a small scale.
1529. Do you think they are capable of manufacturing tobacco here? Yes. They were talking very seriously of going into it on a large scale about that time, but it died out, as I have told you.
1530. Wholly on account of the excise duty? They all told me so, and I have no reason to doubt that such was the case.
1531. Do you think that that affected the crops in any way? No; I suppose the excise duty would hardly affect the crops.
1532. You say that what was sent to Sydney returned a very good profit? Yes.
1533. Was that before the excise duty was put on? Yes.
1534. Has there been any sent to Sydney since, do you know? Not that I know of.
1535. They took it for granted, immediately the excise duty was put on, that it was time to knock off tobacco growing? Yes.

Mr. James Coggan, grazier and farmer, near Inverell, sworn, and examined:—

Mr. J. Coggan. 5 May, 1891.

1536. *Chairman.*] What is your occupation? I am a grazier and farmer.
1537. *Mr. McCourt.*] What is the size of your holding? Something over 4,000 acres, independently of 2,500 acres conditional lease.
1538. How much have you under cultivation? About 200 acres.
1539. What is the principal product? Wheat and maize, principally, and hay.
1540. In what direction is your farm? I have several farms round about the town, and other country out Swamp Oak way, about 12 or 14 miles from here in an easterly direction; I have also other land at King's Plains.
1541. Are you troubled with rust in this district? Yes; we have been. The year before last we lost a good deal of wheat by rust.
1542. Is the rust increasing or decreasing? I have not heard any complaint this year. I remember that the year 1870, in which I came up here to reside, was a very bad year for rust, and occasionally between that time and last year a little rust has occurred in the district. Last year it was very bad.
1543. Is there more rust in the east of the district or in the west? I do not think there is much difference.
1544. Does it occur more in wet or in dry seasons? My opinion is that it comes in the wet, moist weather. I do not think there is any cure for rust, and I have had considerable experience as a farmer.
1545. You think it is likely that rust will affect the growth of wheat in this district? Only through the atmosphere.
1546. Do you think it is likely to affect it seriously? No; for about eighteen or nineteen years the rust did scarcely any damage at all.
1547. How long have you resided in the district? Twenty-one years.
1548. You know it pretty well? I have resided in New England for the last thirty-six years, and I know every inch of the district.
1549. Can you state what is the acreage under wheat in the district? I could not tell. At least one-third of the agricultural land that has been cultivated is idle for want of a market.
1550. Do you know how many bushels of wheat have been produced in the district? No; I could not say.
1551. Where do you sell your wheat? I sell mine to the millers generally.
1552. Is it a cash trade? Yes; I always get cash for my wheat.
1553. What is the yield of wheat per acre in this district? I think the average would be something like 20 bushels. It has been known to go over 30, 40, and 50 bushels.
1554. What would be the lowest yield that would pay the farmer? There are two ways of looking at that question. I might say that there are two different kinds of farming in this district. A man who has a family to help him, and need not pay any wages, can grow wheat cheaper than a man who has to hire labour. I have to pay all wages men, and I do not consider that I can grow wheat and pay everything for less than 4s. per bushel.
1555. You cannot grow wheat to sell it for less than that? No; we have to pay rent for the selections.
1556. What profit do you reckon that 4s. per bushel would give you? Very little.
1557. You heard the last witness say that ploughing costs 30s. an acre;—is not that a very high price? It all depends on the kind of land. There is some land here that you could not plough for less than 30s. an acre.
1558. Take average wheat land? I think £1 an acre would do for ploughing, harrowing, and sowing, without including the cost of the seed.
1559. If you had a large area—say 50 acres—could you not get it done even cheaper than that by contract? I think £1 is quite little enough.
1560. Suppose you called for tenders, would you not get it done cheaper? I do not think so. I know I would not do it for less.
1561. Where do you expect to get an outside market for your wheat? If a line were constructed to Inverell, in my opinion we would have a great market in Queensland. It is impossible for farmers here to attempt to send their wheat to Sydney; they cannot do it.
1562. Do you think Queensland would be your market? I am sure of it.
1563. Do you know the Glen Innes district well? I know all this side of it.

Mr. J. Coggan. 5 May, 1891.

1564. They cannot grow wheat as well as you can? No; they cannot.
1565. Why? In the first place, they have not got the quality of land; the soil at Glen Innes is not half as good as that at Inverell. At Glen Innes, after growing a few crops, you have to use manure, but that is not the case at Inverell. I have land myself which has been under crop for fifteen years, and it grows as good crops now as when it was first broken up, and it has never had a load of manure.
1566. In your opinion then, there is no land in the Glen Innes district equal to the land about here? No, nor nothing like it.
1567. I suppose you are aware that wheat-growing and farming generally in the Glen Innes district is decreasing? Yes.
1568. Do you know the proposed routes of railway? Yes.
1569. Do you know the route to Guyra? Only this side of it.
1570. Have you studied the prices of wheat in the various markets? Yes.
1571. Is it not a fact that the Sydney market is always higher than that of Queensland? It is not at present, I believe.
1572. But, as a general rule, is it not higher in Sydney than in Brisbane? I could not say.
1573. If it has been given in evidence that the price of wheat is generally higher in Sydney, would it not be better for you to send your wheat to that market? I do not think so; it is too far.
1574. Cannot wheat be sent from Glen Innes to Sydney under 6d. a bushel? I do not know.
1575. Suppose that is the freight, would it not pay you to send the wheat to Sydney? It would cost £2 per ton to send it from here to Glen Innes by road.
1576. If you could get the wheat from Glen Innes to Sydney at 6d. a bushel, and the market there is a little better than at Brisbane, would it not pay you better to send it to Sydney? I do not think so.
1577. Why? Because we are nearer to the Queensland market, and I believe that prices in Queensland are much higher, generally speaking, than in Sydney.
1578. Then you are in favour of a railway connecting at Glen Innes? Yes.
1579. You are not in favour of the Guyra line? Well, I look at it in this way: I know the Guyra line very well, and I know the Kentucky line and the Uralla line. The Committee, coming from Glen Innes yesterday, saw the quality of the land, and can form their own idea about that. If you go back by Uralla, or Guyra and Kentucky, you will go through a sandy desert nearly the whole way. I defy any man to go and pick out a farm of 20 acres between Inverell and Guyra, Kentucky, or Uralla, to equal the land about here. Of course there are small patches in the rivers and creeks where the land is pretty fair, and will last for a few years. I have been farming in the country, and I know it pretty well. The land in those districts could not be of much value, or a greater quantity of it would have been taken up. It is a fine climate, and suitable for sheep and cattle.
1580. You think the land is better on the Glen Innes line? I would rather have 1 acre here than 100 acres on the routes I have mentioned.
1581. But the land between here and Glen Innes is mostly held in large estates? Yes, mostly; but there are a lot of selectors.
1582. Where do the storekeepers here generally trade—with Sydney? Yes; I think most of them do. Large quantities of goods have been brought up from Grafton.
1583. But they come mostly from Sydney by rail, *via* Glen Innes? I think so.
1584. Would it not mean 85 miles' extra carriage on those goods to bring them by Glen Innes instead of by Guyra? We would all have to pay for that.
1585. You are willing to pay it? Yes. I have not the slightest doubt that some of the merchants here—and we have some very wealthy merchants in this town—would like to see a railway go from here to Sydney in as straight a line as you could fire a bullet. No doubt they would like that for their own benefit. They come up here and make fortunes in a few years.
1586. But you, as a passenger, would have to pay for the extra 35 miles? Yes.
1587. You are willing to do that? Yes, quite willing.
1588. And the people generally? I have heard very few—not more than one in twenty—object to the Glen Innes line—in fact, in this district there is not even that proportion opposed to it.
1589. You are aware that this proposal to construct a railway from Glen Innes has been a long while under consideration? Yes.
1590. I suppose, as in the case of other lines, there has been a good deal of land speculation along the route in anticipation of the railway? I do not think there has been very much.
1591. To your knowledge, has there been any? No; I do not know of any.
1592. People have not bought land in the vicinity of the proposed railway station, or anything of that sort? No. I think most of the land was bought and selected previous to any line being surveyed.
1593. Do you know where the proposed terminus is? Two sites have been mentioned—one at the lower end of the show grounds, and the other behind the Public School.
1594. Has not the land round these proposed sites been purchased by land speculators? No. All the land is sold there, with the exception of fourteen allotments that were put up for sale some years ago, and was withdrawn from sale, pending information as to where the terminus would be. That is the land near the Public School; all the other land was sold years before.
1595. Do you believe the line ought to stop at Inverell, or go on anywhere else? I believe it ought to go out further north-west. It is splendid country right away as far as you like to go in that direction.
1596. Would not that be your principal market if the railway went further west? If the railway went further west we should have a certain market there.
1597. Would it not be a good market, as they cannot grow wheat out there? They can grow wheat 40 or 50 miles west from here. Last year I saw as good a crop of maize growing 6 miles this side of Moree as ever I saw in my life.
1598. You can grow potatoes here in large quantities? Yes.
1599. And they cannot grow them west? I saw potatoes growing at Moree, but that was exceptional.
1600. Would not the west be your market for potatoes? A good many potatoes go there now.
1601. The people of Inverell would like the railway to be extended further west? I think so. I should like to see it go another 40 or 50 miles.
1602. And it would create a market westward for your products? If we have a railway from Glen Innes to Inverell, where we now grow 1 bushel of wheat we would grow 50—in fact, the quantity would be unlimited.

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unlimited. By sending wheat out to Queensland we would get back trading in the shape of sugar and other things. We can grow any mortal thing here except sugar and tea. I have grown Swedish turnips 36 inches round. I never saw anything like it in the old country, and I was fifteen years farming there.
1603. What is the average value of farming land here per acre? It all depends on the position.
1604. What is the average value of fairly-cleared land fit for agriculture? I think about £6 or £7 an acre. Of course there is a lot of difference in land.
1605. I mean average good farming land? Yes.
1606. And what would be the rent per annum per acre of good average farming land? I consider that it is worth about 10s.
1607. And can it be readily let out at 10s. now? Yes; there is some let at that price within a mile of the town.
1608. It can be readily let at 10s. an acre? It is let now at that price I am told.
1609. For wheat-growing? Yes; anything you like to put it to.
1610. Is corn as profitable to the farmer as wheat in this district? I do not think so. I find that there is a great deal more labour with corn than with wheat.
1611. If the railway were constructed to Inverell, what increased acreage would be put under cultivation—would the present area be doubled or trebled? It would be increased hundreds per cent. in the course of two or three years. If you give me a market, I could, within three years, cultivate 500 or 600 acres, and there are scores of others who would do the same.
1612. If the railway were here, would you do it? Yes; I cultivate now 200 acres, and I would bring the area up to 500 acres within three years.
1613. Would other farmers do the same? I hear them all say the same as I am saying. They are of the same opinion as myself.
1614. And you would send the product of that land over this proposed railway? Yes; it would have to go that way; there is no other market.

Mr. John Moore, farmer, Rob Roy, near Inverell, sworn, and examined:—

Mr. J. Moore. 5 May, 1891.

1615. *Chairman.*] What is your occupation? I am a farmer.
1616. Where is your holding situated? At Rob Roy, 10 miles west of Inverell.
1617. Of what extent is it? 1,000 acres.
1618. Is it red or black soil? It is mixed—all sorts.
1619. How much of it is cleared? I have 300 acres under the plough. In the good old times I thought I would be a big farmer, but I found we could not sell our produce, and I have not cultivated for the last three or four years.
1620. In the "good old times" what did you cultivate? I started and cleared the 300 acres right away, and had it under the plough.
1621. What do you call the "good old times"—do you mean when the tin-mines were flourishing? Yes; there was any amount of money here at one time.
1622. How many acres have you now under cultivation? One hundred and ninety acres.
1623. What is the principal crop? Wheat and corn.
1624. How many acres under wheat? One hundred and thirty.
1625. And how many under corn? Sixty.
1626. That is this year? Yes; the crop is ripe for pulling.
1627. Have you more land under cultivation this year than you had last year? No; not so much.
1628. What is the reason that you have less this year? Because we have not got such a good market.
1629. There is not such a demand as there was? No.
1630. Then is the whole district going down? Yes; every year.
1631. How many years do you think it will take to find bottom? Not long.
1631½. Where do you sell your wheat? I sell it here.
1632. You do not send any away to a distant place? Not wheat; I did corn this year.
1633. Where did you send it to? Glen Innes.
1634. You found a market in Glen Innes? Yes.
1635. Did you ever send any to Grafton or Sydney? No.
1636. Did you ever send any wheat to Queensland? No.
1637. Are you assisted by your family, or have you to hire labour to work your farm? My family assisted me years ago, but some of the boys have left me now.
1638. Have they set up for themselves in the district? Yes.
1639. Are they farming? One is farming, and the others are at a saw-mill.
1640. Have you any cattle? No; only sheep.
1641. How many sheep do you run? 1,000. That is what I have given up cultivation for.
1642. You have gone more into grazing? Yes.
1643. Do you produce anything else besides sheep, wheat, and corn? I go a little into fruit, but not a great deal.
1644. Where do you find a market for that? I have not sold much fruit, but I know it will grow here. Inverell is a splendid place for growing fruit.
1645. If a railway were constructed, would you increase the number of acres you have under wheat? Yes, because I would cultivate the old paddocks that are now empty.
1646. Where would you find a market? I could send it anywhere if we had a railway—wherever there was most demand. I should send it wherever I got the most money.
1647. Where do you think that would be? I would either go to Queensland——
1648. Do you know anything of the market in Queensland for wheat? No; I know very little about it. I know it is a bit closer than Sydney.
1649. Do you know that they grow wheat for themselves? They cannot grow wheat as well as we can.
1650. Do you know that in the year 1889 there was a larger area under cultivation on the Darling Downs district than there was in the Glen Innes, Tenterfield, and Inverell districts put together? No; I was not aware of that. They do not have such yields there.
1651. Do you know what their yield is? No.
1652. Then how do you know? I have never heard of their great yields.

1653. But if you do not know what their yield is, how do you know that it is not as great as yours? We generally see some account of it in the papers, if there have been big crops. Mr. J. Moore. 5 May, 1891.
1654. How long do you say you have been in the district? Twenty-three years.
1655. On the same farm all the time? No; when I first came up, I rented a farm for two years.
1656. What did you pay an acre for it? I forget now; it is a long time ago.
1657. What is good agricultural land worth an acre to rent it? You can rent it for 10s. an acre.
1658. Is there any demand for it at that price? I do not think there is a great deal. Farming is very dull here now.
1659. Do you know anything about the railway rates? No.
1660. Do you know anything about the country between Inverell and Guyra? I have been along it a good many times.
1661. If your market was likely to be in Sydney, would it not be to your interest for the railway to tap the northern line at Guyra, rather than at Glen Innes? It would suit us better to go to Glen Innes.
1662. Why? We may go straight on to the Clarence, perhaps, some day. It is for our children as well as for ourselves.
1663. Suppose there is no direct communication with the coast for the next twenty years, would you and your children during that period rather pay the extra mileage between Glen Innes and Guyra than go direct to Guyra? Yes; but the railway would go direct down to the coast.
1664. But suppose there is no direct communication with the coast, where do you think your market is likely to be if the productions of this district are increased—in Queensland or in Sydney? If we got a direct line to the Clarence, they could take a lot of our flour there.
1665. Which do you think is likely to be your best market—Brisbane or Sydney? I believe Queensland will be the best market.
1666. And that is the reason why you desire to tap the northern line at Glen Innes? That is not the only reason. The Glen Innes route is the shorter.
1667. Is not the distance the same in both cases? The line to Glen Innes goes through good country, while the other lines go through bad country.
1668. What does it matter to you whether the line passes through a desert or through good land? I like to do good for everybody, and to see farmers settled on good land. Between here and Glen Innes, it is nearly all good agricultural land, while on the other route there is nothing but sand.
1669. So that your great aim is not to get the shortest route to market, but to go through lands that will be benefited most by the railway? Yes; to get the route which will benefit the greater number.
1670. Does the land at Glen Innes grow wheat as well as that at Inverell? No; not nearly so well.
1671. What is the reason of that? The climate of Glen Innes is not so suitable.
1672. It has a greater rainfall—is that the reason? There is something in that. The land at Glen Innes grows better potatoes and better oats, but not such good wheat, and not so much corn.
1673. Do you know the estimated cost of this railway? No; I do not know anything about that.
1674. Do you know that the Railway Commissioners, who run the railways of the colony for the purpose of making them pay, estimate that under the most favourable circumstances there will be a dead loss of £13,000 a year on this proposed line between Glen Innes and Inverell? No.
1675. If their estimate is correct, do you think the Parliament of the country would be justified in incurring this loss of £13,000, which would be borne by the people of the colony generally, for the purpose of giving you the benefit of a railway between here and Glen Innes? I believe it would be justifiable, because it would be profitable in the end. This place would raise that much, and more, with a railway.
1676. In what time? In two or three years.
1677. You think that if there was a loss of £13,000 on the first year's transactions, that deficiency would be wiped out within two or three years by the increased production that would be brought about? Yes; and double it.
1678. Why do you think it would double it? Because there would be so much more produced in the district, and so many more people living here.
1679. How much more would you produce during the next three years if the railway were constructed? I cannot exactly say.
1680. How then can you say that the loss would be met in so short a time? I could produce double what I am producing now. That would be a good lift to it, and many others would do the same.
1681. How much does it cost in this district to prepare land for wheat in the way of ploughing? £1 an acre.
1682. What does the seed cost? It costs 3s. 6d. a bushel, and it takes 1 bushel to the acre.
1683. How much does it cost per acre to strip the wheat and gather it? 12s.
1684. What is the total cost of producing a bushel of wheat, deposited in your barn? I have not gone into the figures.
1685. What would be the selling price? 3s. 6d.
1686. Could you not sell with profit under 3s. 6d.? Yes; we do sell under 3s. 6d.
1687. What is the lowest you can sell for at a profit? Not lower than 3s. 3d.; there would not be much profit at 3s.
1688. It will not pay you to deliver it at Inverell under 3s. 6d.? Under 3s. 3d.
1689. And how much does it cost to take it to Glen Innes? 9d. a bushel by road.
1690. What would you be prepared to pay by railway? I do not know what they would charge.
1691. Do you know what it would cost to deliver it in Queensland? No; I have not gone into that calculation.
1692. Do you know the price of wheat in Queensland? No.

Mr. James Bryden, farmer, near Inverell, sworn, and examined:—

1693. *Chairman.*] What is your occupation? I am a farmer. Mr. J. Bryden. 5 May, 1891.
1694. *Mr. Trickett.*] Do you farm only, or graze as well? Both.
1695. What area have you got? I work altogether about 4,000 acres.
1696. How many sheep have you? Nearly 4,000.
1697. Is all the land suitable for agriculture? About 1,000 acres.
1698. How much do you farm? About 100 acres.

Mr. J. Bryden. 5 May, 1891.

1699. Did you formerly farm more than that? Not in this part of the country.
1700. And the reason you do not farm more is because it does not pay? Yes.
1701. How long have you been farming in this district? Only seven years. I am from Victoria.
1702. What area did you start with when you came here? I started with a 640-acre selection.
1703. And you have gone on increasing your holding? Yes.
1704. And has your business in the district enabled you to improve your position in that way? Yes.
1705. Did you start with a farm, or with grazing sheep? I started with sheep and farming at the same time; but it was paying better then. I got 5s. a bushel for the first wheat I had, and maize, too.
1706. That was the price locally? Yes.
1707. I suppose your experience has been that since the mining has declined your market has disappeared, and it does not pay to farm? Exactly; there is no market for the wheat.
1708. Have you ever tried sending it to another market? No; we could not do it; the carriage is so high. I would have to pay more for the carriage from here to Glen Innes than I could possibly afford to pay.
1709. Then it is the gap between here and Glen Innes that is the block to your farming operations? Yes. I am at a standstill now, because I have no market.
1710. What does it cost you per ton to send your goods from here to Glen Innes by team? I think it is £2 per ton.
1711. What could you afford to pay if a railway were constructed between here and Glen Innes? I should say 3d. per bushel from here to Glen Innes would pay very well.
1712. You could afford to pay 3d. a bushel, which would be about 10s. per ton? Yes. As long as we got the wheat carried from Glen Innes to Sydney for 6d. per bushel, and got 4s. a bushel for it in Sydney, it would pay well.
1713. That would be at the rate of 30s. per ton from here to Sydney? Yes.
1714. You seem to have done pretty well in the district? Well, I cannot say that I have done so very well. I would have done a great deal better if we had had a market, for I would have gone largely into farming.
1715. Did you begin here, or did you bring capital with you? I brought capital here.
1716. Are you better or worse off than when you came? I can scarcely say. I think I am better off, owing to the quantity of sheep I am keeping. That is the only thing I am living by.
1717. If you had access to a market you could go in more for farming? Yes, that is what I intended to do when I came here. When I was in Victoria I was the largest grain-grower in the colonies, and I have had great experience in farming all my life, both at home and in Australia, and this is the largest district for agriculture that I ever saw in any part of the colonies. It is the largest by three times. In Victoria you cannot get a large quantity of land in one locality. There is some good country there, as, for instance, at Warrnambool, but here the extent of agricultural country is almost unlimited.
1718. You think that this district is better than the celebrated district of Warrnambool in Victoria? For growing wheat it is. They cannot grow wheat there, the climate is too moist.
1719. You say you graze sheep;—the land here will carry about one sheep to the acre? I have a good deal of it that will do that.
1720. The land which is fit for agriculture? Yes.
1721. A sheep to the acre—how much is that worth a year? It ought to be worth about 3s. an acre profit.
1722. If you put that acre under cultivation, and planted it with wheat or other produce suitable for this soil, what would it be worth if you had a ready market? We can grow an average of not less than about 20 bushels of wheat to the acre, and at 3s. a bushel, that would be £3.
1723. Therefore the land would pay infinitely better under agriculture? Yes, there is no comparison between the two.
1724. If you had a ready market agriculture would pay better than grazing, in the proportion of £3 to 3s.? Yes. Of course there is the cost of labour and carriage to be deducted from the £3.
1725. What would you allow for that? Say 30s. a ton for the ploughing and reaping.
1726. That brings the freight and labour to £2 10s. 6d., which would leave a profit of about 9s. 6d., as against 3s.? We could do it, perhaps, at less than that if we went largely in for cultivation.
1727. Putting it at the lowest, it would pay you in the proportion of 3 to 1 in favour of farming? I should say so.
1728. How did you come to leave Victoria? We could not get land cheap enough there, it is too high.
1729. You have been farming all your life? Yes.
1730. Are you prepared to say that this is the best farming district of which you know? It is three times the size of any district I have ever seen either in Victoria or elsewhere.
1731. For uniform farm land? Yes; there is such a large extent of good country, and it will stand far more cropping. In Victoria there are large plains, but it is not good land; it is all done out.
1732. Have you spent much on your land in the way of improvements, such as building and fencing? I have fenced a large quantity, and made other improvements. I should say I have laid out £1,000 on fencing and other improvements.
1733. Is your holding free of debt? No, it is not.
1734. But the debt is not of a character that is troubling you in any way? Oh, no.
1735. Even in the present state of affairs you do not wish to give it up, and I suppose you can make a very good living? Yes; I would rather enlarge it if anything.
1736. You can do very well even in the present state of things? Yes; sheep grazing is the only thing we are making a living by. It requires a good sized place to pay with sheep, but with farming a smaller holding is sufficient.
1737. What size holding would enable a man to make a living? If a man could go into farming, 150 or 200 acres would be enough.
1738. Do you think people would lease those small farms? Yes; if there was any chance of their paying.
1739. Have you heard of many people making inquiries as to farm lands here? I came here with a number of others. A great number of Victorians have lately been trying to settle here, but all the good country is purchased or selected, and that is the reason they have gone back again.
1740. They cannot get a leg in? Exactly. If there were railway facilities a great number of Victorians could come here with a view to farming.

Mr. Peter Bause Eddy, grazier and farmer, Gum Flat, near Inverell, sworn, and examined:— Mr. P. B. Eddy. 5 May, 1891.

1741. *Chairman.*] What is your occupation? I am a grazier and farmer.

1742. *Mr. O'Sullivan.*] Have you heard the evidence given by the other gentlemen who testified with regard to the agricultural prospects of the district? I heard some of it.

1743. Can you endorse what they have said? Partly.

1744. What reservation have you in the matter? We may differ on some points, with reference to the rent of land, for instance; in fact, I do not know that there is any land rented here.

1745. Where is your farm? I have two places—one at Gum Flat and the other at Paradise, on the proposed route to Guyra.

1746. Where does Gum Flat lie? About 9 miles west, and Paradise lies south-east.

1747. Of what size are your holdings? A little over 6,000 acres.

1748. Then I presume you are more a grazier than a farmer? Yes.

1749. How much do you cultivate? I have about 400 acres under cultivation,—that is, land cleared fit for the plough.

1750. Do you cultivate all you have cleared? Yes; I allow a portion to lie fallow.

1751. What crops do you produce? It depends on the season. I grew over 300 acres of wheat last year, about 70 acres of maize this year, and sufficient potatoes for our own use.

1752. Do you find the potatoes grow well? Yes; very well.

1753. What is the average yield of potatoes per acre? In a favourable season, 6 or 8 tons. I have never weighed them; that is only an estimate.

1754. What is your yield per acre of wheat in a good season? We are not satisfied if we cannot get 25 bushels.

1755. Do you find a ready market for it? I have done, so far. I have expended a lot of money in the purchase of teams, and I have put them on the roads to take the produce away. It is no use to wait on Inverell for a market for there is no market here.

1756. Then where do you send your produce? To Vegetable Creek, to the Half-way House, the Waterloo Station, and to Goondiwindi.

1757. Do you send your produce as far as Goondiwindi? Yes; I have teams there now.

1758. And you find a ready sale there? Yes; for what they can consume.

1759. What do you send? Flour, and sometimes maize.

1760. Have you a mill of your own? No.

1761. You have the wheat ground at Inverell? Yes.

1762. Have you found it profitable to send it out there in your own teams for sale? I have to do so. I could not pay my wages if I did not. I have no other mode of disposing of it.

1763. Do you supply any other places besides Goondiwindi? Warialda occasionally.

1764. Do you bring any return loading back? No.

1765. Does any one beside yourself send out produce in that direction? I think some storekeepers do.

1766. You said something just now about a difference of opinion with regard to the rent of land;—what, in your opinion, would be a fair rent to pay for land, in the event of a railway being brought here? I think the land would readily let at from 10s. to 15s. an acre if we had a railway and protection, in the shape of railway rates.

1767. You think that in the event of a railway being brought here, the agricultural land in the district would readily let at from 10s. to 15s. per acre? I should think so; a large population would come here.

1768. Do you think it likely the land would be taken up and cultivated? I think so.

1769. Do you go up to Goondiwindi yourself? I have been there repeatedly.

1770. What is the character of the country right up to the border? It is very fair country—good grazing land, and some of it would be splendid agricultural land if it were irrigated.

1771. How far would it be safe to cultivate out in that direction? I could not say; that would be ascertained by experience.

1772. Do you know anything of the rainfall? I have not studied it.

1773. I suppose they do not have anything like the rain they have here? I do not think they have nearly as much.

1774. Can you testify as to the extent or volume of trade coming from that direction towards Inverell—from the stations and the settlers generally? I could not say; but I know there are large mobs of cattle coming in from there, and in the dry times hundreds of thousands of sheep come here, and to New England, seeking for grass and water.

1775. Starving sheep are driven down to the grass and water of New England for the purpose of saving them? Yes.

1776. Would that character of stock be likely to use the railway? I think so.

1777. It would be to the interests of the stock-owners to take them the last 40 miles by railway if they were in a weak condition? Certainly; in order to save their lives; it would be better to do that than lose them.

1778. Do you know if stock-owners send sheep or cattle out to the grass country in the west in a good season? Yes; in a good season. There are sheep on the road now. This is a good season.

1779. I suppose in a good season the grass is very good there? Yes; very good.

1780. Do you believe that if the line were brought to Inverell the settlers in the Goondiwindi region would send their produce into the station and obtain their goods from here? Certainly; they could not obtain them from a better market.

1781. They seem to look upon Inverell as the centre of trade for that district? Yes; until the railway passes down there.

1782. I suppose you are aware that at the present time there is no proposal to take the line beyond Inverell? I believe not, although I saw survey marks down there, and I hope it will be taken there in the near future.

1783. There has been a survey made, then? I fancy I have seen some survey marks there.

1784. Do you know whether a railway survey has been made from Narrabri to Moree? I think so; I have seen some trees marked.

1785. In the event of a line going from Narrabri to Moree, would not that tap the Goondiwindi trade as regards wool and stores? It might supply the Sydney market, but I do not think it could possibly take the trade from here. We can produce wheat in greater quantity, and I think of better quality, than can be produced in any other place this side of Sydney.

Mr. P. B. Eddy. 5 May, 1891.

1786. Have you ever taken any fodder out into the Goondiwindi district in dry seasons? I have only sent maize out.
1787. Do you know of anyone who has sent fodder out there in dry seasons? Yes; I saw teams loading to-day to go out.
1788. To Goondiwindi? No; to Moree.
1789. Do you know of anyone who has sent fodder out to Goondiwindi? Yes; I have heard of teams being loaded for that place.
1790. If the railway came as far as Inverell, in time of drought there might be a considerable fodder trade between Inverell and the west and north-west districts? Yes; but the trade would be limited, except in time of drought.
1791. There would be a certain distance, at all events, over which a trade might be commanded by Inverell in the matter of fodder? Yes.
1792. Which of the two routes would you prefer to see adopted—the one to Glen Innes or the one to Guyra? I think, in justice to the public, the Glen Innes to Inverell line should be constructed. If I were to speak selfishly I should say the Guyra line, because I have an interest there.
1793. Why do you think it would be more in the interest of the public to construct a line from Glen Innes rather than from Guyra? We have a large tract of land here as capable of growing wheat as any that I have seen in the world, and I have travelled a great deal. In order to maintain a large population here, we should want other markets than those we have. I have got teams in Goondiwindi now with flour, and the market is glutted; they cannot sell it all, and consequently I have ordered them to store it. We have only a limited market here, and I think we may look for a larger market in Queensland.
1794. What makes the people of this district have so much faith and hope in the Queensland market? Because the Queensland people import so largely.
1795. They import about 46,000 tons a year? I think so.
1796. But between you and that market lie the Darling Downs, where there are about 43,000 acres cultivated;—do you think you could compete with them in the Brisbane market? I think the yield there is uncertain.
1797. You are aware that in some seasons their production utterly fails? Yes, very often—or I have heard so.
1798. In such seasons, at all events, you believe you could command the Brisbane market? Yes; I think we could do so in every season, because we would plant more. Instead of planting 300 acres of wheat, I might plant 1,000 acres.
1799. Do you look towards the coastal districts as a market for your products? Yes; in the distant future.
1800. Have you any market there now? No.
1801. Do you send any of your teams down that way? Not to take products down. I have sent teams to bring sugar up.
1802. But you believe that in the future, when there is a large population there, you may find a good market for your produce? There is a good population there now.
1803. But they do not grow wheat there? No; we could supply that.
1804. Therefore, you will probably find a market there for your wheat? Certainly. I should be very sorry to think that there would not be. I have spent a lot of money here in the hope of getting that market.
1805. You do a considerable amount of grazing? Not much; I graze about 6,000 sheep.
1806. What do you find are the profits per acre from grazing? Very small.
1807. About 4s. 6d.? I do not think so. It all depends on the season and the class of sheep.
1808. In a fair season, what do you believe to be the average profit? I do not think it would be more than 4s., if it averaged that.
1809. Do you carry one sheep to the acre? In some places.
1810. In the event of a railway coming here and giving access to larger markets, would it not be to your interest to convert your grazing land into agricultural land? I think it is a sin and a shame to keep it for running sheep on.
1811. And are there many other settlers in the same position as yourself? Hundreds.
1812. You have to turn your land to account by grazing, whereas you would prefer to cultivate? Yes; it is not a sheep country, and there should be thousands more living in this district than there are at present.
1813. You believe that the construction of this railway would transform much of the grazing land into agricultural land? I think so.
1814. Have you any knowledge of the wheat trade between this district and Queensland, or within and around the Queensland border? Yes. In 1890, in the Inverell electoral district, we produced 67,430 bushels of wheat, 76,968 bushels of maize, 737 bushels of oats, 1,176 tons of wheaten-hay, and 317 tons of oaten-hay.
1815. Will you state the figures for the previous year? In 1889 we produced 11,966 bushels of wheat, 81,536 bushels of maize, 240 bushels of oats, 259 tons of wheaten-hay, and 662 tons of oaten-hay.
1816. Was there at any time greater production than that shown by the returns for 1890? I have a tabulated statement giving particulars from 1886 to 1890, inclusive. It is as follows:—

Produce.	1890.	1889.	1888.	1887.	1886.
Grain—	bushels.	bushels.	bushels.	bushels.	bushels.
Wheat	67,430	11,966	100,639	61,442	77,623
Maize	76,968	81,536	93,540	60,030	71,252
Oats	737	240	487	774	2,996
Hay—	tons.	tons.	tons.	tons.	tons.
Wheaten	1,176	259	908	1,542	1,292
Oaten	317	662	1,431	4,508	2,491

NOTE (*on revision*):—The above figures are as supplied to me.—P. B. EDDY.

1817.

Mr. P. B. Eddy. 5 May, 1891.

1817. Can you account for the extraordinary difference between the years 1889 and 1890 in regard to the yield of wheat? Probably there was rust in 1889, or perhaps there was not as much land under wheat.
1818. You think the rust would account, to a large extent, for the falling off in the yield? I think so—partly.
1819. Could you give the Committee any information with regard to the wheat trade of Queensland? I have ascertained, as nearly as I can, that last year 15,168 tons of flour were imported into Queensland from New South Wales, and 209,764 bushels of grain.
1820. *Chairman.*] Where did you collect those figures? They were supplied to Mr. Cruickshank, from the *Queensland Statistical Register*. There were imported from New South Wales into Queensland, across the border, 782 tons of flour. I said just now that Warwick would be a good market. The distance from here to Warwick is 162 miles, and if we had a railway to Glen Innes the cost of carriage to Warwick would be about 6d. per bushel.
1821. Can you supply 782 tons of flour in one year to Queensland;—do you think you are entitled to a larger trade, and do you think you could carry on that trade if you had a railway to Glen Innes? Yes, and a much larger trade.
1822. You have good reason to think that you would have a market, to a certain extent, in Queensland for your wheat? Yes.
1823. There were 15,168 tons of flour imported into Queensland from New South Wales, and of that quantity 782 tons went across the border by way of Glen Innes? Yes.
1824. Do you know if this flour was sent right on to Brisbane? That I could not say.
1825. You only know that it crossed the border? That is what I gather from the figures supplied.

Mr. Hugh Wyndham, grazier, Bukkulla, near Inverell, sworn, and examined:—

Mr. H. Wyndham. 5 May, 1891.

1826. *Chairman.*] What is your occupation? I am a grazier.
1827. *Mr. Tonkin.*] Where is your holding? At Bukkulla, 19½ miles from Inverell—almost due north. I may state that I am one of the largest, if not the largest freeholder in the district, and I am prepared, in the event of a railway being made to any point on the northern line, to cultivate largely.
1828. What is the size of your holding? Between 13,000 and 14,000 acres freehold, besides the leasehold.
1829. What number of sheep have you? About 25,000.
1830. Do you do your trade with Sydney? With Sydney entirely.
1831. Does that traffic now come through this township? No; it comes, at present, direct from Glen Innes to Bukkulla. Being north from here, I am about the same distance from Glen Innes as Inverell is.
1832. Then if this railway were constructed, it would be of very little benefit to you;—would you still go to Glen Innes? No; everything would come here. It would be a great benefit to me.
1833. How is that, if the distance is the same? Because it would simply mean 19 miles of road carriage instead of 50.
1834. Have you any land under cultivation? Not much. I have simply cultivated for the use of the station—hay, not wheat. I have not grown wheat for years—in fact, I may say I have never grown wheat, except for hay.
1835. Is there much land on your station fit for cultivation? Yes. I should say there are about 5,000 acres fit for cultivation.
1836. Have you considered the cost of producing wheat? Yes; the conclusion I arrived at was, that I could produce wheat at 2s. per bushel, and that anything over that sum would be profit.
1837. So much for ploughing, so much for seed, and so much for gathering? Yes.
1838. And you consider if you could get 2s. 6d. per bushel on the ground it would pay you well? The conclusion I came to was that 3s. would pay me well.
1839. And if you could get 3s., you would be prepared to go in for cultivation at once? Yes.
1840. What area would you cultivate? I would cultivate from 800 to 1,000 acres. But I should be prepared to sell 10,000 acres to-morrow. If I got £2 10s. an acre, freehold, I would take it at any time.
1841. Would this land be fit for agriculture? A portion of it—say a third.
1842. You would expect, of course, that a man taking land from you would have to take some poor and some good? Yes; I would not sell it unless I could do so on a large scale. I do not think agriculture would pay unless combined with a certain amount of grazing. I think the two should always be combined. My country is just suited for that.
1843. You think every farmer ought to have a certain number of sheep? I do.
1844. Would you be prepared to lease land for agricultural purposes in blocks of, say, 200 acres, here and there—picked land? I have not considered that question. I would not like to say "Yes" or "No" without consideration.
1845. Do you grow anything at present in the shape of fruit—any grapes? Yes; I grow fruit and grapes for my own use. I do not grow anything for the market. I grow lucerne, wheat, and oats for hay for station use. There is a vineyard 2 miles from the head station where wine is made, but I am not interested in it at present. I was, but I sold out.
1846. Do you know whether they are all large estates round this township? There are some large estates, and a great many small holdings—a great many original selections, many of which I daresay have changed hands.
1847. Are you acquainted with the character of the land between Inverell and Glen Innes? Yes.
1848. Is it not all held in large estates? Not all. There must be plenty of small holdings. The line would mainly go through the Inverell estate, Newstead, Waterloo, and on to Wellingrove. It would mainly go through large holdings.
1849. Is this a good fruit-growing district, and if railway facilities existed would it be likely to produce fruit for market? It can grow anything in the way of fruit, anything within reason, anything suitable for these semi-tropical climates; both peaches and grapes can be grown to perfection in the district without any irrigation, and in any quantity you like. You can grow anything, and in abundance.
1850. You are aware that a large trade in fruit has just commenced between Tasmania and England;—do you think it is possible to grow fruit here equal to the Tasmanian fruit? I think so; equal to anything, I should think. When I have been at our show-grounds here I have noticed that the show of fruit has always been magnificent; it cannot be surpassed in the world.
1851. Do they grow apples here? Yes, magnificent apples.

Mr. H. Wyndham. 5 May, 1891.

1852. Have you any idea at what price they can sell apples per case? Not the slightest idea.
1853. Is there no fruit grown here by anyone for the market? That is more than I know.
1854. Do you know whether there are any dairies in the district? They may make a little butter for the town.
1855. I mean for export? No, I think not. There are no facilities for export.
1856. You say that your market is Sydney, and that being so, which line would suit you better—a line from here to Glen Innes, or from here to Guyra? The shorter the distance to market, the better, I suppose, it would suit me and everybody else.
1857. Then if Sydney is your market, Guyra is the most direct route;—do you know the difference in mileage? Yes; there is a difference of some 35 miles.
1858. Do you think that the saving of 35 miles of carriage to market for all time is worthy of consideration? Well, to tell you the plain truth, I cannot understand, for the life of me, why anyone wants to go to Glen Innes.
1859. You think the proper thing for the country to do is to construct lines direct to the principal markets? I think so—to the principal centres of population; that is my idea.
1860. Do you think that a line from here, *via* Guyra, to Sydney would be to the interest of a greater number of people than a line from here to Glen Innes? Yes, I do, certainly. I believe the true interests of the district lie in having lines as direct south as possible.
1861. Have you taken into consideration the probability of a port being opened on the east coast—at Byron Bay, for instance? Yes. I consider that too remote for us to give much consideration to it at present.
1862. Have you considered the possibility of a line to Grafton? Yes.
1863. And, in spite of that, you think the proper and more direct line would be *via* Guyra? Yes, and for this reason, that when you get to Grafton you really have not got a port. If you got to Grafton you would have to send your produce from there to Sydney or Newcastle before it could be shipped. I think it would be better that the produce should go straight by railway to the real port, which would be Newcastle or Sydney; the wool all goes to Sydney.
1864. You are aware, of course, that the principal advantage in the carriage of produce is a low freight, and the shorter the mileage the less the cost of carriage. Taking that into consideration, would you advocate the construction of a line from here to Guyra in preference to one from here to Glen Innes? I would, certainly.
1865. You have been in this district for some years? All my life, I may say—ever since I was a boy of 20.
1866. And the whole of your interests, or the principal of them, are centred here? They are all here.
1867. Therefore you are speaking not only for the advantage of yourself, but also for the advantage of the district generally? Yes; what I consider to be its advantage. I may state that, the whole of my property, being north of Inverell, I am really not personally interested in either one line or the other Neither line comes across my property, and they both go away from me, so that it makes very little difference to me. It is not as if I had property on one of the routes, for I have not.
1868. You have no personal interest, but only a general interest? Exactly.
1869. We have heard several farmers state this morning that their market for wheat would be in Queensland;—if that is so, do you think it would be advisable to take the line to Glen Innes rather than to Guyra? It might be advisable in the interests of the farmers, but I rather doubt it. Surely they would never get the whole of their market in Queensland. Wherever the population is, it seems to me, there is the principal market, and the great population for generations to come is sure to be at Newcastle and Sydney.
1870. Have you ever given much attention to the colonial wheat markets? I have, a little. Queensland, I think, is only slightly ahead of the others. It is supplied by sea-borne wheat, and the price there slightly exceeds the price of wheat in Sydney. There is no very great difference in the different markets that I am aware of.
1871. You know perfectly well that if there was a great difference matters would be equalised in a week or two at least by water-carriage? Yes, I know that.
1872. It is no use gentlemen coming to this Committee and saying, "We can get 5s. a bushel for wheat in Queensland," when it is only bringing 3s. or 4s. in Sydney? Of course it is nonsense; that is the only word to use.
1873. We heard also this morning that ploughing costs 30s. an acre;—have you ever had any ploughing done on your station? Yes; I am ploughing now, and it costs about 6s. an acre.
1874. That is very low, is it not? I do not know—my man is quite satisfied.
1875. Are you paying him by piece-work? I am paying him day wages.
1876. Then you are keeping him as well? Yes; still that is the full cost. I am not allowing anything for plant.
1877. Can you give us an idea what it would cost if you had to hire everything, and did not employ your own bullocks? I have never gone into that question. If I went into the business I should do it with my own plant.
1878. Still you can hardly realise that 30s. is a correct estimate? I could not believe it.
1879. You have no hesitation in saying that, in your opinion, the interests of the public would be better served by a line from here to Guyra than by a line from here to Glen Innes? I am fully persuaded of that fact, and have been all along.
1880. If a line were extended to Inverell, either from Guyra or from Glen Innes, would it create an increased trade between this town and Goondiwindi, and the surrounding districts? I doubt it.
1881. You think the trade from that part of the country would not gravitate towards this railway? No. Unless you extended the railway from here towards Goondiwindi, I do not think it would make any difference, because they have a choice between Narrabri on the one hand, and some point on the Queensland railways on the other. I think the traffic already goes there. I have been to Goondiwindi, and I know its situation, and I do not believe this railway will make any difference so far as the Goondiwindi traffic is concerned.
1882. Would not this railway be the nearest to Goondiwindi if it were constructed? It might be, but there would not be very much difference between this terminus and Narrabri, and when you get to Narrabri there is so much less haulage.
1883. For how far to the north and north-west do you think the trade would gravitate to Inverell in the event

event of a railway being brought here? For a distance of 50 or 60 miles—not very much more, perhaps a little. Warialda would come this way. Mr. H. Wyndham. 5 May, 1891.

1884. Does that trade come here now without a railway? No, it goes to Tamworth.

1885. That would probably gravitate to Inverell? Yes, I think it would come to Inverell from a radius of 50 or 60 miles.

1886. Would not the distance be more than 60 miles direct north? Not much more than 60; you see you get to the Queensland border.

1887. I suppose you could not tell the Committee anything about the mining industry? No.

1888. But so far as pastoral pursuits are concerned they are in a flourishing condition? Yes.

1889. You are never seriously affected by drought? Never. We call 16 inches of rainfall here a drought; in other parts of the country they call it a good season.

Mr. Alexander M'Clymont, farmer, near Inverell, sworn, and examined:—

1890. *Chairman.*] What is your occupation? I am a farmer. Mr. A. M'Clymont. 5 May, 1891.

1891. *Mr. McCourt.*] How long have you resided in the district? Sixteen years.

1892. What is the size of your holding? Two thousand acres.

1893. In which direction is it? Sixteen miles a little north of west.

1894. Have you much land under cultivation? A little over 300 acres.

1895. Do you find cultivation pay? Not very well; it is difficult to get a market.

1896. Is the want of a market the sole cause why it does not pay? It is difficult to get a regular market for a quantity—a free market.

1897. Do you adopt modern and scientific principles of cultivation; have you new machinery, for instance? Yes, I have got machinery.

1898. Do you know what is the average acreage under agriculture in the district? I have not seen any statistics on that point.

1899. What is the average yield per acre? About 18 or 20 bushels, I should think.

1900. Is your yield higher or lower than that? It has been beyond that on the average.

1901. Would not 20 bushels to the acre pay you well? Yes, if I could get a free market.

1902. What do you mean by a free market? Get sale for it. You can hardly dispose of your wheat except by barter. You get store goods for it, or perhaps half cash. If you do not deal with the store you cannot sell freely.

1903. If you had a railway, where would your market be? I think to the north, either towards Queensland or the coast. If we had a railway to the coast, it would be towards Grafton or the Richmond.

1904. How do you arrive at that conclusion? Because there is no wheat grown on the Richmond River. That would be our best market if we had a railway, say, from Tenterfield to the Richmond, or by some other route to the coast.

1905. But would it not depend upon the price? Yes.

1906. Do you not think the coast towns would be supplied by sea as cheaply as you could supply them by railway? If we cannot get our sale there we cannot get it anywhere else.

1907. It is only supposition on your part—you only suppose you would get a market there? I am pretty confident we should do so.

1908. Have you ever sent any wheat to Queensland? No, I have not; it is impossible to do so owing to the cost of carriage.

1909. Do you know if they have sent any wheat from Glen Innes to Queensland? I am not aware.

1910. If you could get a market there, do you not think they could also send wheat to Queensland? I do not know. I do not think they grow very much in Glen Innes beyond their own consumption.

1911. Does the rust affect your wheat here? Sometimes, a little.

1912. Do you think it will increase or otherwise? I do not think it will increase much. It may do so in wet seasons, but not at other times.

1913. Are there any farmers here with average-sized holdings entirely dependent on agriculture? Yes, a good many.

1914. They do no grazing? Very little.

1915. Is the tendency in the district for farmers to go out of agriculture and into grazing? I think so. A good many of the smaller holders here have given up agriculture in preference to grazing. Many of them have got hard up, and have been sold out.

1916. Have you given any attention to the Sydney or the Newcastle markets? Very little. I consider that every part of Australia seems to be running grain into Sydney or Newcastle as ballast. It is something like sending coals to Newcastle to send grain there.

1917. Then you think the wheat market at Newcastle and Sydney is worse than it is here, or in Queensland? Yes, simply because they bring grain into Newcastle and Sydney from New Zealand, South Australia, and Victoria as ballast for coal ships.

1918. If it has been stated in evidence that the Sydney market is higher than the Brisbane market, that is not true? I do not think it can be.

1919. Do you speak from your own knowledge, or only by supposition? I know there is always a higher market in Brisbane for grain than in Sydney.

1920. How are you acquainted with the state of the Brisbane market? I sometimes get the papers and read the quotations.

1921. Do you not see quotations of Sydney prices also? Yes.

1922. Are not the Sydney prices often higher than the Brisbane prices? No, not for wheat.

1923. If you had a railway here, do you know what it would cost per bushel to send wheat to Brisbane? I cannot say, but I know the distance is shorter than to Sydney.

1924. It has been stated by those who know that it would cost within a shade of 1s. a bushel to send wheat from here by rail to Brisbane;—do you know what it would cost per bushel by rail from here to Sydney? According to the distance, I suppose it would be a little more.

1925. The price is a little under 6d. If, therefore, there is a difference of 6d. a bushel in favour of Sydney in the carriage of wheat, would not Sydney be your best market? I do not think it would, even then. One hundred miles from Brisbane there is Toowoomba, which would be as far as ever grain from here would want to go.

Mr. A. M'Clymont. 5 May, 1891.

1926. Would not Toowoomba only be a limited market? I do not think so. There is from Toowoomba to Charleville, about 200 miles along the railway, on the north-west line.
1927. Can they not grow wheat in Toowoomba as well as you can here? No, not generally. They grow a good crop there sometimes.
1928. If this district is such a good wheat-producing district, how do you account for the fact that Adelaide flour is sent to Glen Innes? It does not cost so much to bring flour from Adelaide to Glen Innes as it does to send it from here to Glen Innes.
1929. But it must come by rail, or by carriers from Grafton? I believe the cost is no more than is the carriage from here.
1930. Then Adelaide can under-sell this district in flour? Yes; so long as we have to cart our flour to Glen Innes.
1931. But would they not continue to do so, even if you had a railway? I do not think so. It costs 9d. a bushel to cart wheat from here to Glen Innes, and by railway, I suppose, it would cost about 1d. or 1½d.
1932. You are a practical farmer, are you not? Yes.
1933. What do you reckon is the cost of ploughing cleared land? From 12s. to 15s. an acre.
1934. Do you know the route of the proposed railway between Inverell and Glen Innes? I have been along the main road.
1935. You know that it runs through large estates? Yes, I believe the greater portion of it does.
1936. If the railway were constructed, do you think it would cause a large influx of population? Yes, I think it would.
1937. In the event of the railway being made, how much additional land would you put under cultivation? I think that within three or four years I would double the present area.
1938. It would depend upon the price, would it not? Yes. If I could get very little more than the price I have been getting here, I could do so.
1939. What price is that? A very variable price—about from 3s. to 4s.
1940. Taking an average season, what would give you a fair profit on wheat grown in Inverell? About 3s. 6d.

Mr. Egbert Wyndham, wine-grower, Bukkulla, near Inverell, sworn, and examined:—

Mr. E. Wyndham. 5 May, 1891.

1941. *Chairman.*] What is your occupation? Wine-growing.
1942. Where is your holding situated? At Bukkulla, 21 miles north of Inverell.
1943. What is the extent of your holding? Three hundred and twenty acres altogether.
1944. Do you devote your attention exclusively to wine-growing? Yes.
1945. How much of the 320 acres have you under vine? Twenty-five.
1946. In full bearing? Yes.
1947. What do you do with the rest of the land? We graze stock upon it for working the place, and also a few sheep.
1948. Your principal occupation is that of wine-growing? Yes.
1949. Are you increasing your acreage under vine year by year? No, we have not increased it.
1950. Is it less than it was some time ago? No, it has been the same for years—twenty years, I think.
1951. Does the land yield as much as ever? Yes, quite as much.
1952. Have the vines never been attacked by any disease? No, by nothing except the ordinary disease—nothing very serious. The yield is very large indeed.
1953. Where do you find a market for your wine? Usually in the district. Sometimes we send to Sydney; at present we are finding a market on the Clarence and the Richmond.
1954. For that which you send to Sydney, where do you tap the main northern line? At Glen Innes.
1955. If the proposed railway were constructed, in forwarding wine to Sydney would you send it *via* Inverell, or would you send it to Glen Innes? I would send it *via* Inverell.
1956. And would the wine sent to the Clarence go the same way? Yes, I think so.
1957. What quantity of wine do you produce every year? Ten thousand gallons have been the average for seven years.
1958. Your wine has rather a high reputation, has it not? Yes.
1959. Yours is one of the oldest wine-producing estates in the colony? I believe so. It is over forty years since it was planted.
1960. Do you know the country well between Glen Innes and your own place? Yes.
1961. Is the country similar in character to that about here, or does it gradually get worse? It does not get worse; it is quite as good where I am as it is down here.
1962. If the railway were constructed, would it lead to your putting more of your land under vine culture? No.
1963. You would not be likely to increase the acreage? Not unless the railway were continued to the coast.
1964. Do you send your wine to the coast for consumption there, or for the purpose of its being shipped elsewhere? For consumption there at present.
1965. Do you send any to Queensland? No, none at all—the duty is too high.
1966. Do you expect your Sydney market to increase? No.
1967. You look to the coast districts as an outlet? Yes; and also to the English market—that would be *via* Sydney.
1968. Do you expect a very large increase in your English trade? We have had no English trade so far; we may have in time to come.
1969. At any rate, so far as the construction of the line is concerned, there is no intention on your part to immediately increase your vine culture? No.
1970. What proportion of the 10,000 gallons which you produce every year do you send away? About half is consumed locally, and the rest sent to the coast, and to Sydney. Lately we have been increasing our stock rather.
1971. And thereby increasing its value? Well, we have not had the market, and could not get the price for it.
1972. The railway would not get very much traffic from your industry? Not very much until it was continued on to the coast.

Mr. E. Wyndham, 5 May, 1891.

1973. In regard to this coast trade, if a line is to be made from the table-land of New England to the coast in the future, and it is proved that the best route would be *via* Guyra, would it not be better for the railway from Inverell to tap the northern line at Guyra instead of at Glen Innes? It would be for us, perhaps, but I do not know how it would affect others.
1974. Anyone, therefore, having a market either in Sydney or on the coast, if the line to the coast goes from Guyra, would be better served by a railway to Guyra than by one to Glen Innes? I consider the interest of the district generally, and am hardly competent to give an opinion on that point.
1975. There would be a saving of 35 miles' railway carriage? But Glen Innes would be more central.
1976. If the railway were constructed, do you think the large estates in the district would be cut up and let for farming purposes? When the population increased very much, no doubt they would, because it does not pay to graze land after it gets a certain price.
1977. You know the country about here pretty well, I suppose? Yes.
1978. Do you know the country west? Yes, a little; I have been west.
1979. How far west does the good country extend? It is all splendid country out west as far as I have been—to Moree, a matter of 100 miles.
1980. It is a question of rainfall? Yes.
1981. How far does the good country extend south? I do not know much of it south; not very far, I think.
1982. There are other vineyards in the district besides yours? Yes; several others.
1983. Do you know if they are putting more land under vine? I believe not, except in the case of one or two small growers.
1984. Do you convert all your grapes into wine? Yes.

Mr. Joseph Wessey Moore, builder, near Inverell, sworn, and examined:—

Mr. J. W. Moore 5 May, 1891.

1985. *Chairman.*] What is your occupation? I am following the trade of a builder.
1986. *Mr. Trickett.*] In addition to that, do you carry on any other business? I have a vineyard about 5 miles due north of Inverell, and about 600 feet above Inverell, with an easterly aspect.
1987. That is the most suitable aspect, is it not? Yes.
1988. How many acres have you under vine? About 20.
1989. How long has it been planted? It was planted in 1880.
1990. Is it in a state of perfection now? Yes; it is in full bearing.
1991. What do you do with the produce? We make the grapes into wine and then store it, and sell it as we can get a market for it.
1992. Do you find that a profitable occupation? Well, hardly. The market is not a very good one. We are rather handicapped in being such a great distance from the coast. We cannot well send our wine to compete with such a district as the Hunter with the present rate of carriage. The cost of carriage is so great that it almost precludes us from a market.
1993. You say you have 20 acres under cultivation;—what did you give an acre for that land? I gave £4,000 for the whole property, consisting of 220 acres, 20 of which are under grape, and about 10 under orchard. A portion is used for agriculture to produce what we require for our own consumption, and for feed for the horses, and the balance is used for grazing purposes.
1994. You work the whole property as one? Yes.
1995. Therefore you have no means of separating the profits of the wine from the other profits? No.
1996. What quantity of wine do you produce a year? About 6,000 gallons.
1997. How much do you sell? The wine is just about matured. We sell, perhaps, about three-fourths of it.
1998. How long have you been wine-making? About five years.
1999. The wine is about fit for market now? Yes; I have not sold much yet.
2000. Do you find a fairly ready sale? Well, we have only a local market. We can send but very little to Sydney, and there is no market as yet for Australian wines—or not much.
2001. Had you any experience in wine-growing elsewhere? No.
2002. How does the quality of the wine produced in this district compare with that of wines grown in other districts in Australia? The Inverell wines have competed at nearly all the Exhibitions, and have taken a very good position. We produce a wine somewhat similar in character to that grown in Albury.
2003. Rather a strong wine? Yes; a full-bodied heavy wine.
2004. Then the soil is eminently suitable for wine-growing, judging by the competitions to which you have referred? It is the opinion of judges who have seen it that it is equal to anything in the colony for vine-growing.
2005. Is there a large quantity of the same character of soil about the Inverell district? Yes; it is practically unlimited.
2006. Have you tried the manufacture of sparkling wine? No.
2007. As far as you have gone in vine-growing, you are satisfied with the result? We are satisfied with regard to the wine produced, but our market is too limited. We cannot afford to send it to Sydney at the present rate of carriage.
2008. Where do you look forward to for a market for your wine? We have no other market open but Sydney. The Queensland tariff prevents us from sending any into that colony.
2009. Then, as regards this particular industry, the railway would be of little use? Certainly it would, because we could put the wine on the railway at Inverell, instead of sending it to Glen Innes. The railway would be a great advantage to us. Instead of having to subject the wine to shaking and jolting in a cart for 40 miles, we could have it taken away on the train.
2010. To the south? Yes, or to Grafton, if there was any means of taking it there. The Clarence district is a very good market.
2011. You think you would have a good outlet there for it? I am sure we would.
2012. Have you ever sent any there? Yes.
2013. Has it sold readily, and at a fair price? Yes; they like the wine very well.

Mr. J. W. Moore. 5 May, 1891.

2014. What other wine-growers are there in the district? There are three or four others. I know a gentleman who wishes to come to this district to start wheat-growing, and who is prepared to put 800 acres under cultivation if the railway is constructed to Inverell. He is anxiously watching to see if the railway is sanctioned with the view of doing that.
2015. Is he a resident of New South Wales? Yes.
2016. As far as you know, there would be plenty of land at a reasonable price if the people were willing to come here and buy it? Yes, and I think the large estates would be cut up, because it would be to the advantage of the owners to subdivide them. They would get more by doing that than by running sheep on the land.
2017. Does your property, as a whole, pay? Yes; it just about pays.
2018. Is it worked by hired labour? Yes.
2019. How many hands do you employ? I have about four permanent hands, besides a large number of extra hands in vintage time—pickers, pressers, &c.

Mr. Thomas Harland, fruit-grower, near Inverell, sworn, and examined:—

Mr. T. Harland. 5 May, 1891.

2020. *Chairman.*] What is your occupation? I am a fruit-grower and a wine maker on a small scale.
2021. *Mr. O'Sullivan.*] Where is your property? Within a mile of the town, in a westerly direction.
2022. How many acres have you? Nearly 300.
2023. How many acres do you devote to horticulture? About 11 now; I rooted out 4 acres; I had 15.
2024. What do you produce chiefly? Table fruit. I make some wine, and grow orchard fruit.
2025. Do you grow oranges? Yes; I have a few trees.
2026. Can oranges be grown successfully in this district? Yes, very successfully.
2027. Two crops a year? Yes; I judge from what others do in many respects.
2028. Do the oranges here equal those grown near Sydney? I like them better. They seem to be somewhat thicker in the skin, but I think the flavour is better than that of the oranges in the south.
2029. What market have you? A local market—the township.
2030. Do you send any to Glen Innes, or to any of the towns along the railway line? No, but I am sure there would be a market there.
2031. Do you grow or manufacture raisins? No.
2032. You only grow the fruit in the rough for table purposes? Yes; and about 3 acres for wine.
2033. Will this district produce the English fruits as well as oranges? Yes, in perfection.
2034. They grow side by side? Yes, and the olive.
2035. Do you grow the olive well here? I do not grow it, but it has been grown.
2036. Who cultivated the olive? Mr. Lewin. He merely did it as an experiment, and succeeded.
2037. Why have they not been cultivated since? Well, on a new holding a man cannot do everything.
2038. The gentleman to whom you refer merely experimented, to see what the district would produce? Yes. Oil has also been produced from the sunflower.
2039. Then we can take it for granted that in this district you can produce all the English fruits side by side with oranges, olives, and other sub-tropical productions? Yes; all the fruits of a temperate climate and a sub-tropical climate.
2040. Do you manufacture wine? Yes.
2041. Where do you sell it? Principally in the neighbourhood.
2042. Do you send any away? No further than Glen Innes, because I do not make much.
2043. Have you a sale for it in Glen Innes? I never look for orders, but when I get an order I send wine there.
2044. Does it pay you to send it 40 miles? Yes; but there is a risk about it. It gets tampered with on the drays, and so forth.
2045. What is your opinion with regard to the route of the proposed railway? I believe in the Glen Innes line.
2046. Why do you prefer that line? I believe it is the most suited, and that it is the best route by which to reach the coast.
2047. I suppose because it is the most centrally situated? Yes.
2048. Have you any other reason for preferring that route? It goes through the best land.
2049. Do you know the land on the other route? No, except by report.
2050. Then, so far as that goes, you are merely simply going upon what you have heard? Yes; but I have heard a good deal. I have been a resident in the district for 26 years.
2051. Is the land containing black soil, between Glen Innes and Swanvale, fit for fruit growing? I am not positive, but I should expect it to be more suitable for temperate fruits. I know that apples grow well there, and also cherries.
2052. What soil have you in your garden? It is basaltic. The soil is all basaltic about here. The colour is merely an accident—whether it is red, chocolate, or black.
2053. Do you find that these fruits grow well in the chocolate soil? Very well. They grow well irrespective of the colour of the soil, but the black soils are stronger.
2054. I suppose they are more suitable for the English fruits? A good deal depends upon the aspect. Low-lying lands, such as the flats about the township, would not be suitable for growing fruit, as the early frosts would injure the trees.
2055. Have you any other statement you wish to make? I heard some witnesses speak as to the cost of production of wheat. They did not give half the items of cost, but merely the ploughing, the seed, and harvesting.
2056. What, in your opinion, would be the cost per acre of producing wheat? Taking all the data into account, I do not believe that wheat can be produced either here or anywhere else for less than 3s. a bushel. That would be the absolute cost, without any profit.
2057. You mean by "produced," placed in the market? Yes; if it has not to be carted far.
2058. You think it will take 3s. to cover all expenses? I feel positive it will.

Mr.

Mr. Grosvenor Francis Lewin, fruit and wine-grower, near Inverell, sworn, and examined:—

Mr. G. F. Lewin. 5 May, 1891.

2059. *Mr. Tonkin.*] What are you? I am a fruit and wine-grower—fruit, principally.
2060. Where do you reside? About 6 miles west of Inverell, on the Warialda Road.
2061. What is the size of your holdings? Three hundred and twenty acres.
2062. How much have you under fruit? Twenty-five acres under fruit-trees, and four under vines.
2063. What kind of fruit do you grow principally? Cherries, apricots, peaches, plums, nectarines, grapes, apples, pears, persimmons, oranges, lemons, limes, citrons, shaddocks, and olives.
2064. How do you find those fruits do here? Apples do well; pears do exceedingly well, also the table grapes and oranges.
2065. Does the frost not touch them? We are very much sheltered from the frost.
2066. What do you do with your fruit? I sell a great deal of it down west at Moree, Warialda, and Bingera.
2067. Do you cart it away yourself? Dealers mostly take it away; I sell wholesale.
2068. Do you sell the fruit by the case? We generally sell by the dozen, except in the case of plums.
2069. Then you have no idea of what you are selling the apples at per case? They would average from 3s. to 6s. a case, according to quality.
2070. Being interested so largely in fruit, I suppose you study all the markets? I do not study distant markets, because as yet I have not had occasion to do so.
2071. You have a consumption for all your fruit here? Yes, at present—between here and Moree; and I have sent a lot of grapes to Glen Innes in the summer time; there is a good market there.
2072. Then you have a sufficient market for all your produce? At present I have; but I am growing fruit more on the prospect of the railway to Glen Innes. The greater part of my orchard is not yet in full bearing. I am growing more in view of the railway.
2073. Of the 25 acres, how much is in full bearing? I have not more than 12 acres in full bearing.
2074. Are they assorted fruits such as you have described, or does any one particular fruit predominate? The fruits I grow mostly are apples and oranges. They are the most productive. Apples grow to great perfection with me.
2075. You say you have planted more fruit trees in expectation of the railway? Yes.
2076. If you had a good market, you would, of course, put in a great many more trees, if you found you could get rid of the fruit? I would put in three or four times as many if I thought there would be a market.
2077. Have you heard about the wonderful export of fruit to England that is now taking place from Tasmania? Yes, I have read of it.
2078. Do you know what class of apples are being sent home? No; but I should take them to be keeping apples.
2079. Have you any doubt that you could grow any class of apple in this district? I can grow apples of all kinds; but apples that might suit a cold climate might not grow here.
2080. Will the apples that you grow here keep? I have kept them all through the winter until November.
2081. They would keep to send home to England? I believe they would.
2082. Are you aware that some of the apples sent to England from Tasmania brought from 15s. to 18s. a case? Yes.
2083. Have you considered the possibility of your being able to compete in the market like that? I have, but some time would elapse before we would be able to raise the trees to do so.
2084. Do you think it could be done? I think there will be thousands of acres grown in this district in the black soil. There is a great extent of good fruit-growing land.
2085. Do you do anything with the other portion of your land? No, except graze a few sheep and cattle. I should like to say that I am in favour of the Glen Innes line, because I consider that we could sell fruit much better in that direction than by any other route lower down. We should not come into competition with so many other growers. I consider that our market for fruit would be west, north, and east.
2086. Is that because they grow the same class of fruit in the south as you do? In the case of apples we would have to pass through the Armidale district, and as regards oranges and lemons, we could not possibly compete with Parramatta. I have sold a great many grapes along the table-land, and I could have sold many mandarin oranges and lemons if I could have supplied them, but I never had any large quantity.
2087. Then you do not anticipate an export market at any time;—you expect to have a market locally, and in the Glen Innes district, and also, perhaps, as far as Grafton? Yes, principally Grafton and the northern districts of New South Wales for export. It takes time to grow fruit, and I do not suppose there will be any fruit exported from here for many years to come.

Mr. Henry Penberthy, storekeeper, Elsmore, near Inverell, sworn, and examined:—

Mr. H. Penberthy. 5 May, 1891.

2088. *Chairman.*] What is your occupation? I am interested in storekeeping and mining.
2089. *Mr. Tonkin.*] Where do you reside? At Elsmore, about 12 miles east from here.
2090. Is Elsmore a digging township? It is a digging township or village.
2091. What mining is principally carried on there? Tin-mining.
2092. Is it alluvial tin or lode tin? Both; chiefly alluvial, so far.
2093. Stream tin, I suppose? Yes.
2094. Is it all sluicing work? No; a certain proportion of it is sluicing work, but the rest is mining under basalt—ancient deposits, stream tin.
2095. What lode tin have you got there? A few parties are excavating the lodes on the surface and crushing the stuff.
2096. How deep are they from the surface? In very few cases over 20 feet.
2097. What is the size of the lodes? They vary from a few inches up to 10 feet in that neighbourhood.
2098. Is it a granite formation? Yes.
2099. What is the percentage of tin in the lodes? It is very irregular; it varies and runs up to as high as 3 and 4 cwt. to the ton of stuff.
2100. There is not much of that got, I suppose? Not much.
2101. Has not the alluvial tin nearly all been worked out there? Not by any means.

Mr. H. Penberthy. 5 May, 1891.

2102. How long has the place been working? It has been working for about eighteen or nineteen years.
2103. How many miners are at work there? There are about 100 just in that locality at present.
2104. Are they all Europeans or Chinamen? They are nearly all Europeans.
2105. Are they working for themselves or for companies? In nearly all cases for themselves, or, rather, on tribute. The main part of the land is held by companies, or, rather, by one company—the Union Tin-mining Company—and they let the lands on tribute, at so much per ton—that is to say, so much tin out of every ton raised.
2106. Is it very deep where they are working? In one instance as deep as 200 feet, but in most instances much shallower. There is evidently a large extent of deep country under basalt deposits, which are too hard and too wet to be accessible to men with small capital. There are many places in that neighbourhood, extending from there towards Stannifer, which will eventually be brought under the attention of men of capital; and for my part I feel satisfied they will turn out most phenomenal quantities of tin.
2107. Is this deep ground in the same part as the shallow ground, and are there different layers one under the other? In most cases it is a continuation of the same leads, which commence shallow and are worked so far, and then they continue under such a depth of basalt as to be inaccessible to men without means; and in many cases there is too much water.
2108. Is it all the one lead—one layer of tin? It is a continuation of the leads away into the deep and wet basalt.
2109. What amount of wash-dirt have you got there? It varies from 2 inches up to 3 feet, but 2 feet is about the average of what has been worked.
2110. Are there as many men working there now as there were formerly? No.
2111. How is that—has the tin got poorer? All the shallow deposits accessible to men with small means are pretty well exhausted, and what is left is what continues away under the deep basalt.
2112. Do they sink through the basalt? Yes, but pumping machinery is necessary to follow it much further—in fact, to follow it any further, as a rule.
2113. What other mines are there in this district? Stannifer.
2114. How far is that from here? About 15 miles south-east.
2115. Have you been working there yourself? I have in former times, but not lately.
2116. Could you tell us how many miners are working there? I could not.
2117. Is not that nearly worked out? There are deep leads extending away from Stannifer in very much the same way as those I have described as extending from Elsmore.
2118. Is it not a fact that none of these deep leads up to the present time have been found payable? There have been very few serious attempts to deal with them. There has been a good deal of money—Sydney and Melbourne money—expended in the district, but in most cases the design does not seem to be to try for tin so much as to float a company. The motive seems to be somehow to manœuvre the share market in nearly all instances that I have watched; and of all the money that has been expended in the district, very little indeed has been spent where old hands would recommend it to be spent. People who have known the district, and have actually traced tin into the deep ground, have in very few cases been consulted, and the usual course of these companies, it seems to me, is to get on top of a bare ridge, where a few specks of tin are to be found, take up a few leases, give the claim some pompous name or other, and appoint a host of officials and directors, and so on.
2119. How long have you been mining here? Seventeen or eighteen years.
2120. Has the method you have described always been carried on? In the majority of cases.
2121. Has not a very large amount of tin been obtained in this part? Yes.
2122. Was that got in the manner you have just been speaking about? No; I am speaking of money that should have been expended in places where old hands would advise;—money that should have been expended in places where these deep leads have led away from the shallow country. It is too often the case that companies have carried on in the way I have tried to describe.
2123. Has there been no public money expended here legitimately in mining? Not much—a very small proportion of the total amount that has been spent.
2124. How is it that none of these companies are working? Owing to mismanagement in most cases. There are a few months of tinkering, and then a collapse usually.
2125. But if the tin is there, how is it that private individuals cannot make a living out of it? Hitherto there has been no money subscribed in a proper manner, and its expenditure properly directed with the idea of trying to open up these deep leads.
2126. Do you not know, as a practical miner, that if men are working for themselves, they will work harder, longer, and for a great deal less than they will work for a company? Yes.
2127. Taking that into consideration, is it not a wonderful thing that if the tin is here as you say, the men cannot get a living at mining? Not at all.
2128. Why? It requires more money than men of that stamp are generally able to get together, to bottom the basalt in these deep leads. This wet basalt country is something like the Creswick country in Victoria, which requires, in many cases, pretty heavy pumping gear, and good management, to properly test it; and to my knowledge there has been no serious attempt made to prove these leads.
2129. How much do you think it would cost to sink a shaft where you would suggest it should be sunk, in order to prove a deep lead? In some localities it would cost £3,000, and in others more.
2130. Have you worked at these mines yourself? Yes.
2131. Did you work in the deep ground? I made one attempt in wet ground, but I had not capital sufficient to go through with it.
2132. What makes you think that, in the event of the water being beaten, and a shaft sunk, it would prove payable? All these leads from the shallow country lead into it, and they are drainage from granite that has been worn down—granite thickly intersected with reefs that has been worn down evidently from a great height, and the detritus carried away inevitably to these channels under the basalt. There are any amount of traces about which give some idea that the Elsmore hill, for instance, has been worn down from a very high level.
2133. Are the two places you have mentioned—Elsmore and Stannifer—the only ones where mining is carried on in this district. Is there any mining for gold or gems? There is the Auburn Vale diamond mine.
2134. How far is that away? About 18 miles.
2135. Are there many men working there? I have not been there lately.

2136.

Mr. H. Penberthy. 5 May, 1891.

2136. You cannot say what the population is and what they are doing? No.
2137. Is there any machinery at Elsmore? Yes, there is some machinery, but no pumping gear heavy enough.
2138. Have you had a diamond drill in that district? No.
2139. Would not that be a better way to prove the deep ground?. It would be necessary to test the depth of the ground, and also the locality of the lead and its position under the basalt, and it would save a good deal of sinking and prospecting by hand.
2140. One of the witnesses this morning, referring to the tin-mines, spoke of the "good old times;" what did he mean by that? That was the time when all the tin was exactly as nature left it—almost on the surface. It is quite reasonable to expect that in the early days of a tin-field a very large quantity of the ore would be exposed to the surface, and, of course, when that is collected there will be a big yield for the time, and what is obtained afterwards has to be prospected for.
2141. Has there ever been an attempt on the part of the residents of Inverell to form a prospecting party to prove any of this deep ground? There have been a few attempts, but not many.
2142. And they were unsuccessful? Yes, in most cases, so far as they have gone. But no attempt has been made of sufficient magnitude to deal with the leads under the wet basalt.
2143. And the companies that have been formed outside of the district have only been formed for the purpose of selling shares? I do not say that with respect to all, but it gives one the impression from the way they have been carried on.
2144. Have you ever had one company formed legitimately—one company out of the lot working in a proper manner? So far as my individual opinion goes, one or two only have prospected ground where it ought to have been done.

Mr. Hector Neil M'Lean, storekeeper, Inverell, sworn, and examined:—

Mr. H. N. M'Lean. 5 May, 1891.

2145. *Chairman.*] What is your occupation? I am a storekeeper at Inverell.
2146. *Mr. McCourt.*] How long have you been here? I have been here all my life pretty well.
2147. Carrying on the storekeeping business all that time? For the last five or six years.
2148. Where do you get your goods from? From Sydney.
2149. Have you any idea of the tonnage that comes to Inverell? I have ascertained as nearly as possible the quantity of goods coming to storekeepers and others in Inverell. The tonnage in the case of my own firm for the past twelve months is 193 tons. With regard to the other storekeepers and tradesmen, I obtained the figures direct from those gentlemen themselves. The total tonnage from Glen Innes for the year was 1,265 tons.
2150. Did you get any supplies from any other place besides Glen Innes? No; everything comes from Glen Innes, pretty well. There is a little from Grafton which is not included in the estimate; it would amount, perhaps, to 100 tons altogether in the twelve months. Then with regard to the outward tonnage, maize is the only thing the storekeepers deal with, and we make the quantity 7,110 bags, equal to 28,440 bushels, or 711 tons. The butchers estimate the export of tallow at 45 tons, and hides 25 tons. I have not touched wool.
2151. How many carriers are engaged between here and Glen Innes? I have not ascertained exactly—I suppose there are forty.
2152. Have you any idea of the quantity of goods that comes to private people besides storekeepers? No.
2153. Would there be a large quantity? Yes. In the total I have given, goods coming to private persons and goods going to other different stations are not included.
2154. What do you suppose these additional goods would amount to? I would not like to give an opinion. There is a tremendous quantity of salt taken to the stations.
2155. Do you think that for the goods obtained by people who are not storekeepers 10 per cent. might be added? Yes; I think so—10 per cent. would be under the mark.
2156. Would 15 per cent. be about the thing? I daresay it would.
2157. Which do you think is the best route for the railway in the interests of the people of Inverell? Decidedly the Glen Innes route.
2158. Why do you say that if you get your goods from Sydney? It is the most direct route from the coast.
2159. You would not go to the coast? That is what we look forward to.
2160. You do not get your goods from the coast now? Before the differential rates which apply to all towns north of Guyra came into force, we got all our heavy stuff from Grafton, and goods that we were not in a particular hurry for, such as drapery, we always got by the railway.
2161. Could you not get your goods cheaper from Sydney, *via* Guyra, than *via* Glen Innes, if a railway were constructed? I think the difference would be very trifling.
2162. Would there not be a difference in favour of Guyra? Well, we expect to get the coast line yet.
2163. Would you not get your goods from Sydney cheaper by a line from Guyra than by a line from Glen Innes? There would be a slight difference.
2164. There would be a difference of 35 miles' railway carriage? Hardly so much. The Guyra line is rather longer, I think, than the Glen Innes line.
2165. Would not passengers have to pay extra? Yes, but we look to Brisbane, also, as an outlet for our produce.
2166. But I am speaking of the goods coming here? Decidedly, it would be a little cheaper as regards the goods from Sydney.
2167. And would it not be a tax on passengers going to Sydney? I suppose it would be a slight tax.
2168. Even if you got your goods by way of Grafton, and a line was constructed, would not Guyra then be a better route? It is not so short or so direct.
2169. Would it not be more direct from Grafton? I think not. I think it is a greater distance to the coast by way of Guyra than by way of Glen Innes. It is about 140 miles from here to the coast, *via* Glen Innes.
2170. Has there been any land speculation in connection with this line? I do not think so—none of any significance.
2171. Have any of the townspeople ever speculated in land at Glen Innes? I am not aware of it.

Mr. H. N. M'Lean. 5 May, 1891.

2172. Do you think there would be any settlement along the route between here and Glen Innes if the line were constructed? The land is very suitable.
2173. If the line were constructed, in your opinion, would it be occupied by small farmers? Yes, there is a considerable population along the route now.
2174. Where? Along the surveyed route passing through Swanbrook and Swamp Oak.
2175. How many are there at Swanbrook? There is a considerable population there.
2176. What do you call considerable? I suppose there are 100 selectors along the route between here and Glen Innes.
2177. But is not the land in large estates? Yes; there are some large estates.
2178. That being so, what would furnish revenue to the railway? I believe the owner of the King's Plains Estate would give the land required for the construction of the railway.
2179. Can the King's Plains' people get to this line? I am speaking of the old Wellingrove line.
2180. At any rate you are in favour of the Glen Innes connection? Decidedly.
2181. And you speak the opinion of a majority of the people of Inverell? Yes, I believe I do.

Mr. Alfred Oliver, miller and produce dealer, Inverell, sworn, and examined:—

Mr. A. Oliver. 5 May, 1891.

2182. *Chairman.*] You are in business in Inverell? Yes; I am a miller and produce dealer.
2183. How long have you resided in the district? It is thirty years since I first came to the district, but I have been residing here continuously for the last six years.
2184. Have you been in the milling and produce business all that time? Yes.
2185. How many other mills are there besides yours? There are two—one has been idle for some time.
2186. Is yours working full? Yes.
2187. What quantity of wheat do you receive into your mill for treatment? About 35,000 bushels annually.
2188. Do you buy from the farmers, or do you grind for them? Both.
2189. Where do you find a market for the flour? Generally locally.
2190. Do you ever send any away? Yes, both north and south, and even east and west.
2191. What do you mean by north;—do you mean along the northern line? No, to the boundaries of Queensland in the north, and also to the west by team.
2192. And where do you send it to the east? To Glen Innes. I have sent flour to Glen Innes since I have been here.
2193. You produce better flour here than they do at Glen Innes? Yes; owing to the climate the harvesting of wheat on the tableland is late, and it gets the rust. That is why we surpass Glen Innes.
2194. What other produce do you deal in besides wheat? Corn and hay.
2195. Have you only a local market for that, or do you send it to a distance? I have not sent any to Sydney. I did not think it was worth touching.
2196. Would it be worth touching if the railway were brought here? Certainly. I could have placed 60 tons in one line this season.
2197. Where would you have sent it to? Sydney.
2198. Then I understand that you look towards Sydney for your market? I do not.
2199. Where do you look for a market? I certainly look to Queensland for a market for flour, inasmuch as it is dearer in Queensland, or used to be, by about £2 a ton than it is in Sydney.
2200. What do you mean by Queensland;—do you mean Brisbane, Toowoomba, or where? Toowoomba and Brisbane, and also west of those places.
2201. If a railway were brought here, do you think you could compete in the Brisbane market with sea-borne wheat? If we could not compete with the Brisbane wheat we could not compete with the Sydney wheat, because that also is sea-borne.
2202. But would you not have more to pay for transit to Brisbane than to Sydney? I do not know. Certainly not if we had to pay the same railway rates.
2203. If you do not know what you would have to pay to get your produce to Brisbane, how can you say that you could successfully compete in the Brisbane market with sea-borne wheat? Simply because the price is greater there.
2204. But if the greater price is more than swallowed up by the increase in the cost of transit, where are you? But I have yet to learn that that is so.
2205. But you do not know; you cannot tell me what the price is? I suppose the railway carriage will be at the same rate going north as going south.
2206. You know very well that they have altogether different rates in the different colonies? We expect that the rates will be the same when we are federated.
2207. Do you know anything of the wheat-producing capabilites of the Darling Downs district? Yes. I know they can produce very good crops there, but at times they have had to put a fire-stick in their crops.
2208. Has that occurred very often? No, not very often.
2209. Then it would only be in their bad seasons that you would be able to compete successfully with them? Yes, in that direction.
2210. Then where would you go? We would go to the nearest market—the best market we could find, I presume.
2211. The only place would be Sydney? I do not know that.
2212. Where else would you go? I do not know. We are completely blocked from Sydney. We can never send wheat to Sydney at the present price.
2213. Does it not show that when there are good seasons on the Darling Downs your wheat will have to stop in your granaries and rot? We may have other markets. We will have the same markets as we have now; we have to fall back on the local demand. That is generally the case.
2214. But so far as this railway is concerned, it would not be benefited if the market were local. You anticipate, by the construction of this railway, a large increase in your area of wheat under cultivation? Yes.
2215. And you propose to send the wheat to Queensland whenever the crop on the Darling Downs is a failure; and when that is not a failure, you tell us there is not another market open for your surplus produce? I do not say that.

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2216. You told us you could not go to Sydney? No, we cannot. If we have a railway here, surely it will bring population, and there will be an increased local demand.
2217. You expect that the railway coming here will increase the local population, and that your surplus will be eaten up by them? I do not say the surplus exactly. There are other outlets. We have a market to the westward.
2218. Of course you will have a local demand, whether your population is 1,700 or 17,000; but you propose to produce for people outside the local population, and if your market in Queensland is knocked on the head by a good season there, then you have no other market? It may be only once in a way that our market in Queensland will be knocked on the head. We have to chance that, as we have to chance everything else.
2219. But you told us it was only once in a way that they had a bad season? I think they have two bad seasons to our one.
2220. I thought you had no bad seasons here at all;—we understood from other witnesses that the good seasons were regular here, while in Queensland the failures occurred frequently? We have nothing to what they have in Queensland.
2221. Suppose the good seasons in both places should come at the same time, what would you do with your surplus wheat? We should have to keep it.
2222. And the railway would have to stop? Surely the railway would not depend on wheat alone.
2223. Do you know that the Commissioners estimate that there will be an annual loss on this line of £13,000 per annum? Other countries have built railways at a loss at the start, but the revenue has increased with the increase of population.
2224. We should like you to tell us how it is possible, or probable, to wipe out the estimated deficiency? I think the richness of the land in this district will cause a large population to come here, if they have a chance of sending their produce—not wheat alone, but fruit and other products—to a market.
2225. The population will come here just for the sake of living on what it produces? I suppose so.
2226. Where will the revenue for the railway come from? The railway will derive its revenue by carrying things they cannot grow or manufacture.
2227. What other produce is there besides wheat, and what other markets are there open to you, if this line is constructed? There is corn. You have had evidence as to the corn grown in the district, and of the great quantity that has been sent down to Sydney this year. I think there is very little profit, owing to the cost of carriage from here to Glen Innes.
2228. You told us just now that you placed 60 tons of corn on the Sydney market;—I suppose that is an exceptional circumstance, and that the coast districts will always keep you out of that market? I expect they will.
2229. Where is the traffic to come from to make the railway pay and cover the estimated loss of £13,000 per annum? I cannot tell you.
2230. Do you know anything of the quantity of goods inwards and outwards during the year? No, I do not.
2231. Yours is a purely local trade? Yes.
2232. In your position as a miller, you grind for your customers, or buy and grind, and distribute the flour, and the same way with produce—you buy and distribute to local consumers? Yes.
2233. Does much wheat go to Glen Innes from here? Yes; a good deal, in seasons when their wheat is bad.
2234. Do the Glen Innes storekeepers buy up wheat here largely? Yes, the millers do; even this season they are doing it.
2235. Is there much surplus wheat lying in the barns here? Yes; I have a few thousand bushels.
2236. What is it selling at now? From 3s. 6d. to 4s.
2237. Does that pay? It should pay the producer; anything over 3s. 6d. should pay.
2238. You are clearly of opinion that there can be no market in Sydney for any wheat you may produce here? I do not think so.
2239. Or for any other product? I would not say that. Fruits and other things grown here might find a market there.
2240. Glen Innes is a better place than Inverell for growing oats? Yes.
2241. Therefore they would compete with you in that respect? Yes; both in hay and oats.
2242. Do you know anything of the country out west? Yes.
2243. Have you been out as far as Goondiwindi? Yes.
2244. They are all pastoral properties out that way, I suppose? Yes.
2245. Do you know where their traffic goes to now—how they send their wool on the one hand and receive supplies on the other;—where does it find its way—to what line? I suppose to Moree, mostly—as far down as 50 miles to the westward from here. Some of it comes this way, some to Warialda, and down the Tamworth line.
2246. I refer more particularly to the southern portion of Queensland—Goondiwindi, for instance? I should think they would go to Moree.
2247. Do they not go to Stanthorpe, or some other place on the Queensland border? I do not think so.
2248. If that traffic now goes to Moree, is there any probability, if this line is constructed, of it coming here? I do not know; I should think not.
2249. Would it not be shorter for the squatters to take their wool from Goondiwindi, *via* Moree, to Narrabri, and on to Sydney, than it would be to send it from Goondiwindi to Inverell, and on to Sydney, *via* Glen Innes? Yes, probably it would.
2250. Therefore it is not likely that they would send their wool here if they could get a shorter route, and the same argument would hold good with reference to their return supplies? Yes; I should think it would.
2251. Have you any business transactions with Warialda? Yes, and with Goondiwindi, and even with St. George's Bridge, in Queensland.
2252. Is that further north than Goondiwindi? Yes, nearly 50 miles.
2253. What is the nature of your trade with that place? Flour and chaff in the dry seasons.
2254. Much chaff? Yes; a large quantity goes from here in the dry seasons.
2255. Have you ever known starving stock from the south of Queensland, and the places you have mentioned, to come *via* Inverell to the table-land? I cannot say; I have not been in the stock line of late years.

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2256. Have you seen a quantity of fodder go out there in dry times? Yes; a great quantity.
2257. Grown in this district, or in Glen Innes? In this district.
2258. Does Glen Innes grow better fodder than you do here? No, I do not think so.
2259. Does the Warialda trade gravitate here or to Tamworth? It gravitates here.
2260. Is it not a fact that a great portion of it goes to Tamworth? No, I think not. There is a lot of flour that goes from here to Warialda.
2261. And what back loading? All the back loading would be wool.
2262. If the railway were extended from Narrabri to Moree, I suppose the Warialda people would go to Moree? I cannot say.
2263. If it were proved conclusively that the people of this district would look more to Sydney for a market than north, would it not be in the interest of the district to be connected with the main line at Guyra, instead of at Glen Innes? By going to Glen Innes we have the benefit of the two markets—we have a market on either side.
2264. If experience proved that there was no market in Queensland, you would be obliged, for all time, to drag your produce the extra 35 miles in order to get to your market in Sydney? That would apply also to the south, for if we had no market there for all time, and had a market in Queensland, we tap the main trunk line at the nearest point, viz., Glen Innes.
2265. Do you not think it would be better to suspend all reference to this railway until it is clearly ascertained whether the market for this district is north or south? No; I do not think so, because the Government would not be opening up the country by railway extension. Population generally, throughout the known world, follows a railway.
2266. Do you know the country between here and Guyra? Yes; well.
2267. Do you know if it is because there is no township at Guyra, and a fairly good township at Glen Innes, that the Inverell people prefer to go to Glen Innes? If the Inverell people really wanted to go to Sydney, surely they would go by the nearest route they could get, and they could get a nearer route than Guyra.
2268. Uralla? Yes; that would still be nearer.
2269. Guyra would be 35 miles nearer than Glen Innes? Yes.
2270. Yet you are so patriotic that you want to pay an extra 35 miles' haulage for the benefit of the people? But then it gives us a chance of going either to Brisbane or Sydney. If we go to Guyra, we have an extra haulage going to Queensland.
2271. You think there is no probability of a market in Sydney, but that there is a possible market in Queensland? I think so.
2272. Therefore, you desire to tap the main northern line at Glen Innes, and chance having to pay the extra 35 miles' haulage, if your expectations of a market in Queensland turn out to be incorrect? Yes.

Mr. Richard Alcock, coach proprietor, Inverell, sworn, and examined :—

Mr. R. Alcock. 5 May, 1891.

2273. *Chairman.*] What is your occupation? I am a coach proprietor.
2274. *Mr. Trickett.*] You are part proprietor of the coaches running on the line between here and Glen Innes? Yes.
2275. You have been acquainted with the line for a considerable time? Yes; since the 1st January, 1884, before it was opened.
2276. Have you been running this line, or other lines? This line continually.
2277. Has the stream of traffic been pretty constant during that time? Yes; very constant.
2278. Has the increase during the last four or five years been considerable? Yes.
2279. With regard to the proposed railway, what do you think of the route *via* Wellingrove and Swan brook—do you think it is the best? Yes.
2280. If it has the effect of avoiding a steep grade, you see no disadvantage? No.
2281. Is the country along the route such that the railway would be easily accessible to settlers who might reside within 10 or 15 miles on each side of the line? I think so.
2282. Is it so situated that people requiring to use the line would be able to reach the stations easily? Yes; I am sure that is so.
2283. Knowing the country pretty well, and looking at the matter from a practical point of view, do you think the route last surveyed is the best? I do. The line is a little longer, but the grade is better, and I think that it is the best route that could be got.
2284. As far as you know, would it satisfy the people who would be likely to use it as well as any of the other lines would? I think it would satisfy them better.
2285. Do you know anything of the route between here and Guyra? Yes; we had the contract between Tingha and Guyra.
2286. How does the passenger traffic on that line compare with the passenger traffic on the Glen Innes line? There is no comparison whatever.
2287. If there is any comparison, it is all in favour of the Inverell-Glen Innes line? Yes, in the proportion of six to one.
2288. To what do you attribute that? I think the traffic is more concentrated in Glen Innes. That is regarded as the best route, and people come and go there. That line picks up the Queensland traffic and the Sydney traffic. We have a good many passengers who come to Inverell from Brisbane, and all down the northern line.
2289. Could you tell us what class of people they are, and on what business they come? They come to look for land, and about business, and things in general. Of course I have an opportunity of knowing their business, as they ask me for information as to what the country is like, and about business matters.
2290. Have you ever heard of people coming from Queensland with a view of buying produce in Inverell? Yes.
2291. What kind of produce? Chaff. In the season of 1888 there was a good deal of chaff sent there.
2292. Is there a line of coaches between Inverell and Tingha? Yes; the coach goes on to Bundarra and through to Uralla.
2293. Is there much passenger traffic on that coach? None at all.
2294. Is it a mail line? Yes.
2295. Have you the contract? No.

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2296–7. I suppose very few passengers would go that way? There is an odd commercial traveller occasionally, but I do not believe there are three a week.
2298. There is no producing district which would induce them to travel in that direction? No; it is not a producing district—it is all bad country.
2299. How often does the coach run? Three times a week.
2300. How often does your coach run from Guyra to Tingha? Three times a week.
2301. Is that a remunerative line? Well, it just about pays interest on the capital.
2302. I suppose you get an allowance for carrying the mails? Yes.
2303. Is that a considerable item in the cost? The cost of the running is not so much.
2304. When Messrs. Scarr and Price were in the district did they interview you with regard to the traffic? No.
2305. You did not give them details similar to those with which you will furnish us? No.
2306. If a line of railway were constructed from Glen Innes to Inverell, would it be of any advantage to the Tingha people? I think so, because they would be able to reach the line, which would run parallel with Stannifer, Elsmore, and other places.
2307. How many miles is it from Tingha to Inverell? About 16.
2308. Do you think it would suit the people of Tingha better to take their tin to a railway station at Inverell, and have it carried from there round by way of Glen Innes, than to send it direct from Tingha to Guyra by railway? I think so. At the present time they are sending their tin to Glen Innes, and have been doing so for a considerable period. There is not a single team on the road from Tingha to Guyra. There may be an odd dray, but I know there is not a regular team.
2309. What is the character of the country between Guyra and Inverell? Except for a few miles out of Inverell, it is all bad country until you get to Wandsworth.
2310. How many miles is that from Inverell? About 43 or 44.
2311. For the whole of that distance it is bad country? Yes, nothing to compare with the country round here.
2312. Is it of a different character;—is it sandy country? Yes, nearly all white sand.
2313. And not suitable for agriculture? No.
2314. It does not compare at all favourably with the land between Inverell and Glen Innes? No. As soon as you get to Wandsworth it begins to get a little better.
2315. From Wandsworth to Guyra, a distance of about 16 miles, it improves? Yes.
2316. Is it as good there as the land surrounding Inverell? I think it is in places, but there is no extent of it. The coach line, I think, goes through the best of it, because on each side it is hilly and mountainous—rough, stony, mountainous country. The coach line goes through some very good land towards Guyra, but nothing before you get there.
2317. You have travelled between Glen Innes and Inverell for very many years? Yes.
2318. Starting at Inverell, could you describe the different settlements along the line to Glen Innes, and the population located there? There is population on both sides of the road. Brodie's Plains is thickly populated.
2319. Could you give us any idea of what the population would be? I could not say exactly, I know there are a great many settlers there.
2320. Some hundreds? I should think there were.
2321. That is between here and Swanbrook? Yes, on both sides of the road.
2322. When you come to Swanbrook what population is there? There is some, but not much, until you get to Waterloo. Then at Wellingrove there are a good many selectors.
2323. What about Balaclava? Yes, there are a few up there—people, for instance, with holdings of 200 or 300 acres.
2324. These are back off the road? Yes, you cannot see them from the road.
2325. Are there any places between Balaclava and Glen Innes? There is settlement all along the road.
2326. Small holdings? From 100 to 300 acres.
2327. Could you give us any idea of what is the population along the proposed line between Inverell and Glen Innes? I could not state definitely. I know there is a great deal of settlement.
2328. Do you think there are 700 or 800 people? More than that.
2329. Are there 1,000? Yes, I am sure there are 1,000.
2330. And are these residents within a reasonable distance of the proposed railway line? Yes, within a distance of from half a mile to 3 miles.
2331. They would all be benefited by the railway? Yes.
2332. You must be a large consumer of fodder required for your horses? Yes.
2333. Where do you get that? I get some at Glen Innes, and from the selectors all along the road. I get some delivered, for instance, at the first stable, then some more at the next stable, and so on; and the same with the chaff.
2334. In bad seasons, in and about Inverell, have you ever noticed any fodder being conveyed from Glen Innes to Inverell. Yes, I have sent it myself. That was in 1888.
2335. In large quantities? I had to send all down that was used.
2336. Did other people have to do the same? I think so. That is the only occasion since I have been at Inverell that I remember its being done.
2337. Is there not a considerable goods traffic by drays and teams between Glen Innes and Inverell? Yes.
2338. Could you give us any idea of how many teams there are a week, each way? In the wool season there must be from forty-five to fifty teams travelling each way, and in the slack season I suppose about twenty or thirty.
2339. There is a continuous traffic all the year round? Yes.
2340. It is not the case, as in some districts, that after the wool is carried traffic entirely ceases? No; there is a lot of loading that goes out west.
2341. Is the passenger traffic also pretty continuous throughout the year? Yes. It may fluctuate a little, and perhaps in the winter time there may be a little falling off, but nothing to speak of.
2342. Do you know anything of the traffic west of Inverell? A line of coaches run from Goondiwindi to Warwick, and I believe it is a good and profitable line.

Mr. R. Alcock. 5 May, 1891.

2343. Would those passengers be drawn to Inverell if the railway were made? Most decidedly. I should be one of the first to turn from here to Goondiwindi.
2344. If a railway were constructed to Inverell, you would immediately compete for the traffic to and from Goondiwindi? Yes.
2345. Have you heard any of the travelling public say they would be inclined to come on here? Yes, several times. I saw several gentlemen the other day who were passing through Glen Innes from Warwick on their way to Sydney, and if there was a railway to Inverell they would come this way.
2346. Do you think any graziers out there would send their wool this way. I am certain they would. All that western wool would come here.
2347. Is there a good road out there at present? Fairly good.
2348. It is a road by which the wool could be conveyed in teams? Yes. They bring in wool now for 25 or 30 miles.
2349. I believe you have prepared a statement for the Committee showing the details of the passenger traffic between Glen Innes and Inverell from the 1st January, 1884, to the 31st March, 1891? Yes.
2350. Is it a correct statement as far as you have been able to make it? Yes. As regards the horse traffic I think I have rather under-estimated that, and I have not taken into account persons riding from here a few miles on the road.
2351. I suppose the bulk of the passenger traffic is by the coach? Yes. We pick up, perhaps, twenty passengers a week in the night and day coaches, and many are carried only a part of the journey.
2352. If the railway were constructed do you think there would be a considerable intermediate traffic between both towns? Yes, that might reasonably be expected.
2353. Do you furnish the detailed statement already referred to? It is as follows:—Passenger Traffic between Inverell and Glen Innes, and *vice versa*, commencing 1st January, 1884.—To and from Glen Innes, up to 19th August, 1884, the date of the opening of the railway to Glen Innes—189 passengers; from 20th August, 1884, to 31st December, 1884—643 passengers; from 1st January, 1885, to 31st December, 1885—1,761 passengers; from 1st January, 1886, to 31st December, 1886—2,370 passengers. In addition to the above, I estimate the saddle-horse traffic to be fully 600 each year; persons driving their own buggies, 450 to 500 passengers; parcels, £30 per year. From 1st January, 1887, to 31st December, 1887—2,646 coach passengers; saddle-horse traffic, 650; buggies, 500; parcels, £50. From 1st January, 1888, to 31st December, 1888—coach passengers, 2,890; saddle-horse traffic, 650; buggies, 500; parcels, £66. From 1st January, 1889, to 31st December, 1889—coach passengers, 2,940; saddle-horse, 700; buggies, 600; parcels, £75 per annum. From 1st January, 1890, to 31st December, 1890—coach passengers, 3,150; saddle-horse, 750; buggies, 600; parcels, £75. From 1st January, 1891, to 31st March, 1891, three months—890 passengers.

WEDNESDAY, 6 MAY, 1891.

[*The Sectional Committee met at the Court-house, Inverell, at* 10 *a.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN.)

The Hon. WILLIAM JOSEPH TRICKETT.	EDWARD WILLIAM O'SULLIVAN, Esq.
JAMES EBENEZER TONKIN, Esq.	WILLIAM MCCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Charles Cameron Loxton, licensed surveyor, Inverell, sworn, and examined:—

Mr. C. C. Loxton. 6 May, 1891.

2354. *Chairman.*] What is your occupation? I am a surveyor, and I carry on farming.
2355. *Mr. O'Sullivan.*] Are you a licensed surveyor? Yes.
2356. How long have you been settled in the district? About fourteen years.
2357. Have you been doing work for the Government during all that time? Not all the time, but off and on, I have been employed between here and Tamworth, from Tamworth to Glen Innes, north and south, and west to the Barwon, pretty well.
2358. Then you have had a good opportunity of ascertaining the character of the country? Yes.
2359. What, in your opinion, is the character of the country westward to the Barwon? It is exceedingly rich, more particularly as a pastoral country, but still it has great resources even for agriculture, under certain conditions.
2360. The good agricultural soil extends a considerable distance west? A vast distance; it is only a question of the climate and the rainfall.
2361. How far do you think it could be worked for agricultural purposes? I think fully 50 miles from Inverell, but to be well within the limit I will say 40 miles.
2362. Have you been kept busy surveying? The increase in land alienation seems to have been very great lately, and there is a prospect of my being very busy.
2363. Has this arisen from the leases in the Eastern Division falling in? Yes; that has had a good deal to do with it.
2364. And are there still applications for land? Yes; they seem to be more steady now. At first they came in rapidly, but the alienations seem to be steady now.
2365. Do these applications for land come from local people or from persons resident outside the district? There are some new ones, but I think the majority are local—that is to say, a man's sons wish to take up land; a good deal of that goes on, owing to the increase in families.
2366. What is the usual size of the holdings? The average holding is 640 acres.
2367. What is the size of the holdings that are being applied for now? They are mostly small ones. Those I have measured lately have run from 320 down to 40 acres. I have a table showing the size of the holdings. In 1890, there were in the Inverell electorate 515 holdings. Of this number 10 had an area greater than 10,000 acres each; 43 less than 10,000 acres, and greater than 1,000; 50 less than 1,000, and greater than 500; 238 less than 500, and greater than 100; and 174 less than 100. The average size of the holdings for the district is exactly 640 acres. The total area of the electoral district is 1,905,280 acres. Of this 329,601 acres have been alienated, leaving an unalienated area of 1,575,679.

Mr. C. C. Loxton. 6 May, 1891.

2368. In your opinion, how much of that unalienated land is fit for agriculture? I think the majority of the agricultural land would be included in the alienated portion, but I think there is a considerable area of agricultural land still unalienated. Within a reasonable distance of Inverell there must be 40,000 or 50,000 acres.
2369. Can you give us an approximate estimate of the area fit for agriculture still unalienated? I do not think I could give a reliable estimate.
2370. Give us a rough estimate? Of course there would be first-rate and second-rate agricultural land. I consider that the bulk of the first-class land is embraced in the 329,000 acres that have been alienated.
2371. Do you think that one-third of the unalienated land is suitable for cultivation? Yes, but it might not all be first-class cultivation land.
2372. Is there any room still left on the leaseholds about here for settlement? Yes. In those parishes alone, through which the proposed railway will run, and in which there has been most alienation, there are about 11,000 acres still unalienated. Some of that is really first-class land. About 6 or 7 miles from here, at Long Plain, just where the road crosses, and where the line would touch, there is a reserve of about 600 or 700 acres that would be of great value. The line would just touch it, and it could be subdivided into small holdings, which would bring a very high price to the Government.
2373. Could you give us, in a systematic way, something like an idea of the land in the district still unalienated, which would be fit for settlement. You say there are 11,000 acres between here and Glen Innes? Yes, a great deal of that is first-class land.
2374. *Chairman.*] How much is first-class? About 33 per cent. That is actually on the line. I know particularly of that one reserve just mentioned, and I know another something similar further along, and another of 1,000 acres about 15 miles this side of Glen Innes. These are blocks of land that would bring, I should think, not less than £5 an acre, because they are right on the line.
2375. *Mr. O'Sullivan.*] What are the boundaries of the electoral district to which the figures you have just quoted, apply? The western boundary is about 15 miles from Inverell.
2376. And how far does the district extend south? About 20 miles. The boundary on the east is about 15 miles distant, this side of the Great Northern Line, and running parallel with it. On the north, the district runs pretty well to Queensland.
2377. Will you continue the figures you were quoting with regard to the land in the district? Of the alienated land, 14,453 acres are under cultivation. Only 17·29 per cent. of the land of the district has been alienated; only ·76 per cent. of the land has been cultivated; only 4·38 per cent. of the alienated land has been cultivated. In 1882, only 11,980 acres were under cultivation. About 41,000 acres were alienated in 1890 by conditional purchase, and 9,000 acres by conditional lease. That deals pretty well with the Inverell electorate. The Gwydir district, which comes within 15 miles of Inverell, has a total area of 7,253,120 acres. Of that, only 1,335,842 acres have been alienated, leaving unalienated 5,817,278 acres. About two-thirds of this area would be influenced by the Inverell railway. The Gwydir is an electorate with which I am pretty well acquainted. It contains some of the richest pastoral lands in Australia, and a vast area will, most probably, be made available for cultivation in the future. A considerable area is already under cultivation, and, in fact, much of what we claim as the wheat lands of Inverell are in the Gwydir district, because when you get 15 miles west you reach the Little Plain, one of the finest, if not the finest, producing portions of the whole district,—half of that is in the Gwydir district. The mistake is generally made of regarding the Gwydir as an arid plain, whereas it contains one of the finest wheat-growing districts in Australia, and as yet, you may say it is almost uninhabited. The effect of the railway on Inverell itself would be small, compared with the vast influence it would have in the west.
2378. Suppose the railway were extended from Narrabri to Moree? The great point to be considered is the conveyance of the produce of this western country to the coast, and Narrabri is 100 miles nearer to Grafton than it is to Sydney. Referring to the land in the Gwydir electorate, the area under cultivation in 1882 was 2,332 acres, and in 1890 it was 3,261 acres. The average rainfall was 24 inches.
2379. You are yourself a producing farmer? Yes.
2380. What is the area of your holding? Seven hundred and sixty acres.
2381. Do you practice cultivation? To a small extent.
2382. How far are you from Inverell? Eight miles—between Inverell and Bingera.
2383. I presume that you have just taken it up to make a home for yourself? Yes, I had a fancy for farming.
2384. And what cultivation you carry on is more for your own supply? Yes, and in the way of experiment.
2385. Do you find that you can produce the usual crops out there? Yes.
2386. What crop is the land best suited for? It is hard to say; it can grow almost anything. I have tried a vast number of things, and I think they could all be carried on to a large extent. Of course, wheat has been the great product here.
2387. Do you carry on grazing? To a small extent.
2388. How many sheep to the acre? I never keep less than one sheep to the acre, and on the place I have got I suppose I could keep one and a half sheep to the acre.
2389. Do you think that would be a fair criterion for the rest of the district round about? Yes, it is a very fair average farm.
2390. Have you any farmers near you? Yes, the country is all settled.
2391. And their market is Inverell? Yes.
2392. You say you have gone out as far as the Barwon? Yes.
2393. That would almost take you to Goondiwindi? Yes.
2394. Have you any knowledge of the people out there coming to Inverell for trade? Not very recently. There are three direct passenger lines coming to Inverell from that part—mail coaches.
2395. Have the people up here complained at all of the delay in being put on the land after they have applied for it? Not so much lately. I think that complaint is being removed to a considerable extent.
2396. I suppose that is inseparable from the rush of settlement at first? Yes.
2397. Now you are getting into working order, you place the men on the soil very much faster? Yes.
2398. Is there any other point to which you desire to refer? In regard to the question as to whether Glen Innes is the best point at which to connect with the main line, I would like to say that, in the first place,

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place, the Glen Innes route is shorter, although the difference is not very great. In the next place, the line to Glen Innes for its whole length passes through a large area of first-class agricultural land, while the Guyra line passes through what is at the best only second rate country, and for the greater distance, barren country as poor as we have got.

2399. *Chairman.*] Have you read Messrs. Scarr and Price's report? Yes.

3400. Do you generally agree with their description of the land along the Guyra route? I consider that their report on that line is very much too favourable, and I am very familiar with the country.

2401. Why do you consider it too favourable? Because they describe the land as of a better quality than it really is.

2402. Do you consider that they are correct in their description of the land on the Glen Innes route? Yes. I agree with their description of the land along all the routes, with the exception of the Guyra route, of which I think their account is too favourable. I would also point out on the subject of the rival routes, that a line to Guyra would be a new line altogether. It would carry traffic direct to Guyra, and therefore the railway revenue between Guyra and Glen Innes would suffer to that extent, and it would be against the interests of the Railway Department to construct a line which would have that effect. On the other hand, if the line went from here to Glen Innes it would increase the length of carriage on the main trunk railway. The railway would have just as much traffic from here to Glen Innes as it would have from here to Guyra, and the Railway Department would get the benefit of the additional freight on the main line from Glen Innes to Guyra. It is true that the wool-growers of the district would benefit by going to Guyra, because Sydney is the wool market, and there is not much probability of wool going to Brisbane. But I think it would be a mistake to consider the interests of the pastoralists as against the interests of the farmers. The line to Glen Innes would give the most direct connection with the main line. It would give the farmer every possible chance for the Queensland market, and for the coast trade, and it would still leave open to him the southern market, which market, if anything, is the worst of the three, because Tamworth lies 150 miles nearer to it and is an equally good wheat-growing country, while the Inverell farmer meets with no opponent either in the north or on the coast.

2403. *Mr. O'Sullivan.*] If the east coast district were connected with Inverell, *via* Guyra, would not that suit you as well as going by way of Glen Innes? No; because it would give us the extra haulage. It would benefit the wool-grower, because it would save him the expense of sending his wool from Glen Innes to Guyra; but the farmer would be at the furthest point possible from his best chance—he would be so much nearer Sydney, where he has to compete with Tamworth, and so much further from the north, where he meets with no competitor.

2404. Your contention is that the farmer's best market is on the coast? On the coast, and north.

2405. Would a line tapping the coast from Guyra and connecting with Inverell, *via* Guyra, not suit the farming interest? Most decidedly not. If there was no other route possible it might suit the farming interest, but it would be greatly to its injury under existing circumstances.

2406. Which part of your eastern coast do you look forward to as your best market? About the Richmond and the Clarence.

2407. If there were a line from Guyra to Grafton, and one from Grafton to Lismore, would not that aid you to get there? We want to get between two points. If we are going to Sydney, Tamworth is our best point, but we want to get the advantage of Queensland and the eastern coast without altogether losing the advantage of Sydney. We do not want our advantages as regards Sydney to be brought to the front, and our advantages as regards the north and the east, which are very much greater, to be altogether ignored.

2408. Place the three markets in their order of importance to Inverell? The Queensland market is decidedly the best at present. The Richmond has most decided prospective advantages, and, if the line were constructed, would have immediate advantages. In speaking of Guyra, it must not be overlooked that the deviation of the branch line from Guyra starts at a point considerably north of that place, viz., Llangothlin; therefore, 33 miles' haulage will have to be added on to the farmer between Guyra and Glen Innes, whichever route is adopted. As far as the freights go, the difference is nothing.

2409. *Chairman.*] Thirty-five miles have to be added on to the farmer if the line goes *via* Glen Innes? If the line goes to Guyra, the 35 miles have to be added on to the farmer if he is going to Queensland. If he is going to the south, we want to strike a point on the coast not south of Grafton. At the same time if that line is constructed, we want to get the benefit of it, too, but we do not want to give up the benefit north for the sake of that line. We want them all. We have to give up a certain thing, and we prefer to have the 35 miles added on. I am speaking now as a farmer, and not as a surveyor. We want the 35 miles added on to the Sydney end.

2410. *Mr. O'Sullivan.*] I gather from what you say that you favour the Glen Innes connection, for this reason—it will be the nearest point for you to reach your two principal markets, whereas Guyra would only give the nearest point to the Sydney market, which is the worst of the three? Yes, and comparatively speaking of no value, because I know the Tamworth district so well.

2411. *Chairman.*] If you are aiming at the Clarence, and if it is proved that the best line to Grafton is from Guyra, *via* the Don Dorrigo Scrub, how can the route *via* Glen Innes be the nearest to the Clarence? The Richmond is where we want to reach more particularly, but I say that the Clarence is the most southerly, and Guyra would take the line still south of our most southerly point. That is what we object to.

2412. If the Glen Innes line were constructed, what would be the cost of landing Inverell wheat at Warwick, in Queensland? From 3s. 6d. to 3s. 9d. per bushel. We can deliver wheat at Warwick for 6d. a bushel freight, presuming the Inverell to Glen Innes line is made, and the same railway rates are continued.

2413. How do you arrive at that? From the railway rates already in existence, and taking the proportionate rate from Inverell to Glen Innes. If large quantities of wheat are sent to Warwick, the railway rates will, no doubt, be reduced still lower; but I do not take that into account, and simply assume that the present rates will be continued. There is another point. Inverell, Glen Innes, and Tenterfield are always lumped together in the official statistics, whereas Inverell is the wheat-growing part of the three districts, and owing to the long land carriage it cannot deal with the Queensland market with any certainty, although we supply a great deal of wheat to Glen Innes. The wheat goes from here to Glen Innes, and Glen Innes gets the credit of supplying it to Queensland, whereas the wheat actually

comes

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comes from here, and with a handicap of £2 per ton for road carriage. As a good deal of flour is exported into Queensland across the border, no doubt a large quantity of our wheat goes there. In reference to the north coast, there is, on the north coast—more particularly on the Richmond, at Lismore and Casino—a large population who cannot produce any breadstuff. We consider that there is a population in that district of 40,000 people, and that is the market we are aiming at.

2414. Do you hope to compete with the sea-borne wheat that would be taken to Lismore to feed these 40,000 people? Yes, we do, to a great extent, because we have a larger yield here, and with improved appliances we could do it, and I believe we will do it.

2415. Suppose this line were merely taken to Glen Innes? We would not be in it then. We are looking forward to its future extension. That is why I say that our Queensland market is the important one; the other one is prospective.

2416. Then with a line going from Inverell to Glen Innes, and another from Tenterfield to Lismore, you could compete with the sea-borne wheat? Yes; that is the view we take. But that is the more remote market of the two. Queensland is the more direct and immediate market. We believe that this wheat-growing district must, in the near future, be connected with the large and increasing population on the coast. There is a considerable population on the coast at present, but it is very small compared with what we hope it will be in future. As a resident in the west, it appears to me that the traffic by the mail coaches is increasing. There is a line from here to Bingera three times a week. Within twelve months of its starting it increased from a two days a week to a three days a week service. There is a coach to Warialda three times a week, and one to Goondiwindi twice a week, which will run very soon three times a week. And there is a coach from here to Ashford twice a week. Bingera is about 45 miles from here, Warialda about 50, Goondiwindi about 125, and Ashford is the nearest.

Mr. Richard Stout, storekeeper, Inverell, sworn, and examined:—

Mr. R. Stout. 6 May, 1891.

2417. *Chairman.*] What is your occupation? At present I am a storekeeper.

2418. *Mr. Tonkin.*] Do you live in Inverell? Yes; I have lived in Inverell for thirty years.

2419. How long have you been a storekeeper? I was a storekeeper when I first came to Inverell, but for fifteen years I followed other pursuits.

2420. Where were you during those fifteen years? I was farming a part of the time in this district.

2421. How long have you been storekeeping? Six years.

2422. Do you find the business is increasing or decreasing? I have not found it so good during the last six months as it was before. Business was better about six months ago.

2423. How did it compare then with business three or four years ago? Three or four years ago it was still better, but I was not in the same business. I was in a smaller store.

2424. Where does your trade principally come from? Principally from the country—it is chiefly with farmers.

2425. In what position do you generally find the farmers when they come to buy stores? Do they pay for the stores, or do you take it out in wheat? I generally take it out in wheat and corn.

2426. What is about the average price you allow for wheat? This year I have been giving only 3s. 3d.

2427. Is that lower than the usual price given? Last year I gave an average of 3s. 10½d. I had a mill last year.

2428. Is that working still? No; it is idle this year.

2429. Were there three mills working at the one time when you had your mill? Yes.

2430. To what do you attribute the closing of one of the three mills;—has there been a smaller quantity of grain grown in the district? There has been a set of rollers put into one mill, and it works night and day, and it has absorbed the trade principally.

2431. What is the greatest distance from which farmers come to deal with you? Fully 20 miles.

2432. In which direction? In the direction of Warialda.

2433. Are there many farmers in that part who come in here to trade? There are a good many. When you reach about 13 miles out there are not so many; but for 13 miles the country is thickly populated.

2434. And all that trade is done with Inverell? Yes.

2435. You believe that this railway, if constructed, would be of material advantage to Inverell? I do.

2436. Why? Because at times we have a surplus stock of produce of every kind, and we have to send it away. For instance, I myself sent away to Newcastle within the last six months 1,600 bags of corn, which would amount to about 80 tons, and it cost me from Inverell to Newcastle, 1s. 3½d. a bushel. We took the lot from a farmer. He had to suffer the loss. Then the bags were lost; that made 1½d. more, and there was a total loss of 1s. 3d. a bushel.*

2437. Was Newcastle, at the time you sent that corn, a better market for it than Queensland? There is a duty of 8d. a bushel on corn going into Queensland, which makes a lot of difference.

2438. I suppose Newcastle at that time was the best market? It was the best market we could get. We got 3s. 6d. a bushel, and bought the corn here at 2s. 3d.

2439. Can a farmer grow corn here for 2s. 3d. and make a profit? He will have to grow it this year at 1s. 6d., because I do not see any outlet at all for it.

2440. Would 2s. 3d. for corn leave the farmer a profit sufficient to live upon? Yes; he would do very well at that if he were sure of it.

2441. What would it pay the farmer to grow wheat at if there was a regular market? I believe if he could get a constant market he would be fairly paid at 3s. 6d. The farmers are only getting 3s. 3d. this year.

2442. Do you not think that 3s. 6d. is a very good price in a district that grows 20 bushels to the acre? If they improve and get larger farms it will pay at a less price, but there is a lot of small farming here now. There are a few farmers who can grow for less. It would be different if they had a large area under cultivation and used machinery, but in the case of a man with 40 or 20 acres, wheat-growing would not pay at less than 3s 6d.

2443. Do you take any other produce from the farmers besides wheat and corn? I deal with everything they have—butter, eggs, hides, wool, sheepskins, tallow, and potatoes, and sometimes turnips.

2444. Do you export any of these products that you buy from the farmers? I export the tallow, the hides, and the wool.

2445.

* *Note (on revision)*:—Storekeepers did not lose; they made a profit of 3d. per bushel; carriage to Newcastle was 1s. 1½d. per bushel; 9d. of this was paid for carriage by team, 40 miles; 4½d. by train, 325 miles.

Mr. R. Stout. 6 May, 1891.

2445. I am speaking of the agricultural produce? I exported corn last year.
2446. And how about potatoes? Potatoes I do not export, nor turnips.
2447. Nothing but the corn and wheat? Yes, and the hides and tallow, and so on.
2448. Is this a good district for potatoes? Yes, very good. It is the right kind of soil, and grows excellent potatoes.
2449. What is the average rate for potatoes per ton? At present they are £5 a ton.
2450. Is that the average price? Sometimes they are as high as £7, and sometimes as low as £4—the average might be about £5.
2451. Did I understand you to say that the reason of the falling off in your business was because there was no market for the farmers' produce? Not exactly that. In 1888 we had a great drought here, and owing to the low price of grain the year before the farmer had nothing by him, and his capital was all exhausted. He had not a very good price last year, and this year a very poor price, so that he has not yet recovered from the effects of the drought of a few years ago.
2452. Is yours one of the largest stores in Inverell? No; it is one of the smallest; still I bring a lot of goods into it in the year. I bring about 100 tons of goods yearly. The goods I deal in are very heavy goods, such as groceries and ironmongery.
2453. If a railway were constructed, it would, of course, bring that traffic? Yes; it now comes from Glen Innes.
2454. Where do you deal—in Sydney? In Sydney and Newcastle. I get a lot of iron and groceries from Newcastle.
2455. Is there anything else you would like to state? Last year, though the crop was a limited one, I had very great trouble in finding a market. I had 360 tons of flour, and I had to travel from here into Queensland, and go all over the country to sell it. I sold a great quantity, and I have an agent now in Goondiwindi who sells flour for me. I send him down flour regularly now.
2456. Then you have not got a regular market in Queensland? We have a regular market, but sometimes it is very bad. Last year when I went there I had to swim two creeks.
2457. What did you get for the flour there? £15 a ton. I sold to storekeepers. Goondiwindi is a market which we can always command, because there is a high tariff on the railways in Queensland.
2458. If a railway were constructed to Inverell, would it make any difference whether it came from Guyra or from Glen Innes? It would make a great difference to me, and a great difference also to the general public, because we could do a lot of business with Queensland, as there is no duty on flour. There is a duty on corn, but there is no duty on flour, and, therefore, we could do a good business with Queensland, particularly at present, when flour is selling cheaply at Inverell.
2459. Have you ever sent much flour into Queensland? Yes; a great lot.
2460. To Goondiwindi? Yes.
2461. But you have never sent to the northern coast? No, never. All my trade has been in the back country, north and west. I have sent flour into Queensland north to Texas.
2462. How far to the west of Wallangarra have you sent flour—the nearest point to Wallangarra? I should think fully 100 miles.
2463. Suppose you sent it by the northern line to Wallangarra, do you think you would find a market there for it? It is only 140 miles from one of the railway stations in Queensland to Goondiwindi. There is a nearer place; I forget the name of it.
2464. Is that where your market is? Well, we could do business in Warwick now and at any time.
2465. Have you ever sent any flour to Warwick? No.
2466. Then you only speak from hearsay? I know, from practical experience, that if we had a railway from here to Glen Innes we could send flour, because we would have cheap carriage.
2467. Do you know what the price of flour at Warwick is at the present time? I suppose it would be over £12 a ton.
2468. Do you know positively? No; I do not know exactly, but I judge by the price of wheat. Queensland does not grow enough flour for its own consumption, and imports a great quantity. The price of flour in Sydney is from £11 10s. to £12.
2469. Do you know that there is a lot of wheat grown on the Darling Downs? There is very little—the climate will not suit. The land is somewhat similar to that at Inverell, but the climate is not suitable.
2470. Have you ever been on the Darling Downs? Yes; I was there twenty years ago.
2471. Were there any farms there then? Yes, and very poor crops on them, while we had grand crops here. There is good wheat-growing country about Warwick, and there is a little about Toowoomba—at Irishtown, on the table-land. The altitude is very high.

Mr. Henry Percy Baly, Acting Crown Lands Agent, Inverell, sworn, and examined:—

Mr. H. P. Baly. 6 May, 1891.

2472. *Chairman.*] What office do you hold in the Public Service? At present I am Acting Crown Lands Agent for the Inverell district.
2473. *Mr. McCourt.*] How long have you been here? Just six months to-morrow.
2474. Have you any idea whether selection is on the increase or on the decrease here? In 1889, the area selected was 4,661 acres, and the area taken up under conditional lease was 2,675. In 1890, the area selected was 41,000, and the area taken up under conditional lease 90,000. The revenue received was as follows:—Deposits on selections in 1889, £762; and for conditional leases, £218; in 1890, the deposits on selections amounted to £5,840, and the revenue for the leases, £3,080.
2475. What are the boundaries of the Land District? I cannot say—I have not been here sufficiently long.
2476. Can you tell from the books whether there are any forfeited selections? From what I have observed, there are very few.
2477. What is the average size of the holdings selected? They vary very much. I suppose about 250 acres would be the average.
2478. What is the annual amount of interest paid in the Land Office on selections? For 1890 it reached about £16,783.
2479. Does that include the conditional leases and annual leases? No; that is only interest on conditional purchases—interest and instalments.
2480. Have you any idea whether the selectors have been local men or men from other districts? Principally local men, I think.

2481.

Mr. H. P. Baly. 6 May, 1891.

2481. Have any men from other parts of the colony made inquiries for land since you have been here? Yes, a good many. There have been a good many visitors inquiring for information, and I have told them where to go and what to do.
2482. If this railway were constructed, do you think there would be a rush to the district to select Crown lands? Yes, I do. If the reserves are thrown open there will be a great rush for them.
2483. I mean for the ordinary Crown lands, independently of reserves? Yes; I think so. The quality of the land is highly spoken of.

Mr. William Henry Rowland, Postmaster, Inverell, sworn, and examined:—

Mr. W. H. Rowland. 6 May, 1891.

2484. *Chairman.*] You are Postmaster at Inverell? Yes.
2485. How long have you occupied that position? Nearly five years.
2486. Where were you before? At Bundarra.
2487. And before that? I came from Murrurundi.
2488. How long have you been in this district altogether, taking Bundarra and Inverell as one district? Seventeen years.
2489. You are familiar with the whole of the country? Not far in a westerly direction, but I am pretty well acquainted with the country between Armidale and Inverell.
2490. What is the revenue from the post and telegraph offices at Inverell? It is nearly £3,000. I have the figures for last year. They are as follows:—Number of messages transmitted, 9,811; value, £770 2s. 11d. Messages issued, 10,184; the value of these, of course, we do not know, but it will be in proportion to the messages transmitted—probably about £900. Money orders issued, 2,132; value, £5,860 10s. 11d. Money orders paid, 764; value, £2,870 17s. 3d. Savings Bank deposits, 436; value, £2,645 4s. 4d. Savings Bank withdrawals, 118; value, £1,233 6s. 7d. Postage stamps sold, £1,747; duty stamps, £143 0s. 5d.; excise stamps, £104 0s. 9d.; money order commission, £71 17s. 6d.; private boxes, £23 10s. 6d. The letters posted in December were, in round numbers, 14,000.
2491. Is that a test month? Yes. I think about 30 per cent. added to that number would give the full yearly average. The annual report will show about 160,000 posted at the office, but the letters we handle, I consider, number about 500,000 a year. The newspapers posted in December amounted to 11,554; packets posted in December, 2,185; registered letters for the year, 5,886; mails despatched for the year, 8,840; mails received for the year, 8902. The total revenue, in round numbers, is £2,900, and the expenditure for salaries, £712.
2492. Has the business increased during late years or otherwise? It is on the increase.
2493. Very materially? There is not a great increase, but there has been a satisfactory increase since I have been here.
2494. Is this post office a distributing office;—do you receive mails and make them up? Yes; it is a circulating office.
2495. You receive mails from Sydney, for instance, by the Glen Innes coach, and then you distribute them to various places? Yes; as far as Goondiwindi.
2496. By coach? Yes. There is a coach twice a week to Wallangra, a distance of 47 miles. Then the mail is taken from there to Yetman on horseback, and thence to Goondiwindi. The distance to Goondiwindi is estimated at 120 miles.
2497. What other places? Ashford and Bonshaw, which lie, I think, nearly north.
2498. Have you anything to do with the Warialda and Bingera mails? We send a local mail to Warialda three times a week by coach, and also one to Bingera three times a week.
2499. Do you send any mails to Tingha? Yes; three times a week—a local mail.
2499½. Is that by the Uralla coach, *via* Tingha and Bundarra? Yes; but we do not despatch letters further south than Bundarra. All the letters are local, except, occasionally, when we may get Queensland letters from Glen Innes.
2500. Do I understand that any letters going to Uralla go *via* Glen Innes? Yes.
2501. How many mail-coach routes run out to Inverell? Glen Innes, Tingha, Goondiwindi, Bingera, Warialda, Ashford, and Bonshaw.
2502. What price is paid to the contractors for the various routes;—what is the amount of the annual contract for the Glen Innes mail? I think it is £160 for a daily mail, Sunday excepted.
2503. As a matter of fact, there is an additional coach? Yes; but that has nothing to do with us.
2504. Do you make up a mail for that coach? No; not for the day coach—it is not a mail coach.
2505. Have you any idea of the passenger traffic between Glen Innes and Inverell by the mail coach? I could scarcely say; but the coaches are usually well filled coming in. I cannot speak as to the coaches going out, because I rarely see them; but, as a rule, they are well filled coming in.
2506. Is there an average of (say) four passengers? Yes, fully that.
2507. Do you think the mail coach carries more or fewer passengers than the day coach? I think more passengers come down by the mail coach than by the day coach.
2508. But it is reversed going away? Very likely that is the case.
2509. What is paid for the Goondiwindi service? It is a divided service. We pay, I think, £120 to Wallangra, and, I think, the same from Wallangra to Goondiwindi.
2510. You are telegraph master as well as postmaster? Yes.
2511. Have you formed any idea as to the places west that do business with Inverell or through Inverell? A great deal of our business is done with the western district; Moree, for instance, and Warialda, and out that way.
2512. Does much Moree business come through here? Yes; we have a good deal of Moree business.
2513. Is not Narrabri nearer to them? I think the distance is very nearly the same.
2514. Have you much business with Goondiwindi? Not telegraphic, but we have a good postal business. There is a very good mail from here, and nearly all the Queensland letters come down that way for this district.
2515. What other places seem to do a good deal of business with Inverell? Bingera; we do a very good business with Bingera, telegraphic; and Moree.
2516. As a resident here for some years, do you think it is steadily progressing? I do not think it is going back. I daresay the bad season we had may have had a deterrent effect.
2517. I thought you never had bad seasons here? I speak of the bad season in 1888. I know it had a very bad effect on the business of the office for a while.

2518.

Mr. W. H. Rowland. 6 May, 1891.

2518. As one who comes in contact with a great number of the public, what, in your opinion, is the best point at which to connect Inverell with the main northern line? It is a difficult question.
2519. I suppose you have formed some idea? Perhaps I may be prejudiced.
2520. We will discount that? Personally, I should think Glen Innes should be the point of connection.
2521. Do you not think that if they could save 35 miles of railway carriage, and the consequent expense, it would be to their interest to do so? Yes; it might, in some cases, perhaps.
2522. Where do the bulk of the people travel who tap the northern line—south or north? I could not say.
2523. Are the prices of produce in Queensland or Sydney telegraphed to Inverell? Occasionally.
2524. Not as a regular thing? No; quotations of prices would come through the newspapers.

Mr. John Sinclair, stock and station agent, Inverell, sworn, and examined:—

Mr. J. Sinclair. 6 May, 1891.

2525. *Chairman.*] What is your occupation? I am a stock and station agent.
2526. *Mr. Trickett.*] How long have you been in Inverell? Twenty-three years.
2527. In what line of business? I have been managing stations principally, and grazing and growing. I have been pretty well an all-round man.
2528. How long have you carried on your present business of stock and station agent? Twelve years.
2529. In that capacity I suppose you have a pretty good opportunity of judging of the general character of the district, as regards business and trade, and so on? Yes; it is often my duty to make valuations of property.
2530. What is your opinion of the district in regard to its present prosperity as compared with some four or five years ago? Some interests are about as good as we ever had them here, and others are not.
2531. Will you distinguish them? The pastoral interest is quite as good as we ever had it. The farming interest is very low indeed. I never saw it so low before, and also the mining interest.
2532. How do you account for that? A great many of the farmers, expecting that a railway would come here years ago, largely cultivated land, anticipating that they would have a market. That anticipation not being realised, they had to put the land under sheep again. There was not sufficient local consumption for their produce, and the roads were so bad that it would never pay to take it away, so a good many of them sold out, and left the district.
2533. Then the chief cause was the want of a market for their produce? Yes, most decidedly.
2534. We have heard something about a bad season in 1888;—do you remember that? I do.
2535. Was that an exceptional season? It is the only season that I have ever known the crops to fail in Inverell, and I have heard old residents who have been here for twenty years say the same thing.
2536. What is the average rainfall here? About 30 inches.
2537. What was the rainfall in 1888? About 18 inches; but the rain did not come at the right season for wheat; it came too late.
2538. I suppose, from your long residence here, you can give us some information as to the trade of the place;—could you tell us for instance, what was the tonnage into Inverell last year for all classes of goods, from the direction of Glen Innes—I mean goods that would be likely to be carried by railway from Glen Innes to Inverell? Yes; I have taken some interest in the question, and have collected a few statistics bearing on the subject. I may say that I obtained the detailed information from the individual storekeepers, blacksmiths, builders, hotelkeepers, &c. The goods received into Inverell from Glen Innes in 1890, amounted to 1,300 tons. In addition to this quantity, I estimate that from 500 to 600 tons of goods went to different sheep stations. I may explain that salt is a very large item of consumption on a sheep station, and that in some places 15 cwt. of salt would be used to every 1,000 sheep. We have over 500,000 sheep in this immediate district, and I put down the quantity of salt used at 500 tons. Then there is the inward carriage to the mines, which would be about 300 tons. Under the head of "miscellaneous," I put down 100 tons, approximately. This makes a total of about 2,300 tons.
2539. What do you think the tonnage outwards would be in the direction of the northern railway line? We sent this year about 29,000 bushels of maize, or 711 tons from this town alone. In addition to this, a further quantity was sent by carts from the farmers at Emmaville, and other places outside the immediate districts. The tonnage from this source might be put down at 100 tons. The wool I put down at 1,500 tons, that being the actual quantity carried. Then hides, tallow, wines, &c., I put down at 100 tons, and tin ore I estimate at 1,000 tons. This gives a total of 3,400 tons.
2540. That was the tonnage for 1890, as far as you can estimate;—is it a fair average, do you think, for the last few years? Yes; I think it is.
2541. Independently of the tonnage into Inverell, have you allowed for tonnage coming into Inverell to private people, of which you would not have any record? No; the figures I obtained were only from commercial men.
2542. Would that additional quantity be considerable? No; I should not think it would.
2543. Would it amount to 100 tons? I should think that would well cover it.
2544. I suppose the outward tonnage may be looked upon as the export from the present producing area of the district in and about Inverell? Yes; with the present mode of transit.
2545. If a railway were constructed, from your large knowledge of the district, do you think a considerable area of land would be taken up for agricultural purposes? Yes, I am sure of it; there are no two opinions about that. I have applications frequently—in fact, I may say every week—from capitalists wishing to come here. I had a man from Junee here the other day—a very substantial man. He came here as a wheat-grower, but decided to wait until the question of the railway was decided.
2546. Has your experience been that people who inquire, and who are competent to judge, are struck with the wheat and corn-growing capabilities of the district? Yes; in fact some have bought here very recently—some very good men, too.
2547. Have you any idea of the quantity of land (say) within a radius of 15 or 20 miles round Inverell, suitable for agriculture, that would be likely to be taken up in addition to the area already in occupation? That would embrace an area of about 40 miles. It would mean about 600,000 acres, of which 150,000 are fit for the plough, and 20,000 or 30,000 acres of this is plain untimbered land now ready for cultivation.
2548. Could you say within how many years there would be a prospect of this area of 150,000 acres of agricultural land being taken up? I could not say how many years, as 150,000 acres is a large area.

We

We prepared similar calculations for the Railway Commissioners, and we consider that within two years we should have an export of about 10,000 tons of wheat, or 200,000 bushels. Mr. J. Sinclair. 6 May, 1891.

2549. Where do you think that 10,000 tons of wheat would find a market? North of Tamworth—in New South Wales and Southern Queensland.

2550. I suppose, as a business man, you have studied the price of wheat both here and in Queensland? Yes; I have given the market consideration for years. In advocating the construction of a railway the first consideration is: how we should get rid of our stuff, and we have gone very fully into that question.

2551. Will you tell us what you know about wheat-growing on the Darling Downs, and how it compares with wheat-growing here, and also give information as to prices? There is a great uncertainty in the seasons on the Darling Downs. I believe they have more land there under wheat than we have in this district, but their yields are not so certain.

2552. You know that to be the fact? Yes; I know the Darling Downs well.

2553. And although the land is good, the uncertainty in the seasons affects the crops? Yes.

2554. How about the price of wheat in the two places? This is about the lowest part of the colony for prices.

2555. Owing to the large crop per acre? Yes; and because there is no one to buy it.

2556. If the farmers in this district had a railway to Inverell, at what price do you think they could afford to sell their wheat in Southern Queensland? I know what they can afford to sell it here at. One or two of the largest growers have often said that they can afford to sell it here and make a good thing out of it at 3s. a bushel, if they could get the cash and a certain market. I refer to large wheat-growers who have machinery to work the ground.

2557. Could you tell us what is the price of wheat in that part of Queensland? The price of wheat in Brisbane yesterday was 7s.

2558. I suppose it would be considerably higher than that at Toowoomba, and places of that kind? I do not know. The present price is unprecedented, and may be owing to the strikes.

2559. What is the ordinary price? It fluctuates a good deal in Queensland. It is generally about 8d. or so higher than Sydney.

2560. Would about 5s. be a fair price? About from 4s. 6d. to 5s.

2561. It would pay the farmer very well if he could get that price, would it not? Yes, pay him handsomely. We are only 240 miles from Toowoomba. Then there are other districts that our farmers have in view. For instance, there are the mining centres, including Glen Innes, Emmaville, Bear Hill, and Castlereag. There is a population of about 5,000 there, and they would take about 30,000 bushels of wheat. The markets we have always looked to have been east and north. There is a population of 30,000 on the coast, and whichever way the railway goes to the coast, when it does go there, the distance will not be more than 180 miles, and we can compete there with any other wheat from Australia, because our seasons are certain and our yields heavy, and we are not afraid of sea-borne wheat, or any other wheat for that distance.

2562. Is there any other kind of produce besides wheat that would flow eastward from the Inverell district if a railway were constructed? Yes; maize. This district is well adapted for maize, of which we grow very large quantities.

2563. Is not the maize from this district very much appreciated? Yes; I am told that it brings the highest price.

2564. What kind of crops do you get—how much to the acre? About 50 bushels.

2565. Is that very good? The average is from 40 to 60 bushels. I may also mention that we are doing a good stock trade with Brisbane. I have done so myself for years.

2566. With better access to other markets, are there any other products that would be grown in this locality for export? Yes; I consider that we would be large exporters of potatoes. There is a large extent of volcanic soil round the town, where we could grow them very profitably. This is an article which cannot be carried by drays, but must be conveyed by railway.

2567. And where would be your market for potatoes? To the east and north.

2568. Is there anything else you would export? Yes; we would be large exporters of hay. We grow lucerne here very well. All the alluvial flats are splendidly adapted for lucerne. I consider that we can send 1,000 tons of lucerne away easily the first year the railway is opened; in fact we might double that quantity, because there are men here now with hundreds of tons in stacks, and they cannot get rid of it.

2569. Where would be the market—east and north? Yes; I do not think we could go beyond Tamworth; the Hunter is too good for us. The class of produce we would export would be wheat, maize, potatoes, hay, fruit, and wire.

2570. I suppose English fruits grow well here? Yes, very well; except stone fruit, for which the climate is rather hot. Apples, pears, and grapes grow to perfection; they feed the pigs with apples here. There would be a large export trade also in stock. I put down the sheep at 40,000. I sent 12,000 to Brisbane from one station lately. It costs from 1s. to 1s. 3d. more to send them to Sydney; but they do sometimes go to Sydney. The season being good, they travel to Wallangarra—at other times they are trucked to Wallangarra.

2571–2. You have to drive them to Glen Innes Railway Station, and then truck them to Wallangarra? Yes; that has been done; this year they were driven to Wallangarra, I think.

2573. The quicker they can get to market the better? Yes.

2574. It does them no good to drive them along an extra 40 or 50 miles of road? No; it takes so much off them.

2575. What do you estimate the total tonnage outwards? About 16,000 tons, including stock and wool. There will be 1,000,000 fleeces of wool the moment the railway starts.

2576. Does that prospective goods trade outwards include traffic in wool that would come from places that do not trade with Inverell at the present time? Yes; some of the traffic that does not come now would come then.

2577. Have you taken that into consideration in the total of 16,000 tons? Yes; I have gone out 65 miles.

2578. From your experience as a stock and station agent, and from your conversations with graziers out to that distance, you think there is every probability of that trade being realised? I am positive of it, because I put nothing down of which I was not quite sure.

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2579. From the nature of the road they would have to travel to other points on the railway—you think this point would be the most advantageous for them to strike? Yes, it is the cheapest, and they are sure to come to it; it is a matter of money.
2580. Does that include the probable trade coming from the south of Queensland, about Goondiwindi? I have gone 60 miles in that direction. I have not gone all the way to Goondiwindi, but have only included the trade which I think must come to Inverell.
2581. What rate of tonnage do you think it would be fair to charge by railway from Inverell to Glen Innes? From 10s. to 12s. 6d.
2582. You think the people would be prepared to pay that, and be glad to do so? Yes.
2583. Seeing that they are now paying 30s.? £2. It is sometimes down to 30s. a ton, and sometimes up to £3.
2584. In your calculation of tonnage, have you taken into consideration the transit of starving stock that would travel eastward in time of drought from the west of Inverell? No, I have not.
2585. Do you think there would be any traffic of that kind on this line? I do—a very considerable one. There was a good deal of traffic from Glen Innes to Warialda. Good as the season was, there was an exchange of 150,000 sheep.
2586. For the purpose of getting better feed eastward? They were changed from one place to the other. Some were going fat to market, and some were going west to be fattened. There is always an interchange.
2587. And that would increase if the facilities were greater? Yes. In the dry year of 1888, I calculate that 1,000,000 sheep went from the west to the New England table-land.
2588. Even with the difficulty of having to drive them all the way? Yes, they had to drive them.
2589. And, of course, if better means of communication were in existence the number would probably be larger in case of drought? Yes.
2590. There is nothing else to do with stock when a bad season comes, except to move them about for better feed? Yes, they must get away, or else die.
2591. You have given us some evidence as to what you think would be the future outward traffic upon the railway;—do you think there would be a large inward traffic from Glen Innes in the direction of Inverell and westward? Yes; there would naturally be a very large increase. I calculate the station supplies at one-third of their output. The figures I have given show that we should take 1,000,000 fleeces of wool instead of, as at present, 500,000, so that the inward traffic for the stations alone would be doubled, and the increase from other sources would be considerable.
2592. You refer to the goods required, and so on? Yes. Now the squatters go to Tamworth and other places; but if they came here with their wool they would take their goods from us.
2593. Do you think there would be any large trade in the way of bringing fodder westward? No; unless the railway went out west.
2594. You could grow enough about here? Much would not come from Glen Innes. We can grow enough here.
2595. When they can grow it in Glen Innes you can grow it here? I think so.
2596. Have you considered this view of the case: Suppose the railway were connected with the main line, do you think there would be a large quantity of goods supplied to Inverell and the surrounding districts from Queensland, instead of from New South Wales—would we be endangering our own colonial trade;—do you think people would prefer to deal with Queensland for their supplies instead of with Sydney? I think the supplies to the general merchants will always come from Sydney.
2597. People prefer to trade with their own colony? Yes; I fancy they would.
2598. Have you considered the probable increase in passenger traffic? Yes; I have given that matter some consideration.
2599. Coaches come to Inverell from several places? There are five coaches coming from the west and north to Inverell, and they would all be feeders to this railway—Bundarra, Bingera, Moree, Warialda, and Wallangra. There is also a coach from Ashford.
2600. Is that traffic pretty good at the present time? There is always a fair, regular traffic, I think.
2601. Do the people stop at Inverell, or go right on? They go right on; the coaches are always running and the traffic is always increasing.
2602. Do you think the traffic would increase if the distance to the railway were shortened? There is not the slightest doubt about it; in fact, in the event of the railway being made, one prominent coach proprietor is prepared to run a four-horse coach right through to Goondiwindi.
2603. The fact of the coach proprietor being prepared to do that is pretty good evidence that he must have sounded the people there as to whether they would travel in this direction? Yes.
2604. Would there not also be a considerable increase both in the goods and passenger traffic between here and Inverell? Yes, I think so. Wherever the railway is extended it naturally promotes traffic. I should like to make a remark with reference to the statement of the Railway Commissioners in regard to the present passenger traffic between Inverell and Glen Innes. They put down the coaching traffic at £3,200. If we had only twenty-two first-class passengers a day, and they paid a fare of 8s. 6d., which would be at the rate of 2d. per mile,—the same as is charged at Picton and other places—and if the train ran 313 working days, that alone would give a total of £2,921, nearly equal to the total estimate of the Commissioners. These gentlemen have not taken into account the passengers who travel in private vehicles and on horseback. In a country district like this people use their own vehicles to a very large extent. For instance, last week, although there was a very large influx of people owing to the races, very few came by the coach, nearly all using their own vehicles. This private traffic has been altogether overlooked by the Commissioners in their estimate. I would put down the number of persons who travel on horseback and in their own vehicles at 2,000, and this amount of traffic has to be added to the figures given by the Railway Commissioners. Then we have to consider also the five coaches, each running every second day to the west, and no doubt if we had a railway we should have daily coaches.
2605. Messrs. Scarr and Price say in their report, "As part of the traffic going south, taking the item of wool, we estimate that the clip from 750,000 sheep—equal to 2,000 tons—which is at present sent to Sydney and Newcastle from the country around and west of Inverell, would be trucked at Inverell;" do you think that is an under-estimate? I do.
2606. According to the figures you have given us, you think that is considerably under-estimated? Yes.

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I wish to hand in a statement giving the number of sheep depastured within a radius of 80 miles of Inverell, west and south-west. The majority of the places named in the return are much nearer than 80 miles, the only place so far distant being Yetman. The following is the statement I have prepared:—

Number of sheep depastured within a radius of 80 miles of Inverell, west and south-west.

Name of Run.	Distance from Town.	Number.	Name of Run.	Distance from Town.	Number.
	Miles.			Miles.	
Auburn Vale	8	20,000	Yetman	75	10,000
Cope's Creek	12	10,000	Mobinbry	80	12,000
The Grove	16	20,000	Kalki	22	8,000
Long Reach	25	6,000	Bannockburn	14	20,000
Clerkness	30	30,000	Bukkulla	20	20,000
Beverly	30	10,000	Dinton Vale	16	10,000
Keera	35	15,000	Arrawatta	10	10,000
Cooringoora	40	10,000	Nullamanna	12	10,000
Myall Creek	30	100,000	Pindari	25	15,000
Reedy Creek	22	40,000	Inverell Station	3	30,000
Gragin	30	80,000	Prairie Park	9	10,000
Gournama	40	35,000	Byron	4	15,000
Oregon	45	14,000	Newstead	17	50,000
Gunyerwarildi	60	100,000	Various small holdings	.....	100,000
Yallaroi	70	80,000			
Coolootai	60	20,000	Total	.....	1,000,000
Wallangra	45	90,000			

Allowing 5½ lb. per sheep the total quantity would be 2,455 tons.

2607. Do you think the whole of that traffic would come to the railway? I do, even if a railway were constructed from Narrabri to Moree.

2608. Did you supply figures similar to these to Messrs. Scarr and Price? Yes; I went over all the figures with them. I did not prepare them a detailed statement like this, but I gave them the total figures.

2609. You have every confidence in the accuracy of these figures? Yes, I will let anyone challenge those figures.

2610. In addition to the traffic which you estimate on the railway between Inverell and Glen Innes, there would, of course, be the railway revenue derived from it after it got on to the main line. In that way the railway revenue generally would be increased, would it not? Yes; I look upon this railway as a grand feeder to the main line.

2611. What do you think of the rival routes which have been suggested;—have you given that subject any consideration? Yes, I have considered it for the last fifteen years.

2612. Take the Guyra route first. What is your opinion with regard to that? I do not think that any half dozen, or even three producers are in favour of the Guyra line.

2613. Have you traversed that line? Yes, I know the whole country. Everyone is opposed to that line, with the exception of Mr. Wyndham, and, perhaps, another wool-grower, to whom it might possibly be of some slight advantage in sending their wool down; and it might also make a difference, perhaps, to some commercial men in the town.

2614. Have you read Messrs. Scarr and Price's report in regard to the character of the country between Guyra and Inverell? Yes.

2615. They say in their report—"Statements much at variance with facts have been persistently made by some of the opponents of this route, as to the quality of the land over which it passes, it being freely described as 'worthless,' 'thoroughly rotten,' &c. On the contrary, though a considerable portion of the country traversed by the line is of very inferior character for agricultural purposes, the wholesale condemnation of the country is certainly not justified." What do you think of that? I do not think it is justified. I think there is some pretty good land between Wandsworth and Guyra. At the same time no big settlement or township has sprung up there, and that is the best evidence that the country has not been in much demand.

2616. With regard to the extent of land fit for agricultural purposes, does that route compare favourably with the route from Glen Innes to Inverell? No, I do not think there is the slightest comparison.

2617. Is there any extent of farming going on along the line? They grow hay and potatoes pretty well, I believe.

2618. Whereabouts is that? Between Guyra and Wandsworth, and about the Mother of Ducks. They grow potatoes splendidly there.

2619. The Mother of Ducks is close to the main line? Yes.

2620. What about the routes to Uralla and Kentucky? We never considered them.

2621. Because they are too far south? We would not think of competing with a district like Tamworth, and other southern districts, in grain growing.

2622. And the reason you do not take the Uralla or Kentucky route into consideration, is because you do not look for your market to the south, but from Tamworth northward? Yes.

2623. If you wanted a line to connect you directly with Sydney or Newcastle, you would prefer one of those lines? I think we would prefer to go by Bingera and Tamworth.

2624. Either the Uralla or the Kentucky route would be utterly useless, you say, for this district? Yes; decidedly so.

2625. The line between Glen Innes and Inverell passes through some large estates, does it not? Yes; there are two large estates—Campbell's and Anderson's.

2626. Do you know whether these gentlemen would be likely to give the land if the railway were to go through their estates? I did hear them discuss it. I did not hear them talk about the actual giving, but I think they would be very glad to give it at a reasonable rate. Offers have been made by other owners, one of whom I know offered to give his land at £1 an acre if the line went through his property; but that was before the new survey was made. I have not heard similar statements from others.

2627. But you do not think they would make exorbitant claims? No, I do not think so.

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2628. Do you think if the line went to Glen Innes the people who would avail themselves of the railway would object to the extra distance of 35 miles between Glen Innes and Guyra—I mean people going south? I never heard that they would; I never heard the question raised. At the present time, owing to the differential rates, we are just as well off as the Tamworth people for wool, so I do not think the graziers would raise the objection. I would like to point out that I look upon this district as essentially a farming district, and in dealing with, or disposing of, any properties I always treat them from that point of view, and I think large land-owners in this district look upon the matter in the same light. Most of them are very anxious to cut up their estates, and let them at a low rental for cultivation, because it does not pay to grow wool if they can get 10s. an acre rent for the land.

2629. From your general knowledge of the district, do you think it would pay a large land-owner better to cut up his land, and let it or sell it for farming purposes, than to continue to run sheep upon it? Yes; I am quite sure it would, and that is what they all have in view. I am satisfied the greater portion of the land would be under wheat.

2630. For the sake of calculation, we have fixed 10s. a ton as about the probable charge for railway carriage between Inverell and Glen Innes;—suppose your predictions as to profits were not realised, do you think the people would be prepared to pay a little higher than that, seeing that now they have to pay 30s. a ton? Yes; I think they would be very glad to do so; but, like everybody else, they would wish to have the rates as low as possible.

Mr. Alfred George Jenkins, storekeeper, Inverell, sworn, and examined:—

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2631. *Chairman.*] What is your occupation? I am a storekeeper.

2632. *Mr. O'Sullivan.*] How long have you been in Inverell? About four years.

2633. Is trade good in this district? It is fair—not nearly as good as when I first came here.

2634. What is the reason of the falling off? I think it is a great deal owing to the decline of the tin industry in and around Tingha, and also to over production on the part of the farmers. They have grown so much corn that the storekeepers have had to take it, and very often suffer a considerable loss in realising. I may say that the usual course of business here between the storekeeper and the farmer is, that the farmer runs his account with the storekeeper until such time as his crop is harvested, and then he brings in the wheat or corn or anything else he may have, and it is placed to his credit. Of course the storekeeper has to turn the wheat into flour, and find a market for the maize. There is not much difficulty in disposing of the flour; we have always had a fairly good market out west for it, and we have always been able to keep up with the production. The only occasion when I remember that there was a large surplus was the second year I came here. There had been a very considerable harvest in 1887, and in 1888 there was a large surplus of wheat and flour; but as 1888 was a very dry year the flour all came in in 1889. I happened to be a very large holder of flour at the time, and managed to make something out of it. Flour went up as high as £17 a ton here then. Maize we had always been able to get rid of at Tingha, Emmaville, and places round about; but at the commencement of last year I found myself with 1,600 or 1,700 bags of maize, representing between 6,000 and 7,000 bushels, and with no market for it. I could not sell it at Tingha, and having to look for a market elsewhere, I sent it to Sydney. The flood on the Clarence had just taken place, and maize was worth 5s. and 5s. 3d. in Sydney. I had given 3s. for this maize. The carriage from here to Sydney, and the loss of bags I reckoned at 1s. 5d., which brought the cost to me up to about 4s. 5d. I looked to make at least 7d. a bushel on my maize, which on 7,000 bushels would be a fairly handsome profit. I loaded seven waggons with about 3 tons each, or from 3 to 4 tons. Rain set in, and the carriers were all afraid to tackle the road, and the maize remained on the waggons under the tarpaulins for eight days. When it got to Sydney maize had gone down, and instead of making the profit I expected, I had to suffer a considerable loss. Some of the maize only realised about 2s. 11d., and for the best of it I think I got about 4s. Of course if we had had a railway the maize would have been put into trucks, and would have been in Sydney in forty-eight hours, and I should have got on to the good market. Of course somebody had to bear that loss. The next year we were very careful. Instead of giving anything like 3s. for maize we bought at 2s., and as the Sydney market still kept high I managed just to get my money back. Now there is a very large crop of maize almost ready to be harvested, and we hardly know what to offer for it. It is very good maize. I myself took a sample to Sydney, and Mr. John See, who is an authority on maize, and the state of the produce market in Sydney, assured me that they had never seen anything in Sussex-street to equal it. The New Zealand maize they thought approached it, but nothing either from Tumut or the northern rivers came anywhere close to it. So that we are always certain of getting a good price for our maize if we are able to get it away. With regard to wheat, I think the farmers have been obliged to look at it from rather a bad standpoint. I am going to be perfectly candid in what I say. Doing business on the terms which we do, we have been obliged to put a profit on our goods that would cover any possible loss in taking the produce. We have always reckoned in taking maize that two years out of three we have made a loss upon it. We have always looked upon that as a certainty. We have been obliged to sell at a less price than we have given the farmers for it two years out of three. Consequently, the farmer has had to pay for his goods. But when he considers that he cannot grow wheat under 3s. 6d. he is very wide of the mark. I should consider, myself, that wheat could be grown here for at least 2s. 9d. cash. If a farmer were certain that he could bring his wheat into Inverell and get 2s. 9d. cash for it, it would pay him. I consider that 2s. 9d. cash is a great deal better to him than 3s. 3d. credit.

2635. One of the first results of the railway would be to give great purchasing power to the commodity of the farmer? Undoubtedly. It is what the farmer wants. I consider, from my experience of the district, and I have moved about it a good deal, that at the present time the farmer here is in the position that unless he is provided with an outlet for what he grows he must in a very short time collapse. I see no help for it. Lots of men have been obliged to go under. The members of the Committee, as they came in on the coach, passed about 3 miles out what was once, to my knowledge, a very flourishing homestead, owned by a very intelligent man, who has been obliged to give in, and who has sold his selection. I could point out several instances where exactly the same thing has taken place, and it must continue to take place unless the farmers get some means for disposing of their produce. They have overtaken the local consumption, and the question is;—must they give up producing or can any means be provided to give them an outlet for what they grow. With regard to wheat, I think the Committee yesterday asked

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one or two witnesses whether they had ever sent wheat to Glen Innes or out of the district. Of my own knowledge, Mr. Eddy is the only farmer who has ever dealt with his own crop. The farmers' market has always been Inverell. The duty of getting rid of the wheat or corn falls upon the storekeeper. The year before last, when rust was so bad, Mr. Utz bought all his wheat in Young and Cootamundra. He could buy his wheat there, and, with the differential rates, could land it in Glen Innes cheaper than he could buy it here. If there had been anything like the proper quantity of wheat that should be grown here, and a railway had been here to convey the wheat at a low rate, Mr. Utz could have bought all his wheat here instead of going to Young and Cootamundra. As a matter of fact, he has a man down here now trying to buy wheat, and I believe he would buy all the surplus wheat that has been grown in the district this year.

2636. Is there anything else you would like to state? The Committee asked some questions about potatoes. I can say from my own knowledge that potatoes can be grown very well here. Mr. Stout said that the present price was about £5 a ton. That is correct; but I have seen the time here when you could buy potatoes at £1 a ton, and, of course, if there had been any way of getting them out of the place we could have put them on the Sydney market and realised a higher price than that. The potato crops here are most prolific.

2637. How far does the influence of this town extend? West, north-west, and south-west. We would go much further south than Tingha. The flour and the maize appear to go out west quite as far as Moree in one direction, and pretty well all down the M'Intyre River to the Barwon on the north and north-west. I never operate very much out that way myself. I have always preferred, as I did last year, to send whatever I have where I am certain of getting a ready cash return, and I have sold maize in Glen Innes, Armidale, Warwick, Maitland, Newcastle, and Sydney. Wherever I could hear there was a chance of putting in a truck-load of maize I have sent it there. But I know there are storekeepers in the town who have sent flour, maize, and chaff out into all the districts I have named.

2638. Did you ever do much trade with the mining centres, such as Emmaville and Castlereagh? I have sent lots of maize to Emmaville.

2639. Are these mining centres good markets for the Inverell district? Yes, they have been; I do not know that they are quite so good now.

2640. Have you done much trade with Queensland? No, I have never sent anything into Queensland.

2641. Which route would you prefer as a business man? I would like to answer that question first as a business man, and then as an inhabitant of Inverell.

2642. As an inhabitant of the district, desirous that it should receive the best possible benefit from railway communication, what is your opinion? Then I say go to Glen Innes.

2643. Why? Because I believe that for the district it is the best route. I can see that there are very great possibilities for us in the northern part of the colony. Knowing the district as I do, and that we can produce what is wanted on the northern coast, and believing also from what I have observed of the proceedings of Parliament, that there is a chance of our getting to the coast, possibly from Tenterfield to Byron Bay, I can see there is a big opening for us to put our flour, if not our wheat, down there as soon as the line of railway is constructed.

2644. Now what is your opinion as a business man? As a business man I should say the further south you go the better, because I buy all my goods either in Sydney or Melbourne. Sugar I buy from Grafton, and I should like to touch upon that further on. But as a business man I go to Sydney, and the nearer I can get to Sydney the better it suits me. Then there is another reason; though it is a very selfish one. At the other end of the Inverell-Glen Innes line there is a very big town, and there are some very big storekeepers there, and the line opened from Glen Innes to Inverell means increased competition for me. There is no town to speak of at the other end of the Guyra route, nor is there at Kentucky, and I know I have nothing to fear from them.

2645. What about Armidale? I am not so much frightened of Armidale, as I am of Glen Innes.

2646. Which of these interests would predominate in your mind in giving a decision in the matter? I would rather not answer that question.

2647. Would it not be to your interest as a business man to favour a line which would benefit your customers who live by this district? Yes; I daresay it would, so long as they did not go to an opposition storekeeper. If you can guarantee to keep me my trade, I should say "Yes, benefit them all you can." But, putting aside all selfish considerations, I say that Glen Innes is the best for the district undoubtedly, because, as I said before, there are great possibilities on the Richmond, and on those northern rivers. There is a very large population there whom we could supply with flour and wheat. Of course, I expect you will ask me if we could send wheat as cheaply to Casino as they can send it from Sydney, and I think we could, because I do not think I am going too far when I say that it is easier and cheaper to produce a large quantity than a small quantity. My experience here has been against the small farmer. The man who I find does best here is a man with a fairly large holding, who can afford to throw part of his land fallow for a season, and graze sheep on it. But the man who has got 40 or 50 acres, in my experience, is no good. The man who depends entirely upon the crop off his land for his subsistence is not the man who will send the district ahead. I believe I am not right in regard to all districts, but so far as my experience here has gone, it is with men of that kind that I have lost the most money. The big man who can run 500 or 600 sheep, and who can afford to throw his fields idle and let the sheep run over them, is the man who does best.

2648. Would not your argument land you in favour of large estates by-and-bye? No, I do not think so. I am not speaking now of holdings of 10,000 or 12,000 acres, but I am speaking of men with 500, 600, or 700 acres—such men as you had before you to-day, none of whom, I think, had holdings above 2,000 acres. You can produce a large quantity more cheaply than you can produce a small quantity, and I think if they knew they could get their produce away they would put a much larger area under cultivation, and they would be able to sell their wheat more cheaply. Having a large quantity they could sell it more cheaply, and having a cash market they could sell it more cheaply.

2649. Would the railway enable you to get sugar from the Clarence? Yes, and I think that is an additional reason for going to Glen Innes. At the present moment I have a team down in Grafton bringing up sugar for me, so that there is an item of trade straight away from the eastern coast up to Inverell. Before the differential rates came into force, I got the greater part of my goods from Grafton; they were sent round by water to Grafton, and were then brought up here by teams.

Mr. A. G. Jenkins. 6 May, 1891.

2650. Then there is a strong probability that there will be a large interchange of commodities between Inverell and the coastal districts? Yes. There is the item of timber. The timber here is not very good for building purposes, while on all the ranges on the coast there is some very fine timber, and I believe, from what the builders in town tell me, that a very large trade would spring up in timber alone. Some of them estimate that there would be as much as from 12,000 to 14,000 tons of timber per annum. I am speaking now, of course, only of the requirements of Inverell. There is no good timber for building out west, and if the good timber from the coast were brought to Inverell these outlying places would come in here for their timber.

2651. This would be a depôt for the timber from the coast? Yes.

2652. Have you anything further to say? There is one matter I should like to point out with regard to Guyra. I think it is only fair that it should be mentioned. Within the last two or three days, certainly within the last week, Wright, Heaton, & Co. have closed their office at Guyra. I may also remark that all the tin from Tingha is now coming through Inverell. I do not know that I have anything else to say. Sydney, of course, is not a wheat market; it is always dependent upon other places for wheat, and I do not think, considering the extra cost of re-handling in Sydney, that the northern coast ports are likely to get their wheat more cheaply from Sydney than from Inverell—that is, reckoning it on the basis of the present truck rate from Sydney to Glen Innes. If the scale of charges were worked out on the same basis, we should be able to land our wheat in Casino as cheaply as they could obtain seaborne wheat from Sydney. With regard to the rate of carriage on the railway, you asked Mr. Sinclair if he thought the people would object to pay 10s. a ton. I should not object to pay over 10s. a ton.

2653. *Chairman.*] You would like to get the carriage as cheap as you could, but, rather than lose the railway, you would pay considerably more? Yes. The only thing is that some of my customers might object.

THURSDAY, 7 MAY, 1891.

[*The Sectional Committee met in the Court-house, Tingha, at 2.30 p.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN.)

The Hon. WILLIAM JOSEPH TRICKETT.	EDWARD WILLIAM O'SULLIVAN, Esq.
JAMES EBENEZER TONKIN, Esq.	WILLIAM MCCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Robert Buist, mining manager, Tingha, sworn, and examined:—

Mr. R. Buist. 7 May, 1891.

2654. *Chairman.*] What is your occupation? I am a mining manager.

2655. How long have you been resident in the district of Tingha? I have been about eleven years in the Inverell district, nine of which I have spent in Tingha.

2656. I understand that you have prepared a statement which you desire to read to the Committee, as embodying the opinion of the people of this district with reference to the railway proposal? Yes; my statement is as follows:—

In dealing with this question of railway communication between the main northern line and the town of Inverell, and more particularly with regard to a line between Guyra and that town, through Tingha, there is so much to be said that it is difficult to perform the task of speaking or writing on it without either being injuriously brief, or, on the other hand, laying oneself open to the charge of being wearisome; and of the two evils I shall avoid the latter, your time, gentlemen, being valuable, and that at your disposal for the present work, I presume, limited.

In the first place, nothing further need, I think, be said on the respective lengths, &c., of the two lines—Glen Innes and Inverell, and Guyra to Inverell—than that the difference between the two is hardly worth speaking about, while the latter has the advantage as regards cost of construction.

The following points in connection with the whole matter, it is respectfully submitted, are well worth considering:—

1. *The support the Guyra line would, if constructed, receive.*—It appears to most that this is one of the principal features in the affair, and one which should have much weight in arriving at a determination in the case. A few facts and figures anent this will be given, and with a correctness that challenges contradiction. The population of the Tingha field (list taken early this year) amounts to 2,988, out of which 703 are Chinese. The number of miners is about 1,200, while the area held under mineral lease, as shown by return in *Government Gazette* of the 1st of last month (April), is no less than 7,042 acres. The quantity of ground held and worked by virtue of mineral licenses, I have no means of ascertaining, but it must be something considerable. The quantity of tin ore won and sent away last year (1890) amounted to about 1,200 tons, of a local value, at the, comparatively speaking, low rate ruling, of £62,000 sterling. The goods received (from Sydney principally) amounted to about the same tonnage, if not a little more. And I am in a position to show, if you require it, that there need be no fear of a diminution in the output of tin ore from the alluvial for years to come, notwithstanding the predictions of some interested people in Inverell, who know nothing whatever of tin-mining, not having speculated a solitary sixpence in it in their lives. Regarding the probable future of the lode-mining industry, you will have qualified and experienced men to give you an opinion on such. The statements made that there is a steady decrease in the output of tin—whether made by the Warden or others, I care not—is not in accordance with fact, as, although the output last year was slightly less, about 150 tons, than in 1889, the tin won last year exceeded the output of 1888 by 193 tons, and for the first quarter of the present year the output will bear favourable comparison with any similar quarter during the past three years. As an absolute fact the output is now, roughly speaking, about stationary, and it is likely to remain so until lode and further deep lead developments take place, when the tin won will no doubt be much greater. In the matter of wool, there would, from Tingha and its vicinity, be at least 200 tons sent if a railway were running now, which wool, with tin ore, would amount to 1,400 tons available for transit yearly. Regarding capabilities for agriculture, it should be pointed out that there is a wide strip of red basaltic country running from

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from the Gilgai—5 miles from Inverell—through the Pond country, along Topper's Mountain, then through Kangaroo Camp, and away onward by Moredun to Guyra. This country would be close to the Guyra-Inverell line all the way, and such line would, if in existence at present, receive considerable support from farms thereon, and in time would get far more than could ever be commanded by the line from Glen Innes *en route*—the latter being for nearly the whole of the distance through private estates of large extent. *Re* capabilities of soil, extent of land under cultivation about Tingha, and within easy distance of Guyra railway route, together with character of cereals, fruit grown, &c., also possibilities of district, from an agricultural point of view,—evidence of such will be given by gentlemen engaged in farming and fruit-growing pursuits here. A great feeder of this line would be Bundarra and district, or, rather, a feeder of no inconsiderable importance. In Bundarra township alone, the population is about 350, while, within a radius of 15 miles of such, the population is 450, or a total of 800. The weight of wool sent away every year is about 500 tons, while the goods received from Uralla is about 600 tons annually. Taking, then, the 1,200 tons tin ore, and 200 tons wool sent from Tingha and neighbourhood to Sydney, together with the 500 tons wool sent from the Bundarra district, *via* Uralla, to same destination every year, we have a total of 1,900 tons available for despatch by Inverell-Guyra line, should such be constructed—such freight proving an addition almost equal to the tonnage of wool sent from Inverell—the only product it has to send, which tonnage is set down by Messrs. Scarr and Price at 2,000 tons per annum. There is no getting away from such facts as these. And further, and most important to be noted, these particular products must necessarily for some years go to Newcastle or Sydney.

2. *The effect of the Guyra line on Inverell.*—Although much has been said—with what force will be considered further on—regarding the advantage of a line to Inverell from Glen Innes, not a disadvantage, except one—and that depends on a remote contingency—which will accrue to the construction of the Guyra line has been pointed out. The first cry of Inverell was, "We want to get to Grafton, to exchange commodities with it"; but when the Glen Innes-Grafton route was declared impracticable, the next cry was, "We want to get our produce to Queensland." At present it is, "We want to get to Queensland and Byron Bay." Now, in the Darling Downs district alone—as has been pointed out times out of number—there is an area under wheat,—the cereal always brought into question in this matter—nearly one-half greater than in the districts of Glen Innes, Tenterfield, and Inverell put together, while as regards maize, the difference in favour of the Darling Downs is as 19½ is to 8. To state this in conjunction with the fact that wheat can, at present rates, be landed in the extensive market of Sydney at over 1d. less per bushel than it can be landed in the small one of Toowoomba, seems sufficient to explode most effectually the idea of a Queensland market for Inverell wheat. If Inverell will return to its first love, Grafton, the connection will be complete by the construction of the Inverell-Guyra line, and the almost universally approved of one from Guyra to Grafton. Then it will have both down the line, Sydney-ward, and the Clarence district for markets, and as a continuation of the line from Lismore to the Clarence is no more remote a contingency than the line from Tenterfield to Casino is, it, in time, will also have the Richmond and Byron Bay for a market. Here is a noticeable feature in connection with this boasted export of wheat, &c.: Inverell, although it has been an agricultural district for a great number of years, has not yet been able to grow sufficient to meet its own requirements, and, furthermore, it does not appear to be advancing towards that point. How then, if it cannot, or rather does not, do this—that is, meet the demands of the market at its very door—can it it be expected that a railway from Glen Innes will galvanize it into an activity that will cause it not only to grow enough produce to supply its own wants, but to grow a surplus at a cost that will enable it to send it to Queensland, where the senders would have to compete against the Queensland farmer in his own market? This "Queensland market" argument is so absurd that a simple statement thereof is, perhaps, the best refutation of it that can be given. Hence, from the above it will be seen:—1st. That Inverell has little, if anything, else than wool to send away, and Sydney or Newcastle is the destination of such, or when home-going vessels trade to the Clarence, and the Guyra-Grafton line is constructed, probably for some of it, Grafton; and 2nd. If it had anything else to send away, Queensland is not the place to send it to with most advantage as to profit.

3. *A peculiar phase of the question.*—Now that the Queensland argument has been shown to be fallacious, it must seem to an outsider strange that Inverell should so strenuously oppose a line to Guyra, seeing that if it will be put to the cost of an extra 37 miles from Guyra to Glen Innes on its way to Tenterfield and Casino, it would, on the other hand, be put to the cost of travelling the same 37 miles to reach Grafton or Sydney. And this will appear stranger when it is pointed out that before the impracticability of the Glen Innes-Grafton line was declared, the Clarence, Glen Innes, and Inverell districts combined, and, by means of a railway league, did their utmost to get railway communication between Inverell and Grafton, these two being the places which, it was alleged, would reap the advantage of an interchange of commodities. At that time it was predicted that an era of unparalleled prosperity would ensue if such lines were constructed. This tall talk about prosperity still exists, but Byron Bay is at the other end now—not the Clarence. Before, nothing would serve Inverell but Grafton; now, nothing will serve it but the Richmond and Byron Bay. The cause of the agitation is not far to seek: land speculation about Glen Innes and Inverell, on a certain contingency, is at the bottom of it all, and that certain contingency was, and is, a line from Glen Innes to Inverell.

4. *The question of land through which the two routes run considered.*—In the matter of the Guyra line there is a great deal of land along its course yet unalienated, while on the Glen Innes line "almost the whole of the land is alienated, and is principally held in large pastoral estates." The statements are those of Messrs. Scarr and Price, although I, myself, know that both such statements are correct. To say nothing of the cost of resumption, the injustice of improving the value of so large a stretch of private property at the expense of the taxpayers is manifest, and the more unjust it appears when we consider that some of those very taxpayers, if desirous at any future time of purchasing or renting a portion of such land, would have to pay a much higher price for it. In a word, they would have created a land value they would be called on to pay, if they wanted to purchase or rent a portion of the land, while the owners, who had contributed almost nothing, and had done nothing to increase its worth, would reap the benefit accruing to a condition of things brought about at the expense of others.

5. *Reason why railway traffic to Glen Innes increased, and to Guyra diminished, of late.*—The reason why this has accrued is that freights to Glen Innes from the metropolis are actually less than to Guyra; in fact, so much so, that certain goods can be sent from Sydney to Glen Innes, and then returned to Guyra for less than such goods can be sent from Sydney to Guyra at once. That is, less considerably

for

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for 74 miles further haulage. Whether this arrangement has been made in order to add to the importance of Glen Innes I do not know; but at all events, intentional or not, it has had the effect of swelling the quantity of carriage to and from Glen Innes. The truck rates at present are, for general merchandise, £30 to Glen Innes, £40 to Guyra, a difference of £10; for rice, £24 to Glen Innes, £40 to Guyra, or £16 less for a further distance of 37 miles. Is it any wonder, then, that the Tingha people receive their goods at Glen Innes instead of having them delivered at the nearest railway station—Guyra? The policy of charging less for a greater distance of 37 miles is a piece of wisdom few, indeed, seem to be able to comprehend.

6. *Would the Glen Innes line secure the Bundarra and Tingha trade?*—Certainly none of the former, as to send wool, &c., from thence to Sydney by such would necessitate team haulage of 30 miles to Inverell, thence by rail, *via* Glen Innes to Uralla, 132 miles, or a total of 162 miles, to reach a point distant from Bundarra by present road only 50 miles. As regards the Tingha trade, for some of it, perhaps, but with freight charges regulated according to distance—that is, less to Guyra than to Glen Innes in proportion to less miles traversed—the point on line travelled to would undoubtedly be Guyra; and for this reason: Tin ore, &c., would have to be carted 15 miles to Inverell, and then carried by rail 90 miles, or in all 105 miles, to reach a point (Guyra) which, by road, is only 40 miles away from us. Under such conditions, the probability is that the Glen Innes line would receive very little support from Tingha, and none at all from Bundarra. Whether it would be wise from a national point of view to leave out two such important feeders, which, combined, would contribute as much to the earnings of the railway if taken to Guyra, as Inverell would, is a matter that seems to require no great consideration to give an answer to. Besides, the line from Inverell to Guyra would increase in importance day by day, as a deal of the land on its course is still available for selection, and, therefore, settlement would be promoted, and consequently the tonnage for despatch and receipt increased. On the Glen Innes line this could hardly be the case, for the all-sufficient reason already given, viz., that nearly the whole of the land on that route is held in large estates, the breaking up of which, judging by experience, is highly improbable. I might mention that I know of over 15,000 acres that have been taken up, in portions varying from 300 to 1,280 acres, during the past twelve months on the Guyra line, and within 6 or 7 miles therefrom. There is a great deal more than this, but doubtless some of the Guyra people, who are working up the figures, will be able to give the exact quantity, &c.

7. *The Tenterfield-Casino railway project as a determining factor in the matter of the Glen Innes line briefly noticed.*—Conceding that the Tenterfield-Casino line will have to be constructed "in time," the question that suggests itself is: "When will that time be?" If, when the Byron Bay breakwater is constructed, then, by reason of the period that must necessarily elapse before that place can be made available for shipping, even if work were commenced within (say) the next five years, the country in the north of the colony along the Queensland border and to the west of the main line, would be in such a state of advancement that a railway through such, from a point between Glen Innes and Tenterfield, would be imperative. The "all-time" argument used in favour of the Glen Innes-Inverell line is not, by any means, comprehensive enough; it should be carried to its legitimate conclusion. "All-time" is a very long time, and the project of the new line in the north referred to, which at present may appear to savour of fervid speculation as to certain probabilities, will, in a few years, no doubt, become a thing of stern necessity. Simply stated: if the country is ripe for a network of railways such as will then be in existence in the northern districts of the table-land and coast, it is only reasonable to believe that better communication will have to be provided through the extreme northern inland districts of the colony west from the main line than that which will be afforded by a line from Glen Innes to Inverell, onward through Bingera or Warialda. While nothing is desired to be urged against the Tenterfield-Casino line, the following is worthy of note: In advocating the necessity for the construction of such, Messrs. Scarr and Price give as a reason, "That it will pass through the important mining district of Fairfield," while, in speaking of the Tingha field, the inference to be drawn from their words is that it is dying a natural death. The positions of the respective places during the year preceding the visit were, as shown by Mines Department Report, to be as follow:—Fairfield had a population of 500; its output was 2,436 oz. of gold—two-thirds of which were obtained from the alluvial; while, on the Tingha field, there was a population of 3,000, and the tin sent away was about 1,350 tons, of a local value of £70,343. And, while Fairfield has fallen off since that time, Tingha has, if anything, improved. So, if the claims of Fairfield are worthy of so much notice in the matter of the Tenterfield-Casino line, how much more so are the claims of Tingha and Bundarra in the matter of a line from Inverell to the main trunk line? The former (Fairfield) would have the outgoing freight of 2,436 oz. of gold, or barely 2 cwt. yearly, and the incoming freight to supply the wants of 500 people, while the Guyra line would have an outward freight of 1,900 tons and an incoming one of supplies for about 4,000 people. There may be nothing in the comparison, but, bearing as it does on the lines reported on, it is, to say the least of it, interesting.

8. *The Queensland and Byron Bay arguments equally forceful as regards the Guyra line.*—Admitting everything that has been alleged in favour of a line from Inverell to Glen Innes on the score of Queensland and Byron Bay markets, the arguments which appear to give the scheme force are all the more forceful when applied to the Guyra line. If it would benefit the Inverell farmer to send his wheat, &c., to Queensland or Byron Bay, it would benefit the agriculturists of Bundarra and along the Guyra line to send their produce there also; and, such being the case, the Guyra line would be the better line to construct, because such would—independent altogether of the 2,000 tons of tin ore and wool we would have for carriage to Sydney—command the trade of the three districts—Inverell, Tingha, and Bundarra—instead of, as in the case of the Glen Innes line, only one—Inverell. Anyone can see that, except those who purposely shut their eyes and say, "We cannot see."

Summarising the whole affair, the following may be assumed to be a fair statement of the matter at issue. In favour of the Guyra line it may be said:—

1. It will cost at least £15,000 less.
2. It will command about 2,000 tons carriage each way annually, with every promise of yearly increase, that a line from Inverell to Glen Innes would not get.
3. That there would be very little land to resume, the reverse being the case on the Glen Innes route.
4. That the Guyra line will promote settlement—the chief end aimed at in railway construction—a condition that, for reasons previously stated, cannot accrue to the construction of the Glen Innes line.

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5. That the Guyra line would serve the Inverell people quite as well as one to Glen Innes.

And I would further submit:—

(*a*) That the argument of a Queensland market for Inverell has not, as has been shown, the shadow of a foundation to rest on.

(*b*) That the Queensland and Byron Bay argument, even if valid, applies with greater force to the Inverell-Guyra line than a line to Glen Innes; and

(*c*) That the "all-time" theory, driven to a logical and complete conclusion, goes to strengthen the other arguments, already expressed, that the line from Guyra instead of from Glen Innes should be the railway route adopted.

In conclusion, I may say that the statements given are strictly correct, and further, that in one particular, if in no other, I am well qualified to state the case fairly, and reason it out honestly. That particular is—I have no interest whatever to serve in the matter, as I do not own an inch of land in the whole of the district, either in Inverell, Tingha, Bundarra, or Guyra, a thing few, if any, of those who have given evidence before you can with truth say.

2657. How long did you say you have been resident in the district? About eleven years.

2658. Are you familiar with the whole of the district from Kentucky south away north to Inverell? No, I know nothing about the Uralla district.

2659. How far does your personal experience, with regard to the country generally, extend over the district—say south? Down to Bundarra, to Cope's Creek, into Inverell, round by Elsmore, Tingha, and up the line to Guyra.

2660. Do you know anything of the country to the north or west of Inverell? No, not of my own knowledge.

2661. You quoted figures just now to prove that Tingha was not going down in the matter of its products;—is it not a fact that there is considerably less population in Tingha now than there was a few years ago? I do not think the population has materially decreased; I do not think it has decreased during the last four years.

2662. Are you sure of that;—have you made inquiries? Yes, to the best of my belief three or four years ago the population was about the same, viz., 3,000.

2663. Then there has been no increase or decrease? I do not think so.

2664. And you are clearly of opinion that products of the district, consisting principally of tin, have not diminished to any material extent? Since 1888 they have not.

2665. Is it not a fact that nearly all the alluvial deposits of tin at Tingha are worked out? No.

2666. How does the tin at present go to the Great Northern Line from Tingha? It goes from here to Inverell, and from there to Glen Innes.

2667. You spoke of the differential rates just now, coming up from Sydney;—does the same thing exist in reference to goods going to Sydney? There is a difference, I believe, but I think Mr. Litchfield will be able to give information with regard to prices.

2668. You do not know, for instance, the relative cost of sending tin to Sydney, *via* Guyra, and *via* Glen Innes? No, I do not; but this I do know, that teams are compelled to go to Glen Innes on account of the back loading. They take the tin as return freight, otherwise they would go back empty.

2669. But if the owners of the tin had to pay an increased cost of carriage between Glen Innes and Guyra, would they not object to teamsters taking it that way? As a matter of fact, I cannot speak absolutely on the point; but I should imagine that the charges must be the same, or less, from Guyra.

2670. You do not send any tin away, and are not prepared to give any definite information? No; I have given the reason why tin ore is sent there—because it is taken as back loading by the teamsters.

2671. If a railway were constructed from Glen Innes, which would be the nearest point on the line to Tingha? If the line passes, as I am told it does, behind the school-house on Brodie's Plains, the distance would be about 14 miles. I notice that Mr. McCormack, of Glen Innes, gave the distance as 8 miles, but, as a matter of fact, you cannot reach the M'Intyre from here under 10 or 11 miles, let alone get across to the line.

2672. Do you think the description given in their report by Messrs. Scarr and Price of the country between Guyra and Inverell is an accurate description? So far as the Guyra-Inverell route is concerned, I think their report is substantially correct, as far as it describes the line travelled by them. There has been an omission with regard to the tracts of basalt country, to which I referred in my statement, and which runs near to the line all the way.

2673. The only thing they have left out is a reference to that strip of basalt country? Yes.

2674. Otherwise you think it a very fair report? I think that, substantially, it is a correct account of the country they would travel through on that route.

2675. Do you think that they have spoken in unnecessarily glowing terms of any of the other routes. I do not think so.

2676. You concur in their views respecting the quality of the soil on the different routes? Yes.

2677. Did Messrs. Scarr and Price obtain any information from you when they were here making their inquiries? None at all.

2678. Do you know from whom they obtained their information? I do not. I never bothered myself about the matter until the Sectional Committee came here.

2679. How do you arrive at the conclusion that there will be no traffic from Bundarra to the line from Glen Innes to Inverell? By reason of the greater distance.

2680. Where do they go to now? The wool goes to Sydney.

2681. Where do they tap the northern line? At Uralla, 50 miles distant.

2682. Is wool their only product? They have no market for anything else at present. There is a deal of land under cultivation to supply their own wants, but nothing further.

2683. Do you know Bundarra? Yes; I have been there a good many times.

2684. Is it chiefly pastoral country? Yes, the settlers are chiefly small sheep farmers.

2685. There is no agriculture because there is no market? There is sufficient agriculture to supply their own wants. They bring up butter, and bacon, and things of that kind to Tingha. Agriculture is not carried on extensively there.

2686. How long is it since the carriers adopted the plan which you describe of going to Glen Innes, instead of to Guyra with their loading? I do not know exactly.

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2687. There was considerable traffic, was there not, at one time to Guyra with teams? Yes, there was a great deal of traffic,—so much so that teams carrying 4 or 5 tons cut up the roads.
2688. Can you tell us when that traffic ceased and was diverted to Glen Innes? I could not tell you—some few months ago anyway; it is a difficult matter to explain, because heavy teams travel the road that at the time suits best. They went backward and forward on the Glen Innes road several times when the weather was wet. After heavy teams have travelled for a few weeks on the Guyra line, which goes through a lot of rotten basaltic country, they are compelled to go round by hard roads.
2689. Then it is only after heavy weather that they adopt this route? No, they adopt it as a regular thing now.
2690. Because it is a better road? No, but because the goods which they bring to supply the people of Tingha are brought to Glen Innes at a less cost than that for which they could be carried to Guyra.
2691. Do you know the price paid respectively for the conveyance of goods between Glen Innes and Tingha, and between Guyra and Tingha? The same price is given—£2 10s. per ton.
2692. Are you aware that the firm of Wright, Heaton, & Co. have closed their agency at Guyra, and concentrated their attention upon Glen Innes? I am not aware; but I am aware of this, that the last time I went to Sydney, a few months ago, their business was very weak there.
2693. Do you not think that all this evidence points to the fact that Glen Innes is the natural point at which to connect Inverell with the northern line? No, I consider it is a forced one.
2694. Owing to the differential rates and other considerations? Yes, the traffic has been forced there.
2695. Do you know the price of wheat in Queensland? I do, from Messrs. Scarr and Price's figures. I thought I could not go wrong by quoting them.
2696. You quoted Messrs. Scarr and Price's figures to prove that there was a greater area under wheat in the Darling Downs district in 1888, than there was in the Tenterfield, Inverell, and Glen Innes districts put together; are you aware that the crops on the Darling Downs in the year referred to were almost a complete failure? I am not aware of that.
2697. While in Inverell it is very seldom that they have less than 20 bushels to the acre? I am aware that the yield of wheat in Inverell is estimated at from 18 to 20 bushels to the acre.
2698. If they always have good seasons at Inverell, and if in Queensland they are subject to failures, do you not think it likely that there would be a market in Queensland for the Inverell wheat? You are assuming that the failures will always be on the Queensland side, and never on the Inverell side.
2699. If it has been asserted that for two at least out of five years there is a total or partial failure of crop on the Darling Downs, and if it has also been stated that in the Inverell district, even under the most adverse circumstances, they never have less than 20 bushels to the acre, do you not think it is likely that Queensland would be a customer for Inverell wheat? I cannot give an answer to that, simply because one of the assertions is not in accordance with fact. If the statement that at Inverell they always have 20 bushels were correct, I would endeavour to give an answer; but that statement is valueless, simply because it is not true.
2700. How do you know it is not true? I know they have had seasons there when a lot of wheat has been cut down for hay early in the year.
2701. We have sworn testimony to the fact that for thirty years there has not been what they call three droughty years;—is not that really saying that there is never a bad year in Inverell? If any person states that the average crop of wheat throughout the Inverell district year after year is 20 bushels to the acre, I do not believe it.
2702. You say that the population of the Tingha district is 2,998;—what do you mean by the Tingha district? The mining reserve.
2703. Can you give us the boundaries of the mining reserve? What I mean by the population of the mining reserve is the people who are living on the reserve by mining, either by getting tin themselves, or doing business with those who are getting tin.
2704. There are a number of farmers close to the town;—do you not reckon those as amongst the population? They are people living on the mining reserve who took the ground up before it was declared a mining reserve, and are cultivating it.
2705. You said just now that there was not much alienated land on the line between Guyra and Inverell;—are you not aware that there are two large stations on the line, Tenterden and Ollera? Comparatively speaking, there has been no alienation—nothing compared with the other line.
2706. Is not the unalienated land on the Guyra-Inverell route very much inferior in quality to the land on the Glen Innes-Inverell route? Some of it.
2707. Do you know about the quantity of alienated and unalienated land in the district? No.
2708. How do you arrive at the conclusion that there will be very little land to resume along the route from Guyra to Inverell? Independently of the two stations just mentioned there is no land to resume worth speaking about.
2709. How do you know; where did you get the information? I know of my own knowledge that from Tingha right up to Tenterden there is no land at all.
2710. But what is embraced in the mining reserve? No; outside the mining reserve and inside the mining reserve.
2711. Have you any knowledge as to the extent of alienated land through which this route would run? No; it is a question I have not given a great deal of consideration to.
2712. Then on this, and many other points you have referred to in your statement, you simply speak from your general impression, without having any real data? If the information of Messrs. Scarr and Price in certain particulars is taken as correct, the statement of theirs with regard to this thing may be reasonably supposed to be correct also.
2713. Then you have drawn your information from Messrs. Scarr and Price's report? On that one particular I thought it was good enough.
2714. You know nothing personally, I suppose, as to the various proposed routes to connect the Great Northern Line with the coast? No; nothing beyond what I have seen in the papers and on the map.
2715. You have never been down to the coast from the table-land? No. I was on the Macleay, but never on the Clarence.
2716. Did you go down to the Macleay from the table-land direct? No, not direct. I have been by river up the Macleay, and pretty broken country it is.
2717. You went by steamer, I suppose? Yes, from Sydney to the Macleay. 2718.

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2718. Do you frequently visit Sydney? I have been down three times during the last seven or eight months.
2719. Where do you reach the northern line? At Guyra.
2720. Do the majority of people who travel to Sydney from here go to Guyra? Yes; all of them. I took my wife and family down six months ago, and I took them to Guyra and brought them back from Guyra, and I always go to Guyra myself.
2721. There is a coach three times a week? Yes.
2722. Then the passenger traffic between here and Sydney taps the main northern line at Guyra, but the goods traffic taps it at Glen Innes? Yes; that is so.
2723. Do you know where the Bundarra people tap it? They go to Uralla.
2724. How far is Bundarra from here? 18 miles south-west.

Mr. William Litchfield, mining agent, Tingha, sworn, and examined:—

Mr. W. Litchfield. 7 May, 1891.

2725. *Chairman.*] What is your occupation? Mining agent.
2726. *Mr. Trickett.*] How long have you been in business here? About nineteen years.
2727. Have you been in the business of mining all that time? Yes.
2728. As a practical miner, or employer? Both.
2729. Latterly, I suppose, more as an employer of labour and buyer of tin ore? Yes.
2730. Have you prepared any statement as to the mining industry of Tingha during the last two or three years; could you, for instance, give us the quantity of tin that has been sent away from Tingha every year, beginning at 1885, up to 1890? The quantity of tin in 1885 was about 2,000 tons. The average price of the tin was £48 per ton;—that would be the local price. In 1886 the quantity was 1,600 tons, and the local price about £50. In 1887 the quantity of tin was about 1,100 or 1,200 tons, and the local price about £50. In 1888 there were about 1,000 tons, worth about £69 per ton, the average for the year. This rise in value was as much owing to competition in trade as to the general rise in the market. In 1889 there were about 1,300 tons, and the average price for the year was about £52. In 1890 the quantity was about 1,200 tons, and the average price about £53.
2731. Could you tell us what the quantity has been for the first quarter of 1891? For the first quarter of this year the average has been about 18 tons per week, or possibly a little more. The price was £50 per ton.
2732. Then the output for the present year, according to the figures for the first quarter, is not likely to be as large as the output for 1890? Well, we cannot be guided exactly by that. Our mining operations depend a great deal upon the weather. For instance, in very wet weather all the workings in our creeks are brought to a standstill—everybody is shut out, and it is months before they can get back into the old ground. In very dry weather, also, the miners have to stack their tin, sometimes for six or nine months, before they are able to wash it. For instance, about a month ago, I had about 25 tons for one week's work, and the following week I had only 5 tons, so that one quarter will hardly afford a correct indication of the year's output.
2733. The figures you have given would indicate, would they not, that since 1885 the output has grown smaller by degrees and beautifully less? Yes; you may say that for 1888, 1889, and 1890, the output was almost at a standstill.
2734. Why is that? There were several reasons. One reason, and possibly the chief one, was the passing of the Chinese Restriction Act. We had a great number of Chinese on the field who were working poor ground. They have gone away by degrees, and have not returned owing to the operation of the Chinese Restriction Act; and though we formerly had 2,000 Chinese on the field we now have only about 700.
2735. Then the labour on the place is mostly dependent upon Chinese? There is another thing; many of the European miners have left here and gone to Hillgrove, Bear Hill, and other places, during the last few months. Many of them have come back, and they say they cannot find a better place than Tingha.
2736. I do not see how the Chinese Restriction Act could interfere with you;—I suppose all the Chinese who went away did not go to China? Many of them have gone to China. It is a common thing for the Chinese, when they have collected a few hundred pounds, to go home in parties of five, six, or ten at a time.
2737. Do you know what the Chinese population in Tingha was in 1885? Very nearly 3,000.
2738. What do you estimate is the Chinese population at the present time? I do not suppose there are more than between 600 and 700 in the whole of the mining district.
2739. Would the Chinese go away if there still remained a profitable field of operations for them? There is no accounting for their actions. Last year, owing to the wet weather, the mines were almost brought to a standstill in the creek, and perhaps 100 or 200 Chinese went to Texas, with a view of growing tobacco.
2740. Is the whole practical mining on the field done by Chinese? Not the whole.
2741. How many European miners are there? I can hardly say; miners move about a good deal; I suppose there are about 500.
2742. Are they working for themselves? Yes.
2743. What do they do with their tin? It is all sold locally.
2744. Are you the only buyer of tin in the district? No; Mr. Hills is a buyer of tin, and the manager of the Union Co. operates on their own production.
2745. By what route do you send your tin to the railway line? During the last few months it has all gone to Glen Innes.
2746. Since when did you send it by way of Glen Innes? Since about the beginning of the year. The Guyra road has been very bad. It is better now; they have been spending a lot of money on it; but at times it got so bad that an empty team could not travel over it, and we were compelled to send teams by the better road to Glen Innes, round by Inverell, a considerable distance further, in order to reach the railway.
2747. How much do you pay for the conveyance of your stuff from here to Glen Innes, *via* Inverell? £2 10s. a ton.
2748. What used you to pay when you sent it from here to Guyra? The same.
2749. Is not the road between Inverell and Glen Innes also very bad in wet weather? Not now; it used to be very bad.

2750.

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2750. It used to be as bad as the Guyra road? Yes. In fine weather we can reach Glen Innes by a shorter route than by going to Inverell; that is by going over by Elsmore, and across the M'Intyre River.
2751. If there was as good a road from here to Guyra as there is from here to Glen Innes, *via* Inverell, by which road would you send your goods? By the Guyra road.
2752. What is the difference in the railway freight between Glen Innes and Sydney, and between Guyra and Sydney? I think only about 4s. or 4s. 3d. per ton—something very small; in fact hardly worth mentioning.
2753. As an old resident of this place, and having seen its ups and downs, what are your views as to its future permanency or otherwise, in regard to the mining industry? My opinion is that the district is only in its infancy, as far as mining is concerned. We have been scratching about the surface, working the alluvial deposits in the gullies, working out the creeks, and such like, where the tin is very easily obtained; we have still miles and miles of maiden country which the miners have not touched. We have deep basalt leads; they are known to exist, but the cost of getting at them is too much for the ordinary miner. We have the lodes from which the stream tin has, no doubt, come.
2754. If there is so much of this maiden country, and it is well charged with tin, why should it not pay the miners as well to work that now as it paid them to work similar character of country (say) in 1885? If you have to sink a shaft 120 or 130 feet, and go through 40 or 50 feet of hard blue metal, and then have all underground work, and have to secure your shaft with timber, and provide for a large quantity of drainage in the mine, it makes the work very expensive.
2755. I understood you to mean by maiden country the same class of country that you have already worked, alluvial country? I do not mean that. Where the tin is easily obtained would be worked first.
2756. Then you think that that class of mining is pretty well played out here? I do not think it is played out. We will continue as we are now for many years, the results being moderately poor, nothing very great. Every now and then something new, in the shape of a basalt lead opening up, and employing possibly 200 extra men, and again working down to moderate results, and so on, with the ordinary fluctuation of mining.
2757. You have been here a long time, and I suppose you have done pretty well, why is it not worth your while to go in for this deep sinking and try for a more permanent field deeper down? There is always an amount of uncertainty in sinking to secure ground of that sort. A person may put down one, two, or three shafts, and then not succeed, and might often be alongside of the lead. I have spent many thousands of pounds here in speculations that have never returned a penny. I sunk a shaft to a depth of 160 feet, and the men who were working for me struck because I would not give them £6 per foot. They reported the matter to the Department of Mines for my not complying with the working conditions, and it was nearly nine months before the Department decided whether or not I had done right in not complying with the labour conditions, and the mine has been lying idle ever since.
2758. If you, who have the advantage of local knowledge, are not likely to risk any money in deep sinking, is it probable that strangers who know very little about the place would invest their money in the field? Yes; I think so.
2759. Why should they? You are assuming that I have a very large amount of capital at my back.
2760. No; but I am presuming that you would be able to guide other people to invest theirs? I have tried it, and in some cases we have succeeded in finding deep ground that has proved payable. There is a place called Topper's Mountain, about 3 or 4 miles away. Twelve months ago there was nobody working at it, and now I suppose there are 150 Chinese there, producing several tons of tin a week.
2761. What is the depth? Some 40, 50, or 60 feet. They have ground alongside of that that will go over 130 feet; but they cannot get into it on account of the extra quantity of water at the depth. There is no doubt a run of deeper country there which they have not yet touched.
2762. Is that drift tin? All stream tin.
2763. Has there been any mining for lode tin? We have prospectors and miners all over the field. We have a great number of lodes. There is one lode where, I think, they are down over 200 feet. They were flooded out the other day, and had to send down to Melbourne for machinery. They could not go on until they got pumps.
2764. Is that lode of any extent? The lode can be traced for several miles by the indications along the surface.
2765. Then the only way of developing these mines on a more permanent basis is by the influx of a large amount of capital in the district? That is the only way. The mines will continue as they are now, with an average output of tin for many years, provided there are no further developments.
2766. What tonnage have you sent to the railway station during the last two or three years? Last year we sent about 500 tons.
2767. The last witness gave it as his opinion that there would be about 1,000 tons of freight from Tingha and the immediately surrounding districts, including Bundarra—do you think that that is a fair estimate? Yes; if you include the Bundarra wool clip that now goes to Uralla, it would increase our output to about that quantity.
2768. What do you consider is the distance from Tingha to Inverell? Fifteen miles.
2769. If the railway were constructed from Glen Innes to Inverell, would it suit you to send your goods around that way? No.
2770. If the railway were constructed from Glen Innes to Inverell, and if there was a good road from Tingha to Guyra, which way would you send your goods; would you send them to Inverell by teams, then by railway to Glen Innes, or would you send them by team from Tingha to Guyra? I should send them from Tingha to Guyra by teams. In the first place, it would cost us nearly £1 a ton to get the tin delivered to Inverell, a distance of 15 miles, and we could get it delivered at Guyra, which is only 40 miles distant, for £2 a ton. If we sent it *via* Inverell, there would be a journey of over 50 miles to Glen Innes, and then it would have to come 37 miles back from there to Guyra.
2771. You say that the carriage from Tingha to Glen Innes, *via* Inverell, by road, is £2 10s. per ton;—how many miles is that? Fifty-six miles. But in fine weather we can send it to Glen Innes, *via* Elsmore, which is only 42 miles.
2772. Still you have to pay the £2 10s. per ton? Yes.
2773. To take your goods from here to Inverell it would cost you 15s. per ton? Yes. The carriers could not gather the tin, load it up, and carry it in to Inverell under £1 a ton.

2774.

Mr. W. Litchfield. 7 May, 1891.

2774. Although the distance is only 15 miles? Yes; I think that is the average charge now for goods from Inverell to Tingha.
2775. Then if the railway freight from Inverell to Glen Innes were 10s. a ton, that would bring the carriage up to 30s. a ton? Yes.
2776. And you say that the railway freight from Glen Innes to Guyra is 4s. a ton, so that that makes a total of £1 14s.? I do not know what the rate would be. I was only reckoning that the rates would be charged in proportion to the extra distance. You see we are not altogether depending on the tin, but we are depending on back loading.
2777. You say you would have to pay £1 a ton from here to Inverell? Yes.
2778. It is reckoned that if a railway were constructed from Inverell to Glen Innes the freight would be about 10s. a ton? That would make a lot of difference. I should have thought that the freight from Guyra to Inverell would have been considerably more.
2779. You pay £1 a ton to Inverell. The freight from there to Glen Innes by railway would be 10s. per ton. You say that the rate of freight from Glen Innes to Guyra at the present time by rail is about 4s. That would bring the total up to £1 14s., whereas you say that the rate of freight being the same from Tingha to Guyra as from Tingha to Glen Innes, you have to pay £2 10s. a ton by team. Now, why would you prefer to pay £2 10s. a ton for sending your goods when you could get them sent for £1 14s.? A person would not naturally do that. If the roads were good from here to Guyra the loading could be done for £2 a ton. It would pay the carriers well if they could get loading both ways to carry at that price.
2780. Even then you would save 6s. a ton? Just so. If the rates were charged on rice and general merchandise in proportion, our storekeepers here could get their goods cheaper from Guyra than they could by train to Inverell.
2781. If you could get your goods cheaper to Guyra even by a roundabout way, and thence to Sydney by train, you would adopt that route? Yes.
2782. Having been here so long, have you any intention of leaving the district;—are you fairly well satisfied to remain here? I am a fixture.
2783. You have done fairly well in the district, I suppose? Well, I have a little interest here I could not well give up—I have a large family.
2784. And you are likely to be a permanent resident? I think so.
2785. As a business man, could you tell us why there is no bank in Tingha? The banking business here does not pay. In the first place, the banks do not care about mining land as security, but fortunately the mines generally do not require a bank. If a man has 1 cwt. of tin there is the cash—there is no credit. Some time ago it was in contemplation to start a bank here, but it was thought that as there were three banks in Inverell, only 15 miles away, as the interests of many of the business people of Tingha were concentrated in that direction, it might happen that one bank might tread on the others' toes if it started.
2786. Have you ever asked for a bank to be established here? Yes; I saw the manager of the Commercial Bank on two occasions when in Sydney, and the matter was well considered, and they came to the conclusion that they would hardly be warranted in starting a bank here at present.
2787. Do you consider that the district is dependent for its prosperity upon anything else except the mining industry? We have land here available for selection that will carry a very large population. My experience at other mining centres, Lambing Flat, for instance, and some of the western mines is, that as the place gets a little poorer, and as people are introduced to the place, they secure land in the neighbourhood and settle down, and by-and-bye a large population grows up independently of the mines. We have land here that will grow anything suitable to the climate. We have orchards which would be increased to a great extent if we had cheap transit from here to Sydney.
2788. The mining reserve is not available for ordinary free selection? No; but under the new Act the Mines Department has made an arrangement by which a miner can lease 10 acres of land for *bona-fide* residence for a term of fifteen years. There are a few availing themselves of this provision, and if there was better security of tenure land would be largely taken up.
2789. Do you know if there are any difficulties in the way of miners obtaining these residential sites? I do not think so. Application is made to the Warden, and the person is then considered the applicant for that particular piece of land. A surveyor is instructed to survey the land, and conditions are imposed as to improvements and rental.
2790. Do you think that will be an advantage to this district? I have no doubt it will. It would be a great advantage for the men to purchase, because making improvements on leased property and on your own property are two different things.
2791. If the mining industry were to die out altogether, is there anything else for the district to subsist on and to maintain the population even as it is now? I think so. I think agriculture would be followed; but there is very little fear of mining going down.
2792. Even if it did, you think the country would then be open to selection, and the population would increase rather than decrease, and you say that where agriculture has been tried it has proved a success? Yes.

Mr. Edward Warland, fruit-grower, near Tingha, sworn, and examined:—

Mr. E. Warland. 7 May, 1891.

2793. *Chairman.*] What is your occupation? I am a fruit-grower.
2794. *Mr. O'Sullivan.*] What size is your holding? 40 acres.
2795. Where is it situated? About 2 miles out of town, on the Guyra Road.
2796. What fruits do you produce? All the English fruits—apples, pears, peaches, plums, and apricots.
2797. Do you also grow vegetables? Sometimes.
2798. Do you find that the soil round here is suitable for the production of English fruits and vegetables? I do—remarkably so.
2799. Do you grow any cereal crops? No.
2800. You are simply a horticulturist? Yes.
2801. Where do you take your produce? I sell it in the district principally—I have a local market at present.
2802. Are you able to sell all you grow? No; not in a good season.
2803. What do you do with the surplus? Unfortunately, we have had to give it to the pigs.
2804. Does it not pay you to cart it away to Glen Innes or Guyra? No.

Mr. E. Warland. 7 May, 1891.

2805. Is there no market there for your produce? No. I do not think there will be a payable market. I have commenced fruit-drying and preserving so as to preserve all the surplus fruit.
2806. Do you find that profitable? Yes; I believe it will be profitable. I have only just commenced.
2807. And, therefore, it is only an experiment? Yes.
2808. Are there many other gardeners or small farmers around the district? Yes; a considerable number.
2809. What is the average size of the holdings? From 40 to 320 acres.
2810. Do any of them grow cereal crops? Yes; a number of them.
2811. What do they produce? Principally hay and corn.
2812. No wheat? Very little wheat.
2813. Where do they dispose of their crops? About the town. If they grew much wheat, they would have to cart it to Inverell, and that would not pay.
2814. Why would it not pay;—is there no market beyond for it? There is a market, but the Inverell farmer, being almost on the spot, can afford to sell at a lower price.
2815. But you are very little further away than the Inverell farmer? It is 16 miles to Inverell.
2816. If a railway were constructed from Glen Innes to Inverell, and a station were placed at Brodie's Plains, 11 miles from Tingha, do you think you could then avail yourself of the Glen Innes market, and the market away in the north? No; I do not think so.
2817. Do you not think that you would be in as good a position to compete in those markets as the Inverell farmer would be? Yes, I consider we would; but I do not think the Inverell people would be able to compete in those markets.
2818. Why? Because, from what I have known of the markets for the last few years, you can, as a rule, get either chaff or hay, or wheat at a lower price in Glen Innes than you can in Inverell.
2819. Is it not a fact that Mr. Utz, of Glen Innes, is now purchasing wheat largely from the Inverell farmers? That I cannot say.
2820. If we have sworn evidence on that point it would be pretty good testimony, would it not? Well, not always.
2821. I suppose you know a witness giving evidence before this Committee is under the same risk as if he were giving evidence before the Supreme Court, and if a man takes that risk, it is pretty good proof that his testimony is *bona fide*? Well, we may think what we like, but we may not always say it.
2822. Then you have a reservation on that point? Yes.
2823. One witness made a statement here just now that he thought the line between Glen Innes and Inverell would be promoted by land speculators—do you know anything about that? I know that there is a great deal of land being taken up there, and bought by speculators.
2824. Do you know the parties who are taking up the land? I have heard certain names mentioned of parties who have bought land.
2825. Who are they? I could not exactly say now.
2826. Have you no better evidence than that in favour of your statement? I could mention names, but I might not be able to bring forward proof.
2827. Then you can only give what is common rumour? There are many things we know which it would be very hard to prove.
2828. I presume you would be in favour of the Guyra line? Yes.
2829. Why should you favour that when your principal market is here? My principal market is here at present, but, in the course of two years, if I have favourable seasons, I shall have a crop of fruit, and I do not know what I shall do with it unless I dry and preserve it.
2830. Where do you think you will find a market for your products? I believe I could find a market in Sydney.
2831. If a desire to reach Sydney is what prompts you to support the Guyra line, would it not be better for you to go to Uralla, and thus save mileage? I think that Guyra is our natural railway station—it is the nearest point to us.
2832. Still, if you are only actuated by a desire to reach the Sydney market as soon as possible, would it not be more to your interest to go to Uralla than to Guyra? There might be some little difference in my favour if the line were constructed to Uralla, but I think it would not be anything to signify.
2833. Are you not aware that in going to Sydney, past Armidale and Tamworth, you would have to compete with very large agricultural districts which would possibly command the market? I certainly should, but at the same time I think that I could compete with them. I could compete with them in the matter of preserved or fresh fruit.
2834. Would there not be a market for your produce on the coast or in the north? I think that, in the event of a coast railway being constructed, they would get most of their supplies from Sydney and Armidale.
2835. How could they get supplies from Armidale? That is, if they had the Tenterfield and Casino line.
2836. But would you not be nearer to them than Armidale? Well, I should be, a little.
2837. You would, therefore, be in a better position to compete in that market than they would be? Yes, a trifle.
2838. Would it not be to your advantage to be placed in communication with that market? I think that connection with Sydney would be the best for a long time to come.
2839. You prefer the chance of the Sydney market to the chance of the northern market? Yes.
2840. And for that reason you give your preference to Guyra? Yes.
2841. Do you know anything of the yield of wheat and other crops in this district? No, I cannot say I do. I have never grown any grain myself.
2842. There is not much wheat produced here, is there? Not within a few miles of Tingha. The crops are principally fodder, vegetables, and fruit.
2843. And for all these you find a local market to a certain extent? Yes.

Mr. Richard Alexander Wiseman, grazier, Bundarra, sworn, and examined:—

Mr. R. A. Wiseman. 7 May, 1891.

2844. *Chairman.*] What is your occupation? I am a grazier, residing at Bundarra.
2845. *Mr. McCourt.*] How long have you lived at Bundarra? Three years in November.
2846. What is the size of your holding? I have two holdings—Clerkness and Stoney Creek—the area being between 60,000 and 70,000 acres.
2847. What do you stock your holdings with? Sheep and cattle.
2848. Where do you find a market for your stock? I only have store stock.
2849. You do not send them by railway? No, I have not sent any by rail.
2850. If a line were constructed to Guyra, would the Bundarra trade go there? I believe it would. I am sure I would send to Guyra, and I see no reason to suppose that the people of Bundarra generally would not do so. Bundarra is only 17 or 18 miles from Tingha, and the nearest road by which we can touch the railway in any other direction is 45 miles—some call it 50, but I believe it is only 45. I refer to Uralla.
2851. Do you think if a railway were constructed past Tingha to Guyra, that any considerable amount of trade would come from Bundarra? I think so.
2852. What do you think would be the tonnage? With regard to that, I can, of course, only speak for myself. The wool from my station last year, carrying 27,000 sheep, came to 70 odd tons, and my back carriage amounted to between 30 and 40 tons. Within a certain radius of Bundarra there are seven stations, with about 150,000 sheep. That includes myself, and the selectors on my run have 10,000 sheep. I do not know how many sheep the selectors on the other six runs have, but I think the Bundarra traffic in wool and salt alone would come to over 600 tons.
2853. Would the storekeepers get their goods this way, too? I think so.
2854. Would there be any considerable passenger traffic? There is a coach running from Uralla to Bundarra, but it runs at such unearthly hours that it has very few passengers. A railway always makes passenger traffic. The coach from Uralla to Bundarra runs three times a week.
2855. If a railway were constructed from Glen Innes to Inverell, do you think that any Bundarra trade would then go to Inverell? I do not think so. Perhaps there would be a passenger trade. You see we are 30 miles from Inverell at Bundarra, but it is only between 45 and 50 miles to reach the railway station in a direct line, and it would be unreasonable.
2856. I thought it was 52 miles from Bundarra to Uralla? The way the mail coach runs it is 52 miles, but by the road by which we send our goods, that is, *via* Yarrowyck, it is 45 miles.
2857. Where do you send your wool to? Uralla.
2858. What do you pay per ton for carriage? 2s. 3d. a cwt. for my wool, guaranteeing 30 tons, and for back loading, 2s. last year. The usual carriage in the wool season is £3, but as I give back carriage, I pay £2 5s., and £2 for the back carriage. At any other time than the wool season I pay £3 per ton from my own place to Uralla. Wherever you touch the railway line, from the Queensland border to Tamworth, the freight to Sydney is only £2 15s.
2859. Do you do any business with Tingha at present? No.
2860. What would be the cost of tonnage between Bundarra and here? I reckon that if the train came to Tingha it would save me over £120 a year, even at present, with my carriage.
2861. What would be the cost? I think about £1 a ton.
2862. What is the nature of the country round Bundarra;—is it fit for agriculture? Yes. There are a lot of good farms out of cultivation with frontages on the Bundarra River.
2863. Has the land ever been under cultivation? Yes, it has all been under cultivation. It is idle because there is no sale for the wheat now. I believe Bundarra was once kept up by the Tingha traffic. Before the northern line was extended the Tingha traffic used to go by Bundarra; now Bundarra is a place with three public houses and four stores.
2864. How many people are there in the Bundarra district who would come this way if there were a railway? There are seven stations within 12 miles of Bundarra, and between 200 and 300 people living in Bundarra, but I could not tell which way peoples' interests go.
2865. Do you think they would come this way? Yes; I think they would. So far as I can see it would be to their interest to come this way.
2866. And you think if this railway were constructed those farms you have mentioned would be brought back into cultivation? A lot of them would. Some of mine are used for grazing, and would not.
2867. Why would you not go in for cultivation? Because it would not pay me to grow wheat at 3s. or 3s. 3d. a bushel and pay wages.
2868. What is the average yield of wheat in Bundarra per acre? From 16 to 18 bushels.
2869. What is the nature of the soil—chocolate soil? It is a loamy soil—it is wash from granite.
2870. Have you any idea what it will cost per bushel to grow wheat at Bundarra? No, the paddocks are very small, and you cannot use machinery. I am not a farmer; I am only a grazier. I grow hay and corn for myself.
2871. You do not send any fat stock to Sydney? No.
2872. Do any of the people in the neighbourhood? Yes. My neighbour, Mr. Baker, supplies Armidale with fat cattle, and sometimes he supplies Inverell and Tingha, and sends to Sydney.
2873. If a railway were constructed to Guyra, would the stock for Sydney come here? I think the rates almost prohibit the sending of stock.
2874. No fat stock go to Sydney then? Very few. Sometimes Mr. Baker sends some extra good ones, but the freight is almost prohibitory.
2875. You are in favour of the Guyra line? Certainly.
2876. Is it the general opinion of the Bundarra people that this line should be constructed? Yesterday, I made it my business to see the principal people at Bundarra. Their object is to get to the coast, and not to Sydney or Newcastle, and if there is a route from Guyra to the coast they are favourable to it.
2877. Are you aware that Guyra is fixed upon as the best junction with the coast? No, I am not aware.
2878. You come here as the representative of the people of Bundarra? No, only to the extent that I have mentioned. I happened to be here one day last week, and Mr. Litchfield asked me if I would get the feeling of the people of Bundarra, and come here and give evidence, and I have done so.
2879. And you have got the opinion of the people of Bundarra? Yes, so far as I could. I saw the two leading storekeepers.
2880. And they were in favour of this line? Yes, conditionally upon there being a line to the coast from Guyra.

2881.

Mr. R. A. Wiseman. 7 May, 1891.

2881. Suppose that Glen Innes were fixed upon as the point of junction with the coast line, would the people of Bundarra use the Glen Innes-Inverell line? I should think so, if it ever went to the coast; but at present they would not use it, because they would be going right round the country.
2882. If the line went from Glen Innes to Grafton would they use it? I think so.
2883. Are there many small settlers round about Bundarra? There is one man on my station who had 300 bags of wheat this year. They take it all to Inverell.
2884. Are the freehold properties at Bundarra held in large or small areas? They are not very large—between 20,000 and 30,000 acres. The selectors have nice comfortable holdings—about 1,800 to 2,400 acres.
2885. Is there much Crown land open for selection in the Bundarra district? Yes. The land that is left is not of much account.
2886. Do you think the construction of this line would lead to the land being selected? No. When the lands were thrown open on the 7th August last, I think those who had any secured all the good land: those who had conditional purchases made them up to 1,280 acres.
2887. Is there a considerable quantity of Crown land there now? Not agricultural land. All the agricultural portions are alienated. There is some rough Crown land, but no agricultural land. If a man took up a selection now it would simply be as a grazing selection.
2888. Then you do not think that the construction of this line would lead to the taking up of that land? I would not say that, because carriage is a consideration—not only our wool carriage, but our salt carriage. We use nearly a ton of salt for every 1,000 sheep in our district, and when you have to pay 8s. cash, it comes to nearly 2½d. a sheep.
2889. Would the construction of the line from Inverell to Guyra lead to the taking up of the Crown lands in the Bundarra district? Railway facilities always lead to settlement, and my impression certainly is that in this instance, the railway would lead to the land being taken up.

Mr. Thomas Jones, wine-grower, Tingha, sworn, and examined:—

Mr. T. Jones. 7 May, 1891.

2890. *Chairman.*] What is your occupation? I am a wine grower.
2891. You desire to give some evidence on the mining and agricultural aspects of the question? Yes; and to take exception to a few comments with regard to the Guyra and Inverell line.
2892. *Mr. Tonkin.*] How long have you been in the district? Eighteen years.
2893. Would you like to make a statement to the Committee? I simply wish to say that I have been here for eighteen years, and that I held the office of Warden's Clerk and Mining Registrar for six years, and therefore I know something of the statistics of this district for those six years. I have a farm about 2½ miles from Tingha. The area is 186 acres, and it is nearly due north from here. About 10 or 11 acres are under cultivation, producing vines, fruit trees, and agricultural products. On either side of my selection is an extensive tract of the best agricultural land in the district. This land extends for 20 miles, from Inverell to Kangaroo Camp. Fifteen miles of it are more or less tiniferous, but owing to a reserve of 270 square miles, approximately, settlement around Tingha has been successfully defeated.
2894. You mean the mining reserve? It is a gold-field at the present time. It was proclaimed a gold-field by Sir John Robertson some time ago. It was done, I believe, in order to prevent a C.P. or M.C.P. from over-riding a mineral lease. I estimate the value of this land, as mineral conditionally purchased land, at £2 an acre. That is the Government upset price for M.C.P.'s, and much of it surrounding my selection is leased at 5s. per acre per annum. My farm is within a chain of Mr. Litchfield's farm, which is also under cultivation. On the west side the land is freehold, and on the south-east and north the land is under a rental of 5s. an acre. It is distant about a quarter of an hour's ride from this Court-house. Inverell chiefly depends upon Guyra for potatoes. The Committee might have met three loads going in to-day from Guyra. A railway to Guyra would be in a direct line for the Hillgrove mines. It would be a much nearer route to Hillgrove, which would be a market for our produce, and a market also for Inverell.
2895. How far from the line would the Hillgrove mines be? I think they are situated 22 miles from the railway at Armidale. In this district the output of tin ore has been as high as 250 tons per month.
2896. In what year was that? I could not tell you the exact year, but I think it was 1883. I was Mining Registrar, and therefore I am qualified to make this statement, having officially obtained the information from various holders. Having had eighteen years' experience on this tin-field, it is my opinion that this output will probably be equalled again. Property in Inverell is, I think, greatly indebted to the large product of tin from this district reaching, as I have said, as high as 250 tons per month. I wish to impress this upon the Committee, because it will show that if tin will build up a town like Inverell it is deserving of some consideration in the question of a railway. A railway would decidedly enhance the value of the land here. In regard to the railway rates, I wish to bring under the notice of the Committee the fact that the rates going north on the main trunk line are largely in favour of Glen Innes, as compared with Guyra. I have a letter from Messrs. Wright, Heaton, and Co.'s agent, showing that there is a difference of £10 a ton between Glen Innes and Guyra in favour of the former place. The letter is dated Guyra, February 26th, 1891, addressed to Chun Sing, Tingha, and is signed by Wright, Heaton, & Co., and it states as follows:—"The rates have been altered since you got your last 6 tons of rice up. Rice, now, in 6-ton trucks, to Guyra, is the same rate as third-class goods, £40 per truck, and to Glen Innes, £30 per truck. Thus, you see, you save £10 by sending it to Glen Innes. I expect your carrier in to-morrow; let me know by wire what to do with same and oblige." It must be remembered that Mr. Wright is the popular member for Glen Innes, and, no doubt, this will much please his constituents.
2897. *Mr. O'Sullivan.*] But he does not fix the railway rates? But since then we hear that he has shut up his agency at Guyra and gone to Glen Innes. I have one remark to make touching the timber on this line. Admitting the statement in Messrs. Scarr and Price's report, that there are 14,000 acres of forest reserves, I do not agree that the two saw-mills referred to have largely reduced the original quantity. I am acquainted with those saw-mills, and I am perfectly aware that one of them was idle for a considerable time, and that one of the mills had no vertical saw, and therefore the cutting was chiefly confined to small timber.
2898. Can you tell us why the mill was shut up, and why it only worked a short time? Because the man became insolvent.

Mr. T. Jones. 7 May, 1891.

2899. Do you know the cause of his insolvency;—was it owing to the want of timber or the want of a market for his timber? His insolvency was, in a great measure, caused by the fact that, owing to heavy floods, it was impossible to get the timber to the mill, and one cause, no doubt, was that there was very little demand for timber. I differ from Messrs. Scarr and Price when they say that a large quantity of timber has been cut from the reserves. I may mention that there is tin on my selection.
2900. Is there much tin on the mining reserve? I think there is a lot more tin to be developed; I think it is in its infancy.
2901. You think that there is plenty of it on the reserve that has not yet been found? Yes. I am of that opinion. I have six men working for me now on tribute.
2902. Do you think this place would do as well without tin as it does with it? Certainly not.
2903. Do you think it would be as flourishing? Certainly not.
2904. Yet you say you would like to see the reserve cancelled, and the land put into agriculture? No; I said it was not cancelled, and I do not wish to see it cancelled. As far as my interests are concerned, it would lead to competition—I should have a farmer alongside of me in no time.

Mr. James Rank, senior constable, Tingha, sworn, and examined:—

Mr. J. Rank. 7 May, 1891.

2905. *Chairman.*] What position do you hold in Tingha? I am senior constable, in charge of the Tingha district.
2906. How far does your district extend? About 25 miles north from here, 24 miles towards Guyra, and 16 miles out west.
2907. Does that embrace Bundarra? No, I do not go to Bundarra.
2908. How long have you been in the district? I have been stationed here since May, 1886.
2909. Has the European population of Tingha increased or decreased during that time? In my district the European population in 1888 was 1,960, and the Chinese population 1,150. In 1889 the Europeans numbered 1,950, and the Chinese 1,000; in 1890 there were 2,120 Europeans and 1,100 Chinese, and in 1891, there were 2,285 Europeans and 703 Chinese, showing an increase in the European population, and a great decrease in the Chinese.
2910. What do you think of this district generally in the matter of production and population;—has it gone back during those four years or advanced? I think it has gone back a little during my time—that is, the township itself.
2911. Did Messrs. Scarr and Price get their figures as to population from you? Yes.
2912. Do you collect returns of the products of the district for the purpose of sending them to the Registrar General? They are sent away, and I do not keep a copy.
2913. But you collect them? Yes.
2914. Can you recollect generally whether, during those years, production has decreased in the district? It has increased—new selections have been taken up.
2915. If there is a decrease in the population, where do they find a market for their produce? The decrease is mostly in Chinese.
2916. I suppose you are about the district a good deal? Yes.
2917. Can you give us any idea as to where the trend of trade goes to the northern line? At present it goes to Glen Innes, but until just recently it has been going to Guyra.
2918. Have you formed any opinion as to the cause of the change? No, only from hearsay.
2919. And do the passengers to the Great Northern Line also go to Glen Innes? No, they all go to Guyra—four or five go to Guyra for every one that goes any other way.
2920. Is there not a coach between here and Glen Innes and Inverell three times a week? Yes.
2921. And three times a week to Guyra? Yes. All the passengers from here to Sydney go to Guyra.
2922. Does the other line of coaches pass through here? It goes to Uralla from Inverell, calling at Bundarra.
2923. Do many passengers go that way? Very few.
2924. They prefer the shorter coach journey even if it entails a longer railway journey? Yes.
2925. Of what does the increase in the European population chiefly consist? New selectors, and there are a great many children in this district—the natural increase of population.
2926. Has there been an increase or decrease in the number of the force during these three years? There has been the same number in this district for the last twelve or fourteen years.
2927. In what locality has the increase in selections principally taken place in the district? Out towards Kangaroo Camp, about 12 miles along the Guyra road.
2928. What is the average size of the holdings these men have taken up? Some of them are 320 acres in extent and some as large as 1,000 acres.
2929. And is it good land? Good grazing land. About Kangaroo Camp there is some good agricultural land.
2930. They are going in principally for grazing? Principally.
2931. Is there much good land between here and Guyra? Yes, there is a strip of land running for about 15 miles from here.
2932. Is it very good grazing land or agricultural land? Good grazing land and very good agricultural land, too.
2933. Have you formed any opinion as to the cause of the decrease in the Chinese population? No, I could not say what is the cause, only I imagine that they were not getting so much tin as formerly.
2934. Then there has been a decrease in the Chinese tin workers, and an increase in the European agriculturists? Yes.
2935. Does not the decrease in the Chinese show that the tin-fields are being worked out? I do not know. As a rule, the Chinese will not go into deep ground. All the shallow ground is worked out, and you cannot get the Chinese to work any depth.

THURSDAY, 7 MAY, 1891.

[*The Sectional Committee met at the "Commercial Hotel," Tingha, at 8·15 p.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM JOSEPH TRICKETT.	EDWARD WILLIAM O'SULLIVAN, Esq.
JAMES EBENEZER TONKIN, Esq.	WILLIAM McCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Benjamin Champion Martin, miner, Tingha, sworn, and examined:—

Mr. B. C. Martin. 7 May, 1891.

2936. *Chairman.*] What is your occupation? I am a miner.
2937. *Mr. Tonkin.*] How long have you been in the district? About ten years.
2938. Mining all the time? Yes.
2939. Were you ever tin-mining before you came here? I was tin-mining nearly forty years before I came here.
2940. In the old country? Yes, in Cornwall.
2941. Is there any resemblance between the lodes here and those in the old country? Yes, strikingly so.
2942. In the formation? The formation at the surface. Of course we have not as yet seen anything here except at the surface. We have gone down to 200 feet, and I believe that is about the deepest, but in the old country that would not be reckoned satisfactory by any means. But, as far as indication of lodes is concerned about the Tingha district, there is everything to satisfy any miner, or any man understanding mining, that Tingha and the district must ultimately become a large and successful field. Of this I have not the least doubt.
2943. In the old country were the surface indications similar to those at Tingha,—stream-tin on the surface? Not as much. There was stream-tin there, and it has been worked by older men than myself. I have seen the places where the old men have worked, but not so largely.
2944. Then there was more lode-tin in the old country? No; there is a lot of lode-tin produced because there are more men at work, but there was copper as well, and the tin was found sometimes in the copper mines at shallow depths—on the surface, you might say. Then after they got down perhaps 10 or 15 fathoms, it would turn into copper, and in some instances after they got down 200 or 300 fathoms it would turn into tin again—just as the granite would dip from certain ranges here.
2945. Has there been any copper found here? There has been copper, but not much about this place that I know of as yet.
2946. Is it true that most of the stream-tin has been worked out in this district? Not in my estimation; I do not reckon so.
2947. Are you working now on a lode or on stream-tin? We are driving through a granite bar in order to intersect some alluvial or stream-tin which we consider is in a basalt hill. We have two men at work. We have taken it on tribute.
2948. What depth are you? From the highest point to the lowest, somewhere about 100 feet. We are driving a tunnel right in from the foot of the hill.
2949. Has any stream-tin been found in the vicinity to indicate that the run will go under this basalt? Yes.
2950. It is under basalt that you are driving? Yes.
2951. Is there very much basalt formation about here? A great deal.
2952. Has any of the stream-tin about here been worked under basalt? Yes, in many places.
2953. What is about the deepest they have gone under basalt? Somewhere about 140 feet.
2954. At that depth could it be worked without the water interfering with them? No, the water is bound to interfere with them.
2955. But it does not interfere with you working your tunnel? No.
2956. But at this place where there is a depth of 140 feet;—is that worked by a tunnel or a shaft? By a shaft. It is up at Stoney Creek. They have had some very good results, too.
2957. Why did they give it up;—was it on account of the large quantity of water, or did the tin run out? I do not think they gave it up altogether; perhaps it might have been on account of the way they went into it. Sometimes it depends on the men who are working it, whether they are working it on the proper system.
2958. Is not the principal work in mining here done by Chinese? No, I do not think the principal part of it is, but a good deal of it is. They do work for themselves, but the greater part of the work is done by Europeans—what I call work. I call Chinese working, as a rule, surface working. The deep places are generally worked by Europeans.
2959. Do you know whether there are any more Europeans prospecting in deep ground, as you are doing? Yes; there are about twenty men working about the hill now where we are working.
2960. What is the deepest mine that you have worked here for tin that has been payable? The deepest mine that I have worked in since I have been here which has given payable tin was 20 or 30 feet.
2961. That you might almost call surface working? Yes.
2962. Then no stream-tin has been proved here at a very great depth? Oh, yes—this Stoney Creek tin.
2963. That is at the 140 feet depth? Then there is Tom Jones' place, which is somewhere about 130 feet.
2964. But are these places working now? Stoney Creek is working.
2965. Is that the 140 feet one? They say it is 140 feet.
2966. That is working now? Yes.
2967. And is it working with payable results? No; they are driving through the granite. They have a face on the lead. I have been told they have a face about 200 feet wide. They have sunk a shaft down. They think they are down deep enough, and now they are driving in to intersect the run, which is very good.
2968. Have you worked in any lode-tin here? I have worked a good bit of lode-tin in this district.
2969. How have you treated it;—have you got a crushing plant here? There are two on the field, but when my sons and myself started we took a piece of ground from the Union Co. We took it for ten years, and had to pay them a cwt. in the ton from the start, then 2 cwt., and for the last five years 3 cwt., and we worked it a little over three years.

Mr. B. C. Martin. 7 May, 1891.

2970. How did you treat the stone? We treated it the same as you would treat copper. We first broke it with a hammer, then jiggered the small stuff, and then riddled the residue until we brought it down fine enough to go through the sluice-box.
2971. Was not that a very primitive style of working? It was.
2972. If a mine would pay with that system of working, would you not expect big returns from proper machinery? I should.
2973. Do you know what percentage of tin was in the lode? Twelve and a half.
2974. It would pay very well if you had plenty of that? Extremely well if it had continued. It was not as good when we knocked off. At the same time, the lode was right enough.
2975. Are there many large companies in and around Tingha? I do not think so. There have been, but things seem to be at a sort of standstill at the present time. They are more like syndicates than proper companies. What I call a *bona fide* company is one that will put down a certain amount of money, spend it legitimately, and open up the mines in a proper manner. But here they have been working and trying to sink down 100 or 200 feet, hoping to sell to some other company, which in its turn will sell to some other company, instead of testing the country.
2976. Then the majority of the miners here now are working for themselves? Generally speaking.
2977. In little parties? Yes; there are companies. There is the Federal Company. I do not know what they are going to do; they have got down about 200 feet.
2978. Are they on tin? No; but they have the lode there, and I think they have very good walls. The captain was saying to me just before he went away that they had good indications. They have a great increase of water, which is considered a very good sign. It shows that there is a large lode, or else it would not throw out a lot of water. There is room for plenty of good tin in it.
2979. Do you believe yourself that the surface tin in this district is nearly all worked out? I do not think so. I do not doubt that the greatest part of the shallow surface tin is gone, but there are deep places under these basalt hills—miles of it—where, in my opinion, we will ultimately be working, and it will pay well.
2980. You do not think that this place is likely to shut up;—you do not think it is played out as a mining district? I do not think so; it will be working, and working vigorously after I am dead and buried.
2981. Are there as many Europeans working at mining here now as there were a year or two ago? No; I do not think so.
2982. How do you account for that? It is on account of the shallow diggings playing out, so to speak, and the deeper ones being too costly for them.
2983. But have not the Chinese got possession of nearly all the shallow diggings? They follow the Europeans, and pick up the odds and ends, like children running round a harvest field, picking up the corn lost by the farmer; sometimes they find bunches, and do very well.
2984. Are there no lodes working here at all—no reef stone working? There are a good many working reefs about.
2985. Are they working in the same primitive style as you were? Yes; in the very same way. There are a good many working who have got very good lodes in different places.
2986. Is it very good country? Moderate country, not too hard.
2987. Do you find the country getting softer or harder as you go down? So far, I do not think the country has altered much; I do not think that we are deep enough for that. We are not under what I should call the horizontal strata, or flat strata. That is the mistake here. We have not got deep enough to test the lodes.
2988. But you do not expect the stream-tin to go down 400 or 500 feet? No; I am speaking of a lode. We never expect any good results until we get into the vertical strata, which would be, as a rule, 400 or 500 feet deep, and in many places more. I remember in one mine that I was in we were down 600 feet and we never had anything payable in the mine, but when we got down 700 or 800 feet we had a lode at which four men could work abreast, and rich enough, too.
2989. Do you think that the average earnings of the miners here are sufficient to keep them? Yes, I should think so. I do not doubt but that there are some who have worked for very little. But from one end of the year to the other I should think the miners here would earn as much as they do in other places.
2990. What wages are paid here to day labourers on the mines? £2 10s. a week.
2991. Are there many employed at that rate? Not just now. That rate of wages was paid by a few companies, such as the Federal, and one or two others which were working until lately.
2992. Could you tell us how many companies there are working here? I do not think I could; there might be some I do not know of. The Federal is one, then there is the Tingha Proprietary Company—I do not know that that has gone out of existence yet. They are holding the ground, and they have property there—a little battery, and so on.
2993. How many were employed in the Federal claim? They were working about 16 before the influx of water came upon them.
2994. They are not getting tin, you say? No.
2995. Is there any company getting tin? Not on a lode that I know of—not any company.
2996. I want to know whether there is much tin got here that does not go through Mr. Litchfield's hands? It is divided into two parts—Mr. Hill gets one part, and Mr. Litchfield gets the other. Mr. Hill might get some lode-tin that Mr. Litchfield does not.
2997. You could not tell whether Mr. Hill buys as much as Mr. Litchfield? No, I have no idea of that.
2998. You have no doubt in your own mind that this place is substantially a good mining centre? Not the least.
2999. Do you think if the projected railway from Glen Innes to Inverell were carried out, it would be of much benefit to this district? I could not say. I am not an expert in railway matters; and as to which would be the better route of the two, I have no idea.
3000. Do you have any difficulty in getting your necessary supplies;—have you to pay through the nose, so to speak, for the things you require in mining? Of course we have to pay to have them brought from Inverell to Tingha.
3001. Do you think it would be a great benefit to this district if the railway came to Tingha? I do.
3002. I mean in mining matters? Yes, of course it would, and it would ultimately benefit the district generally.
3003. Do you think it would assist in developing the mines by affording facilities for the introduction of machinery? Yes, I should say it would.

Mr. B. C. Martin. 7 May, 1891.

3004. Do you know that machinery is required here? I know that it will be, and I know that the only thing that is wanted in this district is the necessary capital to develop the tin lodes. When that is done, I believe this will be one of the greatest mining centres in New South Wales. But of course that has to be done first. We must open the mines up, sink down and test the reefs, and we want capital to do that.
3005. There is a report that these tin lodes are heading to Inverell, and are likely to run close to that place;—do you know whether that is correct or not? I do not know. I have not taken the bearings of all the lodes—they run in different directions. I do not fancy they head towards Inverell.
3006. Is the general run north and south or east and west? They run about from 35 to 40 degrees north of east, and south-west.
3007. Then they are nearly east and west lodes? Yes; they are nearer east and west lodes than anything else. There are some north and south; but the great majority are nearly east and west.
3008. Judging from appearances, you believe that this place has a big future before it? Yes; I am certain of it.

Mr. Conrad Bowers, miner, near Tingha, sworn, and examined:—

Mr. C. Bowers. 7 May, 1891.

3009. *Chairman.*] What is your occupation? Mining, principally.
3010. You are also a farmer? Yes.
3011. *Mr. McCourt.*] How long have you resided in this district? About eighteen years.
3012. Have you done much farming? I have just grown sufficient for my own use.
3013. Then you have been more a miner than a farmer? Yes.
3014. In what direction from here is your holding situated? Four miles east from here.
3015. What is its size? Two hundred acres.
3016. Are there any other settlers in your neighbourhood? No; I am the only selector.
3017. How does farming do here? What I put in grows surprisingly well.
3018. What is the reason there are no other settlers near you? Because the land is proclaimed a reserve. I intended to take up more land; but I could not do so.
3019. If it were not a reserve, do you think it would be taken up for farming purposes? Yes.
3020. And you think farmers could live on it? I think so.
3021. Where would they get a market for their produce, if they grew large quantities? They would find one.
3022. Where? As far as my experience goes, I think the west would be the best market. I do not say it would be the best for everything you would grow, because we could send up Armidale way, though it would be something like taking coals to Newcastle.
3023. You would go through Inverell westward? To Warialda and out that way. I believe that is the natural outlet for the surplus production of this district.
3024. Do you grow potatoes? Yes.
3025. What is the average crop of potatoes? They grow pretty well. I should think between 2 and 3 tons to the acre.
3026. Do you grow corn? Yes.
3027. How does that grow? It grows very well—as well as I have seen it grow at Inverell.
3028. Does it grow regularly, season after season? Yes; I believe it grows better here than at Inverell, because, the soil being loose and loamy, it takes the moisture easier, and it seems to do better with less rain than the black soil does.
3029. You say it is a pretty regular crop? Yes.
3030. And you can grow it better here than they can at Inverell? Yes; if it is not a drooping season. Less rain will do for this soil than for the soil at Inverell.
3031. Do you grow more than is sufficient to meet the requirements of the district;—do you send it away anywhere? No; I only just grow it for my own use.
3032. But do you know of any others who grow corn? There is not much grown here, for the simple reason that you cannot get the land, owing to its being included in the mining reserve.
3033. Is corn grown outside the reserve by anybody in the neighbourhood? Yes, up away from the reserve; but the reserve is so large—it is 265 square miles.
3034. Are you acquainted with the whole of the reserve? Pretty well.
3035. How far does it go north of Tingha? It goes right over the M'Intyre, which is about 10 miles. To the south it goes 15 or 18 miles; to the east about 7 miles, and to the west about 13 miles, within about 3 miles of Inverell.
3036. There is not much land selected within that area—not many holdings? There are some holdings that were taken up before the reserve was proclaimed, and they are still occupied; but there are not many of these.
3037. If this land were thrown open for selection as agricultural land, would potatoes and other things be grown here in abundance? I think so.
3038. And you would find a market for them westward? I think that would eventually be the market.
3039. What has been the average yield of corn per acre? I have about 2 acres now under crop, and I should think it would yield from 40 or 50 bushels to the acre, which is an average crop.
3040. How do fruit trees grow? They do very well here.
3041. All kinds? Yes. I have got oranges, lemons, apples, walnuts, and peanuts. In fact, anything can be grown.
3042. In your opinion, even if the tin-mining did give out, you would still subsist on agriculture if the reserve were thrown open for selection? Yes.
3043. You think the land would all be taken up for agricultural purposes? Partly for agriculture and partly for grazing.
3044. Which would be the best for the place—that the tin-mining should go out, and that you should have agriculture, or that you should have the tin-mining, as at present? I would rather have the tin-mining.
3045. Are you acquainted with Inverell;—do you know the people there? Yes; I am very well acquainted with Inverell.
3046. Do you know if the people of Inverell were ever in favour of the Guyra line? I think about half of them are; a great many, anyhow.

Mr. C. Bowers. 7 May, 1891.

3047. Was there ever more than half of them in the early stages of the agitation in favour of this line? I could not say.
3048. Why do you think now that the people there favour the Glen Innes line;—have you any idea of the reason? They say that some interested parties have got all the land on the Inverell and Glen Innes route.
3049. How many of those parties would there be? There might not be many, but yet they might have a great deal of influence.
3050. Do you send any fruit away from Tingha? No; the trees are rather young yet. About two or three years hence they will be in full bearing. Some of them are only two or three years old.
3051. If the railway were made to Tingha, do you think the population would increase? I think so.
3052. Would it give a considerable amount of trade to the railway in passenger and goods traffic? I believe so.
3053. Is there anything else you would like to mention? I should like to say, with regard to mining, that there is yet plenty of virgin ground here. There are 80 acres on my selection, which I converted into a mineral conditional purchase. I have three parties working on tribute, and I work another. There is one party of five and another of four. As soon as they get through the hard bar into the soft ground more men will be put on.
3054. What do you get? I get from this party 2 cwt. from every ton of tin; from another party I get 3 cwt., and there is another party, getting very good tin, giving me 4 cwt.
3055. How many miles is that from here? Four.
3056. At what depth are they getting the good tin? It is shallow there; about 22 or 24 feet; but it is dipping in towards the hill into deep ground.
3057. Would it require capital to follow it? No.
3058. Have you any idea of the number of miners and others engaged in connection with tin who are working on this field? No; I could not say.
3059. Are there any payable minerals in the district besides tin? I could not say. There may be some. There are diamonds down the creek.*
3060. Have they ever been proved? Yes; the mines are working.
3061. How many are engaged in working them? I could not say.
3062. How far is that from here? About 15 miles.
3063. On this reserve, too? Yes.
3064. Has the diamond-drill ever been in the district? Not that I am aware of.

Mr. Arthur John Parker, storekeeper, Tingha, sworn, and examined:—

Mr. A. J. Parker. 7 May, 1891.

3065. *Chairman.*] What is your occupation? I am a storekeeper.
3066. *Mr. Trickett.*] How long have you been in business here? I have been in the storekeeping business—I am not a storekeeper on my own account. I have been an assistant to Mrs. Murray for something better than two years, and previous to that I was an assistant to Mrs. Lanman for two years in Tingha. I have been a resident on this field for sixteen years, and was engaged in cordial manufacturing and so on.
3067. Is the business you are at present managing a large one? Yes; a very fair business—I suppose it is one of the best businesses in Tingha.
3068. Could you tell us the quantity of goods you generally import to the business every year? I should think, on an average, we take between 30 and 40 tons a year.
3069. How many other stores are there in the town of any consequence? There are a great many small shops, but there are about five leading stores.
3070. Do you think each of those five leading stores import as much goods as your firm? Yes; in fact, one Chinese store would import more.
3071. You say there are a number of smaller stores? Yes; I could not say exactly how many, but there are a tremendous lot of them.
3072. A couple of dozen? I suppose there are about fifteen or twenty stores in all.
3073. Where do you get your stores from? Chiefly from Sydney direct.
3074. From what railway station? We used to get them from Guyra, but lately we have got them from Glen Innes. We find we can get them cheaper from Glen Innes than from Guyra—not as far as the carriers are concerned, but the railway carries the goods to Glen Innes cheaper than it does to Guyra, so that it is to our benefit to get them from Glen Innes.
3075. And the rate by road is the same? Yes.
3076. Is there much business done between Inverell and Tingha? Not as much as there has been. When I started in Mrs. Murray's store first, we were buying all our produce, such as corn, hay, and chaff, from the Inverell storekeepers, but we find we can get better satisfaction now from the farmers of Elsmore, Brodie's Plains, and Gilgai. So that now we buy nothing from Inverell except a little flour. We get rather a large quantity of Adelaide flour. The consumers prefer to pay a few shillings more for the Adelaide flour than for the Inverell flour.
3077. Do you know the reason of that? The Inverell flour is not good, that is the general opinion.
3078. Is it badly dressed, or is it on account of the wheat? It is on account of the wheat, I think. There is a kind of wheat very plentiful in the Inverell district which gives the flour a very disagreeable smell and flavour.
3079. Which has the largest consumption—the Adelaide flour or the Inverell flour? I think the Inverell flour, because of the cheaper price. But those who can afford to pay the extra price always prefer the Adelaide flour. The bakers here are mixing the flour, half and half.
3080. Do you think that what you have stated is the general opinion of the people of Tingha as to the quality of flour? Yes; on the part of the consumers.
3081. Is there any other business done between Inverell and Tingha? None that I know of.
3082. I suppose none of the leading storekeepers get their goods from Inverell? No; they all get them direct from Sydney.
3083. So that as regards Inverell and Tingha the railway would not create any increase of traffic between those two places? No.

3084.

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* NOTE (*on revision*):—A splendid silver lode has been found on this reserve since I gave evidence. It is my opinion that there are more good lodes on this reserve, and that Tingha will yet be a flourishing mining centre.

Mr. A. J. Parker. 7 May, 1891.

3084. Is business pretty sound in this town? Yes; as far as our own business is concerned. The cash takings are about the best criterion, and our average takings have not varied during the last two years or more.
3085. It has been about an average business? Yes.
3086. You have been managing a store here for about five years? Yes.
3087. During that period has business been about the same? When I was conducting the business for Mrs. Lannan a few years back, business was not as brisk as it is now. It was rather dull; everybody thought the place was falling to pieces; in fact property was almost valueless then.
3088. I suppose most of your business is cash? Chiefly cash. We have monthly accounts, but you can call that cash.
3089. I suppose there is no exchange of goods for produce? No, we pay cash for all our produce; they can please themselves whether they leave anything in the shop or not.
3090. Would it not be a great convenience to you to have a bank here? Yes; I think it would. The absence of a bank has been a great drawback.
3091. Have you ever made representations to any of the banks? I am not aware.
3092. Do you get the greater part of your revenue from people who deal in minerals or in produce? From the mining class. That is the chief industry. There are a few farmers outside the field who leave a good many pounds in town.
3093. Speaking from a connection of sixteen years with the district, what do you think would be the result to Tingha if the mines were to shut up altogether? In the event of their closing altogether—which I do not think is possible—there is a tremendous lot of nice land round about; in fact the whole field is good land. There are a few granite ridges here and there that are barren, but it would make very good grazing land. It is a good district for agriculture.
3094. There are a good many farms in the district already, are there not? There are a few scattered here and there.
3095. But I suppose most of those farmers are combining mining with agriculture? Some of them are, and some are not. As regards potatoes, we have always got supplies of potatoes from Guyra. The Inverell farmers cannot grow potatoes. They cannot grow sufficient for their own supply. I am prepared to say that.
3096. *Chairman.*] How do you know that? Because we can never buy potatoes there. We could never get a potato there. I have often tried to buy potatoes there, but could never get them. They can never grow a successful crop. At least that is what the farmers have told us when we have applied to them.
3097. *Mr. Trickett.*] You have tried to buy them there? Frequently. On the other hand, when we have applied to Guyra we have never failed to get them. It seems to be rather a successful district for potatoes.
3098. If the railway were to go from Inverell to Glen Innes would that suit the people as a means of communication? It would not by any means be as convenient as the Guyra line, and it would benefit this place slightly, if at all.
3099. I suppose it would be better than having no railway at all? It would certainly bring the railway a few miles nearer to us than Guyra, but beyond saving a few miles I do not think it would benefit the Tingha district at all.
3100. Do you see any prospect of getting a market for your produce, or anything that Tingha will produce, to the north of Guyra? At present we are not producing much just about here. I do not know what market the farmers themselves have in view. Not being a farmer myself, I have not given the matter much consideration.
3101. Speaking as a storekeeper, it would suit you better to have the railway to Guyra? Yes.
3102. As being the nearest way to the chief market in which you get your goods? Yes. I think a line coming from Guyra to this field would benefit the miners very much.

Mr. William Litchfield, mining agent, Tingha, sworn, and further examined:—

Mr. W. Litchfield. 7 May, 1891.

3103. *Chairman.*] Can you give the Committee some information with regard to the yield of tin in the Tingha district? Yes. During the existence of the field, which extends over a period of eighteen years, the average yield of tin per annum has been about 2,000 tons, which, at an average of £50 per ton, would give a total value of about £1,800,000.
3104. *Mr. Tonkin.*] During part of that time mining was almost at a standstill in this district? In 1877 and 1878 the tin market was exceptionally low. I do not think it was known to be so low in England for many years. The price was so low that you could not afford to pay more than £25, £26, and £27 a ton for tin here. This caused such a depression, and such a stampede from Tingha, that the place was almost deserted.
3105. So that during those years the quantity of tin was much less than 2,000 tons a year? The tin was got more easily at that time, and the Chinese were still producing, but if there had not been a great depression in the market there would have been a great deal more produced.
3106. *Mr. O'Sullivan.*] Then Tingha has had several seasons of depression and several revivals? Yes.
3107. *Chairman.*] Is there anything else you would like to say? We have silver in the district, but what it may come to we do not know.
3108. It has only been recently found? No; it has been found for a number of years, more or less, showing that silver is in existence here.
3109. Has there been any late development? There is a rumour that there was some late development, but I could not say anything about it.
3110. How far from here are the silver indications? There is a place about a quarter of a mile from here on the other side of the creek where there was a shaft put down for 30 or 40 feet, and the assays showed something like 4 or 5 oz. to the ton. There was another place, 7 miles from here, where the stuff was chiefly galena, with a percentage of silver, equal to something like 9 oz. to the ton.
3111. That would be rich in lead? Yes.
3112. *Mr. Tonkin.*] Has any money been expended here from the Prospecting Vote during the two years that it has been established? I think the Prospecting Board were round here only a few weeks ago.
3113. You have not had any money up to the present? Not that I am aware of, but I believe they have recommended some.
3114. Do you not think that Inverell is a place that should be connected by railway with the main line? I believe it is.

3115.

Mr. W. Litchfield. 7 May, 1891.

3115. *Chairman.*] Only you think that the connection should be with Guyra, *via* Tingha? I think so.
3116. *Mr. Tonkin.*] Looking at the Inverell district itself you think it is worthy of railway communication? Yes. I think with Mr. Bowers, the last witness, that if we had a railway running out west, that would be a better market for the Inverell produce than south or east.
3117. *Mr. McCourt.*] Would the Guyra line be more to the interests of the Government? I think so.
3118. It is estimated that there would be a loss of £13,000 per annum on the Glen Innes to Inverell line;—do you think there would be any loss on the Guyra line? What the line may ultimately pay is one thing, and what it will pay at the present time is another. My opinion is that if the line were opened to-morrow it would be running up and down three times a week from Glen Innes to Inverell without passengers.
3119. Do you think the Guyra line would pay the Government better than the Glen Innes line? I do; because it would secure the whole of the Tingha trade, and the great bulk of the Bundarra trade.] It would be serving three places instead of one.

FRIDAY, 8 *MAY*, 1891.

[*The Sectional Committee met at the "Half-way House Hotel," Wandsworth, at* 1 *p.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM JOSEPH TRICKETT.	EDWARD WILLIAM O'SULLIVAN, Esq.
JAMES EBENEZER TONKIN, Esq.	WILLIAM MCCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Edwin Everett, grazier, near Wandsworth, sworn, and examined:—

Mr. E. Everett. 8 May, 1891.

3120. *Chairman.*] What is your occupation? I am a grazier. I own Tenterden and Ollera, which I work as one station.
3121. *Mr. O'Sullivan.*] What is the area of your holding? The freehold land is about 18,000 acres.*
3122. Has there been much alienation on your run? Every bit worth having has been taken up. There is nothing left, except the Stringybark Ranges and a few water reserves.
3123. We may conclude that all the agricultural portions of your reserves are gone? Yes.
3124. And you are grazing sheep, I presume, on the remainder? Yes, and some cattle.
3125. I understand that there is an admirable route from this point to Bundarra, which would give the Bundarra people much easier and quicker communication with the proposed railway than they could get *via* Tingha;—could you describe that route? I think it would reach the railway line that has been surveyed in about 25 miles, and Tenterden, I think, would be the nearest place. Bundarra is at the junction of Moreden Creek and the river, and George's Creek, which is over where we live at Tenterden, is the next creek to it.†
3126. But the proposed railway route lies some distance to the south of this, does it not? About 5 miles, I think.
3127. How far would that be from the Bundarra township? I think the Bundarra people could meet the line at New Valley or Tenterden; but if they met it at New Valley it would not answer, because there would be no traffic; but if they came up to Tenterden and had a goods shed there, it would be very much used by all the neighbours round.
3128. Then a station, or siding, placed on Tenterden would serve not only the Bundarra people, but also the settlers of Tenterden and Ollera? Yes; Ollera, I suppose, might get another one further on.
3129. Could you give a rough estimate of the population on Tenterden and Ollera? No, I could not. According to the census taken the other day, there were 500 souls between Ollera Creek and this creek and Moreden Creek, but part of them were up at the north and ought not to come in.
3130. Do you think that a station, or siding, on Tenterden run would serve at least 500 souls? Yes.‡
3131. Without including Bundarra? I asked the schoolmaster at Tenterden to find out the number of children and families, and he has brought a list showing 129 children, and I know he left out a good many large families.
3132. You say that this list shows that there are about 129 children in this district? There are 150 children below the road here—west of the Armidale and Inverell crossings of George's and Moreden Creeks.
3133. That would indicate a pretty fair population for a sparsely settled district? Yes. There is a school at Tenterden and another 8 or 9 miles further down at the saw-mills, and then there are a good many families on the other side of George's Creek who cannot reach any school at all. There is another school at Ollera.
3134. Where do you send your wool? We send it to Newcastle, *via* Guyra.
3135. And do you obtain your stores by way of Guyra? Yes, they all come that way.
3136. What distance are you from Guyra now, starting from your homestead? Ollera is 13 miles. That is where our wool shed is. Tenterden is 5 miles further down.
3137. In the event of a line being constructed from Glen Innes to Inverell, would you still use the Guyra station? Yes.
3138. If you were describing the locality on which the population round here is settled, how would you describe it—which would be the central point to start from? Tenterden.
3139. How many miles around Tenterden are the families to which you have referred to be found? Within about 8 miles from Tenterden.
3140. Are there any more pastoralists in this neighbourhood? Yes; a great many.
3141. Who are they? They all keep sheep.
3142. I do not mean small farmers; I mean squatters? No; there are no squatters—unless Paradise would come in, or Moreden.
3143. Would they all be likely to send their wool away from a station somewhere about Tenterden? No, Moreden would not; Moreden would go direct to Ben Lomond. 3144.

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* NOTE (*on revision*):—By freehold I mean it to include some C.P. and C.L. land, all of which belongs to self or brothers, severally or separately.

† NOTE (*on revision*):—Tenterden is on the right bank of George's Creek and 25 miles from Bundarra township. I believe a very good road could be made at little expense up what is known as the Tenterden Gap or some other spur of the range. Buggies, and spring-carts and drays have frequently been driven down and sometimes up.

‡ NOTE (*on revision*):—I consider a railway station, say on George's Creek, a mile and a half above or east of Tenterden, would serve for over 500 souls, living within a radius of 8 miles; but if there were other platforms within a few miles it would vary accordingly. By consulting the maps of the adjoining parishes the population may be easily got at.

Mr. E. Everett. 8 May, 1891.

3144. What stations between here and Tingha, or anywhere outside here, would be likely to send their wool from a station placed on the Tenterden run, or at the best available point for the district? Elsmore, and all the Tingha people, and the Bundarra people, Mrs. Derby's run, the Grove, and Wiseman's Clerkness run.
3145. Would not Tingha serve Mr. Wiseman better than this? No; not if he had a road straight to Tenterden.*
3146. In mentioning Tingha just now, did you refer to the pastoral holding or the Tingha township? The township.
3147. But Tingha would have a station itself? Of course.
3148. Therefore they would not be likely to use the station on Tenterden? No; I was wrong there. Of course the Grove run would go to Tingha, too, because it is only a few miles away.
3149. What pastoral holdings would be likely to send their wool away from a station placed somewhere about Tenterden? I believe Mr. Wiseman, at Bundarra, would, and also Paradise Creek. I do not know about any more.
3150. Have you any idea of the quantity of wool likely to be sent away from a station on Tenterden? No; I have never tried to find that out.
3151. Do you cultivate at all? Only hay and potatoes for my own use.
3152. You do not grow anything for the market? No.
3153. The only thing you send away is wool? That is all.
3154. *Chairman.*] Is there anything else you would like to state? No; except that I consider that Tenterden is about the best timbered country anywhere about, and I believe it will never fail. People fancy that as the timber is being cut down it will all run out, but I think it will never fail, because, where one tree is cut down, very often five or six spring up, much straighter and better than the old one.
3155. *Mr. O'Sullivan.*] What is the nature of the timber? Stringybark. There is also yellow jacket and red gum. I may say that there is a great deal of good building stone.
3156. Are any of these timbers used for building purposes in the district? Yes; and what we cannot use ourselves goes to Armidale, Inverell, and Bundarra.
3157. Is there likely to be a market for these timbers in the west? They can take any quantity of them. There has been a sawmill at Tenterden for the last three years; they have always been sending timber away whenever the state of the roads would allow it.
3158. Is the timber to which you refer fit for railway purposes? Yes. An immense quantity of railway sleepers were obtained from here and taken to Guyra when they were constructing the main line.
3159. I presume there is plenty of timber left for this line, should it be taken along this route? Yes, plenty.†

Mr. Donald Stewart, grazier and farmer, near Wandsworth, sworn, and examined:—

Mr. D. Stewart. 8 May, 1891.

3160. *Chairman.*] What is your occupation? Grazing and farming combined.
3161. *Mr. Tonkin.*] Where is your holding? Within 2 miles of Ollera Station.
3162. What is the area of it? About 4,000 acres.
3163. How much of it have you under cultivation? About 50 acres.
3164. What do you grow? Potatoes, turnips, wheat, oats, and hay.
3165. What do you do with your produce? As a rule the readiest market we find is at Tingha and at Inverell for such things as potatoes and other vegetables.
3166. Have you sent any yourself from here to Inverell? I have sent as much as 30 tons of potatoes in a season.
3167. Is it a usual thing for you to send potatoes from this district to Inverell? Yes.
3168. Have you sent wheat to Inverell? I sent wheat the other day to Inverell; the teams returned yesterday.
3169. Is it usual for you to send wheat that way to Inverell? Well, I do not think I ever sent wheat there before. Armidale would be the place.
3170. What is the usual market for wheat or potatoes grown in this district? As a rule they are sent to Tingha and Inverell.
3171. Do you know the proposed railway line? Yes.
3172. How far would your place be from the line surveyed from Guyra to Inverell? About 1½ mile.
3173. And how far would your place be from the Guyra Railway Station, or the nearest point on the Great Northern Line? Twelve miles.
3174. If the line were constructed from Guyra would you cart your produce to Guyra, or to the nearest point on the northern line, or would you use the station close to you? I would use the station close to me.
3175. What would you have to send away, and where would you send it to? I would have to send my wool and my agricultural produce, and so on. The wool would go to Guyra, and the agricultural produce would go to Tingha and Inverell, and perhaps lower down.
3176. Have you any idea, in the event of this line being constructed, of putting more land under cultivation than you have at present? Yes; and a good many more would also do so.
3177. Suppose you had this railway, could you give the Committee any idea of what you would grow the wheat for per bushel and sell it on the ground? I suppose from 2s. 6d. to 3s.; it depends on the season and the price.
3178. What is about the average yield of wheat here? I have had as much as 60 bushels to the acre; that was on a small portion of new land. As a general rule the average is from 18 to 20, and perhaps 25 bushels.
3179. The average would be about 20 bushels? I should think so.
3180. What is the average yield of potatoes to the acre? Perhaps 10 or 12 tons to the acre from a good crop.
3181. That would be an exceptionally heavy crop, would it not? Yes.
3182. What would you call a poor crop? Five or 6 tons per acre. I would consider that a very bad crop indeed.
3183. Then you would average 9 tons to the acre, taking good and bad seasons together? Yes. In some places the crop is next to a failure this year, simply because we have had too much rain.
3184. What do you think would be the yield per acre, taking it all round? I am in hopes that we shall have about 5 tons to the acre. 3185.

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* Note (*on revision*):—Mr. Wiseman, of Clerkness, is 22 miles from Tingha, by King's Gap Road, and Tingha is 21 miles from Tenterden, making 43 miles instead of 25 miles. Laura Station is also about 25 miles from Tenterden, and Abington the same distance; but Abington is 33 miles from Tingha, and about 40 miles from Uralla.

† Note (*on revision*):—If a good road were made up the range from Bundarra to Tenterden it might cost £200 or £300 to begin with, and then £10 per annum ought to keep it in repair—unless a bridge were required over Clark's or Moredeu Creek—and the road would be used at once, as all people living below the range want to get at the timber on the top.

Mr. D. Stewart. 8 May, 1891.

3185. Do you call that a poor crop? I do; very poor indeed; so much so that we had to plant potatoes a second time, simply because the ground was saturated with wet.
3186. Have you any neighbours growing potatoes? Yes.
3187. Do they get as good crops as you do? I think my land is quite as well adapted for potatoes as that of any of the neighbours, because the soil is light.
3188. Do you think that the neighbours get approximately the same yield that you do? I daresay they do.
3189. Then the average crop of potatoes in the district would be over 6 tons? In a fair season I should think it would be.
3190. Do you grow any fruit? A little.
3191. Nothing for export? No.
3192. Could you tell us about the tonnage of wool, wheat, and potatoes that you would send away from your place? I am not prepared with that information, but I have a list of twenty-five holdings.
3193. How near is the nearest run to Guyra? I should think 5 miles.
3194. How far from Guyra is the furthest one towards Tingha? About 17 miles.
3195. How far on either side of the suggested line do they extend? About 7 miles on either side.
3196. So that the line would serve all these people if it went through here? Yes.
3197. You have collected these statistics from people whom you know would be served by the suggested line? That is so. The total area of the holdings is 32,633 acres; the number of sheep, 27,650; the number of acres under cultivation, 459; the number of cattle, 499; and of horses, 277. On the twenty-five holdings there are 119 people, and they all reside within 6 miles of the proposed railway line from Guyra to Inverell.
3198. Could you tell us the tonnage that would go from these holding to the railway? I could not. Owing to the nature of the roads the cultivation has been cut down very much indeed.
3199. If a railway were constructed do you think a larger area than the 459 acres would be placed under cultivation? I do.
3200. You think that the other holders besides yourself would increase their area under cultivation? I am quite of that belief.
3201. Have you any idea where your market would be—suppose you had 100 acres of wheat, where would you send it to? I would send it to the best market, of course.
3202. Have you considered where that best market would be? At present Sydney is considered the best market in our own immediate neighbourhood.
3203. If you had a surplus over and above the local consumption what would you do with it? We have such a very little surplus about this part; we can always make use of it each season.
3204. You have not grown more than sufficient for ordinary consumption? No; and I do not know anyone in the neighbourhood who has done so.
3205. You said just now that if a railway were constructed you would place more ground under cultivation? Yes.
3206. Have you thought what you would do with the produce after the local requirements were supplied? If I were inclined to part with it, I would forward it by the train to the best market.
3207. *Chairman.*] And if you were not inclined to part with it, the railway locomotives would lie in the shed idle? Yes.

Mr. William Wade, grazier and farmer, near Wandsworth, sworn, and examined:—

Mr. W. Wade. 8 May, 1891.

3208. *Chairman.*] What is your occupation? Grazier and farmer combined.
3209. What is the extent of your holding? Something over 2,000 acres.
3210. In which direction from here is it situated? About 5 miles south-west towards Tenterden, close to the run.
3211. How far are you from the proposed Guyra-Inverell line? About 150 yards.
3212. What is your production of wool a year? I had last year 5 tons.
3213. Where do you send it to? To Sydney, *via* Guyra.
3214. If this line were constructed, would you put it on the railway at your own door? Yes; if I had a platform.
3215. If you had a platform nearer than Guyra, you would use it? Yes; I should use the nearest station.
3216. What other produce have you? I have never grown a great deal of anything; but I should grow a great deal more if I had facilities for sending it to Tingha and Inverell, and west of Inverell.
3217. Is that where you find a market for your produce? Yes.
3218. What do you produce? Potatoes, wheat, oats, and corn.
3219. Do you send those productions to Inverell? I have never sold any anywhere else, and very little there.
3220. You grow only for your own consumption, and for any surplus you find a market at Tingha and Inverell? Yes.
3221. What is your average yield of wheat? About 17 or 18 bushels—perhaps less. Corn averages about 50 bushels per acre.
3222. Is your holding of a fair average quality of soil? Yes, about the average.
3223. What is your potato crop? About 5 or 6 tons, taking the average.
3224. Then the only produce you send southward is your wool? Yes.
3225. The other productions go north and west? Yes.
3226. And you would use this railway, if it were constructed between Guyra and Inverell, for the purpose of taking your produce to Tingha and Inverell? Yes.
3227. Do you think you would find a market there? I am sure of it.
3228. You would always readily find a market for your produce? I always find a market for everything I take there.
3229. If the Committee have been informed that the farmers immediately around Inverell have great difficulty in finding a market for their produce, do you think that is correct? I have friends living there, and I never heard them complain much about not being able to sell whatever they had.
3230. Are you able to grow at a less cost and under-sell them, do you think? I do not know whether we could under-sell them or not. It would pay very well if a man got £3 10s. or £4 for his potatoes, and about 2s. 6d. or 3s. for his wheat.
3231. Suppose the first sod of the Guyra to Inverell line were turned to-morrow, what would be the first thing you would do? Put in a good crop, I should say, would be the first thing.

Mr. W. Wade. 8 May, 1891.

3232. In anticipation of the railway being completed? I should get a sale of my produce while the railway was going through, and if I had any surplus I would send it off down west, because I consider that is the only market we would get. We will never get much of a market on the coast.
3233. Do you think there is sufficient traffic to warrant the construction of the line from Guyra to Inverell? Yes.
3234. Do you know the estimated cost of the line? No; I do not know the exact figures, but I know it is a great deal less than the cost of the Glen Innes line.
3235. How much less? Some £200,000.
3236. Would you be surprised to learn that the cost of the Glen Innes-Inverell line is only some £15,000 more than the cost of the line from Guyra to Inverell? You mean the actual cost of construction, but I include the purchasing of the land through which the railway runs, and everything else.
3237. Are you aware that the purchase of land has very little effect now in determining the cost of the construction of a railway? No.
3238. Have you formed any idea of the total tonnage which would be sent by this line either south or west? No; I could not say. I did not expect to be called upon, and am not prepared with evidence of that kind. I know, however, that the tonnage would be very considerable. There are a good few people living around here.*
3239. Do you think there is a sufficient number of people in this district to produce enough to pay interest on £420,000, besides working expenses? I do. I think it would be much better than the Glen Innes line, as it would benefit a greater number of people.
3240. If the line were constructed from Uralla or Kentucky to Inverell, would it be any benefit to this portion of the district? Not the least.
3241. You would still go to Guyra? Yes.
3242. How long have you been living in the district? About twelve or thirteen years. I was at Tingha for six or seven years before that. It is about eighteen years since I came to New England.
3243. Have you any knowledge as to the volume of traffic between Tingha and Guyra? Yes; there is a great deal of traffic.
3244. Has it fallen off recently? I think it has fallen off a little since the tin got scarce, and the differential rates came into force; since then the greater part of the people of Tingha and Inverell get their goods from Glen Innes.
3245. Has there been any falling off within the last three or four years? I could not say anything about the traffic for the last three or four years.
3246. You are not on the line of road? No; I am about 5 or 6 miles off it.
3247. Do you know whether there is any good timber about this locality? There is some very good stringybark pretty well all down along the line, especially on the southern side.
3248. Suitable for bridge work? Yes; it is the same sort of timber that they used when constructing the line to Guyra, because I was getting stringybark sleepers myself.
3249. Did you skin the forests when you were getting the timber? No; there is enough left to build this line.

Mr. William Willis, farmer and grazier, near Wandsworth, sworn, and examined:—

Mr. W. Willis. 8 May, 1891.

3250. *Chairman.*] What is your occupation? I am a farmer and grazier.
3251. *Mr. Trickett.*] Where do you live? A mile and a half from Ollera Station.
3252. How far is that from Wandsworth? Ollera is about 3 miles from here, and my place is about 4½ miles.
3253. You are a farmer? Yes.
3254. To what extent? 2,500 acres.
3255. How long have you had that? We have been here over thirteen years.
3256. What do you do with your holding? We have it for grazing and farming.
3257. Chiefly grazing? We have 2,300 sheep and some cattle, and about 50 acres under cultivation.
3258. Is the land you have extra rich in quality? No; it is just a fair quality—some good land, and some not so good.
3259. Then your land is capable of carrying fully a sheep to the acre? Yes.
3260. Could you put any more stock on it than that? I could in a season like this.
3261. But in an ordinary season? Not in an ordinary season.
3262. Is there a regular rainfall here? Yes; there is always a regular rainfall; we never suffer from drought.
3263. What is the annual rainfall? I do not know.
3264. How would this line from Guyra to Inverell benefit you? It would benefit me in regard to my farming; I could send hay away, and potatoes.
3265. Where would you look for a market? I have a market now at Tingha for the hay and potatoes.
3266. Do you look for your market west or on the main railway route? I would look for it west if there was a line constructed.
3267. You would not contemplate a market down below—at Tamworth, for instance? No. If there was a line from Guyra to Coff's Harbour I believe we could compete with the Sydney market in hay, because the water carriage to Sydney would not be very great.
3268. But until that line to Coff's Harbour was constructed you would look for your market chiefly west? Yes.
3269. What crops would you grow? Hay, potatoes, wheat, and maize.
3270. Does wheat grow well in this district? Yes; it is a very good district for wheat.
3271. How does the wheat here compare with that grown in Inverell in regard to the quantity per acre? I do not know much about the Inverell district.
3272. The evidence there is, that they have an average of about 20 bushels to the acre? I would say the average about here would be about 18 bushels.
3273. Having been in the district for sometime, can you say whether it is progressing or retrograding? It is progressing.
3274. There does not seem to be any evidence of progression along the coach road that we have come? All the tin teams have left this road on account of the differential rates to Glen Innes, and the tin principally goes to Glen Innes now.

* Note (*on revision*):—The total amount of wool to go south, within 5 miles of my own door, is about 110 tons. The people of Bundarra would use this line if constructed.

Mr. W. Willis. 8 May, 1891.

3275. There do not seem to be any new houses and farms between Tingha and Wandsworth—how do you account for that? There are plenty off the road.
3276. Is the soil much better off the road than along the line of road? Yes; it is much better for agricultural purposes. Down towards Tenterden the soil is splendid.
3277. What is the character of the soil between here and Guyra? As you get up close to Guyra it is red soil, and between here and Guyra it is black and sandy soil.
3278. Taking the whole distance from here to Guyra, what are the capabilities of the land—what is it suitable for—say for 6 miles on either side of the projected railway line? Potatoes, wheat, and hay.
3279. All kinds of farm produce? Yes.
3280. Have you had experience of farming at any other place about here? Yes; I was down at Armidale before I came here.
3281. How does this district compare with the Armidale district for farming? We get better crops here than they do down there.
3282. Very much better? Yes.
3283. Do you know the Guyra-Inverell line as surveyed? Yes; I have an idea how it runs. I have been right down along the line to the New Valley.
3284. For 6 or 7 miles on either side would the line be easy of access? Yes.
3285. There would be no difficulties in the way of hills or creeks? No; a station at Tenterden or between here and Ollera could be reached by all around here without any difficulty.
3286. Would a line from Inverell to Glen Innes be of any use to this particular district? None whatever.
3287. Not if you contemplated getting a market north of Glen Innes? There would be no market north of Glen Innes for us.
3288. Not for wheat? Not that I know of. Queensland is no market for us.
3289. Does not the south-eastern portion of Queensland get its wheat from the New England district? I do not know.
3290. Have you observed the state of the traffic along the road lately, and can you say whether or not it has fallen off very much? Yes; it has fallen off.
3291. You think that is owing to the tin traffic having been diverted? The traffic along this road has fallen off on account of the differential rates to Glen Innes. All the Tingha traffic now goes to Glen Innes, because it is cheaper than to take it to Guyra.
3292. As a wheat-grower, do you know anything about the relative qualities of wheat grown here and the Inverell wheat? I do not know anything about the Inverell wheat.
3293. What about your own? I grow good crops of wheat here. The wheat from about here and Inverell goes to Armidale, and from what I can hear it has a very good name.
3294. It has always been looked upon as of first-class quality? Yes.
3295. Did you ever hear anything against the Inverell wheat? No.

Mr. John Edward Everett, Road Superintendent, Wandsworth, sworn, and examined:—

Mr. J. E. Everett. 8 May, 1891.

3296. *Chairman.*] What are you? A civil engineer, and I am at present employed as a Road Superintendent.
3297. *Mr. O'Sullivan.*] Have you any knowledge of the route between Guyra and Inverell? I have a knowledge of a portion of it, but I cannot say the whole of it.
3298. Do you know if there is a grade of 1 in 40? No; I have not seen the sections.
3299. How long have you been in the district? I have known the district for nearly three years; I have not lived in it constantly.
3300. Are you acquainted with the roads and tracks in the district? Very little beyond Tenterden into Guyra.
3301. Is that your district? No; my district is in the South Grafton district. I am, of course, interested in the property at Tenterden and Ollera, being a nephew of Mr. Everett, who gave evidence just now.
3302. What particular evidence do you desire to give? Only as to the practicability of the line, as far as I know, and the general utility of the country here, and as to the advantage generally that the railway would be to the district.
3303. Do you know the surveyed railway route from Guyra to Inverell? I know it from Guyra to within a mile or so from Tenterden.
3304. I suppose you are not in a position to state whether a better grade could be obtained on the route? No, I am not, but as far as that portion is concerned between Tenterden and Guyra I do not see any difficulties at all.
3305. What, in your opinion, would be the advantages conferred upon this district by the railway? It would open up the district and give the farmers a chance of cultivating, because they would have a means of getting their produce away.
3306. Where would they send their produce? My idea is that it would go to the coast, and from there to Sydney. If a coast line were made this line would act as a feeder to it, and the market would be ultimately in Sydney.
3307. Are you well acquainted with the South Grafton district? Yes.
3308. Where do the people there get their stores from in the shape of potatoes, flour, and wheat? It all comes from Sydney.
3309. Do you think that the farmers of this district could compete in the Grafton district with the seaborne produce? I am sure they could if there was a railway down there.
3310. What price are they paying in the Grafton district for potatoes and flour? I could not tell you.
3311. How can you express an opinion in favour of this district in regard to its competition with seaborne wheat if you do not know the price paid at present at Grafton? Well, of course, that does not sound very well, but, at the same time, that is my opinion. At any rate, it would give the people up here a chance of getting a market, which they have not got now.
3312. Then it is only a matter of belief with you that they would find a market on the coast for their produce? I know there would be a market there. A little time ago it was proposed to start freezing works down there, and export direct to England. I believe it would pay very well, if there was railway communication, for the people of this district to send their cattle down there by train; and, of course, the railway from Guyra to Inverell would open up this district and act as a feeder to the coast railway.

Mr. J. E. Everett. 8 May, 1891.

3313. It is only a matter of belief with you after all that there would be a market down there;—you have no positive evidence of the fact? I know that they are importing, and especially in times of flood. Last year they often imported maize from Sydney.
3314. You believe that in flood time, when it would be dangerous to enter the rivers from sea, there would be a certain market for the produce of this district? I think so.
3315. You mentioned something about freezing works;—are you not aware that there are freezing works at Tenterfield? I have heard that they send frozen meat from there.
3316. Would not that be much nearer to the stock-owners of this district than Grafton would be? But the proposal was that the meat should be shipped direct to England from the Clarence River.
3317. How could it be shipped direct to England from the Clarence when no ocean-going steamers go there? There are none at present, but it is done in New Zealand, and I do not see why it should not be done here.
3318. But in New Zealand it is done at harbours which accommodate ocean-going vessels? I am informed that vessels lie alongside in places where there are no harbours in calm weather, and on this coast in winter time, during westerly winds, a vessel might lie off the mouth of the Clarence River and be supplied with cargo.
3319. Would not that be a very precarious way of loading ocean-going vessels, especially near a bar-harbour? Well, it is done in New Zealand.
3320. Where? I cannot say of my own knowledge, but such is my opinion.
3321. It is purely a matter of belief with you that there would be a market on the coast, and that there would possibly be a chance of sending meat away from the Grafton district by ocean-going vessels? Yes. As far as a market is concerned, there is a demand there, at any rate.
3322. That demand is met by sea-going vessels from Sydney;—do you think the farmers in this district could compete in that market with produce brought by sea-going ships from Sydney? I do.
3323. But in saying that you are not aware of the prices paid for wheat or for coast transit? No.

Mr. William M'Crossin, storekeeper, Waudsworth, sworn, and examined:—

Mr. W. M'Crossin. 8 May, 1891

3324. *Chairman.*] What is your occupation? I am a storekeeper.
3325. *Mr. Tonkin.*] Where do you reside? Just opposite.
3326. How long have you been here? Twenty-five years.
3327. Have you noticed much falling off in the trade? No.
3328. You have as much trade now as you had two or three years ago? Yes.
3329. Has the trade increased? It has rather increased than otherwise.
3330. Do you notice any difference in the traffic of the road? Yes.
3331. Has that fallen off? That has fallen off altogether.
3332. Did not the traffic along the road, while it existed, bring you any trade? Very little.
3333. To what do you attribute the falling off of that traffic? On account of the raising of the railway rates to Guyra. They carry goods now cheaper to Glen Innes than to Guyra.
3334. Was it the raising of the rates to Guyra, or the lowering of the rates to Glen Innes? Both, I suppose. I do not know that they raised the rates to Guyra.
3335. You mean that it was on account of the differential rates? Yes.
3336. And that caused the traffic to go on to Glen Innes—the Tingha traffic? Yes.
3337. Was there any traffic done between here and Inverell? Yes.
3338. Did that traffic go by this road? Yes, but that is a good many years ago.
3339. But the Tingha traffic always used to come this way? Yes.
3340. And on account of the differential rates it now goes to Glen Innes and Inverell? Yes.
3341. Can you tell us whether this district is in a flourishing state in regard to agriculture and pastoral pursuits? I believe it is.
3342. Are the people about here, as a rule, large holders or small holders? The selectors all hold areas of from 1,000 to 2,000 acres, and in some cases as much as 3,000 or 4,000 acres.
3343. Are any of these selectors selling out to the larger men? No.
3344. They are still holding their own? They are.
3345. None of the smaller men are giving up and clearing out of the district? No. I do not know that I ever knew one of the small holders about this district to sell out.
3346. I suppose there is no more available land here for further population? Very little. Indeed I do not know that there is any at all. It is nearly all occupied.
3347. Do you know what is the population of this part? I could not say.
3348. Do you think it would be a great benefit to this part of the district if the line were constructed from Guyra to Inverell, instead of from Glen Innes to Inverell? I do.
3349. Have you any knowledge of the road between Glen Innes and Inverell? No; I do not know anything about it.
3350. Do you know anything about the passenger traffic between here and Tingha? Yes.
3351. Does a coach run through Wandsworth? Yes; a coach runs from Guyra to Tingha three times a week.
3352. Have you noticed whether there has been a falling off in the passenger traffic lately? No, I think it is about the same. Sometimes the coach is full, and at other times it has no passengers.
3353. Then the passenger traffic has been just about the same for the last two or three years? Yes.
3354. Would the railway be a material advantage to the district? I think so. Many who have now to cart their wool and other produce 15 and 18 miles would only have to cart it half that distance.
3355. Is there any other storekeeper here beside yourself? No.
3356. Is there any storekeeper between Guyra and here? No.
3357. Where do you get your goods from? From Sydney.
3358. What is about the amount of tonnage you get? Not less than 30 tons.
3359. Do you purchase anything in the shape of hides, tallow, and anything of that sort to send away? No.
3360. You do not export anything from here yourself? No.

SATURDAY,

SATURDAY, 9 MAY, 1891.

[*The Sectional Committee met at the "Guyra Hotel," Guyra, at 9·45 a.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM JOSEPH TRICKETT.	EDWARD WILLIAM O'SULLIVAN, Esq.
JAMES EBENEZER TONKIN, Esq.	WILLIAM McCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Arthur William Everett, Manager of Ollera Station, sworn, and examined:—

Mr. A. W. Everett. 9 May, 1891.

3361. *Chairman.*] What is your occupation? I am Manager of Ollera Station, on the road between here and Tingha.
3362. Have you any information to furnish regarding the population of the district? Yes. In a statement given yesterday by my uncle, at Wandsworth, a number of selectors, chiefly on Tenterden run, were omitted. There are seventeen of these selectors, with a total acreage of 20,200 acres, and 19,939 sheep.
3363. Do these people combine farming with grazing? Yes; most of them have farms as well.
3364. They are similarly occupied to those who gave evidence yesterday? Yes; nearly all combine farming with grazing.
3365. Principally grazing and some farming for their own wants, and also to supply the district? Yes.
3366. How near would the bulk of these selectors be to Guyra? I should say about 15 miles.
3367. And how near to the nearest point on the Guyra-Inverell line, if it were constructed? Some of them would be nearly on the line.
3368. How far would the furthest be away? About 4 miles.
3369. Then any produce they had to send either to Sydney or to Inverell would be taken to the Guyra-Inverell line? Yes.
3370. Have you formed any idea as to where the market would be for the surplus products of this district? I should think out west—Inverell way.
3371. The farm produce would go out west? Yes.
3372. You do not think that any of it would go down towards Sydney? It would if the line from here to the coast were constructed, but at present I think we would find a better market for our goods west.
3373. Do all these people bring the wool they now produce into Guyra? Yes.
3374. Can you tell approximately the quantity of wool that would be sent by that number of people? I should say about an average of 5 lb. a sheep.

Mr. William Moore, farmer and produce dealer, Guyra, sworn, and examined:—

Mr. W. Moore. 9 May, 1891.

3375. *Chairman.*] What is your occupation? Farmer and produce dealer.
3376. *Mr. Trickett.*] How long have you resided in the Guyra district? For about fourteen years in the immediate neighbourhood of Guyra. For six years prior to that, I was at Paradise, about 25 miles from here, and nearly the same distance from Inverell. Before that, I resided on the Inverell home station for five years, doing farm work and ordinary station work. Previous to that, I was eleven years with my father on a farm near Armidale.
3377. So that you have had considerable experience in farming? Yes; thirty-seven or thirty-eight years.
3378. What is your opinion of this district as a farming district? My experience is that I can grow a better average crop at Guyra than I could at either of the other places.
3379. What other produce? Principally potatoes and hay and oats. Those are the principal products we grow. We do grow wheat, and very good wheat, too, sometimes, but the one difficulty we have to contend with worse than any other is that of wet harvests—bad harvests.
3380. Have you lived at Inverell? Yes, for five years; and, having been reared a farmer, I took a general interest in the farming industry. I was hired as a station hand by the Messrs. Campbell, and did contract work. Every year they farmed with wheat more or less, and I had to do with that part of the work.
3381. What do you think of the farming industry in the Inverell district? It is very good.
3382. As regards what products? Principally hay, maize, and wheat.
3383. Do you know what the average wheat crop was there? From 20 to 25 bushels to the acre.
3384. That is very good, is it not? Yes; very good.
3385. Is the wheat, as far as your knowledge goes, of a good saleable quality? Yes.
3386. You have never heard anything to its detriment? No.
3387. Is the corn crop good there? The corn crop there averages about 25 bushels to the acre. I have seen crops as high as 60 bushels; but only occasionally.
3388. With regard to Guyra, how many people are there living at Guyra, and within a radius of 4 or 5 miles? Within 4 miles north and south, and 5 miles west of the starting point of the proposed railway to Inverell, there are seventy-eight heads of families and land holders. This includes 3 miles east of the northern line, and the same radius north and south.
3389. Do you know what is the total population? I should say the families would average six in number.
3390. That would bring the total up to about 500 people? Yes; that would be about a fair estimate.
3391. I suppose there is not much local consumption here of produce grown in the district? No; not just here. As a produce dealer, I have had as much as fourteen or fifteen, or perhaps more, trucks of grain in the year from Newcastle, and I have also had grain from Inverell in my time.
3392. But during the last few years has the district grown enough to supply the 500 residents in it? Yes; and far more. We are almost purely an agricultural population here.
3393. What do they bring into the district for consumption? There is nothing brought here except maize. We nearly all grow our own wheat, and get our own flour ground.
3394. Do they not bring flour from Sydney in considerable quantities? Sometimes Adelaide flour is brought here.
3395. Is that the exception? It is not the rule.

Mr. W. Moore. 9 May, 1891.

3396. Are the farmers and others living round the district fairly well to do? There are a good many of them fairly well to do; they are not all well to do.
3397. Are they all occupying small holdings? Yes; the holdings are not very large.
3398. How many acres do you think a man would require to make a fair living for himself and wife and two or three children? Forty acres, if he farmed the 40 acres alone—if he put the whole of it under crop.
3399. And where would he get a market for his produce? He would get his principal market at Hillgrove, Narrabri, and Inverell for potatoes, and sometimes chaff and hay.
3400. I suppose you would not expect to get a market for farm produce below Armidale? Yes.
3401. How far? Narrabri.
3402. Not as far as Tamworth? That is past Tamworth. Narrabri, I may say, is one of our principal market towns, and takes a great share of our produce—principally potatoes, sometimes chaff.
3403. Is there any land available for selection within 4 or 5 miles of Guyra? Very little, except a few special areas, and there are some very large reserves.
3404. Do you ever hear of any people making inquiry for land in and around this district? Sometimes they come here; but most of the land is taken up, and there is hardly any land around here open for selection. The price of the special areas is too high. I think they are £5 10s. an acre.
3405. Seeing that Guyra is already on a line of railway connected with the great markets of the colony north and south, what special benefit do the residents expect to get if a line of railway is brought from Inverell to Guyra? We expect a great outlet for our potato crop to the west. I have taken potatoes to Inverell and out west for twenty-five years, and ever since there has been a continual demand there for potatoes. Out Inverell way and Narrabri would be our principal markets for potatoes.
3406. Could you give us any idea of the tonnage in that produce which goes away every year at the present time with road carriage? I could not tell you exactly; but I should think there must be 400 or 500 tons, because they go not only from here, but also from Ben Lomond, 14 or 15 miles further up the line. I know that one year I myself took eleven loads of potatoes from here out.
3407. That was some time ago, I expect? That was about twelve years ago.
3408. We would like some idea of more recent traffic? Since then, I have not carried myself.
3409. I suppose you are aware that the road traffic between Inverell and Guyra has decreased very much lately? Yes; I am well aware of that.
3410. What do you attribute that to? To the differential rates being applied to Glen Innes and removed from here. This, of course, makes such a wonderful difference to the people that they naturally get their produce from where they obtain it cheapest.
3411. Would any produce go from here in a westerly direction? In dry seasons we would send hay and chaff. We are never affected with dry seasons; in fact, a dry season is our best season, and a wet season is our worst. A dry season is the time when the farmers in this part of the colony make most money. Such a thing as a total failure of crops here is unknown.
3412. With regard to the differential rates, I understand that the Railway Department does not charge any more for taking goods from Sydney to Glen Innes than it does for taking them to Armidale; but suppose you sent goods from Guyra to Inverell, *via* Glen Innes, do you know what the charge would be by rail? I have never sent them round that way, but I think they charge ordinary rates. I think I should be compelled to pay ordinary rates. I think the differential rates only apply to truck loads and long carriage.
3413. So that you could not get your goods up at a cheap rate from here to Glen Innes, and then cart them to Inverell? No.
3414. Is there anything else that would go from this district westward? Oats; but they are not required where corn is grown in such abundance as at Inverell. Chaff and potatoes are the principal products we should have to send.
3415. Anything else? There is one thing I would remark. Some people think we would find a market in Queensland for our produce. Now, we are so situated on the railway line as to have every facility for sending produce to Queensland, and at the present time we send very little.
3416. But are there not duties which would interfere with any such export except as regards wheat? There is no duty on wheat.
3417. But you do not grow wheat? There is a duty of 15s. a ton on potatoes, 15s. a ton on chaff, 8d. a bushel on oats, and 8d. a bushel on maize.
3418. Naturally those duties would deter you from exporting into Queensland? Yes.
3419. You have given us the class of goods that would flow westward from Guyra and its surroundings; what class of goods do you think would come eastward from Inverell, and westward of Inverell, in the direction of Guyra? Maize in particular, and wine.
3420. Wheat? Wheat might not be required here, but it might be required for other places. I believe there would be a large demand for wheat at Hillgrove, Kookabookara, Bear Hill, and other places.
3421. Having lived in Inverell for some time, what is your opinion as to the probable wool traffic from the stations and other holdings in the direction of Goondiwindi, in the south-eastern portion of Queensland? We have had wool sent here from there by teams—two years ago.
3422. Do you think that traffic would come this way, if there was a railway to Inverell, by either the Guyra or the Glen Innes route? Yes; I have every reason to believe it would come this way, because we have already had a fair share of it.
3423. With regard to that traffic, which route would satisfy the wool-grower better—from Inverell to Glen Innes, or from Inverell to Guyra? I should fancy the Inverell to Guyra route, because it is nearer to the Sydney wool market.
3424. If a railway were constructed from Inverell to the northern line, do you think there would be any trade in wheat done between Inverell and Toowoomba? I do not think so.
3425. Why? I believe the Toowoomba people are as well able to supply their own market as the Inverell people are to send wheat to them and pay the cost of carriage.
3426. Have you ever studied the question sufficiently to be able to give any opinion as to the probability or otherwise of a market for Inverell wheat being found on the Darling Downs or at Toowoomba? Yes; I have been in communication with friends of mine who have been out there. I was talking over the railway question four or five years ago with Mr. Bloomfield, who formerly resided in Queensland. We were discussing as to whether there was a market for New South Wales wheat in Queensland, and he said

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said it was nonsense and stuff, and that they would look to us for a market and expected eventually to serve us. That is one reason for the conclusion at which I have arrived.

3427. Is Mr. Bloomfield a practical wheat-grower? He is a squatter. He is a practical and intelligent business man, and manager of a station.

3428. Do you know whether wheat grown on the Darling Downs is subject to rust? I believe it is; and so is the wheat at Inverell to some extent—in some seasons.

3429. But are not the seasons much more reliable for wheat-growing at Inverell than in the Darling Downs district? I cannot say.

3430. With regard to the two routes of railway, from Inverell to Guyra and from Inverell to Glen Innes, which do you think is the more desirable; and will you state briefly the reasons for the opinion you have? I think a line from Glen Innes to Guyra would serve the greater number of people. There is a large population settled in and around Tingha; there is a large number of middle-class men settled on the land; there are men with large families who have holdings varying in size from 1,000 to 5,000 acres. Some of these men have six and seven sons—in fact, one man has eleven sons—and sheep-farming would not keep them and their families. They naturally wish to see their families settled around them, and think there is a prospect of something better opening up for them. They could divide the land amongst their sons and turn it to better advantage than running sheep on it. That is one great reason in favour of the Guyra route. With regard to the line from Glen Innes to Inverell, I am aware that there is a fair amount of population settled on the land for about 10 miles from Inverell, in the direction of Glen Innes. Then almost the whole of the land is occupied in squattages or large holdings. There are very few people settled on the land until you get near Glen Innes. Then, again, I hold that any person who is within 8 or 10 miles of a railway station is very well served, for he can go in with his produce and return on the same day. The principal portion of the people settled here are not within that distance of a railway, whereas on the other route they are pretty nearly all within that distance, or all who are likely to supply the line with anything in the shape of produce.

3431. Do you mean that on the Glen Innes route the agricultural portions are at the two ends of the line—the Glen Innes and Inverell ends? Yes.

3432. Does not that also apply to this line? No. There are here about Tenterden, Paradise, and Moreden people settled almost the whole way who would want to reach the railway; and although it goes, to a certain extent, through very poor country, yet there is not the slightest difficulty in getting good roads to it a short distance from most of the holdings along the route between here and Inverell. With regard to the Glen Innes route, I have some idea of the country at Wellingrove, and out west from there the land is of a very poor, barren nature, especially in the direction of Ashford. There are some settlers there, but they are thinly settled on the land, and you are nearly on the boundary of the good land when you are coming down by Wellingrove, until you come within 10 miles of Inverell, and from thence west, of course, the country is all good.

3433. Is there not a considerable extent of country, if not actually on the railway line within, say, 4 or 5 miles of it, that is well fitted for agriculture? Yes; within 4 or 5 miles the whole way. But after that 4 or 5 miles the land is of the character I have described.

3434. Is that not much the same as the Guyra line? Yes; but there are very few people settled on the portions I am describing; a lot of it would be of no benefit to the railway.

3435. Why would they not settle on it there as well as here, if it is well suited for agricultural purposes? It is all held in large estates. Here the land is all settled.

3436. Would it not be to the advantage of those large holders to cut up their land, and either sell, or lease it instead of keeping it for grazing purposes? I question it. Sheep do so remarkably well there, and we have seen in England and Scotland so many old estates converted into sheep walks. I believe sheep will do as well in that part of the country referred to as in any other part of the world almost. It would be very questionable whether the owners would remove the sheep and cut the land up into farms.

3437. Do you know any land on either route that is leased to farmers? No.

3438. Do you know of one single instance? Not on the Glen Innes route; but there are two men here who lease land.

3439. What do they pay an acre for the land here? One man rented a farm of about 30 acres last year for which he pays £20 a year. But he has the use of a grass paddock in addition.

3440. What acreage does he get for the £20 a year? I think there are 214 acres. But the portion not under cultivation is of no benefit to him—he has no stock upon it.

3441. Is it good grazing land? Yes.

3442. But not fit for agriculture? Yes.

3443. What is the residue suitable for if he only farms 30 acres? It is fit for agricultural purposes, but it is not cleared. I do not suppose any man would care to clear land under a lease.

3444. Is it fenced in? Yes.

3445. Therefore he really pays the £20 a year for 30 acres? Yes. That is all that is of any material use to him.

3446. Would not that pay a grazier much better than grazing his land, which, as a rule, only carries one sheep to the acre, and which would be worth to him only about 3s. or 4s. But sheep do not do so well here—they are addicted to rot.

3447. That makes it all the worse for your position; what is the land fit for? Agriculture, but not purely agriculture. All the holdings embraced in the seventy-eight that I have mentioned are used for agriculture and for carrying cattle and horses, both of which do well here.

3448. Given one acre of land suitable for either sheep or farming, which is the more profitable as regards the land—to keep it to run sheep on, or to farm it? I think at the present time it is more profitable to run sheep.

3449. But if there were railway communication and a market would it be better on a small holding to run one sheep to the acre or to cultivate? To cultivate. I believe it would be better to combine one with the other, because you cannot get all the country exactly fit for agriculture—some of it will be good and some of it will be swampy.

3450. Is there anything else you would like to say? In the event of a railway being constructed from Guyra to Inverell I think it is likely that a large population would be settled in the mining districts, where, as a great many horses are used, a market would spring up for maize.

3451. Have you any interest in land between here and Tingha? Not between here and Tingha, only what I have here.

Mr.

Mr. James Kirk, farmer, Guyra, sworn, and examined :—

Mr. J. Kirk. 9 May, 1891.

3452 *Chairman.*] What is your occupation? I am a farmer.

3453. *Mr. O'Sullivan.*] Can you give the Committee a general idea of the condition of the farmers around Guyra, and the prices they obtain for their produce? Speaking generally, the farmers are not in the best of circumstances, and the prices obtained for produce fluctuate very considerably. A dry year down country raises our prices here, and is to us a God-send, so to speak. On the other hand, plentiful rains below throw our markets back. This year our principal produce as an agricultural crop is potatoes. This year people are holding back. The price has dropped, and growers here are holding back. It would not pay them to send potatoes away at the price offering.

3454. I notice that a writer in one of the Armidale papers of your name gives a long account of this matter; is that you? Yes.

3455. I inferred from that letter that the writer was selling out, and going to Queensland? I have sold out.

3456. And you are going to Queensland? I think so.

3457. Why have you sold out? Because my health would not allow me to stay here.

3458. On that ground only? Yes; I left England for my health; the winters here are too severe for me; my chest is weak; I did very well for the first four or five years; I have been here seven years, but I have not been well so far this winter.

3459. Instead of going to Queensland, why have you not gone west towards Inverell, where you would get a similar climate and better land? For the simple reason that I am not going into land at all.

3460. What part of Queensland are you going to? Toowoomba.

3461. You are going into some business, I presume? Yes. I do not know what I shall do yet exactly.

3462. You are giving up farming altogether, because your health will not allow you to carry it on? Yes.

3463. Does farming pay around Guyra? It does, and it does not. There are certain crops that pay. Wheat-growing does not pay, for instance. Potatoes grow best as a rule. I think there has only been one year since I came here—seven years ago—when potatoes were unsaleable. That was four or five seasons ago. Potatoes have been higher and lower, but they have always been at a paying price, and there has always been a fair crop, except in the one year to which I have referred.

3464. What crops, other than potatoes, have you found profitable in this part? Hay is the next best crop.

3465. Where do you obtain a market for that? South, at Narrabri, and at Hillgrove and Armidale sometimes.

3466. Then a railway running to Inverell, giving you access to the western country, would open up another market for hay? Certainly; in the dry seasons.

3467. What are the general features of the country round here? It is broken country: patchy, rather, with stony ridges, and flats here and there.

3468. Is it more suitable for grazing and agriculture combined, or for agriculture pure and simple? For grazing and agriculture combined, only it will not carry sheep soundly.

3469. What is the size of most of the holdings westward from here? About 2,000 acres.

3470. Is that the general run of the holdings about here? No.

3471. There are smaller holdings on the eastern side, nearer Guyra? Much smaller within 4 or 5 miles of Guyra—I should think 640 acres would be a big farm.

3472. But out towards Wandsworth the holdings appear to be a fair size—about 2,000 acres? There is a reason for that. It gets sounder for sheep there than it is here, and wherever it is sounder for sheep the holding naturally gets larger in size.

3473. The men out in that district seem to depend more upon grazing and farming? I have only been out there once, and could not speak positively on the matter.

3474. How far from Guyra, on the west side, are there settlers on this line of route? I believe it is practically settled almost all the way to Tingha.

3475. But is the larger number of settlers near the main line or on the Tingha side? I daresay the larger number are at this end, because the holdings are smaller; but otherwise I think they are pretty evenly distributed.

3476. Do you think the country between here and Tingha is well settled with a population carrying on grazing and farming combined? I believe it is.

3477. You think that settlement is likely to be permanent? Yes.

3478. You have been in Queensland lately, have you not? Yes.

3479. Have you been near the Darling Downs or at Toowoomba? I drove through the Darling Downs, from Warwick to Toowoomba.

3480. What is your opinion of that district as an agricultural region? Very favourable from what I could see of of it. I saw grain crops and potato crops growing equal to anything I ever saw in Inverell, and I was down there once.

3481. Is the soil around there as good as the Inverell soil? As far as I could see it is exactly like it—deep black soil on the Downs. Toowoomba itself stands on red soil, such as we have around the lagoon here.

3482. Then the general character of the soil on the Darling Downs is black? All black.

3483. But that is not the best soil for wheat, is it? It seems to be. They grow splendid wheat there. I saw a sample grown 15 miles this side of Toowoomba, and a man who was with me, who had been a practical farmer all his life in the old country, said he had never seen a better sample.

3484. Is not dark chocolate soil the best for wheat? I am not a wheat-grower, and I could not say. I do not think anything could have beaten the wheat I saw, and it was grown in black soil.

3485. Is there much settlement down there? It is all settled—all except where it is held by big squatters. In and around Allora the farms are as thick as they can be, being from 160 to 300 acres in extent. Three hundred acres is a good-sized place there.

3486. Is it not a fact that a large portion of the Darling Downs was resumed some time ago by the Government of Queensland, with a view to establish agricultural settlements? I believe it is, but above and beyond that the large estates are being cut up and sold every day.

3487. Do you consider that agriculture is well established down there? Most decidedly.

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3488. How often do their crops fail? In and around Toowoomba itself they hardly ever fail any more than they do here. But, as you are aware, the rainfall diminishes rapidly as you go westward. At Toowoomba the rainfall is greater than it is here on the average, and so it is at Allora.
3489. Do you think that the Inverell farmers, or the farmers out this way, are ever likely to get a foothold in the Queensland market? No. I am sure they never will except in a case of drought, and that is only a catch market.
3490. Not even on the frontier towns? There are no frontier towns. Stanthorpe has been a good town, but there is nothing in it now. Warwick is on the Downs.
3491. Where, in your opinion, will the farmers of Inverell get a market for their wheat, maize, and other produce, if they should get a railway? They will have to rely on the people nearest to them to begin with. They must send their surplus wherever they can get a market—to the nearest sea-port town if possible, and then they can command the world.
3492. Are they likely to obtain a market for wheat in the coastal districts? I should think so; they grow corn principally down there.
3493. Between Grafton and the Tweed? Yes. Even if they had a Queensland market the better way would be, in my opinion, for them to tap the coast and land their wheat in Brisbane, because they are nearer to the coast than they are to Toowoomba.
3494. Do you mean that they should get off a railway and ship on a steamer, and then go to Brisbane? Yes; because they have to re-ship the wheat on the border, where the railway gauge is different. It has to be handled in either case. In one case the water carriage can beat the railway carriage hollow, and they are nearer the coast than they are to Toowoomba. Toowoomba, which is the first place where they could touch a market by railway, is in the centre of a wheat-growing district. If they could get into the non-producing districts without going through the wheat-growing district there might be a chance, but I cannot see any chance if they have to go right through a wheat-growing district in order to get a market further on.
3495. You think, then, that the break of gauge will always act as an impediment in the way of gettting a market in the non-producing districts? The break of gauge is not much. That is a matter of detail which could be overcome; but the productiveness of the country through which you would have to send would alone prevent a market.
3496. Is there any other point you would like to bring out? No. I may say that I am quite disinterested in the evidence I have given. I have no interest either in this line or the other. I am going away from here, and I hold no land of any description in the colony whatever. On going to Queensland to look about for a change of climate I was struck by the wonderful prosperity of the agricultural community there. Any one who will travel from here into Queensland will not require to be told that the agriculturists there are much better off than they are here, and that they can produce equal crops. I was talking with one farmer outside of Allora who had grown 60 bushels of corn to the acre for three years consecutively on one piece of ground, composed of black soil. I was talking also with another man—an old farmer from Toowoomba—who was putting in potatoes. That is what we cannot do here at such a time of the year. I asked him if the frost would not kill them, and he said, "No, we do not get frost here until about July," and I said, "How can you grow potatoes here?" "Well," he said, "off this same piece of land—a little three-cornered piece—last year I took 9 tons, and there is hardly an acre of it." I said, "Can you do that often?" and he said, "We can do it always if we get any season at all." In regard to fruit, they can grow fruit there equally as well as they can at Inverell. I saw orange groves all over the place north of Toowoomba, on the ranges.
3497. What is the product per acre here of potatoes? The paddock in which I am working now has an average crop, and it will go 6 tons to the acre.
3498. Is that a fair average yield? It is a good crop. There are some crops more and some less.
3499. I suppose there is not much of a market in Queensland for potatoes if what you say is correct? No, there is not. Last year we sent some. We have been in communication with Queensland for years, and I believe a score of trucks of potatoes will reckon up all we have sent there.
3500. Does the duty there operate against you even when you have a fair show? The price in Toowoomba must be over £6 a ton to pay us to send potatoes there.
3501. Do they produce much wheat around this district? No; just a little patch. Some of them grow a little patch, and get it ground into flour; but this is not a wheat-producing district.
3502. How do you account for Adelaide wheat being sold so far away from the coast as this? On account of its superior quality. That is the only way I can account for it.
3503. Do you think it likely that the wheat from Inverell would drive the Adelaide wheat out of the market? I do not know. The Adelaide wheat has got a big name, and a name is a good thing. If it were equally good I should think it would.

Mr. Michael Kenny, farmer, near Guyra, sworn, and examined:—

M. Kenny. 9 May, 1891.

3504. *Chairman.*] What is your occupation? I am a farmer.
3505. *Mr. Tonkin.*] Where do you reside? One mile and a half from Guyra, to the east.
3506. What is the size of your farm? 135½ acres.
3507. How much have you under cultivation? 26 acres.
3508. What do you do with the rest of the land? Graze cattle and sheep.
3509. How long have you been farming in this district? Four years.
3510. Were you farming anywhere else before you came here? Yes; to Inverell and in Queensland.
3511. How do you compare farming here with the farming at Inverell, so far as crops are concerned? Inverell is a very good farming district, but I have grown more wheat per acre here than ever I grew in Inverell, and with a smaller acreage.
3512. *Chairman.*] And did you run sheep, too? No; it is not a quarter of a mile from here where I grew the wheat.
3513. *Mr. Tonkin.*] I suppose that was an exceptional crop? It was not an average crop.
3514. On an average you could not grow as good wheat crops here as at Inverell? No.
3515. Is there any crop that you can grow better here than at Inverell? Yes; potatoes and oats.
3516. Did you ever grow potatoes at Inverell? No; I never grew a bag there.
3517. Did you ever see potatoes growing there? Yes, I saw crops growing there, but never in great quantities. Sometimes there is a reasonable crop, but not very often.

Mr. M. Kenny. 9 May, 1891.

3518. And potatoes grow very well here? Very well.
3519. And oats? Oats grow very well here.
3520. What do you do with your produce when you grow it? I chiefly sent mine to Queensland last year, but I could not send any there this year.
3521. Why is that? Because the market is well supplied locally.
3522. Do you often find that the Queensland market is supplied locally or is this the only year? It depends on the seasons. In a good season it is very fairly supplied locally.
3523. If you were farming on a large scale you could not depend on Queensland as your market? Not at all.
3524. Where do you think you would find a market; do you believe there would be a market westward? That is the only market, if we could get there—either westward or coastways.
3525. Have you ever sent any of your potatoes westward? Never.
3526. Then you can, of course, say nothing about what that market would be? No.
3527. When you were farming at Inverell where did you find a market for your produce? There was a local market.
3528. You never sent any produce from Inverell westward? Never.
3529. You say you have been farming in Queensland? Yes.
3530. In what part? Near Warwick.
3531. Can you give the Committee any idea of the prospects of farming there? They are very good.
3532. How long were you working there? Four years.
3533. What were they growing there? Wheat and maize chiefly, and some potatoes.
3534. What sort of crops did they have? Very good crops.
3535. The average crops were good? During the four years I was there, there was a large farmer at Sandy Creek, who got 37 bushels of wheat to the acre, and in the following year, I saw the same land yield 22 bushels to the acre, a stripper being used, and in the year following, off the same land, he got 16 bushels of corn to the acre.
3536. Then it is not true that failures occur there regularly every second or third year? No; sometimes there is a drought, and the crop may not average so well. I have seen a crop of corn as low as 25 bushels to the acre.
3537. That is about an average crop here, is it not? I think it is.
3538. And it is considered a very low crop there? Very low. Anything under 40 bushels is not recognised as much there.
3539. Then we can understand that the seasons there for farming are quite equal to the seasons here—I do not mean Guyra, but say Inverell, for instance? I think they are about equal, for the drought at Inverell affects the crops very much sometimes. Two years ago they had nothing very much. The only thing I ever saw interfere with the wheat at Warwick was rust. Sometimes the rust is very bad there.
3540. Have you seen rust here at all? I have never seen it very bad here, but I have seen it very bad at Inverell.
3541. As bad as you have seen it in Queensland? Yes; equally as bad.
3542. Then as regards rust, they are about equal? Yes.
3543. And also with regard to failures caused by drought? I think so; there is not much difference.
3544. But the advantage of the Queensland farmer is that his crops are much heavier? Yes.
3545. Then take it altogether, a farmer is in a much better position in Queensland than he is in Inverell? Much better.
3546. Do you know anything of the country between Inverell and Glen Innes? Yes; I know every inch of it.
3547. Do you know whether there is a large population there? From Inverell to Swanbrook there are a few farmers, including Munsey's place, on Swanbrook Creek.
3548. How far is that from Inverell? Eight miles; from there you go through King's Plains. There are not many selectors there, only a few scattered about. At Waterloo there might be one or two, until you come within 6 miles of Glen Innes, and there are a few people along there, and at Furracabad.
3549. Do you know the country between Guyra and Inverell? I have travelled over it; but I could not give you much information about the country.
3550. Could you give a comparison between the farming population settled along the route from Guyra to Inverell, and that on the route from Glen Innes to Inverell? There is a larger farming population between Guyra and Inverell. I could not say exactly.
3551. You never sent any of your produce to Tingha or anywhere down that way? Never.
3552. Is there anything else you would like to state? In my opinion the nearest route to the coast would benefit us.
3553. Which line do you think would serve this district better;—the line from Guyra to Inverell or Glen Innes to Inverell? The line from Guyra to Inverell.
3554. Why? After it went to Inverell we would want something further than that to do us any good here.
3555. You would want it to go further west? Yes; it would be of very little use to us if it only went to Inverell. We could send potatoes there certainly, as they do not grow potatoes there in large quantities. We would want a market further out west beyond Inverell.
3556. But if you got as far as Inverell, would not that be a portion of the way? Yes.
3557. You believe you would find a market out west instead of to the north or south? I am sure of it.
3558. And the only thing that stops you from that market is the want of easier communication? Yes.
3559. Do you know if in times of severe drought, fodder for cattle and horses has been sent from here westward? Yes; I have sent it. I have sent produce from Inverell to Warialda by teams, and have sold hay there for £14 a ton. I have seen maize sold at 9s. per bushel.
3560. That was in a time of severe drought? Yes.

Mr. Gottlieb Drabsch, farmer and grazier, near Guyra, sworn, and examined:—

Mr. G. Drabsch. 9 May, 1891.

3561. *Chairman.*] What is your occupation? I am a farmer and grazier.
3562. *Mr. McCourt.*] You wish to make some statement with regard to the prices of produce, do you not? All I have got to say is that I have taken my produce down towards Tingha and Inverell, and have done so for the last five years.

3563.

Mr. G. Drabsch. 9 May, 1891.

3563. Do you get a good market there for it? Generally a better market than I can get elsewhere.
3564. How much produce a year do you take to those places—about how many tons? One year I took about 20 tons of chaff to Tingha.
3565. Do you know the farms in this neighbourhood well? Yes; I know a few of them.
3566. Could you give any idea of the number of acres under cultivation in and around this neighbourhood? No; I do not think I could.
3567. Could you give any idea of the total tonnage of potatoes grown within a radius of a few miles from here? No; I could not.
3568. If a railway were constructed from here to Inverell, could you give any idea of the tonnage that would go west by that railway? There would be a good lot, there is no doubt, but the exact amount I could not say.
3569. Could you not give an idea of the approximate tonnage? I have not studied the question.
3570. If the railway were constructed, you believe that the market of the farmers would be to the west? Yes. Not only would they take their produce to Inverell, but also further west still. I have taken potatoes to Inverell, and sold them to a storekeeper, and then he has wanted me to take them out as far as Yetman.
3571. Do you think there would be 2,000 tons per annum of various kinds of produce going west from here? I believe there would be, and more.
3572. How much does it cost you to take your produce now to Inverell? I could not take it under 30s. a ton, without reckoning my own time. If you paid for it, it would cost you 50s.
3573. If a railway were constructed from Glen Innes to Inverell, and if you could get your produce sent round there by that railway at 15s. per ton, would you use the line? There is no doubt I would, as it would be cheaper.
3574. Would that suit the farmers here as well? No, it would not, because it would cost them more to send their produce round that way than by a direct line.
3575. What would be the difference in the cost? The cost would be about double.
3576. Is Guyra a Government township? I believe so.
3577. Have allotments been sold in it? Some.
3578. Has there been any outside speculation in allotments here? That I could not say.
3579. I suppose the owners of the allotments would like the railway to come here? Very likely they would.
3580. What is the average size of the holdings here? From 100 acres to 640 acres.
3581. Are there any greater in extent than 640 acres? There might be odd ones, but very few.
3582. How much land in this immediate district do you think a farmer could make a living off? A farmer could make a living off 100 acres of good land.
3583. What is the value of farms around here? Generally about 30s. an acre. That is what I have seen some sold at, plus what is owing to the Crown.
3584. How is it that on special areas the Government have put a price of £5 and £6 an acre? But I do not think many of them have been sold.
3585. There is a vast difference between 30s. and £5 per acre? There are special areas upon which a reserve of £5 was placed five years ago, and they are still unsold.
3586. Is there any good timber along the Guyra to Inverell line? Some very fair timber.
3587. What is the nature of it? Stringybark.

Mr. Robert Sutton, farmer, near Guyra, sworn, and examined:—

Mr. R. Sutton. 9 May, 1891.

3588. *Chairman.*] What is your occupation? Farmer.
3588½. Where is your holding situated? About 2 miles from Guyra, on the Tingha road.
3589. What is the area? 618 acres.
3590. How much have you under cultivation? More than 70 acres.
3591. What does it produce? Wheaten and oaten hay and potatoes.
3592. Where do you find a market for that produce? Locally for some of the hay, but the principal part goes to Narrabri, and sometimes to Maitland. I sent chaff to Maitland last year. I sent some before to Narrabri. I sent a little to Emmaville. The potatoes mostly go to Tamworth, Gunnedah, and Narrabri.
3593. Do you send any out to Inverell? I sent a couple of loads of chaff to Tingha.
3594. Your principal market is down south and by the north-west line to Narrabri? Narrabri is the principal market.
3595. But you have at times sent your produce as far south as Maitland? Yes, both potatoes and chaff.
3596. If the line were constructed from Guyra to Inverell, do you think that would give you a better market? I think a great deal of what now goes to Narrabri would then go to Inverell.
3597. So far as the Railway Commissioners are concerned, then, if they recommended a railway to Inverell they would be cutting of their noses to spite their faces? Perhaps so, if they considered their own pockets only.
3598. That is what you do, is it not? Oh, yes.
3599. In other words, they would be carrying goods only 53 miles by railway to Inverell as against 150 miles from here down to Werris Creek and on to Narrabri? Yes.
3600. Then the only advantage of this line, if constructed, would be that the produce that now goes out Moree way, *via* Narrabri, would go *via* Inverell? A good portion of it.
3601. Do you think that the construction of this line would lead to a larger demand of the produce of the district? Yes; I think so, and especially for potatoes.
3602. Have you ever tried the Queensland market? No.
3603. How long have you been a resident of this district? Just over four years.
3604. Where were you before that? In Victoria.
3605. What part of Victoria? Near Ballarat at one time, and then north.
3606. Are you fairly satisfied with the progress you have made since you have been here? Fairly satisfied as regards the last two years, but not before that.
3607. Have you formed any idea as to where your markets will be in the future? I think we shall have to depend on the west and on Sydney.

Mr. R. Sutton. 9 May, 1891.

3608. Your trade is now principally with the west? Yes.
3609. Have you ever sent any produce as far south as Sydney? I sent one or two trucks of chaff.
3610. That was exceptional, I suppose? Yes.
3611. What is your yield per acre of potatoes? Where the land was not flooded with water this year, the yield has been about six tons; but in other places it has been poor.
3612. May we take the average yield of the district at five or six tons to the acre? Not this year.
3613. Taking one year with the other, what would be the average during your four years' experience? Not above four tons of saleable potatoes.
3614. Do they not grow potatoes out west? They grow, I believe, in the gardens at Inverell, but so far as I have heard only small quantities.

Mr. Lewis Dean, carrier and farmer, near Guyra, sworn, and examined:—

Mr. L. Dean. 9 May, 1891.

3615. *Chairman.*] What is your occupation? I am a carrier and small farmer.
3616. *Mr. Trickett.*] You have had some experience, have you not, in regard to the prices of produce in this district, and the disposal of produce? Yes.
3617. What place do you find is the best place for produce grown around Guyra? Inverell way.
3618. Better than Tingha? Yes—Inverell and Tingha both.
3619. There is a ready sale in those two places for all that is grown here? Not for all, but a great quantity.
3620. What are the articles produced in Guyra that are sold in those places? Potatoes and chaff principally, and oats.
3621. Have you been long in this district? About five years.
3622. Is there any back traffic to those places from Guyra? Not now.
3623. There used to be a large trade from Tingha? Yes, up to about three months ago; but the carrying now all goes through Inverell and Glen Innes.
3624. How do you account for that? It is owing to the differential rates.
3625. Have the roads anything to do with it? No; we have better roads now than ever we had.
3626. Would it not suit better to bring goods from Tingha to Guyra than to take them from Tingha to Glen Innes? It would suit if they would send them, but they will not send them.
3627. Why shouldn't they? On account of the charges they make on the railway.
3628. But the road to Guyra is much the shorter? Yes.
3629. What is the difference in the railway freight? I could not say exactly, but they get goods in quantities of six tons £16 cheaper to Glen Innes than if they took the goods off the railway at Guyra, and sent them from here to Tingha.
3630. It comes to this,—that the carriage from Tingha to Inverell and then to Glen Innes, and then by rail right down, comes to less in the aggregate than if the goods were sent from Tingha to Guyra? Yes.
3631. You know that as a fact? Yes. We get 2s. 6d. a cwt. from here to Tingha, and they only get 2s. 6d. a cwt. from Glen Innes to Tingha, but they save the difference in the railway freight by taking the goods to Glen Innes.
3632. As a carrier, what benefit do you think would accrue to Guyra and its immediate vicinity if the railway were taken from Inverell to Guyra instead of from Inverell to Glen Innes? I think we would get rid of a lot more produce than we do at present.
3633. In which direction? From here to Inverell.
3634. What is the carriage from here to Inverell? £3 a ton.
3635. If the railway were constructed from Inverell to Glen Innes the charge for carriage, as far as we can estimate, would only be 15s. a ton from Guyra to Inverell, *viâ* Glen Innes,—would not that be of great advantage to the people? Yes.
3636. Even if they had to go an extra 35 miles? Yes.
3637. Still I suppose it would be better for them to save that distance? Yes.
3638. It would lead to greater expedition in sending stuff, and it would be cheaper, would it not? Yes.
3639. You have passed along the road between Guyra and Inverell very often during the last five years? Yes.
3640. The Committee yesterday in coming along the road noticed a great many apparently deserted houses and enclosures,—could you give us any reason for that? I could not.
3641. Do you know whether the people sold out and left the district, or whether they failed? I only know of one house being empty during the five years that I have been on the road.
3642. But within 7 or 8 miles from here we counted yesterday three or four empty houses? They may have been empty before I came on the road.
3643. But you know that there are some empty places along the road? Yes. They are the places of people who selected, and did their residence, and, perhaps, shifted and selected again.
3644. Were they dummies, do you think? No; I do not say so.
3645. There are residences which appear to have been deserted? I only know of two in sight of the road. One is the place of Mr. Willis, 7 miles from here—that is a selection.
3646. What became of them? They are living here. You passed their house against the bridge. They did their residence, and selected again. Then there is an empty house at Wandsworth. Those are the only two I know of.

Mr. Joseph Monteith, farmer, near Guyra, sworn, and examined:—

Mr. J. Monteith. 9 May, 1891.

3647. *Chairman.*] What is your occupation? I am a farmer.
3648. *Mr. O'Sullivan.*] Where is your holding? Two miles and a half from the railway station, along the lagoon to the west.
3649. Have you made farming a success? Yes.
3650. What is about your average production per acre of various crops? Of potatoes, this year 5 tons.
3651. Is that a fair average yield? Four tons is a very fair average yield, take one year with another, but this year the crop is a little better, and last year the average was a little over that. With regard to the other crops, they are as good in proportion. In the case of wheat, I threshed 20 tons from 25 acres. It would be a little over 30 bushels.

Mr. J. Monteith. 9 May, 1891.

3652. Do you grow anything else? I grow oats and hay. I have had oats that have gone over 40 bushels, and as high as 50 bushels, in past years. This year the yield was not as good. The hay would go about 30 cwt. or 2 tons to the acre. 30 cwt. is a fair crop.
3653. I suppose all root crops grow well? Yes, they all grow well in this district.
3654. Do you produce any fruit? No.
3655. How do you dispose of your produce? We send it principally to Narrabri and Boggabri, and as far as Muswellbrook, Quirindi, Murrurundi, and Tamworth.
3656. Have you a good market for your produce in those places? Yes; it has been very fair up to now, but produce is very dull of sale just at present.
3657. Does it pay you to send to those distant markets? Yes.
3658. Have you any sale for your produce out westward? The carriage to Inverell is so high. If a railway were made it would be different. If there was a railway a great quantity of produce would be sent from here to Inverell and west of Inverell.
3659. Then if a railway were constructed you would look forward to the opening of a market there? Yes; for potatoes.
3660. On the whole, you have made farming pay in the Guyra district? Certainly.
3661. Do you employ labour, or do you perform the work yourself? We employ labour to a certain extent. We do the work pretty well ourselves, but we cannot do it all, and have to employ labour.
3662. When do you employ the labour—at harvest time and ploughing time? At harvest time, and in digging the potatoes out.
3663. How long during the year do you employ labour? From Christmas on to June—about six months.
3664. And you are able to make farming pay, although you do that? Yes.
3665. Have you any sons to help you? No.
3666. Are you married? No.
3667. Do you know any farmers around you who have been selling out and leaving the district? A few have left within the last two years.
3668. Where have they gone? Some have gone to Hillgrove, on account of the gold mines. It was the diggings that induced them to go, and the high price paid there for labour. One going takes another, and they went to this new diggings.
3669. Have any gone to Queensland or further west? No; not to my knowledge. There are some about to leave now—Mr. Kirk for one.
3670. Do you consider that agricultural settlement around this district is likely to be permanent? Yes.
3671. What would you require per acre for your land if you wanted to sell out? At the present time there is no one wanting land, but I could not sell it under 50s. an acre.
3672. Then it does not pay men to take up special areas to farm? No.
3673. I suppose that is the reason why they are still lying idle? Yes.
3674. What, in your opinion, would be a fair price for these special areas? 50s. an acre.
3675. Just half the price the Government have placed upon them? Yes.
3676. Is there anything else you would wish to mention? I believe if the railway were made from here it would be a great benefit. There would be a lot of settlement along the line between here and Tingha and Inverell, and Inverell itself would be benefited if the railway went from here instead of from Glen Innes.

Mr. Archibald Francis Dutton, grazier, near Guyra, sworn, and examined:—

Mr. A. F. Dutton. 9 May, 1891.

3677. *Chairman.*] What is your occupation? I am a grazier.
3678. *Mr. Tonkin.*] Where do you reside? About three miles east from the Guyra Railway Station.
3679. What is the size of your holding? About 6,000 acres.
3680. How long have you resided here? Seven years next January.
3681. Have you followed the same occupation in any other part of the colony? In my early days, in the Hunter district, that is all.
3682. You run sheep I suppose? Sheep principally.
3683. Is any of your land under cultivation? Yes; some of it. A good deal of it is laid down in English grass; that is the principal thing I have gone in for.
3684. You are not growing any agricultural produce for the market? Very little.
3685. Is there any statement you would like to make to the Committee with regard to the railway? There is no information I can give you particularly, except as regards the climate and soil up here, and my experience in Queensland, where I resided for twenty-six years before coming here.
3686. In what part of Queensland did you reside? The central part.
3687. There is no agriculture carried on there? No.
3688. Then you can only give your opinion as regards pastoral matters? Principally, and also in regard to agriculture to some extent. They have a fine climate here, and as far as my experience has gone droughts are unknown.
3689. You never run out altogether of water or food for stock? Never.
3690. Since you have been here have you ever known stock to come here from the starved-out country? Yes; plenty.
3691. Where have they come from? From the Liverpool Plains, from down the Namoi and the Darling, from as far as Walgett, on the Namoi.
3692. They have had to travel here for food? Yes; and been trucked up, thousands of them.
3693. Do you know anything of the timber about this country—is there any good timber for fencing purposes? Immediately about here it is almost worthless.
3694. I am speaking of the line between here and Inverell? Travelling down along the line there is some very good stringybark, which is good timber for fencing.
3695. Is there plenty of it? That I cannot say. But out towards Guy Fawkes, about 30 or 40 miles from here, in the direction of the coast, there is some of the finest timber I have seen in Australia.
3696. Where do you send your produce? To Newcastle, for shipment home.
3697. If the railway were constructed from here to Inverell I suppose you would not make use of it? Very little.

Mr. A. F. Dutton. 9 May, 1891.

3698. Because you are already served by railway? Yes. Our principal object in looking forward to a railway is in view of a connection between Guyra and Coff's Harbour, which would be of great benefit to the district. It is the long carriage that kills everything here.
3699. Is there a port at Coff's Harbour for your produce? There is a port—so far that we can get water communication to Brisbane.
3700. Would you send your wool to Brisbane? No; we do not.
3701. You do not produce anything else? Very little. I send away any surplus I have of hay, corn, and potatoes.
3702. Have you sent any to Queensland yet? Yes; I have sent some by the railway.
3703. Did that pay? Yes; I got a very fair price.
3704. Where did you send it to? Brisbane.
3705. What did you send? Potatoes.
3706. Was that an exceptional year? Yes; there was a drought.
3707. Which do you think would be of greater benefit to the district—a line from Guyra to Inverell, or a line from Glen Innes to Inverell? Speaking from my own point of view, I look upon the Guyra route as the better of the two, putting aside all personal interest in the matter.
3708. Why is it the better? Mr. Rogerson has been living in New England for forty years. He says, "I have a property at Glen Innes and also at Inverell, and it is to my personal interest to see a line constructed from Glen Innes, but if I had to give an impartial opinion, I should say that the line should go naturally from Guyra to Inverell, and give us a fair outlet down to the sea coast."
3709. Did he say why? He said it was the only feasible line of route, that he knew the route between Grafton and Glen Innes well, and that it was quite impracticable.
3710. You are speaking now of the line to Coff's Harbour? Yes.
3711. But had he no reason beyond that—no reason why the people between Guyra and Inverell should be served by a railway line in preference to the people between Glen Innes and Inverell? He did not say so. His only object was for the general good.
3712. Is there anything else to which you desire to refer? No; except that so far as the carrying capabilities of this district are concerned, I may say that laid down in English grasses the land is superior to anything I have ever had experience of before. Wherever I have improved the country I can always keep three and four sheep to the acre with English grasses, and even fatten a bullock to the acre.
3713. It would of course be of no use to lay down English grass where the rainfall was not pretty general? It would be utterly useless in any other part that I was ever in.
3714. Here you seem to have a general rainfall;—you never have much drought? Never; and English grasses of all kinds do remarkably well.
3715. Do you know what is the average rainfall in this district? I can only speak for the few years during which I have been keeping a record myself. Last year I think it was 50 odd inches. But it varies from 34 or 35 up to 60 inches.

Mr. Richard Pearson, saw-mill proprietor, Guyra, sworn, and examined:—

Mr. R. Pearson. 9 May, 1891.

3716. *Chairman.*] What is your occupation? I am a steam chaff-factory and saw-mill proprietor.
3717. *Mr. McCourt.*] Where do you sell your produce? Principally in Maitland and Newcastle.
3718. You buy from the farmers around? Yes.
3719. Have you any idea what the produce of this particular district would amount to in tonnage? I could not say.
3720. How many tons do you buy per annum? Last year about 640 tons.
3721. How much of that would you send west if you had railway communication? I could not say, but I suppose about 200 tons.
3722. Do you send any produce to Queensland? Yes.
3723. Do you get a good market? Sometimes.
3724. To what part of Queensland do you send it? Toowoomba and Warwick.
3725. Of what does it consist? Of potatoes principally, and sometimes hay.
3726. What trade do you do in timber? A local trade.
3727. Do you send any timber west to Inverell? No.
3728. They have no timber there, have they? We have had no chance of sending it west.
3729. Would the construction of this railway open a market for your timber west? I think so—at any rate as far as Tingha.
3730. If the line were constructed from Glen Innes to Inverell, could you not easily send your produce down that way? I think the freight would be too high.
3731. Would it not be much cheaper than the present cost of sending it to Inverell by road;—what does it cost you for carriage now from here to Inverell? About 4s.
3732. If you could get it taken round by railway, *via* Glen Innes, for 15s. a ton, would you not send it that way? Yes.
3733. And would not that railway suit you as well? I have no doubt it would, if you could get the stuff carried for that price.
3734. Which line are you in favour of—the line to Guyra, or the line to Glen Innes? The one to Guyra.
3735. Why—you have some reason I suppose? I cannot say that I have any particular reason.
3736. Would the Guyra line bring more revenue to the Government? I consider it would.
3737. If it is estimated by the Railway Commissioners that the construction of the line from Glen Innes to Inverell, or from Guyra to Inverell, would entail an annual loss of over £13,000, do you think that either line ought to be constructed? No; I do not think so.

Mr. William Relton, sheep farmer, near Guyra, sworn, and examined:—

Mr. W. Relton. 9 May, 1891.

3738. *Chairman.*] What is your occupation? I am a sheep farmer.
3739. Where is your holding? About 8 miles west from Guyra.
3740. What is its extent? About 4,000 acres. There are two of us in it, myself and my son.
3741. Do you run sheep only? Sheep and cattle, but sheep principally.
3742. How many sheep have you? Between 3,000 and 4,000 sheep, and between sixty or seventy head of cattle.
3743. You do not go in for agriculture at all, except for your own use? Yes; we grow a little for sale.

Mr. W. Kelton. 9 May, 1891.

3744. How much land have you under cultivation? Between 40 and 50 acres.
3744½. What do you cultivate? Potatoes, hay, turnips, and a few other things.
3745. Where do you find a market for the surplus? So far, I have found it south and south-west—that is, embracing Sydney and Narrabri.
3746. You make use of the Great Northern Line? Yes.
3747. You have brought all your surplus products to the Guyra station? Not all. I have sometimes sold to teamsters going west.
3748. But for that which you export south you tap the Great Northern Line at Guyra? Yes.
3749. If a railway were constructed from Guyra to Inverell would you tap that line at a nearer place than Guyra? Yes.
3750. How close would it come to your holding? Within 4 miles.
3751. And you would tap it of course at the nearest point to your holding? Yes; I imagine that is where they would have a station.
3752. If a railway were constructed from Guyra to Inverell do you think it would lead to a large increase in the productions of the district? I think it is very probable that it would.
3753. What would be the character of these increased productions? Farm produce.
3754. And where do you think people would find a market for them? The railway would open an extra market for them down west.
3755. It would open another market for them at Inverell, and west of Inverell? Yes.
3756. Do you know if any produce grown in this district has gone further west than Inverell? I can only speak from hearsay.
3757. Inverell is at present the principal market for the farmer here? I cannot speak from personal experience on that point.
3758. How long have you been resident in the district? Under four years.
3759. Where were you before? On the Hunter. I spent thirty years there.
3760. Have you ever sent any produce to Queensland? No.
3761. Not north of Guyra? No.
3762. Are the people in this district who are engaged in agriculture and grazing comfortably off? I think their position is very good. I may say that there are no large holdings along the whole of the Guyra-Inverell route—not one. The large holders have failed to secure any of their runs, or hardly any, and the land has been distributed amongst a class of persons who are likely to be permanent settlers.
3763. The only large estate along the Guyra line is what is known as the Ollera and Tenterden Estate? Yes.
3764. And the eyes of that estate have been picked out for agricultural purposes by selectors? There is no doubt about that. I am prepared to say so from personal observation.
3765. Are the selectors who have taken up land in this district going to stay, or are they birds of passage? I think they will be permanent settlers. When a man comes with a large family and makes a home he is not likely to be one of those who are here to-day and gone to-morrow. They have come here because the inducements offered to them have been pretty good. I think the prospects of the settlers in this district are very good. They have been anxious to secure all the property they possibly could, knowing that this was their final chance, and as soon as the leases expired every man went in for increasing his holding.
3766. Is there a bank doing business at Guyra? There is one bank—the Joint Stock—and there is a probability of another one finding its way up here—the Commercial.
3767. If the selectors are *bona fide* and have come to stay, how is it that we saw so many empty places along the road between Guyra and Tingha? Here and there you see an old fallen down building, but these are really not selectors' dwellings, and never were. They were only temporary arrangements erected by people who are here to-day and gone to-morrow, and who are not selectors.
3768. In other words they were dummies? I would be frightened to use the word, because I am perfectly safe in saying that there has been less dummying done in and around this district than in any other place I know.
3769. Is it true that some of these places which you now see empty have been vacated by the owners for better sites? Perhaps so. In many instances they have been camping places for shepherds in olden days before we were fenced in as we are now.
3770. *Mr. Trickett.*] There is a place about 5 or 6 miles out? That was the place of one of the unfortunates that we have in every mixed community.
3771. *Chairman.*] Can you tell us anything about the timber in the district;—is there any good timber—any better timber than the Committee saw yesterday? The country you passed through yesterday, as is the case always close to a fairly good track, has been picked out. You saw nothing of the best timber we have. There is a stretch of country from Gilgai right away up to Ben Lomond, about 4 or 5 miles in width, and a portion of that contains as good timber as can be found in any part of New England. We are not blessed with the variety of timbers in New England that they have in some other districts.
3772. Is there anything you desire to say in the nature of a general statement? I should like to make myself better understood in reference to Mr. Trickett's question with regard to the place 5 or 6 miles back on the road. I know I shall not please the audience here when I make the statement, but nevertheless it is a fact. I say, without fear of contradiction, that we have not got a good class of farmers settled in the district. They depend too much upon nature, and that is the unfortunate position. But it is possible that if we get better facilities for conveying our produce to the centres of population they will rouse up and study their own interests more. At present we are too much inclined to trust to Providence.
3773. You do not think the best has been made of the capabilities at hand? There is no doubt about that. We just go in for the one old thing—potatoes and hay, with here and there a patch of wheat and oats; but up to the present we have not thought anything of raising bacon and other things I could mention, which, in my opinion, would pay handsomely. For instance, there is a great future in store for New England in the matter of fruit producing.
3774. *Mr. Trickett.*] English fruits? Yes.
3775. *Chairman.*] Then you believe in concentrating your produce, and if it will not pay to send your maize to market you believe in putting it into pig flesh? Yes; put it into bacon, and the people living in the metropolis would be very glad of some of our good New England bacon.
3776. Is there anything else? In regard to the railway grade, I believe, from reliable information, that our grades can be reduced from 1 in 40 to 1 in 60 by lengthening the line 2½ miles.
3777. From whom did you get that information? From Mr. Deane, the Engineer-in-Chief.

MONDAY,

MONDAY, 11 *MAY*, 1891.

[*The Sectional Committee met at the Court-house, Armidale, at* 9·30 *a.m.*]

Present:—

JACOB GARRARD, Esq. (Chairman).

The Hon. William Joseph Trickett. | Edward William O'Sullivan, Esq.
James Ebenezer Tonkin, Esq. | William McCourt, Esq.

The Sectional Committee further considered the proposed railway from Glen Innes to Inverell.

Mr. William Drew, Mayor of Armidale, sworn, and examined:—

Mr. W. Drew. 11 May, 1891.

3778. *Chairman.*] You are Mayor of Armidale? Yes.
3779. How long have you occupied that position? Since February last.
3780. How long have you been an alderman? About fifteen years—not continuously.
3781. How long have you been a resident of the Armidale district? I have been in business here for the last twenty-four years.
3782. Have you any statement, written or otherwise, that you desire to make to the Committee on the matter now in hand? I wish to state that in my opinion the people of Inverell are standing in their own light in advocating a line from Glen Innes, because the extra distance of 35 miles over which they will have to carry everything they require from Sydney and Newcastle is a very important matter, as is also the inconvenience to passengers.
3783. They inform us that so far as their inward goods from the Sydney market are concerned it makes no difference to them whether the line goes to Guyra or to Glen Innes, because, owing to the differential rates, the cost of carriage on the main line is the same? Yes; but there would be great inconvenience in regard to the passenger traffic. To reach Inverell *via* Glen Innes passengers would have to travel by rail 35 miles further than if they went *via* Guyra. Then again, in the sending of their wool away, it will be a very serious matter. They send a large quantity of wool away, and the carriage on the wool would be greatly increased. Apparently they do not take into account the importing of their goods from Sydney. They seem to me only to rest their contention in support of the Glen Innes route, on the assumption that they would have a market north. I think we can bring evidence to show that they will find this to be a mistake, and that the Queensland people can now supply the very articles that the people of Inverell want to export—that they grow wheat much better in Queensland.
3784. You have no knowledge of that yourself? No. Although we are not advocating that the starting point from Inverell should be at Armidale, yet we are almost practically doing that when we support the line from Guyra. The line from Guyra will serve this part of New England, and when you consider that the population of this part of New England now numbers 15,000, and that it will largely increase in ten years, it will be seen that the Inverell people will really have a better market at Armidale and this part of New England than they will have at their supposed northern market.
3785. Do the Inverell people produce anything which is not produced in the Armidale district? Yes,—maize; we are getting maize from there now.
3786. Any other produce? We have to buy wheat.
3787. Do you not grow sufficient wheat in this district for your own consumption? We did some time ago, but have not done so of late years.
3788. Do you get your wheat from Inverell? No; we can get it much cheaper at present by railway carriage.
3789. Are you in a position to state that if the railway were constructed to Inverell—either from Guyra or from Glen Innes—you would be customers for Inverell wheat? Yes.
3790. Have you any personal knowledge of that particular trade? I know that the bakers here are using Adelaide flour, and owing to the precarious climate here it has been difficult of late years to get wheat in at the harvest time.
3791. Is the uncertainty of the seasons one reason why wheat has been going out of cultivation here? I think they have been going more into root crops; potatoes pay better. Then again, if the railway is continued from Guyra to the coast it will open up some splendid country between Guyra and Grafton. There is no better country, I suppose, in Australia than that which lies between those two places. A junction at Guyra would enable the coast to tap New England at its centre, and we think that, in a national sense, this line should extend from the coast to Inverell, and then, probably, further out to the west. The only contention on the part of the Inverell people, as I have said, is that they look for a market in Queensland and to a connection in the future with Byron Bay. There is another reason why we are also interested in this matter, and that is that we are taxpayers as well as the people of Inverell. I desire to say in reference to the report of Messrs. Scarr and Price upon the two rival routes, and railway connection with the coast, that while agreeing generally in the statements contained in that report, I disagree with the conclusion at which they have arrived, that Glen Innes is the best point at which to reach the northern line from Inverell. It appears to me that this conclusion is contradictory to their own report.
3792. Do you know anything of the nature of the country along the different routes? I have travelled between Inverell and Glen Innes, and I know the country there is pretty mountainous, and I have travelled also from Guyra to Inverell.
3793. And from Uralla to Inverell? It is pretty much the same country as between Guyra and Inverell.
3794. Which route would you give the preference to as far as the country is concerned? The route from Guyra to Inverell seems to be the best for a railway—the cheapest.
3795. I mean with regard to the quality of the country and its producing capabilities;—is it better land between Glen Innes and Inverell than between Guyra and Inverell? I would take Messrs. Scarr and Price's report for that.
3796. You said just now that you thought the Inverell people were standing in their own light in advocating a connection at Glen Innes rather than at Guyra, in view of the fact that Guyra will probably be the starting point for the coast line? Yes.
3797. Do you think the Inverell people would find a market on our coast for their produce? I do.
3798. Their principal product is wheat, is it not? And maize.
3799. They would hardly be able to compete with the coast in maize? No.

3800.

Mr. W. Drew. 11 May, 1891.

3800. Do you think they would be able to compete on the coast with sea-borne wheat;—if you get Adelaide flour right up here, do you think the Inverell people would be able to go down to the coast and compete with sea-borne wheat there? I think they will find a better market south of Inverell than they will north. I think the towns of New England, and the population that will spring up on the line, and the large population that will settle at Guyra, will create a market for their wheat.
3801. Is it not a fact that nearly all these towns south supply their own wants, so far as bread-stuffs are concerned? Tamworth does pretty well.
3802. The Inverell people would not have any market there? But we require corn. That is an article we could take from them, and, as I said before, wheat.

Mr. Henry Hogarth, Acting District Surveyor, Armidale, sworn, and examined:—

Mr. H. Hogarth. 11 May, 1891.

3803. *Chairman.*] You are Acting District Surveyor in the Armidale district? Yes.
3804. How long have you occupied that position? I have been Acting District Surveyor for about eight months.
3805. How long have you been in the district? Fourteen years.
3806. How far west does your district extend from the Great Northern Line? About 50 miles west from the line.
3807. And north from Armidale? To the border.
3808. And south? About half way between the Macdonald River and the Moonbi—that would be about 50 miles.
3809. And how far east? About 57 miles.
3810. Do you know the country pretty well that is traversed by the different routes from Inverell, viz., from Kentucky, Uralla, Guyra, and Glen Innes? Yes; I know the localities pretty well.
3811. In regard to the quality of the land,—that is, its capability of supporting the largest number of people, and irrespective of everything else,—in what order would you place these different routes? I should place the Inverell to Glen Innes line first.
3812. And next? The Guyra to Inverell line.
3813. Next? Uralla to Inverell, and then Kentucky. These last two run almost parallel.
3814. Has there been much land taken up lately in that portion of the district which would be in the field of these lines? Yes; there been a good deal taken up.
3815. Principally about what line? I think there has been a greater amount taken up on the Kentucky-Inverell line.
3816. More than on the Guyra-Inverell line? I think so. There has been a great deal taken up on the Guyra-Inverell line too, but I fancy that Kentucky would show the most.
3817. Is there not very little land to take up on the Glen Innes-Inverell line;—is it not nearly all alienated? There is very little left.
3818. Only a few reserves? Yes.
3819. If that had been as free as the Kentucky or Guyra line, would there have been a larger amount of land taken up there? I think so. I do not think it would have remained vacant very long.
3820. Have you an intimate knowledge of Tingha? Yes; I have been there off and on ever since I have been in the district.
3821. As a visitor and observer, do you think it has gone back considerably of late years? I think it has during the last few years.
3822. Both in regard to its products and its population? Yes.
3823. Have you formed any idea as to whether the tin-fields are worked out, or whether they are likely to receive an impetus? I could not say anything about that.
3823½. Will you look at this plan prepared by the head office in Sydney, showing the Crown lands and reserves that would be affected by the proposed railway? This plan is not up to date, considerable alienations having taken place in some of the parishes, viz., Honeysuckle, Nuandle, Torriburn, Stonybatter, Chapman, Barlow, Laura, Abington, Clerkness, Chigwell, Moreden, Mackenzie, and Yarrowyck. All of these parishes are in the county of Hardinge, and alienation of land to a considerable extent has taken place there; also in the parishes of Macintyre, Paradise, Eden, and Newstead, in the county of Gough; and in the parishes of Weean, King's Plains, and Vivier, in the county of Arrawatta.
3824. You have prepared a statement showing the Crown lands within one mile of each side of these different proposed routes? Yes.
3825. Will you kindly state the total? On the line from Kentucky to Inverell, within one mile of each side, there is a total of unalienated Crown lands and reserves of 47,220 acres, approximately; on the line from Uralla to Inverell, *via* Tingha, there are 37,780 acres.
3826. Would not those two routes overlap each other—that is to say, would they not be less than two miles apart in some places? I hardly think they would touch.
3827. You do not think they would be closer to each other than two miles at any point? I do not think so. On the line from Guyra to Inverell the total area of Crown lands within one mile of each side of the line is 28,481 acres; on the line from Glen Innes to Inverell the total is 8,070 acres.
3828. The return gives the details of the Crown lands and reserves in each parish? Yes.
3829. Will you hand that in as an appendix to your evidence? Yes.
3830. As a resident of this district for a long period, familiar with all the centres of population and the produce of the various portions of the district, which do you think is the best point at which to reach the northern line from Inverell? It would depend entirely upon where Inverell wants to get to.
3831. If its market were north, then Glen Innes would be the best? Certainly.
3832. If its market were Sydney, then I presume Uralla would be the best? I think Guyra would be the better route for Sydney.
3833. If they wanted to get straight to Sydney, would not the most direct route suit them? Yes; but there would be the cost of construction. There would be a longer extent of railway to be constructed to Uralla than to Guyra, and the distance saved would be about 10 miles.
3834. Then you are of opinion, looking at the matter all round, that Guyra would be the best point of connection? With Sydney as their object.
3835. Or the coast? Yes.

Mr. H. Hogarth. 11 May, 1891.

3836. If either of these lines were constructed what increased value would the railway give to these Crown lands and reserves? That is very hard to estimate.
3837. I presume these lands would all be made special areas? Yes; if they were of any value whatever.
3838. Of the total of Crown lands within one mile of each side of the different routes what proportion would be fit for agriculture—take first the Kentucky line? There is very little agricultural land on the Kentucky line.
3839. Or the Uralla line? Or the Uralla line. There is some agricultural land on the banks of the creeks, but taking it right through I think it is only a grazing country.
3840. What about the Guyra line? There would be more on that line.
3841. Would half of it be agricultural land? I do not think so. There is such a lot of land between Tenterden and Tingha that could not be utilised for agriculture.
3842. Would the proportion be one-fourth? About one-fourth might be suitable for agriculture on the Guyra line.
3843. And on the Glen Innes line? I should think that more than one-half of the unalienated Crown lands on that line would be fit for agriculture.
3844. Can you give us any idea of what increased value would be given to the Crown lands if this railway were constructed? It would vary of course, because on the Kentucky line there would not be a great deal of land that could be made into special areas, and again on the Guyra line there would be a certain proportion which could not become special areas. In regard to the land on the Glen Innes line I think its value would be increased 100 per cent.
3845. Are there any special areas there now? No; the Crown lands are nearly all in the shape of water reserves, travelling stock reserves, and forest reserves. We do not propose to touch them or revise them in any way until the line is decided.
3846. And you do not think the railway would increase the value of land on the Guyra route? Oh, yes; it would increase it very considerably.
3847. Not 100 per cent? Not 100 per cent., I should say.
3848. 50 per cent., or 70 per cent.? It might increase it 50 per cent., I should think.
3849. To what particular route did your figures concerning the Glen Innes to Inverell line apply—what is known as Hogg's line, *via* Wellingrove? The Wellingrove line.
3850. You are, perhaps, not aware that the new survey goes from Glen Innes, and approaches nearer to Wellingrove than did Hogg's line, and it then goes down Maid's Valley into Swanbrook, and runs for the remainder of the distance into Inverell by what is known as the Swanbrook line. Would that alteration make much difference to your calculations in regard to the area of Crown lands on each side of the line? I do not think it would affect the alienations along the line to any extent.
3851. There is not much Crown land on King's Plains for instance? No. I do not think the deviation would affect it materially.

Mr. John Moore, senior, miller, Armidale, sworn, and examined:—

Mr. J. Moore. 11 May, 1891.

3852. *Chairman.*] What is your occupation? I am a miller, and am connected with tin and gold mining and other matters.
3853. *Mr. Youkin.*] Where do you reside? In Armidale.
3854. Have you been here long? Forty-three years on the 1st July next.
3855. Is there anything particular that you wish to state to the Committee in regard to the present railway proposal? I have travelled along both the Glen Innes and the Guyra routes. I had a business at one time at Inverell; in fact, I had the first store that was opened on the present site of Inverell. The goods had always to go through here in those days. I had a number of teams on the Grafton road. We used to get up all the goods by Grafton. I had never less than fifteen bullock teams, and guaranteed to give them five trips a year. The goods came here, and were then sent on by Tingha. In those days we did not go along the present route by Kangaroo Flat, but over what was called the Gap and Grahame's Valley, and right on to Tingha.
3856. From your knowledge of the commerce of that part of the country, which line do you think would suit the greater number—the line as proposed from Glen Innes to Inverell, or the suggested line from Guyra to Inverell? I certainly think the Guyra line, from my knowledge of both routes. I believe there is as fine land as there is in the country between Guyra and what they call Kangaroo Flat. As you get on towards Tingha the land is not so good, but after you leave Tingha and on to Inverell it can hardly be surpassed.
3857. Do you know which is the principal market for the Inverell people? I do not know. But I know for a fact that I used to supply the squatters of Inverell, Glen Innes, and Dundee, and all about there with flour.
3857½. Do you send much flour in that direction now? Not just now. For the last two years we have not had very good crops here—last year in particular—owing to the seasons. But previous to that I never for years bought less than from 35,000 to 40,000 bushels of wheat every year grown in the district.
3858. Of course you have never bought wheat from Inverell? No; we send flour there.
3859. Did you ever have much of a market at Tingha for your flour? Yes. We have also sent to Walltrees, Scone, Newcastle, Singleton, Sydney, Glen Innes, Dundee, and Vegetable Creek.
3860. Have you any idea what is the main market for Inverell, for commerce of all kinds? I cannot say.
3861. Do you know whether it would be the southern, or the northern market? I should fancy myself that they would send their produce to the northern market. They can grow lots of things about Guyra that they cannot grow at Inverell—potatoes, for instance. We cannot grow corn very well here; we have to get the corn down from there.
3862. Would potatoes go that way? Yes. They can grow the finest potatoes in the country at Ben Lomond.
3863. The potatoes would go towards Inverell over the northern line, and the corn would come from Inverell back this way? Yes. There is a large consumption of potatoes and all these things in Sydney, Maitland, Muswellbrook, and down the line.
3864. You know that there is a very extensive trade done with Tingha, I suppose? There was some time ago, but I think there has been a little falling off there.

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3865. But still there is a large trade done there? I wish to say in regard to Tingha, that if the Government would send up one of the diamond-drills to test that locality they might find something good. At Vegetable Creek, where I have a very large interest, we contemplate getting a diamond-drill to test the deep ground.
3866. Is that for tin? Yes. I had a lot of land at Tingha when the field first opened.
3867. I suppose you know what is about the population of Tingha? No.
3868. You know that there is still a large trade done at Tingha? Yes.
3869. Do you not think that the people of Tingha have a right to some consideration in regard to the construction of this railway? I think so.
3870. Do you think that they would be as well served by a line from Glen Innes as they would by a line from Guyra? No, because from Glen Innes you would have to go along two sides of a triangle to get to Tingha, whereas you would go there in a straight line from Guyra.
3871. Do you know whether the Tingha market is north, or south? I am almost sure it would be south, because they branch off at Uralla and take their goods that way. I have never been on the line, but I know they do come that way.
3872. Do you know where they get their goods from at Tingha and Inverell? The goods for Inverell would go from Glen Innes.
3873. I mean where do they come from originally—from Sydney, or Brisbane? From Sydney.
3874. Then they must come from the south to the north? Yes.
3875. Do the Tingha people also get their goods from the south? Yes.
3876. If the line were constructed from Glen Innes to Inverell, the large number of people living at Tingha would have extra freight to pay? Of course they would, and extra haulage.
3877. Independently of the differential rates—because we are informed that the rates to Glen Innes on certain goods are less than the rates to Guyra? Yes; I cannot say anything about that.
3878. Independently of that, would not the Tingha people have a certain amount of haulage by dray—that is, between Inverell and Tingha? Yes.
3879. Suppose the market for the Inverell produce was at Queensland, have you considered the extra amount of freight they would have to pay on wheat if the line were taken to Guyra instead of to Glen Innes? I have not. I was only asked to give evidence on Saturday last, and did not prepare any statement.
3880. Of what does your evidence principally consist? I have a knowledge of facts extending over many years.
3881. You know the class of country around Inverell? Yes.
3882. Is it good agricultural land? Yes, there is very good land all the way down there, but I expect that a great deal of it has been alienated.
3883. I am speaking of it as agricultural land? Yes, it is good agricultural land. But there is as good land on the other line as far as Kangaroo Flat; after that you get into the basaltic country, and it is not so very rich until you get near Inverell again.

Mr. Charles Wilson, auctioneer and commission agent, Armidale, sworn, and examined:—

Mr. C. Wilson. 11 May, 1891.

3884. *Chairman.*] What is your occupation? I am an auctioneer and commission agent, doing business in Armidale, and I am also an alderman.
3885. *Mr. O'Sullivan.*] You have a good knowledge of the northern districts, have you not? I have.
3886. Do you know much about the trade done by the northern districts with Queensland? I know that a great deal has been made of the prospect of opening up a market in Queensland, and I know a great deal about the capabilities of Queensland in regard to wheat production. I lived there, and grew wheat there, years ago.
3887. You refer to the Darling Downs? Yes.
3888. How long did you live there? Seven years.
3889. Did you cultivate wheat the whole of that time? I was sheep farming and wheat farming.
3890. Did you ever know the crops to fail there? I have known them to fail the same as I have known them to fail elsewhere. But I have seen 40 and 50 bushels to the acre there several years. We ourselves have grown 70 or 80 bushels, and an average of 40 bushels to the acre, on the Darling Downs.
3891. Is there a large area now under cultivation there? Yes.
3892. That portion of Queensland was resumed by the Government for the cultivation of wheat, was it not? A portion of it was resumed about Warwick. But there are thousands of acres on the Downs suitable for cultivating wheat—cleared land and splendid soil.
3893. Do you think it possible for the farmers of Inverell, who can grow wheat extensively, to find a market for their produce in Queensland? I do not think they would be likely to compete with the Darling Downs. In suitable seasons—and the seasons on the Darling Downs are quite as good as those in Inverell, the climate of the two places being very much alike—I think they can grow better crops on the Darling Downs, and more of them, than they can at Inverell.
3894. You are aware that there is now a large importation of wheat and flour to Brisbane from other colonies? I know that.
3895. Does not that go to indicate that the Darling Downs are not supplying the Queensland market? Probably they will not grow wheat at the price at which it can be imported—in the same way that it is being supplied here.
3896. If the Darling Downs district is not supplying the whole of that wheat to the Brisbane market, does not that go to show that there must be a margin in which the farmers of Inverell may find a market? If it will not pay the farmers of the Darling Downs to grow wheat for the market to compete with water carriage, I do not see how it can pay the farmers of Inverell to do so.
3897. Do the farmers of the Darling Downs merely grow wheat for pastime, or to sell? They grow it to sell.
3898. Well, where do they sell it? They must not be growing wheat now if they do not supply it. I suppose they cannot compete with the water-carried wheat.
3899. But may it not be that they are not growing enough wheat on the Darling Downs to supply the Queensland market? I do not think it is a matter of not growing enough, because they are capable of growing as much as will supply the whole of Queensland, on the Darling Downs. I know the country well,

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well, and its capabilities. There are thousands of acres of splendid land, without a tree on it, suitable for wheat-growing. It simply does not pay them to grow wheat to compete with water-carriage.
3900. Do you know if any of the wheat lands have gone out of cultivation? Yes, thousands of acres.
3901. What crops do they grow on their land on and around the Darling Downs, if they are not producing wheat so largely as they used to do? They grow corn. It is simply the same as it is in this district—the farmers here have gone out of wheat-growing, simply because they cannot compete with the imported wheat.
3902. And you think they cannot grow wheat on the Darling Downs to compete with sea-borne wheat? No.
3903. And they find it more profitable to grow maize and other crops? Or to go in for grazing. Of course, on the Darling Downs they are liable, and have been liable, to rust and bad seasons occasionally.
3904. But there was a time, very recently—in 1888—when the crops utterly failed on the Darling Downs? Yes.
3905. Have you ever known that to occur in the Inverell district? I do not know that the crops would fail there to such an extent; but I have often known the Inverell district when they have not had the fourth of a crop.
3906. Have you ever known the rainfall of the Inverell district to be less than 17 inches for the year? I could not tell—I have no record.
3907. That being the lowest rainfall at Inverell, what might be regarded as a dry season in that district would be considered as a good season out west? It would not be on the Darling Downs. I think the rainfall on the Darling Downs and at Inverell is something about the same. The climate of the Darling Downs is not very hot. The country is on the same level as New England.
3908. Do you know the altitude of the Darling Downs? It must be 3,000 feet.
3909. Therefore there is a very different climate there to that which prevails at Brisbane? There is as much difference as there is between here and the climate of the Tamworth district. Going down the main range to Brisbane, is something like going down the Moonbi to the Tamworth country.
3910. What other crops are grown on the Darling Downs besides those to which you have referred? There are a lot of other things. It is a good place for growing fruits and vines.
3911. Is it a good horticultural district? Very fair.
3912. Do they produce potatoes or other root crops? Yes, they grow splendid potatoes.
3913. Is there any chance of our farmers here obtaining a market there for their root crops? The only thing that operates against a good potato crop there, is that in one season out of every three or four they do not get the rain at the right time. But I have seen as good potatoes growing there in a favourable season as I have ever seen anywhere else.
3914. To sum up your evidence you appear to be of the opinion that there is not a reliable market in Queensland for the produce of Inverell? I do not think so—not for their wheat.
3915. Not even on the frontier towns? Of course there might be a certain consumption there in certain years, but in a good season they can drive the Inverell product out of the market. The only thing they have to compete with in a good season is the sea-borne wheat.
3916. Where do you think is the best market for the produce of Inverell? Out west.
3917. Out towards Goondiwindi and Warialda? Yes, that is the natural market.
3918. You think there is a better market out west than to the north? There is a reliable market out there, because I do not think they can grow wheat in the west, and that is really their market for wheat.
3919. Do you think it would be more to the interests of the people of Inverell to commence the railway there and go out towards Goondiwindi? It must eventually go out there, because that is really the great outlet for both their corn and wheat. That will be the great outlet for them.
3920. Do you not think there will be a good outlet for the wheat and flour of Inverell in our north coast districts? Yes, there is no doubt about that.
3921. Then which is the best way for them to reach that market? The whole thing seems to me to lie in a nut-shell. If the connection with the coast is to be at Byron Bay then Glen Innes is the proper route, but otherwise the Inverell people are simply cutting their own throats in attempting to go to Glen Innes, because it will mean so much more carriage to either go to Guyra or to go to Tenterfield and on to Byron Bay.
3922. Suppose a line were run from Guyra to Grafton or Coff's Harbour, there would be no connection then between Glen Innes and the Richmond? No.
3923. There would be a very small market about Grafton or the Clarence for the wheat of Inverell? That district all down there—the Richmond and the Clarence—will be connected eventually. They do not grow wheat there, and I consider there will be a great outlet there for wheat.
3924. You think then that the future of Inverell hinges upon the north coast railway? I decidedly think so.
3925. And if a railway should run from Grafton to Richmond, a line running from Grafton to Guyra would give the people of Inverell speedy and cheap access to a reliable market? There is no doubt about it. That is their outlet, and so far as Armidale itself is concerned it is also the outlet for Armidale—to get to the coast. It would be very cruel to the people of Armidale to compel them to go to Tenterfield. The Tenterfield line would be of no use whatever to this portion of New England.
3926. You are aware that there is a very much larger population already in the Richmond and the Tweed River districts than there is in the Clarence River district, and that the probability is that there will be a still larger population, reaching, perhaps, 100,000 within ten years? Yes, I believe there is splendid soil there. The line from Guyra to Coff's Harbour passes through magnificent country, which only wants railway communication to enable it to carry a very large population.
3927. You grant that the larger population will be along the Richmond and the Tweed? Yes, larger than on the Clarence.
3928. Is it not more important, then, for the Inverell people that they should reach that market than that they should reach the Grafton market? Of course. I consider that the communication by railway would increase the traffic of both places very much indeed, and I presume they would be able to tap the whole district down there when they get a line constructed to the coast; the whole of the coast will be connected.
3929. You are aware that there is a proposal to construct a harbour at Byron Bay, and that it is probable that the work will be carried out at no distant date? Yes.

3930.

3930. Ocean-going vessels would then go to Byron Bay and take away the wool from the New England and northern districts, and the grain and other products of this district could also be shipped at Byron Bay;—is it not far more important to the New England people to be brought within easy reach of a good harbour at Byron Bay than to be brought within easy reach of the Clarence, which does not afford the same accommodation? It might be for the Tenterfield people, but it would not be for this portion of New England. I believe that the communication would still remain with Newcastle and Sydney if we were obliged to go round by Tenterfield to get to Byron Bay. Mr. C. Wilson. 11 May, 1891.

3931. It must be very much nearer to Byron Bay even by way of Tenterfield than it is to go from here to Newcastle? I do not think the storekeepers would get their goods that way.

3932. Do you not think they would endeavour to save themselves so much haulage? I admit that would probably be so if there was no other line constructed, but I think it would be very cruel to this portion of New England to compel the people to go so far north when they could get a much nearer communication from Guyra, and a communication that would suit the Inverell people very much better in every respect.

3933. As to the future prospects of these two lines, do you think there will be so large a population settled between Coff's Harbour and Guyra, along the route through the Dou Dorrigo Scrub, as to more than counterbalance the trade that might be done with the Richmond and the Tweed River districts? Of course; that is a matter for future development. There is no doubt about the soil being there, and about the capabilities of the country, and there is no doubt about a population being settled there, as the result of railway communication. At the present time, of course, by going round the other way, you can get to the thicker population, if you do not look to the future at all.

3934. As to how this line will affect the trade of Armidale, do you think that by going to Guyra it would improve the prospects of Armidale? There is no doubt about it.

3935. Has it ever struck you that if a railway is brought from Inverell to Guyra, and another one is taken from the coast to Guyra, you may establish a rival city at Guyra, which will take away trade from Armidale? I do not look upon it from a purely local view. I look upon it as serving the whole district. Probably it would interfere materially with the storekeepers in Armidale, but I think the good of the whole district should be considered. I do not think the Armidale people would simply be actuated by a desire to build up the business of a few storekeepers.

3936. So that even if there is a danger of establishing a rival city at Guyra, which may materially affect the business at Armidale, you think that the line should be taken there? There is no question about it—that is, if we are to get communication from Guyra to the coast. That is the line the Armidale people want, and that is the one that would be useful to all this part of New England.

3937. What is the rainfall for the Armidale district? The average for the last thirty-two years has been 32·55 inches.

3938. Is Guyra included in that? The average at Guyra would be more than that.

3939. You have no reason to complain then of the want of rain in this district? No; we are very fairly supplied with rain. We suffered severely from too much rain in the harvest time during the last two years. The record of the rainfall was taken at Armidale. The record in Armidale shows that the average for the last thirty-two years was a rainfall of 32·55, and an average of ninety-two wet days, and that last year there were 122 wet days.

3940. Is there anything else you would like to say? I simply wish to corroborate what Mr. Drew said with reference to Messrs. Scarr and Price's report. The Armidale people are perfectly satisfied with that report. They believe that it is a fair and conscientious one, and that it goes further than anything they can say to advocate the Guyra line. But we are altogether at variance with the conclusion at which Messrs. Scarr and Price arrive, which we think is altogether in opposition to the evidence submitted in the report.

3941. You say that while you concur with the statements made by Messrs. Scarr and Price as to the Guyra route, you disagree with their conclusion that the line should be taken to Glen Innes? Yes.

3942. Are you aware that after summing up the merits of both routes, Messrs. Scarr and Price decided in favour of Glen Innes for this reason, that it will be the centre between the two probable starting points to the coast—one going from Tenterfield to Casino and Lismore, and the other going from Guyra to Coff's Harbour or Grafton? Yes; I am aware that that is the way they put it. But I think that the evidence all points to Guyra being the proper point of connection between Inverell and the coast. I am sure that anybody carefully reading the evidence in Messrs. Scarr and Price's report, will come to that conclusion.

3943. But you know that this line is being proposed in the main for the people of Inverell, and that, therefore, they are first to be considered? So long as we get a line to the coast from Guyra, whether the Inverell line goes to Guyra or Glen Innes, is not a matter of such vital importance to Armidale.

3944. In that respect you agree with Messrs. Scarr and Price, who recommend a line from Guyra to Grafton? We think that if there is a coast line from Guyra, the connection with Inverell ought to be there.

3945. But so long as you get the line from Guyra to the coast you are not very anxious about the line going from Inverell to Glen Innes? We would have a considerable trade, of course. It would be a great disadvantage to us to have to travel 35 miles further, but it would be a still greater inconvenience if we were taken away to Byron Bay, and compelled to go there instead of reaching the coast *via* Guyra.

Mr. Russell Richardson, miller, Armidale, sworn, and examined:—

3946. *Chairman.*] You are a member of a mercantile firm carrying on business in Armidale? Yes, and we are also millers. Mr. R. Richardson. 11 May, 1891.

3947. *Mr. McCourt.*] How long have you been here? About sixteen years.

3948. Are you thoroughly acquainted with the surrounding district? Only around Armidale.

3949. Do you do a large amount of trade westward from Armidale with Inverell and the districts beyond? No; we do no trade there whatever. I believe we could buy wheat from Inverell, and do a large trade down the line towards Sydney.

3950. What do you pay for your wheat here? We are paying 4s. 6d., and while we are buying wheat from Glen Innes, we are also endeavouring to buy wheat from Inverell at the present time.

3951. I suppose 4s. 6d. is an exceptional price? It is.

Mr. R. Richardson. 11 May, 1891.

3952. What is the average price ruling here for wheat? It fluctuates a good deal. Since the railway opened it has been low—about 3s. 6d.
3953. Have you any idea at what price the farmers can produce wheat here? They tell me that it will not pay them to produce it at a price under 4s.—between 4s. and 4s. 6d.
3954. If the Inverell people can sell wheat at 3s. 3d. they could supply Armidale? I believe so. The Inverell people would have an excellent market down the line towards Sydney, because Tamworth is the only district that grows wheat between here and Sydney.
3955. I suppose that, as a merchant, you take great interest in the markets of Sydney and Brisbane? Yes.
3956. Is Sydney as a rule a better market than Brisbane or Toowoomba? I believe it is.
3957. Can you state, as a fact, that it is so as a rule? I would not say Sydney exactly—between Armidale and Newcastle.
3958. A better market as a rule for wheat than Toowoomba and Brisbane? I would not say for wheat, but for flour.
3959. Do you know whether the freight is in favour of Sydney or of Brisbane;—have you studied the freight? I have not studied the Brisbane freight.
3960. If there is a difference in the freight of 5d. or 6d. a bushel in favour of Sydney, would Sydney always be a better market for wheat than Brisbane or Toowoomba? That I could not say.
3961. Then you cannot compete with sea-borne wheat here if your wheat is 4s. 6d. a bushel? That is an exceptional price. It is very high in Sydney at present. It is 5s.
3962. Is Adelaide flour sold here? Yes; we do not sell it—we manufacture our own flour. It is sold in large quantities. It would not be sold if we could produce the wheat. We can sell twice as much flour as we can manufacture at the present time.
3963. What interest has Armidale in the question of which line should be constructed to Inverell? Simply on account of the local products. I believe there would be a large trade done in produce between Inverell and Armidale.
3964. You mean if the Guyra line were constructed? Yes. I believe the Inverell people would find an excellent market here for their produce. They tell me that they can grow wheat much cheaper at Inverell than they can here, on account of the soil.
3965. Is Armidale a distributing centre for goods—do you supply the Guyra storekeepers? Only with very little.
3966. Do the differential rates help you? No; they are very much against us.
3967. Is there not considerable rivalry between Glen Innes and Armidale, as to which shall be the leading town of the north? I do not think so. I do not think Glen Innes has any claim whatever.
3968. Has there not been some rivalry between them? There may have been a little.
3969. Was there not very great rivalry in regard to the Land Board? I believe so.
3970. Has not that something to do now with the agitation? I do not think so. I have never heard so.
3971. If Inverell were connected with Glen Innes by railway, would not Glen Innes become a distributing centre for Inverell and the western districts? I do not think so.
3972. But would it not be placed in a better position to deal with those districts than Armidale? I cannot see it.
3973. Would it not be nearer? I do not see that the railway would benefit Glen Innes so much, after it passed through. It might for a time, while the line was being constructed.
3974. But what I mean is, would not Glen Innes, as a distributing centre for Inverell and the country beyond, have an advantage over Armidale, in regard to supplying those districts with merchandise? I cannot see it. Inverell might, but not Glen Innes, because there are more towns beyond Inverell. I do not know of any towns immediately around Glen Innes.
3975. There is no rivalry at all between Armidale and Glen Innes? Not that I know of—personally there is not.
3976. How many mills are there in Armidale? Four, and only one working—that is ours.
3977. How long has that been the case? One has been stopped for about ten or twelve years, another one was stopped within the last twelve months, and the other one you can scarcely call a mill—they merely grind a little grist.
3978. There is practically only one mill? Yes; that is ours.
3979. How much wheat per annum do you put through? We could put through a great deal more than we do. Last year was a very bad year—I do not suppose we put through more than 50,000 bushels.
3980. What would be a fair average for the last seven years? I should say between 400 and 500 tons a year. In olden times we would put through a great deal more than that.
3981. You are referring to your mill only? Yes.
3982. I suppose the other mills would put through a certain quantity? I have no idea as to how much.
3983. Where does the wheat come from? Round about the district.
3984. You do not get any wheat from Sydney? No.
3985. How far south do you go for wheat? We got wheat last year from Newcastle.
3986. But how far south in the district do you go for wheat? To Tamworth.
3987. What do you buy at there? We have some coming up from Tamworth at the present time, and we are paying 4s. for it in town. We are also in communication with Inverell. I do not know whether we will succeed in getting any, but we have been told we can.
3988. Would it be fair to ask what you are offering in Inverell? We are offering 4s. 6d. delivered at the Armidale station.
3989. What would that give the grower at Inverell? I should think about 3s. 4d.
3990. Have you had any experience of Inverell wheat? I have seen it—it is very good.
3991. Is it as good as the Tamworth or Armidale wheat? Quite as good. It is a different wheat from the Armidale wheat—it is a drier wheat.
3992. Then if a railway were constructed from Inverell to Guyra you think there would be a good market here and at Tamworth for the Inverell wheat? I believe there would be a better market than in the north. I do not see why the Inverell people should not be able to send flour to Singleton, Muswellbrook, Scone, and all round between here and Newcastle.
3993. Is all the flour you grind sold locally? Yes.

Mr. R. Richardson. 11 May, 1891

3994. Around Armidale? Yes; and we could sell four times as much as we are manufacturing at the present time if we could get the wheat.
3995. How much do you import? We are not importing any just now—we cannot execute the orders.
3996. But if the people want the flour they must get it from Newcastle or somewhere else? But there are other people in town selling flour besides ourselves.
3997. You think generally that the Inverell people and the people west would find a better market this way than in Queensland? Yes. From my experience of milling and of the flour market, which we have studied very carefully, I believe they could find an excellent market between here and Newcastle.
3998. But would it be better than the Queensland market? I quite believe it would. They may find a flour market between here and the border, but when they once get into Queensland I do not think they can compete with the Queensland people, and I think they can find an excellent market between here and Newcastle.
3999. *Chairman.*] But as they approach Newcastle they come into competition with wheat-growing land? No.
4000. What about Tamworth? I mentioned Tamworth. That is the only place between here and Newcastle that produces wheat in any quantity.
4001. Can you state the quantity of flour imported from Newcastle and Sydney? The quantity of flour imported into Armidale from Newcastle and Sydney is about 2,500 tons per annum which comes to Armidale for consumption and distribution. This is by direct importation from other places, and altogether independent of locally grown wheat.

Mr. Frederick Braund, merchant, Armidale, sworn, and examined:—

Mr. F. Braund. 11 May, 1891.

4002. *Chairman.*] You are a merchant, engaged in business at Armidale? Yes.
4003. How long have you been in business here? For two years. Previously to that I was travelling in the northern district for eight years as a representative of the firm A. M'Arthur and Co.
4004. You have an extensive knowledge of the district? Yes. My duties occasioned me to travel to and from Narrabri, as far as Warialda in the north-west, and to Tenterfield, and once I went through to Toowoomba.
4005. In your present business do you do any trade with the Inverell district? Not with Inverell, but with places between Armidale and Inverell.
4006. How near to Inverell do you go—as far as Tingha? As far as Tingha, to Bundarra, and a little way south.
4007. Do you supply the people of these places with general goods? Yes.
4008. Do you get any produce in return? No. Evidence will be given by another witness in regard to the produce from Inverell.
4009. From your extensive knowledge of the district to the west of Inverell can you say, in the event of Inverell being connected with the Great Northern Line, for what distance out west the trade would be influenced to come to Inverell? The trade at Bingera and Warialda would be influenced at present.
4010. No further? Not unless a railway were taken to Coff's Harbour, and then the influence of the line would extend right out to the border.
4011. If Inverell were connected with the Great Northern Line you think the trade would go as far as Warialda? That would be the railway trade.
4012. Do you know anything of Goondiwindi? No.
4013. Have you been further west than Warialda? No.
4014. Do you know where the Warialda traffic taps the Great Northern Line at present? The goods traffic comes to Tamworth, and also the bulk of the passenger traffic. A few people may go to Inverell.
4015. Are you sure it is not the reverse, and that the bulk of the people go to Inverell and not to Tamworth? Yes, I am certain. There is a line of coaches running from Tamworth to Inverell, and there is only an occasional coach, or there was when I was over the line—between Warialda and Inverell.
4016. How often does the coach go from Tamworth to Warialda? Every day. I am speaking of two years ago.
4017. We are informed that there is a tri-weekly coach from Warialda to Inverell now? It was twice a week when I was there.
4018. Do you know whether Bundarra is improving or going down? I think it is about stationary. I have not been there for about two years. Previous to that it did not alter—it was just the same.
4019. Have you been to Tingha more recently than two years ago? No.
4020. Is your trade with Tingha and Bundarra increasing in volume? I have only had two years' experience. We are doing a fair amount of business.
4021. If Inverell were connected with the main line, do you think it would find a market for its produce, principally wheat, in this district? Yes, in many seasons.
4022. Do you buy wheat here? A little. We are not millers.
4023. What do you do with it? We grist it. We buy flour as well away from here.
4024. What quantity of flour do you import from Newcastle or Sydney? I am hardly prepared to say, but I should think between 100 and 200 tons a year.
4025. Can you give us any idea of the quantity of flour that is brought to Armidale from the south every year? I cannot say. My importation of flour would be very small compared with the total. Nearly all the bakers import their flour from Newcastle or Sydney.
4026. Have you anything further to state? I should like to mention this fact, that there are two towns that would be served by the proposed line from Guyra, viz., Tingha and Bundarra. The railway would get the whole of their trade, but if it went from Glen Innes to Inverell it would not get any of it—it would all go, as at present, to Uralla or Guyra.
4027. But if the Tingha people have themselves confessed that they would use the Glen Innes line, at all events to some extent, do you not think they are better able to judge than yourself? Well, I do not think so. As a witness stated just now, they would be carrying their goods along two sides of a triangle. If the railway went from Glen Innes, they would have to pay teams for carrying their goods 15 miles to Inverell, in addition to the longer railway carriage, and the cost of sending their goods direct to Guyra by team would be only a trifle more.

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4028. Are you aware that the traffic of Tingha now goes to Glen Innes? That is on account of the differential rates. When the line is constructed to the coast there will be no further necessity for differential rates.
4029. Are you aware that the carriage from Tingha to Guyra by team is the same as it is from Tingha to Glen Innes by team? I cannot say.
4030. If the nearest point on the Glen Innes to Inverell line was within 10 or 11 miles of Tingha, that would make some difference, would it not? It is rather rough country across from the proposed Glen Innes line to Tingha.
4031. You are not familiar with the actual route, I presume? No, but I have crossed from Stannifer to Glen Innes, and there is some rough country there, as I have found to my cost. The Inverell trade does not lie north-east into Queensland, but it lies north and north-west—down the M'Intyre and the Gwydir.
4032. That is the trade which at the present exists? Yes, and the trade that will exist.
4033. But what about the trade along the Great Northern Line, extending to the Darling Downs? Judging from the present amount of business done, I take it that there will be very little traffic from New South Wales into Queensland. Last year there was a little on account of the shipping strike.
4034. What was the nature of the produce sent then? Potatoes and flour. A little flour went over the border. We sent a little over, but it was an exceptional case, because under ordinary circumstances flour can be landed either in Brisbane or Toowoomba at a much lower price than that for which we can send it from here.
4035. Have you any knowledge of the prices for wheat and flour in Brisbane and Toowoomba? No, not at the present time.
4036. Then how do you know that wheat and flour could be sent to Toowoomba sea-borne, cheaper than it could be sent from here? Judging by the distance from the port.
4037. I suppose you are aware that the yield per acre in South Australia, is considerably less than the yield per acre in the Inverell district? Yes.
4038. That would make a considerable difference, would it not? I do not know. The price of wheat there is generally less than the price of wheat here.

Mr. John Thomas French, architect and civil engineer, Armidale, sworn, and examined:—

Mr. J. T. French. 11 May, 1891.

4039. *Chairman.*] What is your occupation? Architect and civil engineer.
4040. *Mr. Tonkin.*] Where do you reside? In Armidale. I have resided for the past fourteen years in Queensland.
4041. Do you hold any professional appointment in Armidale? Yes; I am city engineer.
4042. What were you doing in Queensland? Following my profession, and for four years I was engaged with my parents grazing and farming on the Darling Downs.
4043. How long ago is that? Twelve years.
4044. Have you been on the Darling Downs since that time? Yes; I was there fifteen months ago. I sent my family there fifteen months ago for a change.
4045. Could you give the Committee any idea of the number of acres under wheat cultivation on the Darling Downs? I could not give the acreage, but I know it is very large. For instance, I have seen 180 acres of wheat in one paddock at Freestone Creek, on the property of Mr. Wilson's brother.
4046. Have you any idea of the average yield per acre? Yes. The average yield of wheat per acre on the Darling Downs is reckoned to be about from 24 to 25 bushels. That is taking the bad seasons with the good ones.
4047. Does that include some seasons that are a failure altogether? Yes; that is the average yield.
4048. Do you know whether rust is very prevalent on the Darling Downs? Yes; rust is very bad on the Downs. If the rust comes after the milk has commenced to set, it does not affect the wheat very much. But if it comes before that, it destroys the crop altogether. I have seen the sky quite light at night, when they were burning the wheat off. They run a machine round to clear the crop away from the fences, and then set fire to the standing crop. This has a beneficial effect on the soil, and gives a clean crop for a couple of years.
4049. Does this happen very often? No. The farmers on the Downs are perfectly satisfied, if they can get three good crops and lose the fourth. The average tells in their favour.
4050. Then for three years they must average considerably over 25 bushels to the acre? I do not say that the average of 24 bushels would include the crop that was burnt. That would be the average of the crops harvested. If they burnt a crop, of course they would not reckon that at all.
4051. Do I understand that they lose one crop out of four, as a rule? Yes; they allow that themselves.
4052. Do you know of your own knowledge whether much wheat goes from this part of the country over the border into Queensland? I never heard of any.
4053. Is there any other produce grown on the Darling Downs besides wheat? Yes; they grow oats, barley—malting barley—and they grow lucerne very largely. On one estate, I was shown over 4,000 acres of lucerne.
4054. Where do they find the market for their produce? In Brisbane. But in a good season a vast quantity rots on the Darling Downs, because, being so far distant from Brisbane, they cannot send it to market. The farming centres nearer to Brisbane cut them out of the Brisbane market.
4055. In that way you account for the importation of wheat to Brisbane by water? Not of wheat. The Darling Downs district is the only portion, or the principal portion of Queensland, that can grow wheat, and yet the whole of Queensland consumes wheat and flour. The distance between Warwick and Brisbane is a great bar to the Darling Downs supplying the rest of Queensland with wheat. It can be sent from Adelaide to Brisbane at a cheaper rate than that at which it can be sent by train from Warwick to Brisbane.
4056. And the wheat and flour imported to Brisbane is generally consumed north of Brisbane? In Brisbane and north of Brisbane.
4057. Do you think there would be any possibility of flour exported from here over the border going throught the wheat-growing country of the Darling Downs to Brisbane? That, I think, would be a moral impossibility. It could not be sent there on commercial principles, and pay.

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4058. You think that there is always sufficient wheat on the Downs to supply its own immediate local market, and that the only reason they do not fully supply the Brisbane market is the cost of carriage by railway to Brisbane? Just so.
4059. Have you any idea what is the average price of wheat on the Darling Downs, where it is grown? Three shillings and 3s. 6d.
4060. Is that the lowest price at which the farmers there can grow it? I think that is about as low a price as they could grow it for profitably on the Downs. They could grow it profitably for 3s.
4061. I mean, of course, on the ground where it is grown? Yes, landed, say, at the nearest railway station.
4062. I do not mean even that. I mean what is the price the farmer actually wants for it at his barn? Three shillings; they reckon that anything under that is not a paying price. They have great advantages in growing wheat on the Downs, about Warwick, because the ground is all cleared. It is not even like the Liverpool Plains. There are places there where you could get 5,000 and 6,000 acres of plain land fit for the plough; in fact, they have to clear very little of the wheat land.
4063. Have you any knowledge of the Inverell country, or the country between Glen Innes and Inverell? Yes; I was in the Inverell district fourteen years ago, before I went to Queensland.
4064. How does the soil there compare with the soil on the Darling Downs? The soil about Inverell is very similar to the soil at Toowoomba; in fact, there is little or no difference, and the products of the two places are the same. Toowoomba is 54 miles nearer Brisbane than Warwick. The products of Inverell and the products of Toowoomba are as nearly the same as anything I have ever seen. There are vineyards at Inverell, and also at Warwick, and the fruit grown in both places is very much the same.
4065. But the Darling Downs district is not so suitable for the growth of root crops, such as potatoes, as a moist district like Guyra? No; Guyra is the finest place I have ever seen for potatoes.
4066. How do they succeed with potatoes on the Downs? They grow potatoes at Warwick.
4067. Do they have large crops? Very good. Fifteen months ago, when I was at Warwick, I bought potatoes at the same price as I am paying for them here now.
4068. Do you know whether there is any large importation of potatoes into Queensland from this part of the country? No; I have never known of any.
4069. Do you know the country between Inverell and Guyra? No.
4070. Have you considered which is the better line to construct in the interests of the greater number—the line as proposed from Glen Innes to Inverell, or the line as suggested from Guyra to Inverell? Judging from the map, and knowing the population in the New England district, I should say, most decidedly, that the line from Inverell to Guyra would suit the convenience of the majority of the people.
4071. Suppose Queensland, or the southern portion of Queensland, to be a market for Inverell wheat, do you know the extra distance they would have to carry their wheat if it went to Guyra? Yes.
4072. That extra distance would be 35 miles, and the cost of carriage would be something like ½d. per bushel;—do you think that that would make a material difference to the Inverell people if they had a market in Queensland for their wheat? It would make very little difference to the Inverell people; but it would be a moral and physical impossibility to find a market for their wheat in Queensland. There was an agitation going on in Warwick when I was there, for the Via Recta line, the argument in support of such a line being that the farmers and others in Warwick were so handicapped by the heavy freight for their produce to Brisbane that they could not compete with Toowoomba, Rosewood, Helidon, Laidley, and Ipswich.
4073. When did this agitation take place? It has been going on in Warwick for the last five years. At a deputation which waited upon the Government to urge the construction of the Via Recta line, Mr. Beresford Hudson, a very large grazier and farmer in Warwick, stated that he had grown some 600 tons of lucerne hay; that he had sent 160 tons from Warwick to Brisbane; and that when he got his returns the amount he received, after paying freight and agents' charges in Brisbane, was £1 17s. 6d. This statement was made to prove that Warwick was virtually outside the Brisbane market, and cut off from any sale of produce on account of the heavy railway charges. Warwick would be, as nearly as possible, midway between Inverell and Brisbane.
4074. You are fully convinced, then, that this colony is not going to supply Brisbane with wheat? I am quite certain of that.
4075. At any rate, not by overland carriage? That is an impossibility.
4076. Do you know anything about Tingha or Bundarra? I have been in Tingha and Bundarra.
4077. Do you know anything about the amount of business done in those places? I do not. I only know from statistics the quantity of tin that has been produced, and I know that a difference in the freight of tin makes a difference in its production.
4078. Do you think that Bundarra and Tingha would be as well served by a line from Glen Innes to Inverell as by a line from Guyra to Inverell? No; because in the latter case the line would run through or near Tingha, and they would have no land carriage, but in the other case they would have not less than 12 miles land carriage from Tingha and Inverell.
4079. Do you know how the wheat grown on the Darling Downs compares, as regards quality, with the wheat grown in Inverell? The Darling Downs wheat is superior to the Inverell wheat. The wheat that took the prize at the last Warwick show weighed 67¼ lb. to the bushel, while the wheat that took the prize at the Inverell show weighed 3 lb. less than that. The Darling Downs wheat contains a larger percentage of flour, and is more valuable to the miller than the Inverell wheat.
4080. Have you ever heard any complaints made of the Inverell wheat? No. It is regarded as very good wheat.
4081. Have you ever heard that it is necessary for the bakers to mix a certain proportion of Adelaide flour with the flour produced in the Inverell district, in order to make good bread? I have heard the bakers make that statement, but I do not know of my own knowledge. I know that Adelaide flour is reckoned superior to ours.
4082. Is there any other information you think the Committee would like to hear? A question was put to one of the witnesses with regard to the rainfall on the Darling Downs. I was on the Downs from 1877 to 1880. We had what was termed the three years' drought there, and during those three years the lowest rainfall was 20¾ inches, and the highest 22⅝. What they reckon an average rainfall is from 30 to 34 inches. They reckon that a fair rainfall.

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4083. Was there a failure in the crops during those three years? No. One year they had wheat of a remarkably fine quality, on account of the rain happening to come at the right time. In fact, in some of the dry years they get very good crops of wheat as long as they get sufficient rain to cover the soil.
4084. Is there anything else? While in Queensland I have frequently heard the statement made that they would try to get the New England trade for Brisbane—that is, for the goods to go from Brisbane; but I never heard the statement made that they hoped to get the New England produce trade for themselves. Therefore, I think that if the line from Glen Innes would be of any benefit to Inverell, this benefit would be more than counterbalanced by the keenness of competition that would be experienced on the way to the Brisbane market. In Queensland they would compete very keenly against Inverell for the Brisbane market. I think it quite possible that a differential railway tariff would be instituted in Queensland for the purpose of keeping that trade.
4085. Why do they not do so now? Because there is no railway to Inverell.
4085½. You must remember that the same drawback applies equally to Sydney and to Brisbane. There is the same amount of carriage, independently of a railway, for the Sydney market as there is for the Brisbane market? Still, looking at it from a business point of view, I hardly think it would be a wise thing to construct a railway with New South Wales money that would give equal advantages to the Queensland merchants. That is a suggestion I wish to throw out. The only point that strikes me as being important to consider is that the products of Inverell and Toowoomba being so identical, and the climate and altitude of the two places being so similar, it would be against nature to suppose that Inverell could compete in the same class of produce with Toowoomba and Warwick in the Brisbane market, Toowoomba and Warwick being so much nearer that market.
4086. I do not think you told us what was the yield of potatoes on the Darling Downs? I do not think the yield of potatoes per acre would be so large as about Guyra and Ben Lomond, but still I have seen some very good potatoes grown there.
4087. Could you tell us approximately what is the yield? I suppose about 4 tons to the acre. There is another argument which was made use of at the deputation from Warwick which waited upon the Queensland Government, and that was that in and about Rosewood there was a population of many thousands of Germans, who had cleared the scrub land, and were able to produce all kinds of produce at a much cheaper rate than the settlers about Warwick, and, being so much nearer to Brisbane, they cut the Warwick farmers out of the market. That would also apply to us—they would cut us out of the market.
4088. *Chairman.*] If the Rosewood farmers are away down on the coast they would grow a different kind of product to that grown on the table-land? Rosewood is at a lower elevation, yet the farmers there grow a similar product to that grown about Warwick, with the exception of wheat.
4089. *Mr. Tonkin.*] How far is Rosewood from the railway line? The Rosewood station is on the railway line.
4090. How far is that from Brisbane? About midway between Brisbane and Toowoomba; that would be about eighty miles.

Mr. James Ingram Moore, auctioneer and commission agent, Armidale, sworn, and examined:—

Mr. J. I. Moore. 11 May, 1891.

4091. *Chairman.*] What is your occupation? I am an auctioneer and general commission agent, and also salesman for the Farmers' Association.
4092. *Mr. O'Sullivan.*] Where does the produce come from which you sell? From Guyra, and all up the northern line, and large quantities come from Inverell.
4093. What produce do you receive from Inverell? Corn. I may mention that they could not sell at Inverell, and several holders of corn there asked me if I could get a market for it here. I wrote back and told them that there was a good market, and I sold 2,500 bushels for them inside of three weeks.
4094. When was this? About two months ago.
4095. By what route did that corn come? It was sent by team to Glen Innes, and it came here from Glen Innes by rail.
4096. Is that the usual route for produce from the Inverell district to take? That is the only way they could bring it, except across to Guyra.
4097. What was their reason for sending it that way when they could save so much railway carriage by sending it to Guyra? I do not know; but I have written to the people since, and they told me that the cost of carriage was so great that they could not send any more.
4098. Then the experiment made to open up this trade between the Inverell district and Armidale has failed? No; it has not failed. They were quite satisfied with the price they got, and made money out of the transaction.
4099. What did they get for their corn? From 3s. to 3s. 6d. a bushel. And they were selling it at Inverell at the same time for 2s.
4100. Was that a fair price in Armidale? Yes; a very fair price, and I could do with as many more bushels at the present time.
4101. What did they have to pay for carriage to the railway, and from the railway on to Armidale? I do not quite remember the railway freight. I think the cost averaged about 3d. a bushel by rail. I do not know what the carriage cost from Glen Innes to Inverell by team.
4102. You sold the corn on commission, and received from 3s. to 3s. 6d. a bushel for it. How much would the Inverell farmers receive? They would have to pay the carriage and my commission.
4103. After paying those charges what would be the balance they would receive? Some of it was sold for 3s. 6d., and of this I suppose they would receive about 3s. They would receive very little under 3s., (say) from 2s. 10d. to 3s.
4104. Then 8d. would cover the charges from Inverell to Armidale? Yes, about that.
4105. And were they not satisfied with that price? Yes.
4106. Then why do you say they object to do any further business? I wrote and asked them if they would send some more corn, and they said that the carriage by train was so heavy that they could not compete.
4107. Do you estimate that they would receive 3s. a bushel for that corn after paying the cost of carriage by team to Glen Innes? No; they would receive about 3s. per bushel, less their team charges. I paid the railway charges.
4108. It is pretty evident that business on those terms would not be satisfactory to the Inverell growers of maize? One farmer sent me that consignment, and I could get lots of produce from Inverell, and from places from between Guyra and Inverell, if there was any way of sending the stuff to market.

Mr. J. I. Moore. 11 May, 1891.

4109. If a railway were constructed between Guyra and Inverell, do you think the farmers there would be able to receive something like fair remuneration for their produce? Yes; I think there would be a large trade.
4110. *Chairman.*] Your price would only give them a penny over what they were getting at Inverell? At the time that corn was sold the price was very low. There was competition here from the Maclcay.
4111. *Mr. O'Sullivan.*] Do you send any produce back to Inverell? No; except potatoes. I have sent potatoes from Guyra.
4112. By what route did you send them? From Guyra to Inverell by team. The farmers took it themselves on their own drays.
4113. You simply bought the stuff? No; I do not buy anything. I simply act as agent;—I send it on to Inverell to be sold there.
4114. Anything else besides potatoes;—any other root crop? I have letters almost daily from Inverell, and all round Wandsworth and Ollera, and that way, asking the prices. But as I say, they do not care about sending their produce round to Glen Innes, and then here. If they had communication direct they would send their produce to this market.
4115. I presume you favour the route from Guyra to Inverell? Decidedly.
4116. For what reason? Simply because it is the shorter route, and there is more farming going on between Guyra and Inverell than on the other route.
4117. Suppose a smart commission agent were established at Guyra, and intercepted all that trade and took it out of your hands, would you still hold on to that line? Yes.
4118. Is there any danger that a rival town might be started at Guyra in opposition to Armidale? There might be—I do not know.
4119. *Chairman.*] Have you any allotments there? No; I have no interest in Guyra whatever.
4120. *Mr. O'Sullivan.*] Do you know if any Armidale people have speculated in allotments at Guyra? I have not the faintest idea.
4121. Is there anything else you think worth mentioning? I know that 60 tons of potatoes have been sent down south this week from farmers between Wandsworth and Guyra.
4122. How far south? To Newcastle, Tamworth, Maitland, Gundagai, and different places. Last year, acting as agent, I sent potatoes to the Brisbane market for sale, and the returns showed that the growers could get a better price south than they could north. The returns from the southern markets are far larger than those from the northern markets.
4123. Did you send the potatoes of which you now speak, right up to Brisbane, or to any intermediate places? To intermediate places, but more especially to Brisbane. We sent to the Brisbane market direct.
4124. *Chairman.*] Did it pay the producer, or were they sent at a loss? They were sent at a loss. He could have got a better price here for his potatoes.
4125. Then he made something on what he sent south, but lost on what he sent north? Yes. There were so many potatoes in the northern market, that he could not get a price.
4126. Where did the potatoes in the northern market come from? I do not know. Only last week, a farmer living at Ben Lomond, showed me the account sales of some potatoes he sent to Brisbane, and after paying all expenses, he got about from 27s. to 30s. a ton for his potatoes, and he could have got from £3 5s. to £3 10s. in this market for the same potatoes. I got £3 10s. for him this week.
4127. *Mr. O'Sullivan.*] There is a duty on potatoes in Queensland, is there not? Yes.
4128. These facts go to prove that there is not much chance in the nothern market for New South Wales potatoes? I do not think there is. In the first place, there is a duty of 15s. a ton, and in the next place, the prices they get there are not high enough.

Mr. John Craigie, auctioneer and commission agent, Armidale, sworn, and examined:—

Mr. J. Craigie. 11 May, 1891.

4129. *Chairman.*] What is your occupation? I am an auctioneer and general commission agent, residing in Armidale.
4130. *Mr. McCourt.*] Have you any general statement to make with regard to the proposed railway? I resided for some six years on the Richmond, and I am well acquainted with the Clarence and the Richmond, and also with the New England district. Some questions have been asked to-day with regard to the trade between New England and the coast district, and it was suggested whether a larger population would not be settled in the Richmond River district than on the country between Guyra and Grafton, or Coff's Harbour. It appears to me, from the fact of the Government constructing a line of railway from the Tweed to Casino, and probably on to the Clarence, that a great deal of traffic from those districts will go to Brisbane, eventually. It is not very far from the Tweed to Brisbane. The country is comparatively level and suitable for the construction of a line, and it appears to me that a great deal of traffic instead of going from the Richmond to Tenterfield, as might be expected, will go on to Brisbane. There is another thing with regard to the line that would be constructed from Coff's Harbour, or South Grafton. The coast line from Guyra would go through an immense quantity of country, where up to the present time, there has been no chance of settlement, and it would tap New England in the centre; whereas the line from Byron Bay to Tenterfield, though in my belief an excellent line, would tap New England at the extreme north, and a line from Tenterfield to Byron Bay, while it would suit the Richmond River people, and those in the extreme north of New England, would be of no use whatever to the great centre of New England. Guyra is as nearly as possible the centre of New England.
4131. *Chairman.*] But you only produce potatoes here? We produce potatoes largely, certainly; but an industry is growing up here, which will become one of the greatest industries of the colonies—I refer to fruit. We grow all sorts of stone fruits here—all sorts of English fruits.
4132. *Mr. McCourt.*] Does not all that fruit go to Brisbane now? A good deal of it does, but a good deal of it goes down south to the Liverpool Plains.
4133. Is it not a fact that nearly the whole of the fruit grown here goes to Brisbane? No, it is not—the rate of carriage is too heavy. A tremendous lot of fruit goes from here to Tamworth, to Narrabri and Walgett, and down as far as Newcastle; and the class of fruit we grow here could be sent out to the north-western country, out Inverell way, and also down to the Clarence and the other coast districts. From the latter districts we could take sugar in exchange, and the tropical fruits that are grown there. We could send them potatoes and fruit, and receive these other things in exchange.

Mr. J. Craigie. 1 May, 1891.

4134. That evidence refers more particularly to the coast, but we are inquiring into a line to Inverell? I mention this because I noticed that in the previous evidence the question of the coast line was introduced.
4135. Do you think that wherever the coast line junctions with the main line, the Inverell line should junction there also? Certainly. My contention is that wherever the coast line junctions, there the Inverell line should junction. If a line were constructed from Inverell to Guyra, and thence on to the coast, there would be nothing to prevent another line being constructed eventually from Tenterfield, through Casino to Lismore, and on to Byron Bay, provided that Byron Bay can be made a port, as it is contended it can.
4136. Do you know anything about the Glen Innes line, or the Guyra line, to Inverell? Yes, I have been over the country. I have not been exactly along all the lines, but I have been across the country.
4137. In your auctioneering business do you deal chiefly with stock? Live stock and properties.
4138. Do you do any business with Inverell? Yes, I do a certain amount of stock business with Inverell.
4139. Do you think any fat stock would come this way from there, on the line? I do. I think there would be a considerable traffic between Inverell and this district, if a railway were constructed from Guyra to Inverell.
4140. Is there any prospect of freezing works being established in these districts? I am in communication now with Mr. Hudson and a few others, with a view to the establishment of freezing works at Armidale.
4141. And if freezing works were established at Armidale, would stock from Inverell and the districts beyond come this way? I think so, as regards cattle.
4142. And sheep? Of course we have plenty of sheep here ourselves, but with regard to cattle I think there would be an immense local consumption here; because there is not only Armidale itself, but also Hillgrove and other large mining centres. There is Wollomombi, where there has been a further discovery of silver, and, going south from Walcha, there is Niangala. These are all mining centres, and are therefore not food-producing, except in the sense that they produce what will pay for food, and they would be large consumers of cattle.
4143. Do any fat cattle from Inverell and the western districts pass here to Sydney now? I can hardly say that they do.
4144. Is it not a fact that they send most of their fat cattle to Brisbane? I cannot say. I do not think it is at all probable that they would send fat cattle from Inverell to Queensland.
4145. I suppose none of the Armidale people are interested in the land about Guyra? I do not believe there are half a dozen people in Armidale who own land at Guyra.
4146. But have they lent money on mortgage, or anything of that sort? I think not. As far as Armidale is concerned, I think it would be more to its interest to advocate a railway from here to Hillgrove, and we might then have put in a claim for a line from the coast, had we taken a selfish view. I do not see that a line from Inverell, *via* Guyra, to the coast will benefit Armidale one whit more than it will the other districts concerned. But Guyra is the centre of New England, and I think that the volume of trade from the west would go that way, whereas Glen Innes is too far north; and I believe that if the connection were made at Glen Innes, the Inverell people, and the people to the west of Inverell, would still have to find their market to the south, and there would not only be the loss of time in travelling the extra distance, but Ben Lomond would have to be climbed at a very high altitude, and the wear and tear would be very considerable.
4147. Is not the principal climb between here and Guyra? No, I think not.
4148. Do you know anything of the Uralla line? Yes.
4149. Would not that be the best line to the south? It would be the best line if a railway is not to be constructed from the main northern line to the coast But on looking at the map I regard the matter in the light of an ultimate connection with the coast.
4150. If it is a fact that there would be an annual loss to the country of about £14,000 on a line from Glen Innes to Inverell, or from Guyra to Inverell, do you think the work should be undertaken, and the country saddled with that loss? Yes; I believe that in a few years that loss would be built up.
4151. It would not be a permanent loss? No.
4152. In how many years would the line pay? I do not believe it would pay for another ten years, probably. Of course it would depend greatly on the amount of settlement. I certainly think there would be a far better chance of a line from Guyra to Inverell paying, than a line from Glen Innes to Inverell, because nearly all the land along the latter line has been alienated, and is held by large speculators, whereas there is a considerable quantity of Crown land along the Guyra route. Nearly the whole of the land from Guyra to South Grafton, or Coff's Harbour, is still in the hands of the Crown. And I believe that the sale of that land would, to a very great extent, pay for the construction of the railway.
4153. Still you do not think that either line will pay for ten years to come? I do not.
4154. Would there be any passenger traffic from the districts out west if the line were constructed to Guyra? Yes, there would be a fair amount of passenger traffic.
4155. Anything considerable? There would be a fair passenger traffic. There is no doubt that the passenger traffic would considerably increase. At present it is not very heavy.

Mr. Edmund Lonsdale, builder, Armidale, sworn, and examined:—

Mr. E. Lonsdale. 11 May, 1891.

4156. *Chairman.*] What is your occupation? I am a builder.
4157. How long have you resided in Armidale? Twenty-two years.
4158. Have you been here all that time? Yes; I was at Inverell for three or four months.
4159. How long ago? When I first came here, about twenty-one years ago.
4160. Are you familiar with the whole of the district through which these various lines have been surveyed? I am not exactly familiar with the different routes. I have been down where the coast line goes, and I have been across from Guyra to Inverell, but I do not know anything of the other routes.
4161. Have you any statement to make with regard to the matter before the Committee? So far as I have heard the evidence, the question seems to hinge a great deal upon the existence or otherwise of a market in Queensland. I may say that my brother-in-law is a produce merchant in Armidale, and he is dealing now with Inverell in maize, and he is dealing with Newcastle and all round. Of course he is simply doing as a business man does, and getting his stuff from where he can get it cheapest. He is in communication

Mr. E. Lonsdale. 11 May, 1891.

communication now with Queensland, and he expects a telegram directly, which he thinks will enable him to bring maize from Queensland to Armidale cheaper than he can get it from Inverell.

4162. But not if Inverell were connected with the Great Northern Line? No, probably not. But this shows that Inverell cannot compete with Queensland in maize. Then with regard to flour, we are importing into the district large quantities of flour. My brother-in-law has at the railway station now 18 tons of flour. The probability is, if the line were made in the shortest way, and not taken all around the country, that if Inverell can produce wheat much cheaper than it can be produced in this district, the market for Inverell wheat would be here rather than in Queensland. We are told that if a line is made to Coff's Harbour, the market for Inverell for wheat will be in Sydney rather than in Queensland.

4163. Do you mean to say that the Inverell wheat would go down the coast to Coff's Harbour, and be shipped to Sydney? Yes.

4164. That would involve a good many handlings? That may be, but you would find that there would only be the same number of handlings as if it were sent to Newcastle.

4165. You do not compare Coff's Harbour, or even the Clarence, with Newcastle, as a shipping port, surely? I am told that if the breakwater were made at Coff's Harbour, there being deep water and no bar, ocean-going steamers could enter there.

4166. That is rather wide of the question? Well, three or four years ago I induced some Armidale farmers to send wheat and stuff down the Great Northern Line from here. I took a lot of interest in the matter, and corresponded with the South Coast Company. The wheat was sent, and as it was before the Hawkesbury Bridge was completed, it had to be punted over the river, and even then New England wheat competed in Sydney with wheat that was brought from other places, and they sent me back a sample of wheat, saying, "If you can grow wheat like that, we can ensure you a constant sale for it".

4167. That was when the punt was in use on the Hawkesbury River. Did the railway people charge you less after the bridge was constructed? I do not know, but I should say so. At any rate there was the delay.

4168. Was there much more wheat sent afterwards? I do not think so. I was doing it amongst friends, as a test, and I tried to get them to take shares in the South Coast Company, and I believe it would have been a good thing for them. We can produce some things here as well as they can in any other part of the colony. We can produce wheaten hay, and make wheaten chaff; we can produce potatoes and fruits, and we can produce maize as well as Inverell can. And, as a consequence, it appears to me that the thing would be to exchange our natural products.

4169. If you had this line to Coff's Harbour, and if they can produce maize on the coast better than they can at Inverell, poor Inverell would be out of it? I do not think we are here on protectionist lines. I take it that this investigation is as to what is best for the whole community. Regarding the matter from a purely local point of view, probably it would be better for Armidale to have nothing to do with the line.

4170. The subject of our inquiry is in reference to giving Inverell communication with the Great Northern Line? Yes, But I take it that the object should be to give such a connection with the main northern line as would be best for the community as a whole, and not only for Inverell, Armidale, Glen Innes or any other particular place. Of course if this investigation is simply a local matter as to what will help Inverell, and if Inverell only is to be considered, and not the community at large, it is a different thing.

4171. You may very safely leave the Committee to say how the matter ought to be dealt with? I have been told by a selector who has taken up about 6,000 acres of land that the scrub land on the Guyra to South Grafton route would fetch £12 an acre put into the market for farms if they got railway communication.

4172. You mean cleared land? No; scrub lands, not cleared.

4173. Then I understand that you are clearly of opinion that if Inverell is to be connected with the northern line, the connection should be at Guyra? Yes.

4174. In view of the fact that you believe that their market will be to the south, and not to the north, and in view of a future connection with the coast from Guyra to Grafton? Yes. If the line is taken to Glen Innes the southern traffic will have a longer distance to be carried for all time.

4175. Have you any knowledge of the Queensland market beyond what you have stated? That is the only thing—I have no personal knowledge of it.

4176. You cannot say whether the Inverell people have any good grounds for their hope of a wheat market in Queensland? I do not think they have the slightest ground.

4177. Why? Simply because the sea-borne carriage will beat them in that direction.

4178. The sea-borne wheat will have to go up into the interior? Not according to the evidence we have heard this morning. The interior would be supplied by the Darling Downs.

4179. Can you give us any information as to the quantity of flour brought to Armidale? Not exactly. My brother-in-law gets about a truck of maize a week, and I should think he gets about 200 or 300 tons of flour a year, and I know one baker gets 200 tons, and then the storekeepers I should think get a considerable amount of flour. I have ascertained that 470 tons of corn were landed by rail at Armidale during the last three months.

MONDAY,

MONDAY, 11 *MAY*, 1891.

[*The Sectional Committee met at the Court-house, Uralla, at 2·45 p.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The HON. WILLIAM JOSEPH TRICKETT.	EDWARD WILLIAM O'SULLIVAN, Esq.
JAMES EBENEZER TONKIN, Esq.	WILLIAM McCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Michael John McMahon, Mayor of Uralla, sworn, and examined:—

Mr. M. J. McMahon. 11 May, 1891

4180. *Chairman.*] You are Mayor of Uralla? Yes.
4181. How long have you occupied that position? I have been nine years in the Municipal Council since the town was first incorporated, and have occupied the position of Mayor three times.
4182. Have you been long resident in the district? Fourteen years.
4183. Have you any statement to submit to the Committee bearing upon the subject of our investigation? I would wish to say first, that in the report of Messrs. Scarr and Price on the different proposed railway routes there are several mis-statements. It is not true, as stated in the evidence given before the Public Works Committee, that when Messrs. Scarr and Price visited Uralla every opportunity was given to the public to afford information as to the claims of this district in regard to the proposed railway communication. The only persons from whom these gentlemen obtained information were the Council Clerk and myself. Important evidence bearing on the question could have been furnished in Uralla. The number of bales of wool sent away from the Uralla Railway Station during the last wool season was 8,454. On the eastern side we have the following stations: Mihi Creek, Goatwyck, part of Salisbury Station and Enmore. On the western side, along the course of the proposed railway, we have Balala, Toryburn, Stonybatter, Winscombe, Kingston, Yarrowyck, Laura, near Bundarra, Woodlands, Goldsmith, Myamba, Greylands, Underwood, Blair Athol, Avington, Beverley, the Grove, near Tingha, Auburn Vale, Stony Creek, Trida, Woodstock, Linton, Orabah, Baldrock, Launchley, Woodlands, Stockgrove, Turkey Creek, Roushalla, and Rounalla Park, Long Reach, Clerkness, Bushfield, Cope's Creek, Haystack, The Woolshed, and Rockhall. More than two-thirds of the 8,454 bales of wool sent away from Uralla during the last wool season would have come by a railway if constructed to this place.
4184. I suppose that with regard to a number of stations you have read out the line from Guyra to Inverell would serve them as well? I do not think so. The Grove, near Tingha, is the nearest one. We included none beyond that.
4185. Would not the wool from Cope's Creek Station find its way to the Guyra line if it were constructed? I am not aware.
4186. But you take it that the fact of their sending the wool here is pretty fair evidence that this is their natural terminus? Yes; that is my argument. I next have to refer to the subject of mineral resources, mentioned in the report of Messrs. Scarr and Price. We hold that if the mineral resources and population of Tingha are a consideration in favour of the Guyra to Inverell line, so are they also a consideration in favour of the Uralla line. We wish also to mention that the minerals that are now, and have been for some time past, delivered at Guyra and Inverell, were sent to Uralla, until the differential rate system removed the traffic from its natural centre. Not only did the minerals come to Uralla from Tingha, but all the goods going to Tingha and the other places came through Uralla, and went *via* Bundarra in that direction, until the establishment of the differential rate system offered an encouragement to the tin producers and others to send their traffic to a point higher up on the Great Northern Line.
4187. The Guyra people assert that prior to the differential rate system they got all this trade? I assert that before it went to Guyra, it came here.
4188. And now it has gone a step further, and has been taken from Guyra to Glen Innes? Yes; I am informed by Mr. Litchfield, of Tingha, that they saved something like £5, or more, per truck load, by sending their goods to Guyra instead of to Uralla.
4189. Do I understand that when it was left to gravitate to its natural centre, the Tingha trade came to Uralla? Yes.
4190. And that owing to the alterations in the railway rates, it was taken to Guyra, and now, in consequence of a further alteration in the railway rates, it goes to Glen Innes? Yes; this was the natural outlet, and it was used as such up to the time of the alteration in the railway rates. In regard to timber, Messrs. Scarr and Price in their report, state that there is little or no timber on the Uralla route that would be useful for railway construction. I am in a position to prove beyond all doubt that there is a large quantity of timber suitable for railway construction in the vicinity of Yarrowyck, where Mr. Proudfoot, when he had the contract for the line to Uralla and Armidale and Glen Innes, obtained a very large quantity of his timber.
4191. What kind of timber? Ironbark and stringybark. There is plenty of timber there for railway purposes.
4192. Mr. Proudfoot did not skin the forest I suppose? I think not. He got a great quantity from the Enmore side, about 20 miles east of the main line.
4193. How many miles is it from Tingha to Uralla? It is about 18 miles from Tingha to Bundarra, and 43 miles from Bundarra to Uralla.
4194. Have you been over the country along the Kentucky and Uralla routes, which are virtually the same? Yes.
4195. Have you been over the other two routes—from Guyra to Inverell, and from Glen Innes to Inverell? I have been over the road from Glen Innes to Inverell, and also from Guyra to Inverell.
4196. But you know the country generally? Yes.
4197. Is the country between Guyra and Inverell better for agricultural purposes than the country between Uralla and Inverell? I should think not; if railway facilities existed we would have a settled population, and agriculture would be more largely gone into than it is at the present time.
4198. Can you give us any idea of the farming population on the Kentucky and Uralla routes? I could give you the population approximately. I think it is about 2500—that is, reaching as far as King's Gap.
4199. That includes Bundarra, of course? Yes. We take the estimates of Messrs. Scarr and Price, and allow 500 for Bundarra.

4200.

Mr. M. J. McMahon. 11 May, 1891.

4200. And you are not taking any portion of Tingha? No. From King's Gap across to Toryburn, including Bundarra, they give the population at 1,500, to which I have added 1,000 as the population between Toryburn and Uralla on either side of the proposed route.
4201. Do you not think Messrs. Scarr and Price took those into consideration? I think not. They calculated from King's Gap to Toryburn, and we calculate from Toryburn to Uralla.
4202. In what pursuits are these people engaged? In grazing and farming.
4203. What do they produce in the farming line? Wheat, corn, and potatoes.
4204. Where do they send their produce? To Uralla and so on, to Kingstown, and I think they despatch a good deal to Tamworth.
4205. Can you tell us, as a matter of fact, whether they do send their wheat to Tamworth? I think most of them come here.
4206. A local consumption only? Yes.
4207. It would not take much wheat to supply the Uralla township? I think they grind a good deal for themselves.
4208. Who is the owner of the flour mill at Uralla? Mrs. Macrossin.
4209. Where do the farmers find a market for their corn? It is sold locally.
4210. Is any sent south along the Great Northern Line? Not that I am aware of.
4211. What other produce do they grow? Potatoes.
4212. Do they grow potatoes well here? Yes, it is a first-class district for potatoe growing; I know of no better.
4213. Are they consumed locally? Yes, I think so.
4214. None are sent away? Not that I am aware of. I should say that some of each kind mentioned are sent away from time to time.
4215. What keeps this healthy little town in existence? Well, we are the natural centre of a very large and prosperous district; but we stand in a position which places us at a decided disadvantage. Being so close to Armidale we are overshadowed by the larger city. If it were not for that we have a better position as a centre and have a larger and better district than Armidale.
4216. You consider that you are naturally the centre of a larger and better producing district than Armidale? Yes, I say that without hesitation.
4217. Have you any knowledge of the Queensland market;—does any produce go from here to Queensland? I think not. The protective duties debar us from sending anything.
4218. There is no duty on wheat? I am not aware that any is sent from here.
4219. Any surplus beyond what is required for local consumption finds a market south? Yes.
4220. How far south? I have known wheat to be sent to Sydney.
4221. In an exceptional case, I suppose? Yes.
4222. Do you know at what price it would pay the farmers along this line to grow wheat? I think about 3s. a bushel would be a very fair price. They very often have to take less. It was ruling at 2s. 6d. here a short time ago.
4223. Are the farmers in this district men of substance, or are they in the hands of the storekeepers and banks? I think most of those who have followed up the farming industry carefully are about the most intelligent and thrifty class of men we have in the district—those who carry on farming to a large extent and watch it carefully. The majority of those who are not doing well at farming are gradually increasing their area and going in for sheep growing, which is an easier life, I suppose.
4224. Putting on one side your natural love for Uralla, and looking at this matter as a taxpayer of the country, which route do you think would be best in the interests of Inverell and the country generally? I am wholly unbiassed. I have no particular stake or interest in Uralla that would cause me to give an opinion which I did not feel was according to facts. From a study of all the facts I am conscientiously of opinion that Uralla would be the better route. The question of a connection with the coast is one, I suppose, which cannot be taken into consideration; but if a route had been surveyed from Uralla through Walcha to Trial Bay, we should not have the slightest difficulty in proving that our line would be better than any of the others. I speak from a national point of view, and altogether without any personal interest.

Mr. William Cleghorn, sheepowner and fruit-grower, near Uralla, sworn, and examined:—

Mr. W. Cleghorn. 11 May, 1891.

4225. *Chairman.*] What is your occupation? I have some sheep, and grow fruit.
4226. *Mr. Tonkin.*] Where do you reside? On the road between Armidale and Uralla.
4227. How far from Uralla? Five miles from Uralla, and about 10 miles from Armidale.
4228. Do you know the country on the surveyed route between Uralla and Inverell? Yes; I am very familiar with it.
4229. What is your opinion of its agricultural capabilities? The character of the country from Uralla to Inverell is varied. There is some very good agricultural land about Bundarra, but generally speaking it is mineral land, and exceedingly good grazing land.
4230. Have you seen the report of Messrs. Scarr and Price? I have glanced at it here and there.
4231. Have you read what they state in reference to the route from Inverell, *via* Yarrowyck, to Uralla? I have seen it.
4232. Do you agree with that statement? No.
4233. In what respect do you differ from it? They gave the people no opportunity whatever of expressing an opinion on the subject when they called at Uralla. I have always taken a great interest in the railway question, both as regards the existing line and the branch line, and I never knew of their being here. I asked one of the leading storekeepers in the town if he had seen these gentlemen before they went on their trip to Inverell, and he had never heard of them in the town.
4234. In their description of the proposed route from Inverell, *via* Yarrowyck, to Uralla; they say the country passed through is, on the whole, of the same inferior quality as that on the Kentucky line, with the exception of some limited areas of good land near the banks of the creeks tributary to the Bundarra River, being generally of granite formation with poor gravelly soil;—do you agree with that statement? I do not think it fairly describes the country.
4235. It does not say it would not be good pastoral country? It is good pastoral country. It is not rich agricultural country.
4236. Do you know anything about the timber? Yes.

Mr. W. Cleghorn. 11 May, 1891.

4237. What is your opinion with regard to it? There is a good deal of ironbark at Toryburn and Abington, and between Bundarra and King's Gap.
4238. Is the ironbark sufficiently good for railway sleepers? It has been largely used for fencing in the neighbourhood. A very large beam was brought from there to be used in the front of one of the largest stores in Armidale, showing that it must be of good quality.
4239. Is there plenty of ironbark? Passing along I saw a good deal of ironbark, but I think that for the large quantity of timber they would require for a railway they would have to go principally to the Yarrowyck Mountains, and to the right of the surveyed line.
4240. How many miles to the right do you think? They would begin to get it immediately on the line, and there is a very extensive belt of timber extending northward from the line.
4241. Do I understand that Messrs. Scarr and Price took no evidence at all at Uralla? When they came here they simply had a few moments' conversation at the fireside of the hotel with the Town Clerk and the Mayor, and I was told that when they went down the road the curtains were drawn down, and they had a covered buggy.
4242. Do you think, then, that this statement that the country is poor, and that there is no timber, emanates from the Mayor? Certainly not.
4243. Where did they get the information? I really could not say. In the evidence, they say that in every town they visited they gave the people an opportunity of furnishing information. They did not do so here.
4244. Then I take it that you are dissatisfied with the manner in which the evidence was gathered at Uralla by these gentlemen? Most decidedly dissatisfied.
4245. Do you know the number of men working about here for gold and other minerals? We estimate that there is always a very large population on the Rocky River, immediately adjacent to Uralla.
4246. There may be some evidence which I have not drawn from you by examination, and perhaps you would like to make a statement? I should like to state this, that in my opinion the Inverell district is deserving of railway communication with the main northern line, and that the line from Uralla to Inverell is the most direct one.
4247. The most direct in what direction from Inverell—to Sydney, Newcastle, Brisbane, or where? To Newcastle and Sydney, and the other parts of New South Wales. All the trade trends that way, and will do so in the future, no doubt. We have nothing to do, I think, with Queensland. It appears to be the most common sense and scientific route to take, this particular angle towards Inverell, and no doubt it will be extended to valuable country to the north of Inverell—to Warialda, for instance, where there is an extensive area of mineral country, and an enormous coal-field.
4248. Where is the coal-field? The whole district north of Warialda is a coal-field.
4249. Are you sure of that? Yes; quite sure. I could have brought a geological map, but I know the country perfectly well. A few weeks ago a party picked up a lump of kerosene shale on the surface.
4250. If the people at Inverell state that the market for their principal product is Brisbane, do you think it would be a proper thing to bring that product down to Uralla, and then send it back again along the main line? I think that evidence might be taken with a great deal of caution. They can deliver wheat much cheaper up here than they can by rail from Inverell or anywhere else. I have grown wheat very largely in this district for many years, and the experience here is that wherever the railway is extended it simply stops the plough as far as wheat growing is concerned, because it will not pay.
4251. Have you any other reason why the line should come to Uralla? There will be a save of 50 miles in the haulage of goods to and from the shipping ports of New South Wales—Newcastle and Sydney—the termination of the existing system of railways, of which this proposed line would be a branch. I consider that the branches from the main line should go off at a certain angle, and between a line extending north-west, say to Walgett, and the line to Tenterfield. A line from Uralla to Inverell would be intermediate.
4252. You understand that the Committee are investigating whether it would be advantageous to construct a line from Glen Innes to Inverell. Do you think it would be better for the Committee to leave the district without a railway at all rather than construct that line? I think that line will be a mistake, because you go north to Glen Innes and turn back to Inverell; and, besides, it would involve a loss of £12,000 a year.
4253. Why? If a line were constructed from Uralla to Inverell the distance would be rather shorter than that from Uralla to Glen Innes—that is to say, a train would reach Inverell in a shorter time than it would reach Glen Innes on the present line, and if you add 50 miles further from Glen Innes to Inverell, that 50 miles will be entirely unnecessary—will be a complete waste, and involve a loss of £12,000 a year—that is, allowing for two trains each day—a mail train and a goods train. It is allowed by the Railway Commissioners that the cost of running a train per train mile is about 4s. Four trains a day on a line of railway 50 miles in extent would be equal to 200 miles, and at 4s. per mile, this would be about £250 per week. This gives £1,000 per month, which would be entirely unnecessary, and a permanent loss to the country.
4254 Do you know the length of the line surveyed from Inverell to Uralla? It is about 80 miles, or rather under.
4255 Do you know the distance from Glen Innes to Inverell? I believe it is about 50 miles, according to the last survey.
4256. Then there are nearly 30 miles more of construction to be taken into consideration? But you get the benefit of opening up the country, which at present has no railway communication.
4257. But would not the railway from Inverell to Guyra, going through Tingha and close to Bundarra, serve the very country you are now speaking about? No. There is one great obstacle there. You have to make an ascent of something like 1,100 feet unnecessarily. At the present time Uralla is the highest point on the line from here to Inverell. You start at Uralla, and there is no other point so high on the route to Inverell. It is a gradual descent from Uralla to Inverell. Inverell is at an altitude of 1,926 feet; Bundarra, 2,278 feet; and Uralla, 3,335 feet; so that there would be a gradual descent all the way; whereas, if you went to Guyra you would have to ascend to a height of 4,328 feet, which is entirely unnecessary, and which is one of those matters allowed by all railway authorities to cause a great increase in the cost of working the line.
4258. Is there anything else you would like to explain? I should like to point out that if a railway is made from Uralla to Inverell, there will be no necessity for a line being constructed from Glen Innes to Inverell, because all the residents between Glen Innes and Inverell would have railway communication

4259.

Mr. W. Cleghorn. 11 May, 1891.

either on the right hand or the left—at Glen Innes or Inverell. The Waterloo Station, on the Glen Innes side, and the Inverell Station, on the Inverell side, would be within easy reach of a railway, and the small township of Swanvale, situated midway between the two places, where there are two or three settlers, would, at the most, be only 22 miles from a railway station on either side. On the Great Northern Line the stations between Tamworth and Armidale are, on an average, 13 miles apart, and the people between Glen Innes and Inverell would be just as well served as the people of this line within sight of the train passing.

4259. You think that a line between Inverell and Guyra would not serve as large a population as a line from Uralla to Inverell? Certainly not. I am not so familiar with the whole of the line between Guyra and Inverell, having only been over part of the country, but I am satisfied that the population there is not likely to be so large as between Uralla and Inverell.

4259½. Suppose Uralla were left out of the question altogether, of which of the other two routes would you be in favour—the Guyra route or the Glen Innes route? According to my argument, the ascent from Inverell to Guyra would be less than the ascent to Glen Innes, because the altitude of Ben Lomond is 4,471 feet, and you would only have to go to 4,428 feet. There would be some little benefit there. Then again, striking off from Guyra to Inverell would be more consistent with the branch system, and would be a more scientific and common-sense plan than that of going to Glen Innes and turning back again. Besides, the Guyra line would touch upon the tin-fields. The Uralla line passes through a tin-field reserve for 20 miles. The natural trend of the traffic was towards Uralla until the railway people gave the Guyra people the tremendous benefit by delivering goods there at a great deal less cost than the cost delivered at Uralla. This has been done to such an extent that the people of Uralla can save money by getting their goods taken up to Guyra and brought back here again. By this means all the traffic that formerly went to Tingha and Inverell through Uralla was diverted.

4260. Is there anything else? A very large portion of the land between Uralla and Inverell is Government land, including some mineral reserves. There is a reserve, to start with, on the Rocky River Gold-field, extending for about 5 miles from Uralla, and there are also tin-mining reserves. There is a very large area of mineral country on the line from Uralla to Inverell, and no doubt there will be a very large population there. The tin traffic continues all the year round, and is not confined to one season of the year, like wool. Besides, new discoveries are always being made. Only last week a very large silver lode was found half way between Bundarra and Inverell, right on the line of the railway survey. I would also like to mention that when the line from the south to Uralla was being constructed the contractors saved an enormous amount of money by being able to get ballast at the Macdonald River. On the line to Bundarra there is a great deal of river gravel which could be used for ballast. With regard to the comparative cost of the Uralla line and the Glen Innes line, in the House of Assembly the length of each line was taken, and the cost arrived at by an estimate of so much per mile in both cases. Now, that method of multiplying the number of miles by the same amount per mile was very unfair to Uralla. The line from Uralla could be constructed at a far less cost than the line from Glen Innes, because in the former case the country offers so very many more facilities.

Mr. James Danvers Leece, Council Clerk, Uralla, sworn, and examined :—

Mr. J. D. Leece. 11 May, 1891.

4261. *Chairman.*] What is your occupation? I am Council Clerk at Uralla, and also a commission agent.

4262. *Mr. O'Sullivan.*] Will you state your opinion with regard to the proposed railway? My opinion, divested of any prejudice which a citizen and resident of this place might have, is that the Uralla line is best from a national point of view.

4263. Why is it best from a national point of view? In the first place, I must premise this, that I must take Newcastle and Sydney as being the feeders and the ports for Inverell. I do not take the prospective trade with Grafton into account. That is too much in the future for us. I take the country as it is at present. Therefore, I begin by saying that either Newcastle or Sydney are the proper ports, the only ports, we can look to, and the only ports we can base our estimates on. The tariff and the difference in the railway gauge put Queensland entirely out of the question. The tariff, and especially the tariff recently imposed, and the difference in the gauge are two factors entirely opposed to the existence of a market for Inverell in Queensland.

4264. You are not, perhaps, aware that the tariff does not apply to wheat or flour? I think it does. think there was a tariff recently put on.

4265. There is no duty at all on wheat or flour going into Queensland? But there is still the difference in the railway gauge.

4266. You are aware that in constructing this line of railway, after paying a due regard to the interests of the country, we have to consider the thriving and promising district of Inverell;—at Inverell they produce largely wheat, flour, and maize;—now, what, in your opinion, should be the best outlet given to these producers of wheat, maize, and other products that might be sold on our northern coast, which may be a natural market for them? But we have first to prove that that is a natural market.

4267. Are you not aware that wheat is not grown on the coast? I am aware that maize is grown far more largely on the coast than at Inverell.

4268. I do not refer to maize, I am speaking of wheat? Very good wheat has been grown on the Clarence. I have seen splendid samples of it.

4269. It is grown very little, is it not? I think the brush lands of the Clarence did once grow large and very excellent crops.

4270. Is there not already a large population between the Tweed and the Clarence, living in a country which, although it may grow wheat in a few favoured spots, is not, generally speaking, wheat-growing;—if these people desire to obtain wheat or flour, have we not a right to consider them in constructing a line of railway from a wheat district? Yes; except where there is such intervening country as that between here and the coast. The intervening country is merely a mass of rocks and gullies, with steep descents.

4271. Have you ever heard of a proposal to construct a line from Guyra to Coff's Harbour, *via* the Don Dorrigo Scrub, through what is represented as splendid country? I have.

Mr. J. D. Leece. 11 May, 1891.

4272. How does that fit in with your expression of opinion about a country full of gullies? They have not proved yet that the line from Guyra to the coast is a good line, only it runs level from Guyra to Guy Fawkes, and it must, therefore, intersect the bullock dray road already in existence from Armidale to Grafton.
4273. If there is already a road between Grafton and Armidale, does not that suggest the idea that that is a natural route for trade, and that any railway to the coast should follow that route? Yes; from Armidale. It would also take in Hillgrove, which now has a population of about 2,000, and which would be near the line. It would also take in Wollomombi, the population of which is increasing.
4274. If experts tell us that there is a better line from Guyra to the coast than from Armidale, have we not a right to pay respect to their opinion? Of course we have, but experts very often make great mistakes, for which the country has to suffer.
4275. Bearing all these facts in mind, and considering the resources of Inverell, and that it is a magnificent district, languishing for want of access to a market, in constructing this line to Inverell, have we not a right to consider the best route that will give them access to a natural market on the coast? That should be the first question to consider.
4276. Then what you offer them at Uralla to counterbalance that is speedier access to Newcastle and Sydney for their wool, and to receive their stores in return? If I am asked which is the best direct line from the coast to Inverell, I will say from Inverell to Uralla, and from Uralla to Walcha, down to Trial Bay, which will be a harbour before ever Coff's Harbour will pretend to be one.
4277. Has that line ever been surveyed;—have you any reason to believe that engineers have expressed an opinion favourable to it? Stockmen, who have lived in the country, and know it probably better than engineers or surveyors, think that everything that applies to the Don Dorrigo route, with respect to the existence of splendid timber, applies with equal force to the line from Walcha to Trial Bay. It is magnificent country, and there is magnificent timber there.
4278. We have not any suggestion about that line before us, but we have about the other;—I would like to know from you, as an old resident, and one competent to give an opinion, which would be the more valuable for the people of Inverell, and the people of the district between here and Inverell—a more direct and shorter route to Sydney, *via* Uralla, to take their wool down and get their stores back, or a direct route to the coast, to give them a market where they can sell their produce? I think the direct route to Sydney would serve them best. I do not believe that either Grafton or Coff's Harbour, with all their improvements, will ever attract shipping. I mean ocean-going ships of the present day.
4279. Have you completed your statement? In the first place, as Mr. Cleghorn has pointed out, to go from here to Inverell, *via* Glen Innes, would involve a distance of 58 miles further than going from Uralla to Inverell—that is, taking Newcastle as the port—and in the second place, to go to Inverell, *via* Glen Innes, you would have to surmount a considerable elevation. The same applies *via* Guyra.
4280. You agree with Mr. Cleghorn's statement as to that? Yes; I wish to state that in the information furnished concerning the different routes, the number of schools is given in all cases except in the case of Uralla. We have fourteen schools, not including those at Uralla and Inverell.
4281. Including Tingha? Yes.
4282. From the fact that there are fourteen schools between Uralla and Inverell, you deduce that there is a fair amount of settlement along that line? Yes; there is a fair amount of settlement all the way. I believe there is more wool sent away from Uralla than from any other station on the line, except Narrabri, which is a terminus.
4283. Does any wool come down here from Moree, Warialda, and Goondiwindi? Not that I am aware of. I agree with the remarks of the previous witness regarding the effect of the differential rate system on the trade of Uralla. It has attracted traffic to Guyra, for which that place has taken credit. It has paid Wright, Heaton, & Co. to take 6-ton trucks of goods consigned to different people here to Guyra, and then send them down south again to Armidale, Kelly's Plains, Walcha Road, and Uralla, and this is the reason why Guyra is credited with so much traffic.
4284. Is there anything else? On the question of cost, I may say that men who have travelled the line seem to think that per mile the line from Uralla to Inverell would cost less to construct than the line from either Guyra or Glen Innes. We do not think it fair to estimate the cost of the different lines at the same price per mile.
4285. As Council Clerk of Uralla, are you in a position to state that this is a stable town? I have known this town for thirty-six years. When I first came to it there was only one house, and the town has grown to what you see it at the present time.
4286. Have many persons left the district lately? No; on the contrary, they are rather coming into the district. Our population has been increasing.
4287. What is the population of Uralla now? According to the recent census, 785.
4288. What is the population area? The area of the municipality is 320 acres.
4289. I suppose we can take it that all the fine brick buildings, stores, and dwellings that we see indicate that this is a prosperous community? Yes.
4290. And a large centre of trade? Yes; it seems a wonder to everybody that it does progress. It is not from anything internal; it must be external—it must be from the district, and the district we depend most upon is the very district where we contend that the line should go through. There is another thing. Last July the runs were cut up, and since that time a very good number of selections were taken up between Inverell and Bundarra.
4291. Were these taken up in the interest of the stations, or by strangers coming into the district? By strangers, and by the sons of farmers living in the district. They thus answer the question, "What are we to do with our boys?"
4292. And you regard it as *bona fide* settlement? Yes; I know many of the men individually, and I know that they are *bona fide* selectors. With regard to Messrs. Scarr and Price, we first got a letter asking when they should come, to which we replied that as the creeks were up it was not advisable that they should come down. The mailman from Bundarra to Uralla was stopped once or twice just at that time. Then we got a telegram which, as Council Clerk, I opened, asking again to let them know when it would be possible for them to travel down, and we answered that when the creeks were passable we would let them know. They came down one day in the evening, and Mr. McMahon and myself went up and saw them. They had asked me to write out a report, and I gave them a report of about four pages of foolscap on the line from here to Inverell. With the exception of that report, which they took away, and two or three questions they asked just in the gloom of the evening, I know of no other information sought from anybody here with respect to the Uralla route.

4293.

Mr. J. D. Leece. 11 May, 1891.

4293. Does any portion of the information you gave them appear in their report? I never saw it.
4294. Then your complaint, like that of the other witness, is that Messrs. Scarr and Price scamped their work? Well, the man who drove them down, John Carroll, said they scarcely looked out of the buggy. They had the buggy closed, and they said, "Is this the road," and "Is that the road." They had no opportunity of looking at the ground, except as two men looking at the ground driving at a rapid pace. We complained very much about their report, and that they did not actually look at the country.

Mr. Joseph Haines, manager of a flour mill, Uralla, sworn, and examined:—

Mr. J. Haines. 11 May, 1891.

4295. *Chairman.*] You are the manager of a flour mill? Yes.
4296. *Mr. McCourt.*] How long have you resided here? Twenty-four or twenty-five years.
4297. Do you know the district thoroughly well? I know the neighbourhood pretty well; I have not travelled much about the district.
4298. How much flour do you put through your mill during the year? For the last two or three years the seasons have been very bad.
4299. On an average? On an average, with good seasons, we put through from 40,000 to 60,000 bushels.
4300. Where does that wheat come from? From the immediate neighbourhood, and from about 15 or 25 miles west from here towards Bundarra.
4301. Do you know the country along the Bundarra line? No; I do not.
4302. If a line were constructed from Uralla to Inverell, would it not compete with the main line as far as Glen Innes? No.
4303. Why? As the main line is running in a northerly direction to Glen Innes, and the Uralla line to Inverell would run westerly, the latter could not possibly compete with anything on the northern side of it.
4304. But would it not be competing as regards the distance between Uralla and Glen Innes? I think not.
4305. If a line were constructed from Inverell to Glen Innes, would not the Railway Department get the freight from Glen Innes to Uralla? Not so far as Uralla is concerned.
4306. Would not the Department get more freight? I think not. The goods and other traffic between Uralla and Inverell would be equally as large as that between Glen Innes and Inverell. I do not see how the revenue of the Railway Department would be benefited by constructing the line from Glen Innes to Inverell in preference to the line from Uralla to Inverell.
4307. If the line started from Uralla the Railway Commissioners would only get freight from Sydney to Uralla? Yes.
4308. But if the line started from Glen Innes they would get in addition the freight between Glen Innes and Uralla? Yes.
4309. In that way would they not get extra revenue if the line went from Glen Innes? Yes; perhaps they would.
4310. The Uralla line, then, would to that extent be a competing line with the main line? Yes; according to that view.
4311. If the construction of either of these lines would entail an annual loss of £13,000 or £14,000, do you think either of them ought to be constructed? I should think so if the railway is a convenience to the public.
4312. You think it should be constructed from a national point of view? Certainly.
4313. How many years do you think would elapse before the line would pay? I am not prepared to say.
4314. In this matter of connecting Inverell with the main northern line, do you not think that the opinion of the Inverell people, who are the people mainly interested, ought to be taken as to where the connection should be? I should think so—certainly.
4315. That they should be the best judges as to which connection would be most preferable? Their say should be taken as well as that of any other persons.
4316. But should it not have more weight than that of other persons? Yes; I should think so. But the people on this side of Inverell ought to be considered as well as the Inverell people themselves.
4317. Does any flour come up here from Sydney to supply the local market? Yes.
4318. How much? A great deal; I could not say how much.
4319. What is the average yield of wheat per acre? The average for the past three years has been very light indeed. I should think from about 10 to 12 bushels to the acre. But in a good season the average is from 18 to 25 bushels.
4320. Do the farmers find that wheat-growing pays here? I may tell you this, that I made up the average price that we paid for wheat for the last ten years, and it amounts to 4s. 2½d. per bushel.
4321. Would you consume Inverell wheat if the line were constructed? Yes; we would consume a lot of it—this year especially.
4322. There would be a market in Uralla for Inverell wheat? Yes; a good market.
4323. Would there be any market lower down the line? Yes.
4324. Where? This side of Moonbi—we send flour there now—and down to Walcha. I may say that we sent large quantities of flour over to Tingha, and it was considered much more suitable by the bakers than Inverell flour.
4325. Do you supply Tingha? We have not done so lately. We have sent flour as far as Bundarra recently, but not to Tingha. We used to supply Tingha with very large quantities.
4326. Would you have a market west of Inverell for your flour? We have sent flour west of Inverell by teams.
4327. If a railway were constructed would a market be created? I think so. We have sent flour some considerable distance the other side of Inverell.

Mr.

Mr. John Hope Sandilands, grazier, near Uralla, sworn, and examined :—

Mr. J. H. Sandilands. 11 May, 1891.

4328. *Chairman.*] What is your occupation? I am a grazier.
4329. What is the extent of your holding? Something like 2,500 acres.
4330. In which direction is it situated? West of Uralla.
4331. Would the surveyed line between Uralla and Inverell go nearer to your property than the present railway station? I presume it would a little; but it does not interfere with me very much.
4332. Would you use the railway if it were constructed? I certainly should, if it were nearer to my property than the main line.
4333. How long have you resided in the district? Twenty-five years.
4334. Have you a general knowledge of the whole of the country? Yes; right up through from here to Bundarra.
4335. Do you go in for any agriculture? No.
4336. Where do you send your wool? To Uralla.
4337. Did you hear the statement made by Mr. McMahon as to the wool sent away from Uralla railway station during the last year? Yes.
4338. Do you agree with what he stated? Yes; I think he was rather under than over the mark as to the quantity of wool sent away.
4339. Do you think if a line were constructed to Inverell, whether from Glen Innes or Uralla, a larger amount of trade would be done? Yes. The Balala Station is now shearing 50,000 sheep, when formerly they only used to shear 20,000, and myself and any number of selectors would all send a much larger quantity of wool into Uralla.
4340. You think they would if the line were constructed from Uralla to Inverell? Of course they would.
4341. Putting aside your personal interest in this portion of the district, which do you think is the best route for connecting Inverell with the northern line? Decidedly the Uralla route. I have thought so from the first. Even before I had any interest in Uralla I thought the junction should be here.
4342. Why? Because I considered it the most direct route.
4343. For the wool and produce of the district? It opens up such a large extent of country.
4344. As a matter of fact, the principal produce of the country here is wool? Yes. There are a great many small station-holders and selectors on the route who would all send their produce to Uralla.
4345. Have you formed any idea as to where the wheat and other produce of Inverell would go if a railway to the Great Northern Line were constructed? I could not say.
4346. I suppose you are aware that Inverell is more of an agricultural district? Yes; and Uralla is its cheapest way of getting to market.
4347. Is there anything else you desire to say? Merely that, in my opinion, the route from Uralla to Inverell presents hardly any engineering difficulties. There is only one spot where there would be any difficulty, and that is just the other side of Bundarra, at King's Gap. But this could be easily avoided by passing round through Moses' Gap, and then it is completely flat country all the way through from Bundarra to Uralla, *via* Yarrowyck.

Mr. Michael John McMahon, Mayor of Uralla, sworn, and further examined :—

Mr. M. J. McMahon. 11 May, 1891.

4348. *Chairman.*] I believe you have received several letters in favour of the route from Inverell to Uralla in preference to any of the others? Yes; I have received letters giving a very decided opinion on the subject from the following gentlemen :—Mr. Arthur Little, storekeeper at Inverell, Uralla, and Bundarra; Mr. G. P. Morse, squatter, of Abington, and an extensive wine-grower; Mr. Layton, storekeeper, of Bundarra; Mr. J. Reynolds, storekeeper, of Bundarra; Mr. L. Stehr, miller, &c., Bundarra; Mr. A. J. Darby, of the Grove Station, between Bundarra and Tingha; and Mr. J. H. Sandilands, the last witness.

TUESDAY, 12 *MAY*, 1891.

[*The Sectional Committee met at the "Royal Hotel," Tamworth, at* 11·30 *a.m.*]

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

JAMES EBENEZER TONKIN, Esq. | EDWARD WILLIAM O'SULLIVAN, Esq.
WILLIAM McCOURT, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Alderman Charles Jeffries Britten, Tamworth, sworn, and examined :—

Alderman C. J. Britten. 12 May, 1891.

4349. *Chairman.*] I believe you are an alderman of Tamworth? Yes; I have been an alderman for two years.
4350. How long have you been a resident of the district? Twenty years.
4351. What is your occupation? I have been a brewer for the last six years.
4352. And prior to that? I was a miller.
4353. For how many years? I was a miller for thirteen or fourteen years in Tamworth.
4354. I suppose you have a general knowledge of the trade and produce of this district? Yes.
4355. How many flour mills are there in Tamworth? Three.
4356. Constantly working? I cannot say constantly working. There are two of them constantly working. The other one, owing to bad seasons, has not been constantly working during the last two or three years. When I was milling here myself we were running the mill night and day.
4357. Where does the wheat come from that is ground in these mills at Tamworth? It is all local wheat. Sometimes we have bought wheat. During the last three or four years, when we suffered so badly from rust, we imported wheat from Adelaide and Melbourne, and from Cootamundra side.
4358. Have you ever had wheat brought from the Inverell district? I never saw any Inverell wheat down here in my life.
4359. Where is the flour which is ground here sent to? When I was milling myself I sent flour up country. I have sent flour to Tenterfield—north and north-west.
4360. As far north as Inverell? We have not sent any flour to Inverell for a good long time.

Alderman C. J. Britten. 12 May, 1891.

4361. As far as Tenterfield at all events? Not for a long time.
4362. Have you ever sent flour to Queensland? Up the north-western way we do.
4363. To Goondiwindi? Yes.
4364. How do you send that traffic beyond Tamworth—by teams direct, or *via* Glen Innes? Either direct, or to Narrabri.
4365. That being the nearest point to Goondiwindi? Yes.
4366. Do you know if flour is sent now from this district to Goondiwindi? Yes; the greater part of Messrs. Cohen and Levy's trade is done out that way—out on the plain.
4367. Do you know what is the average yield of wheat per acre in this district? That is rather hard to say, because we have had so many seasons of rust and one thing and another; but I have known over 40 bushels to the acre grown here, and I have known our average dwindle down to 12 bushels. I should think we averaged last year over 25 bushels.
4368. Was that an exceptional year or an ordinary year? It was a very ordinary year.
4369. Then we can take 25 bushels as a fair average? You can take from 25 to 30 bushels as a fair average in a good season.
4370. How often do the bad seasons occur? We have had bad seasons—we might say one out of nine.
4371. Do you think the rust has increased of late years? Certainly it has.
4372. And land is constantly going out of wheat cultivation and into something else? There is a tremendous lot of land that is now out of cultivation. The reason for this is not so much owing to bad seasons as that the land has been bought back by the squatters. The selectors have sold back to the squatters, and have given up wheat-growing.
4373. Do you send any flour south, between Tamworth and Sydney? Yes.
4374. Regularly? Not regularly. During the last three months Messrs. Cohen and Levy, of Tamworth, have spent over £4,000 on a thorough roller plant, and they have now as complete a roller plant as you could find anywhere, and their intention is to run the mill night and day, and send the flour down to Sydney.
4375. Is there less land under cultivation for wheat now than there was when you were milling? No; I should not think there was less. I should say about the same. I do not think it has increased much of late years.
4376. Then we understand that the best market for the locally-grown wheat is the immediate neighbourhood and out towards the north-west? Yes.
4377. And it is only under exceptional circumstances that it is sent south? Certainly. When we have more than we want here we must find a market for it, and we send it down to Sydney.
4378. Do you supply Armidale from this district? Armidale has bought a good deal of wheat. A great deal of wheat has been sent from this district to Armidale.
4379. Wheat or flour? Wheat and flour.
4380. What was the average price for wheat when you were milling? I have given from as high as 7s. down to 2s. 9d. I should think the average price in Tamworth for the last twelve years would be about 3s. 3d.
4381. Does that pay the farmer? Oh, yes.
4382. What is the lowest price at which it pays the farmer? It would pay the farmer at 3s. if he got a good crop. Anything over that would be all profit.
4383. What other products are grown in this district? Maize.
4384. What does that yield per acre? It depends upon the quality of the land. Some of the rich river flats have been known to yield up to 80 bushels to the acre.
4385. That is an exceptional patch? No; that would be on an area of 40 or 50 acres.
4386. What would be about the average yield? Fully 40 bushels to the acre.
4387. Where do you find a market for that? Locally.
4388. And out in a north-west direction, too? Yes; Narrabri, and places about there; and we sent a great deal up New England way.
4389. Do you send flour or corn out to Warialda by team? Yes, a great deal.
4390. But you make use of Narrabri as your distributing and collecting centre for the west? Yes. It is cheaper to send flour to Narrabri, because it is an article that is carried at a low rate on the railway. If I had to send a load of beer to Moree, for instance, I could send it cheaper by team from Tamworth than I could send it by rail to Narrabri, and from there by team to Moree; but flour I can get a great deal cheaper round by Narrabri, because a carrier wants just the same for taking a load of flour as a load of beer, but the railway would take it for almost nothing, you may say. For instance, take my own business. If I wanted to get a truck-load of malt from Sydney—and none of the railway porters can tell it from barley—they would charge me about £3 12s. 6d., per ton from Newcastle, but they would bring up a truck-load of barley the same distance for 12s. 6d. a ton.
4391. Then, because of the cheapness of the railway rates for flour and wheat, it is better to send it by rail to Narrabri as a distributing centre, and from there to the different places by teams, than it is to send it direct by teams from Tamworth? Yes; a great deal.
4392. But in regard to other goods, such as beer, for instance, would it be cheaper, owing to the railway rates, to send it direct from Tamworth by team? It would be cheaper to send it by team. I am a malster, and it costs me nearly £4 a ton to send my malt down to Sydney, but I can send barley to Sydney for about 14s.
4393. Do you know the Inverell district? Yes.
4394. Do you believe that it is a good wheat-producing district? Inverell is a very good wheat district.
4395. If Inverell were connected by railway with the northern line, do you think it likely that the farmers of that district would send their wheat to Tamworth to compete in the local market here? The demand for wheat in a district like this is very much influenced by the existence of first-class flour-mills. Take Goulburn for instance. There some first-class mills have been erected, and last year flour was sent from Goulburn to Tamworth. Where good mills are once started it will take a great deal of capital to start anywhere else, as, unless conducted on a large scale, they are not very profitable undertakings. Wherever the flour mills are there the trade will come, and with good mills, such as we have now in Tamworth, wheat will come into this district.
4396. But the fact remains that the Tamworth district grows sufficient for its own requirements, and has a surplus which it sends principally to the north-western district? Yes.

Alderman C. J. Britten. 12 May, 1891.

4397. That goes to prove that there is no market here for Inverell wheat, or any other wheat? If the millers, who are now going in for the trade properly, will grind and send their flour down to Sydney, that will be the great market. The great idea will be to increase the production in Tamworth, and send the surplus down to Sydney or Newcastle.
4398. Tamworth then, being so much nearer to Sydney, would completely outpace the Inverell district? Certainly, I should say we would do that.
4399. Is the area of land in this district limited for the growth of wheat? No; this is one of the largest districts in Australia as regards its capability for wheat-growing.
4400. I mean excluding the Peel River Company's land? Yes, without touching that.
4401. There is a very large area of land now in the district not under wheat cultivation which could be put under cultivation? Thousands and millions of acres.
4402. So that so far as the Inverell wheat is concerned you do not want any for the local consumption, and if the Inverell people go to Sydney you will get in between them, having such a shorter distance to go? Certainly.
4403. Do you think the Inverell farmers would command the Armidale trade? No; Armidale supplies itself pretty well.
4404. We have evidence to the effect that it does not do so, that it is going out of wheat-growing, and depends to a great extent upon Tamworth? Tamworth does supply them with a good deal, but for the last two years they have had very bad seasons up there. If we were to get a very dry season here, Armidale would have a surplus, and we should get some of it.
4405. Suppose Armidale was not a wheat-growing district, but dependent upon other places for its breadstuffs, do you think it would be supplied more cheaply from Tamworth than from Inverell? I certainly think Tamworth would cut into that market.
4406. Inverell would have to depend for its market north of Tamworth—there would be no market south of Tamworth? You cannot get a market for Inverell in Queensland. I know something about the Warwick district, which is the principal wheat-growing district in Queensland, and it is a better wheat-growing district than Inverell. The Inverell wheat going to Queensland would have to pass through Warwick.
4407. Have you an intimate knowledge of the wheat production on the Darling Downs? Not an intimate knowledge. Mr. Charles Hayes, who was a miller in Tamworth at one time, now lives on the Darling Downs, and I have had some conversation with him.
4408. How long has he been away from Tamworth? He went from Tamworth twelve or thirteen years ago, and started a mill in Warwick.
4409. Is he satisfied with the progress he has made there? Yes, he is very well satisfied. He is so well satisfied that he has got his mill working there, and has built a very large mill in Brisbane.
4410. Do you know whether the crops frequently fail in the Darling Downs district? From what I can understand from Mr. Hayes, it is just a similar district to our own. The only thing that interferes with them is the rust. Whenever they get a failure we are almost bound to do so.
4411. Do you know whether the rust has less effect upon the wheat in the Inverell district than upon the wheat elsewhere? Not a bit. I have seen the rust worse in the Inverell district than I have seen it here.
4412. Have you been frequently at Inverell? Yes. I go up to Inverell pretty often on business.
4413. Then you are clearly of opinion that the Inverell people would not find a market on the Darling Downs or that portion of Queensland for their surplus wheat? I am certain they would not.
4414. Where do you think that Inverell will get their market for wheat? They will have to supply the same markets that Tamworth does—supply our own districts, and send the surplus down to Sydney.
4415. They will have the north, west, and the southern markets? Yes, the same as we have.
4416. As you, being nearer to Sydney, will intercept them from the Sydney market to some extent, so they, being nearer to the north-western district, will intercept you from that market? Yes, their surplus will all have to go to Sydney.
4417. Have you given any thought to the question of a possible connection with the coast, say at Grafton or further north, as furnishing a market for the produce of the New England district? I have often thought about it. I cannot see that the New England districts will ever be able to compete on the coast against the steamers.
4418. You think the sea-borne supplies will always compete successfully against New England produce? Yes, it is always bound to do so.
4419. *Mr. O'Sullivan.*] In the event of a line being taken to Inverell, which route would suit you best, if you could command any portion of the trade out west—Guyra or Glen Innes? The shortest route—by way of Guyra. If you ask me which way I would like to have a railway to Inverell, I should say by the route which should have been adopted in the first instance for the northern line, viz., *via* Manilla.
4420. Are there any arguments now in favour of the Manilla route? Yes. I do not mean to say that a very heavy trunk line should be constructed; but the time will come when the country must have a railway line. I have been up there many scores of times, and I always look upon that country as one of the best agricultural districts in Australia.
4421. But would not that line go to the south of Inverell—more out towards Bingera? Yes; you would pass through Bingera. It is all splendid land from Bingera right down to Tamworth. The principal part of our wheat-growing district lies out towards Manilla and Barraba.
4422. Have you read the report of Messrs. Scarr and Price? Yes. I think they have greatly underestimated the value of the country between Tamworth and Bingera. I do not think there is a much better farming district in Australia than that district. Instead of there being stony ridges, as stated in Messrs. Scarr and Price's report, the country comprises principally alluvial flats.
4423. Do you consider that black soil is not fit for agricultural purposes? No; it is very good for grazing, but no good for agriculture. Like the soil on the Liverpool Plains, you could not grow anything on it.
4424. There are four railway lines surveyed to Inverell, viz., from Glen Innes, Guyra, Uralla, and Kentucky. Of those different routes which would you place first with regard to the value of the land along the line? I should place the Glen Innes to Inverell route first. In regard to the second in value, I should say that the Kentucky and the Guyra routes were about equal; in fact, there is not much difference

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difference between either of these routes, and the Uralla route, as regards the value of the land along the line. Perhaps you would pick up a little better land along the Kentucky line.
4425. Do you think, if a line were constructed from Glen Innes to Inverell, the large estates through which it would run would be cut up for agricultural purposes? I do not know.
4426. Would not the owners be likely to get a better return from agricultural land than from pastoral land? I do not know. You might say the same about the Tamworth district, and, in fact, all over the colony. The tendency seems to be to increase the large estates, rather than to cut them up.
4427. Are there any leasehold farms about here? Very few.
4428. Can you tell us what the tenants pay per annum? It depends upon the quality of the land. Some pay £6 10s. or £7 an acre.
4429. What is the lowest rent for leasehold land that you know of? I cannot exactly say. I know of a farm of 200 acres, which has been let for £75 a year. That is a good farm. The rent depends a good deal upon what improvements are on the land.
4430. Is much of that farm of 200 acres composed of agricultural land? It is nearly all agricultural land, and is pretty well improved.

Mr. Lewis Hyam Hyman, merchant, Tamworth, sworn, and examined:—

Mr. L. H. Hyman. 12 May, 1891.

4431. *Chairman.*] You are a member of the firm of Cohen and Levy, merchants, of Tamworth? Yes.
4432. You have been a resident of Tamworth, I believe, for a considerable time? About twenty-seven years.
4433. *Mr. Tonkin.*] Have you been in business the whole of that time? Yes.
4434. How long have you had a flour mill? Twenty-six years.
4435. Have you, during that time, bought very much foreign wheat? We have bought some, but not very much.
4436. Has the importation of foreign wheat been greater of late years than it was years ago? No.
4437. Where do you get your wheat from? From our own district, Manilla, Barraba, Moonbi, &c., and when there is a deficiency here, from Inverell—from all parts, wherever it is most convenient and cheapest. We occasionally get it from Adelaide. We have got it from Adelaide, from Inverell, from Glen Innes, and from Armidale.
4438. But is there not a great deal of wheat grown locally? Yes.
4439. Sufficient to supply the local consumption? Yes; in ordinary seasons.
4440. At other times, of course, you have a surplus? No; we seldom have a surplus.
4441. You only grow enough for local consumption? Yes.
4442. Do you send any flour away from here? Yes; we send to the Barwon, and up about that district.
4443. To the north-west? Yes.
4444. You call that local consumption? Yes.
4445. What you mean is that you do not send much to Sydney? Very little to Sydney.
4446. I understand you are putting up some very advanced improvements in machinery? Yes.
4447. When you have your new plant at work, you expect to compete with the southern markets. We shall try.
4448. Do you think that at the prices at which you can buy wheat here you will be able to do that? We can hardly tell. We come now into such close contact with the metropolitan markets that we have several buyers up here to oppose us. It would be a very difficult question to answer. Of course, we shall only be in the same position that other people are in buying wheat here and sending it down.
4449. Do you know what is the average yield of wheat per acre in this district? I should say the average was from 16 to 20 bushels.
4450. Of course, there are times when you may get 25 bushels? Yes, and even 40.
4451. Have you ever compared the average yield in your district with that of the Goulburn district? No; but I am sure that our district will compare very favourably with the Goulburn district.
4452. Then if that is so, can you not buy wheat here as cheaply as the millers in Goulburn can buy wheat? No, we cannot.
4453. How do you account for that? I suppose the competition here in the purchase of wheat would be keener.
4454. Is there a greater demand for wheat here than at Goulburn? I do not think so; but I suppose the rates from Goulburn to Sydney would be cheaper, on the same principle that they are cheaper from Newcastle to Glen Innes than to places less distant. The railway rates are most absurd. They can get their goods from Sydney to Glen Innes cheaper than we can get ours from Sydney to Tamworth. It would almost pay us to send our goods to Glen Innes and bring them back here again.
4455. I am referring to the local supply of wheat. If your average crop is quite equal to that at Goulburn, why can you not buy wheat here for milling purposes as cheaply as the Goulburn millers can buy wheat? I do not think that our market ever goes as low as the Goulburn market in a good season.
4456. Then the farmers in Goulburn are satisfied to take less money for the same crop than the Tamworth farmers? Yes.
4457. I suppose the farmers here are in a better position than the Goulburn farmers? No; I do not think so.
4458. Would you be able to compete in Sydney with Goulburn, the only advantage on the side of Goulburn being that as she is nearer Sydney she would have less carriage? Yes.
4459. You would compete, of course, with your surplus stock after supplying your own district? Yes.
4460. What do you call your district;—how far do you send flour from here north or north-west? We have sent wheat as far as Bourke.
4461. That has been exceptional? We have sent large quantities of wheat to St. George's Bridge in good seasons. St. George's Bridge is about our limit.
4461½. How did you send wheat to Bourke? We sent it by drays to St. George's Bridge.
4462. Have you sent any to Goondiwindi? Yes; a large quantity, not of late years. Our crops have not been sufficiently large.
4463. If there was a good market out Goondiwindi way would you not, with your improved plant, be able to supply that district in spite of the Inverell competition? That is a very difficult question, because it depends on the crops they have there.
4464. Can you produce flour by your improved machinery cheaper than with the old plant? Yes.
4465. And better? Yes.

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4466. Do you think you would be able to continue in possession of the market at Inverell? They have also gone in for the same improvements in milling as we have, and that might stop us.
4467. Has it affected you at all yet? The improvements were only completed the same time as ours were. We have not had an opportunity of testing the market.
4468. Would a railway from Glen Innes to Inverell be of any advantage to you in supplying this north-western market? I do not think so.
4469. Would it be of any advantage to you if the connection with Inverell took place at Guyra instead of at Glen Innes? I do not think so.
4470. Which way do you send your flour from here to Goondiwindi? By Barraba, and by Warialda.
4471. By teams? Yes; direct from here.
4472. You find that cheaper than using the railway line? We have found it cheaper up to the present time. We have recently sent teams from here to Yetman.
4473. If a line were constructed from Guyra to Inverell, would you use that railway? Doubtless we would. We would be compelled to; it would be a quicker route than by team.
4474. But would it not be very much cheaper? I do not think so. Teams are very cheap. It is much more expensive now to get our goods by rail from Newcastle than it was in the olden times to get our goods from Morpeth by team. We have got goods from Morpeth to Tamworth by team for £2 10s. per ton.
4475. What does it cost you now by rail? It costs on an average from Morpeth £4 15s. for the general class of goods.
4476. Do you serve the Walgett district? Yes.
4477. How do you send your goods there? By Narrabri. Sometimes they go round by Warialda—in wet seasons.
4478. You say that it costs you £4 15s. per ton for goods by rail from Morpeth, and that the same kind of goods used to be carried by team for £2 10s.? Yes.
4479. Did it pay the carriers to carry it for £2 10s.? Yes.
4480. How is it they do not compete now with railway carriage? On account of the more rapid transit by rail, in consequence of which we do not now require to keep such a large stock as formerly.
4481. If a line were constructed from Guyra to Inverell, and you were supplying Goondiwindi with flour, would you carry your flour by team direct, or would you send it by the railway as far as Inverell, and then carry it by team? I do not know the exact distance. Of course, it would depend upon the cost.
4482. You would go the cheapest route? Most decidedly.
4483. *Mr. O'Sullivan.*] I suppose time would not be so much of an element in the out stations? Yes; sometimes it is a very important element.
4484. *Mr. Tonkin.*] Is there much business done here in general goods with the north-west and Goondiwindi, independently of flour? Yes; there is a very large business done about the Yetman district and Warialda, also at Bingera and Barraba.
4485. You trade with all those places? Yes.
4486. Do you send the goods by rail to any of those districts? You cannot, as there is no railway.
4487. You take it entirely by drays straight from here? Yes.
4488. And it would have no influence upon the railway traffic in any way? It would if a railway were constructed in that direction, of course.
4489. But would the railway we are now considering have any effect upon it? None at all.
4490. The railway from Glen Innes to Inverell would have no effect upon you whatever? Not at all, as regards this route.
4491. And probably a railway from Guyra would have? Not as regards Bingera or Barraba.
4492. *Chairman.*] Where does the Warialda produce come to now;—does it come to Tamworth? It comes here. It would come here. But I suppose they occasionally take it to Inverell. The distance from Warialda to Inverell is about 45 miles.
4493. If they send a portion of their produce here now, would they not be likely to send the whole of it here if a railway were constructed to Inverell? Most decidedly.
4494. *Mr. Tonkin.*] If the railway were constructed, there would only be 45 miles of carriage by dray? Yes.
4495. Is there a market for Inverell wheat here at 3s. 6d. a bushel? Yes.
4496. What are you paying now? I think the market price is 4s. at the present time.
4497. Is that high or low? A good average price.
4498. Do you think there is a good market here for any wheat the Inverell people might grow at 3s. 6d. or 3s. 9d.? Yes; a very good market at the present time.
4499. Is not wheat exceptionally dear just now? Yes; the market is a little high just now.
4500. Then your price would not average 4s. here? No.
4501. What would be about the average? About 3s. 6d., I should think.
4502. Have you ever done any business with Queensland from Tamworth in the way of breadstuffs? With a portion of Queensland—Goondiwindi.
4503. I mean by the northern line? No.
4504. Do you know anything of the trade of the northern towns? No.
4505. Have you never sent any produce there of any kind? No; only flour.
4506. Have you ever received any wheat from the Darling Downs? No, never.
4507. With regard to the production of wheat in this district—can you tell us the quantity that passes through your mill every year? I think the quantity for the whole district is about 300,000 or 400,000 bushels a year.
4508. Have you sent any flour to Sydney at all? Yes.
4509. Lately? Yes.
4510. Do you find a payable market there? No; we did not find a payable market for that lot. That was no criterion, as it was under the old system we had.
4511. Have you supplied Armidale with wheat or flour? Yes; we sent a few tons a few months ago to Armidale.
4512. Is Armidale drawing upon the Tamworth district for its breadstuffs more than it used to do? No, I do not think so.

4513.

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4513. Has the mining population out there made any difference in the demand for breadstuffs here? It would, I think.
4514. But at present it has made no appreciable difference? No; but I think it will eventually if it goes ahead a little.
4515. Do you think the Inverell people could compete in the Sydney market with the wheat grown in this district? Of course, the railway rates are so very peculiar. It seems to me that the railway rates from Inverell to Sydney would be quite equal to ours. They can get their goods up quite as cheaply as we can now as far as Glen Innes.
4516. Do you know anything as to the relative quality of Tamworth and Inverell wheat? Inverell wheat is very good wheat.
4517. Have you ever ground any? Yes; it is very good.
4518. Is it better than the Tamworth wheat? No; you cannot get very much better wheat than the Tamworth wheat.
4519. At all events, taking one year with another, you think the Inverell people would find a market for their wheat here at 3s. 9d.? Yes, I should think so, provided the locally grown was not equal to requirements.
4520. Do you deal in any other produce besides wheat? Yes, in corn and that sort of thing.
4521. Where do you find a market for that? In the same places.
4522. Have you sent any of that to Sydney? Frequently.
4523. Have you sent any root crops,—potatoes, or anything of that sort? We do not grow sufficient about here to have a surplus.
4524. Do you supply the Warialda storekeepers with a large amount of goods, or do they get their general goods direct? We do a large business with Warialda.
4525. You are a distributing centre here? Yes.
4526. And you trade with Bingera, too? Yes. Our principal trade is done that way.
4527. Is there a coach running each day between here and Warialda? Yes.
4528. Do you think the largest number of passengers come that way or *via* Glen Innes? They come that way by coach to Tamworth.
4529. It has been asserted that whilst the goods traffic is the larger between here and Warialda, the passenger traffic goes almost exclusively *via* Inverell and Glen Innes? I do not think so.
4530. Putting aside any reference to Tamworth, have you given any thought to the question, regarded from a national stand-point, as to which is the best point on the Great Northern Line at which to connect Inverell by railway? The best route would be *via* Bingera and Barraba.
4531. That would be a very lengthy line to construct? I do not think so.
4532. It would be very much more lengthy than the line between Inverell and Glen Innes or Guyra? But it would be of much more advantage to the country.
4533. In expressing this opinion, have you had in view a probable connection between the table-land and the coast? No.
4534. You look at the matter in the light of Sydney being the market for all that district? Yes.
4535. And you think that the quickest route to Sydney is the best for them? Exactly.
4536. If in the near future a connection were made between the table-land and the coast, either by a line from Guyra to Grafton, or from Tenterfield to Byron Bay, do you think that would have any influence upon the New England district in regard to the disposal of their produce? I do not think so. It certainly would not have any influence here. It would be quite foreign to us.
4537. The market for your surplus produce will be in the west and north-west and at Sydney? Exactly.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

Railway from Glen Innes to Inverell.

SECTIONAL COMMITTEE.

APPENDIX.

A.

[To Evidence of Mr. H. Hogarth.]

CROWN LAND WITHIN ONE MILE OF EACH SIDE OF THE PROPOSED ROUTES FOR THE RAILWAY.

RETURN showing Crown Land within One Mile of each side of the Railway Line from Kentucky to Inverell, *via* Bundarra.

Parishes.	Area in each Parish.	Parishes.	Area in each Parish.
	acres		acres
Uralla	1,900	Chigwell	3,200
Devon	550	Tiengah	3,000
Balala	980	Aston	4,000
Honeysuckle	7,420	Darby	1,400
Morse	850	Mayo	1,700
Nuandle	3,170	Clare	1,200
Chapman	6,770	Swinton	800
Cameron	1,350	Clive	3,000
Darbysleigh	3,000	Inverell	500
Bundarra	2,480	Total area	47,220 acres.

RETURN showing Crown Land within One Mile of each side of the Railway Line from Uralla to Inverell, *via* Tingha.

Parishes.	Area in each Parish.	Parishes.	Area in each Parish.
	acres		acres
Uralla	400	New Valley	1,000
Salrash	1,550	Chigwell	7,300
Morse	500	Darby	7,780
Torryburn	2,800	Swinton	2,500
Yarrowick	2,000	Clive	3,500
Barlow	4,000	Inverell	500
Laura	2,200		
Clerkness	1,750	Total area	37,780 acres.

CROWN LAND within One Mile of each side of the Railway Line—Guyra to Inverell.

North Side.	Total.	Parish.	South Side.	Total.	North Side.	Total	Parish.	South Side.	Total.
acres	acres		acres	acres	acres	acres		acres	acres
40		Parish of Elderbury.					Parish of Tenterden.	230	
160			125		87			1,440	
70			764		2,000			800	
	270			889		2,087			2,470
250		Parish of Everett.			2,540	2,540	Parish of New Valley.	2,500	2,500
38			220						
140			500		3,900	3,900	Parish of Cope's Creek.	3,200	3,200
40			340						
160			570		1,000		Parish of Swinton.		
	628			1,720	20				
					20			60	
160		Parish of Skinner.			1,040			1,000	
40			320			2,080			1,060
240			500						
68			340		.....	.....	Parish of Darby.	800	800
80			570						
	588			1,820	3,000	3,000	Parish of Clive.	600	600
400		Parish of Ollera.	136	136	320	320	Parish of Inverell.	113	113
360									
	760					13,173			15,303

North side ..... 13,173 acres
South side ..... 15,303 ,,

Grand total ..... 28,491 ,,

AREAS

AREAS of Crown Land within One Mile of each side of the Railway Line from Glen Innes to Inverell—Wellingrove Route.

North Side.	Total.	Parish.	South Side.	Total.	North Side.	Total.	Parish.	South Side.	Total.
acres	acres		acres	acres	acres	acres		acres	acres
363		Parish of Glen Innes.	70	70	400		Parish of Ross.	400	
51					240			579	
105						640			979
52					616		Parish of Swanvale.	80	
	571				40			28	
80	80	Parish of Dilmas.	35			656			108
			40		140		Parish of Swanbrook.	90	90
				75	30				
110		Parish of Wellingrove.	60	60	22				
112						192			
12					340		Parish of Campbell.	108	108
	234				10				
193	193	Parish of Waterloo.	760	760		350			
508		Parish of Bolaclava.	82		90		Parish of Inverell.	220	
129			684		15			180	
878			20			105			400
67			40						
	1,573			826		4,594			3,476

North side ..... 4,594 acres
South side ..... 3,476 „
Grand total ..... 8,070 „

[Two Plans.]

Sydney: Charles Potter, Government Printer.—1892.

PLAN I.

GLEN INNES TO INVERELL RAILWAY

INDEX MAP SHOWING PROPOSED ROUTES

GLEN INNES To INVERELL & GUYRA To INVERELL

Scale

0 15 30 60 120 180 240 300 360 CHAINS

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

KING'S PLAINS

KING'S PLAINS VIA WELLINGROVE

WELLINGROVE

TO TENTERFIELD

PROPOSED LINE

MAIN ROAD

GLEN INNES STATION

STONEHENGE

SUPERMANENT SURVEY VIA WELLINGROVE

ARRAWATTA

TRIAL SURVEY VIA APPLE TREE GULLY

Apple Tree Gully

Horse Gully

ORIGINAL LINE (SWANBROOK) TRIAL NOW SURVEY

INVERELL

MAIN ROAD

BRODIE'S PLAINS

Macintyre River

Sig 64.

MOORE'S EXPLORED ROUTE

TINGHA

Middle Mr. Creek

Cope's Creek

Darby's South Branch

TRIAL SURVEY

Meredun or Clerk's Creek

OLLERA

Limestone Ck.

George's Creek

Scale.

0 15 30 45 60 120 180 240 300 360 CHS.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

Sig 64.

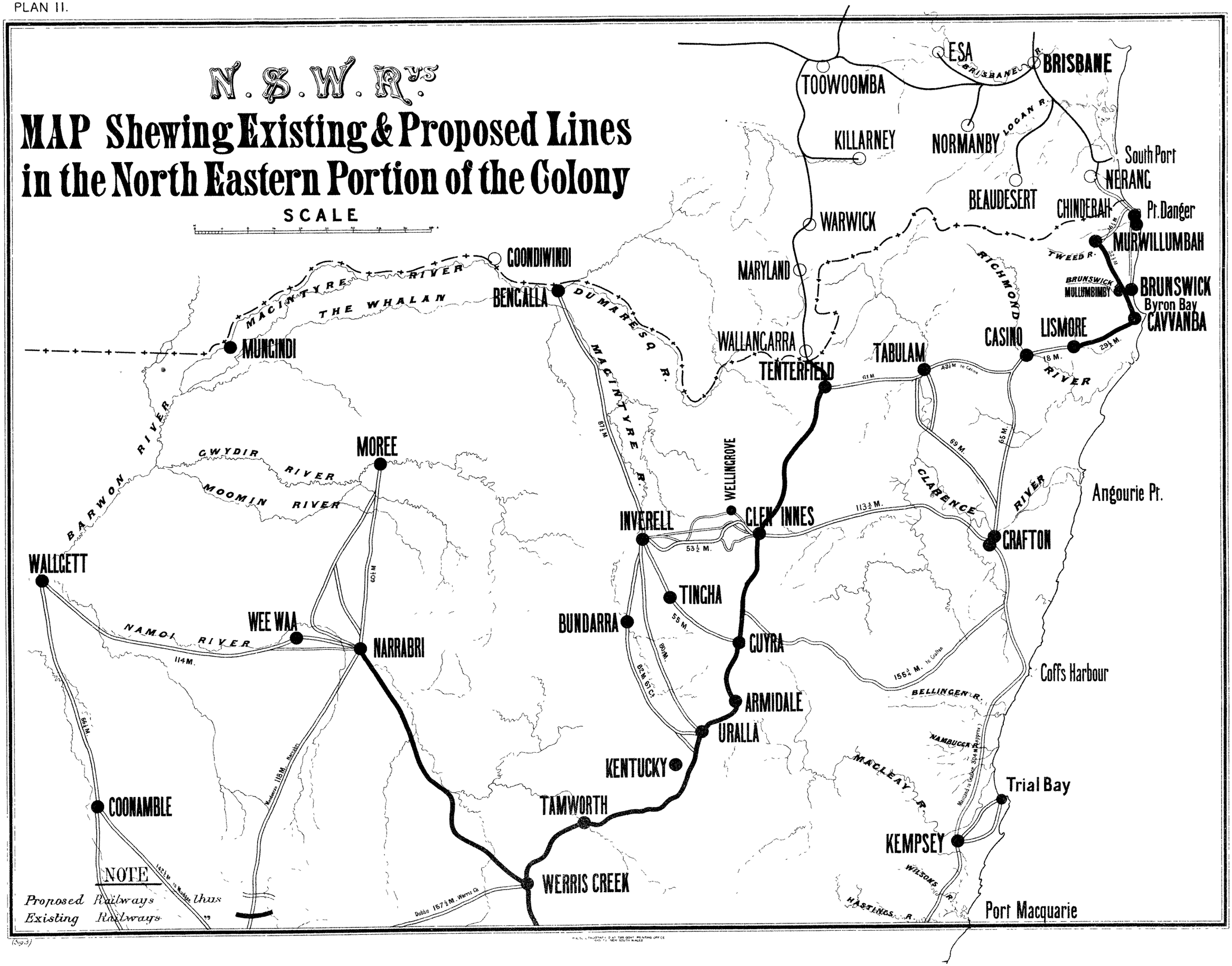
GREAT NORTHERN RAILWAY FROM SYDNEY

Moreton Creek

MOTHER OF DUCKS LAGOON

GUYRA

PLAN II.


N. S. W. Rys
MAP Shewing Existing & Proposed Lines in the North Eastern Portion of the Colony
SCALE
TOOWOOMBA
ESA
BRISBANE
KILLARNEY
NORMANBY
South Port
NERANG
BEAUDESERT
CHINDERAH
Pt. Danger
WARWICK
MURWILLUMBAH
MARYLAND
BRUNSWICK
Byron Bay
CAVVANBA
LISMORE
CASINO
TABULAM
WALLANGARRA
TENTERFIELD
GOONDIWINDI
BENGALLA
MUNGINDI
MACINTYRE RIVER
THE WHALAN
DUMARESQ R.
MACINTYRE R.
RICHMOND RIVER
TWEED R.
BRUNSWICK
MULLUMBIMBY
BARWON RIVER
GWYDIR RIVER
MOOMIN RIVER
MOREE
WELLINGROVE
INVERELL
GLEN INNES
CLARENCE RIVER
GRAFTON
Angourie Pt.
WALLGETT
TINGHA
BUNDARRA
GUYRA
WEE WAA
NARRABRI
NAMOI RIVER
114 M.
Coffs Harbour
ARMIDALE
URALLA
BELLINGEN R.
NAMBUCCA R.
KENTUCKY
MACLEAY R.
Trial Bay
TAMWORTH
COONAMBLE
KEMPSEY
WERRIS CREEK
WILSONS R.
HASTINGS R.
Port Macquarie
NOTE
Proposed Railways thus
Existing Railways

1893.

NEW SOUTH WALES.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

SECOND REPORT

TOGETHER WITH

MINUTES OF EVIDENCE, APPENDIX, AND PLAN,

RELATING TO THE

PROPOSED RAILWAY

FROM

GLEN INNES TO INVERELL.

Presented to Parliament in accordance with the provisions of the Public Works Act, 51 Vic. No. 37.

SYDNEY: CHARLES POTTER GOVERNMENT PRINTER.

443—*a* 1893.

[4*s*.]

MEMBERS OF THE COMMITTEE.

LEGISLATIVE COUNCIL.

The Honorable William Henry Sutton, Vice-Chairman.
The Honorable James Hoskins.
The Honorable Frederick Thomas Humphery.
The Honorable John Davies, C.M.G.
The Honorable William Joseph Trickett.

LEGISLATIVE ASSEMBLY.

Jacob Garrard, Esquire, Chairman.
Thomas Thomson Ewing, Esquire.
William Chandos Wall, Esquire.
William McCourt, Esquire.
John Cash Neild, Esquire.
Edward William O'Sullivan, Esquire.
Charles Collins, Esquire.
Henry Dawson, Esquire.

MEMBERS OF THE SECTIONAL COMMITTEE.

The Honorable William Henry Sutton, Chairman.
The Honorable Frederick Thomas Humphery.
Thomas Thomson Ewing, Esquire.
William Chandos Wall, Esquire.
John Cash Neild, Esquire.
Charles Collins, Esquire.
Henry Dawson, Esquire.

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Minutes of Evidence taken before the Committee.
Appendix to Evidence taken before the Committee.
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PLAN.

Glen Innes to Inverell Railway. Index map showing proposed routes, Glen Innes to Inverell and Guyra to Inverell.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

RAILWAY FROM GLEN INNES TO INVERELL.

SECOND REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, appointed during the last Session of Parliament, under the Public Works Act of 1888, 51 Vic. No. 37, the Public Works Act Amendment Act of 1889, 52 Vic. No. 26, and the Public Works (Committees' Remuneration) Act of 1889, 53 Vic. No. 11, to whom was remitted for further consideration and report "the expediency of constructing a line of railway from Glen Innes to Inverell," have, after further inquiry, resolved that, with certain provisions as to limitation of cost, special local traffic rates, and the application of the betterment principle, it is expedient the railway should be constructed; and, in accordance with the provision of sub-section IV, of clause 13, of the Public Works Act, report their resolution to the Legislative Assembly:—

Decision of the Committee in a previous inquiry respecting the proposed railway.

1. The proposed railway was under the consideration of the present Committee during the months of April and May, 1892, and of the Committee previous to the present in the months of April, May, and June, 1891. It was referred by the Legislative Assembly to the present Committee on 29 March, 1892, and to the previous Committee on 19 December, 1890. That Committee took evidence on the subject in Sydney, and, by means of a Sectional Committee, at Glen Innes, Swanvale, Inverell, Tingha, Wandsworth, Guyra, Armidale, Uralla, and Tamworth. The present Committee adopted the evidence taken by their predecessors, and supplemented it by further evidence from witnesses examined in Sydney. They decided by seven votes to six, for reasons they stated, that it was not expedient the railway as referred to them should be carried out, and to this effect they reported to the Legislative Assembly, under date 27 May, 1892.

Reasons for the present inquiry.

2. On 27 October, 1892, the Legislative Assembly, on the motion of Sir George Dibbs, for Mr. Lyne, passed the following resolution:—

"That it is expedient that the Report of the Parliamentary Standing Committee on Public Works, upon a proposed line of railway from Glen Innes to Inverell, be remitted to the said Committee for its further consideration and report, for the following reasons:—That since the said Report was made fresh evidence concerning the commercial value of the said line of railway has been obtained, which was not before the said Committee when that Report was completed, and which evidence would probably have led the said Committee to arrive at a different and favourable conclusion."

The Committee were informed by the Under-Secretary for Public Works that in proposing this resolution the Minister for Public Works had in view the facts that no Sectional Committee of the present Committee had visited the districts of Glen Innes and Inverell for the purpose of collecting statistics and taking evidence, and that the Sectional Committee appointed by the previous Committee reported in favour of the line as proposed. These circumstances, together with the necessity for investigating the fresh evidence relating to the trade of the district which it was intended to place before the Committee, as associated with the question of the railway paying, might lead them, the Minister thought, to consider themselves justified in appointing a Sectional Committee to visit the districts again. It was also stated by the Under-Secretary that since the project was last before the Committee the survey of the line had been revised, with the result that the length had been shortened by 47 chains and the cost reduced by about £6,000.

Description of the proposed railway.

3. The proposed railway, as shortened by the revision of the survey, is 52 miles 67 chains in length, as against 53 miles 34 chains, the length stated in the Committee's previous Report. It is represented on the plan by the route coloured purple. Leaving the Great Northern Railway at the south end of Glen Innes Station, 323 miles 39·50 chains from Newcastle, it runs in a westerly direction across Furrucabad Creek and crosses through a low saddle of the Waterloo Range at 336 miles 64 chains. From that point it goes in a southerly direction, crossing Wellingrove or Waterloo Creek at 342 miles 18 chains, and then running up Made's Valley it crosses the watershed between the waters of Waterloo and Swanbrook Creeks at 345 miles 33 chains. Taking then a westerly course down the valley of Swanbrook Creek it crosses the creek at 361 miles 57 chains, and thence, still going in a westerly direction, it reaches Brodie's Plains, crossing the divide between Swanbrook Creek and the Macintyre River at 366 miles 33 chains. Thence it skirts the northern side of the Macintyre into the town of Inverell, terminating at 376 miles 26 chains from Newcastle. It is known as the line from Glen Innes to Inverell, *via* Made's Valley, Swanbrook, and Brodie's Plains.

Estimated cost.

4. The estimated total cost of the line, reduced according to the revised survey, is £421,400 as against £427,400, the estimated cost previously before the Committee. The reduced estimate represents the cost per mile at about £7,975.

The Committee's inquiry.

5. The Committee have carefully reconsidered the proposed railway in the light of the new evidence which led to their last Report being remitted to them for further consideration, and of other evidence obtained in the present inquiry, but they have not thought it necessary to burden the inquiry with the examination of many witnesses. The Under Secretary for Public Works was the first witness called, and he laid before the Committee the information which in the opinion of the Minister for Public Works justified the further inquiry. The Engineer-in-Chief for Railway Construction was examined, principally in relation to that part of the evidence of the Under Secretary dealing with the length and cost of the proposed line, and the connection of Inverell with the coast; and he was followed by Mr. C. E. Hogg, who, as a surveyor formerly connected with the Railway Construction Branch of the Department of Public Works, was for a considerable time employed in the surveys made to connect Inverell by railway with the Great Northern line. Mr. J. Harper, Railway Goods Superintendent, was called and questioned with respect to the new statistics of traffic put forward by the Under Secretary, and subsequently he was re-examined on this question of traffic as it was represented in evidence at Inverell. Other witnesses who gave evidence in Sydney were Mr. J. McMasters, a grazier of the district of Inverell; and Mr. E. Pulsford; each of whom was examined at his own request. The Committee then appointed a Sectional Committee of seven, no one of whom was a member of the previous Sectional Committee, and most of whom had not previously visited the Inverell district. The Sectional Committee, accompanied by a railway surveyor, travelled along the route for connecting Inverell with Guyra, and the route of the proposed line from Glen Innes to Inverell; and they examined witnesses at Guyra, Ollera Station, Tingha, Inverell, Glen Innes, and Armidale.

The evidence.

6. The principal features of the evidence in the present inquiry are the new statistics of probable traffic on the railway, the probability of a material reduction in the cost of constructing the line, and the weight of opinion among the people of Inverell in favour of the railway connecting Inverell with Glen Innes rather than with Guyra or any other place on the Great Northern Railway.

The new statistics.

7. When the proposed work was previously before the Committee the statistics of traffic furnished by the local Railway League were stated as follows:—

Inwards goods	3,843 tons
Outwards goods, exclusive of live stock	7,950 tons
Total	11,793 tons

Total receipts from all sources of traffic, including live stock, £7,689 11s.

In

In the present inquiry the statistics, as submitted by the Under Secretary for Public Works, to whom they had been supplied by the local league, are :—

Inwards goods	6,000 tons
Outwards goods, exclusive of live stock, ...	14,000 „
Total	20,000 tons

Estimated Receipts.

Local traffic of all kinds	£16,825
Increased traffic to main line	1,980
Probable saving in roads maintenance	3,000
Total	£21,805

Taking into account the reduction in the estimated cost of constructing the line, as mentioned by the Under Secretary for Public Works—£6,000—the amended estimate of receipts virtually balances with the amount representing the interest payable on the capital cost of the railway and the estimate of working expenses. The annual expense for which it would be necessary to provide, after constructing the line, would be :—

Interest on capital cost, £421,400 at 3½ per cent.	£14,749
Estimate of working expenses, as made by Commissioners ...	7,138
Total	£21,887

The Under Secretary when laying the new statistics before the Committee did not vouch for their accuracy. He had not been able to check them, he said, and he left the question of their accuracy to the Committee. They were investigated by the Sectional Committee; but prior to the appointment of the Sectional Committee the Railway Goods Superintendent, as representing the Railway Commissioners, was examined by the Committee respecting them. He stated that he had "analysed them as a matter of figures not as a matter of fact," that they were not in accordance with the statistics obtained by the Railway Department, and that at the most the receipts would not exceed £15,000. This sum, he informed the Committee, could only be obtained by applying local rates to the probable traffic; and, dealing with the statistics in this way, he arranged the estimate as follows :—

Inward, general goods, 6,000 tons at 3d. per ton per mile, 13s. 4d.	£4,000
Wool, 3,300 tons at 3½d. per ton per mile, 13s. 10d.	1,787
Maize, wheat, and potatoes, 7,000 tons, 5s. 3d.	1,848
Hay, 2,000 tons, 400 trucks, 21s. 6d.	430
Tin-ore, 1,200 tons, 5s. 8d.	340
Miscellaneous, 500 tons at 3d. per ton per mile, 13s. 4d.... ...	334
Sheep, 80,000, 800 trucks at 35s. 4d.	1,412
Cattle, 2,000, 220 trucks at 35s. 4d.	389
Total goods...	£10,540
Coaching—6,000 first-class passengers, 53 miles at 8s. 6d. ...	£2,550
4,000 second-class passengers, 5s. 6d.	1,100
Mails, at £12 per mile	636
Parcels, as per estimate	500
Total coaching	£4,786
Grand total	£15,326

The local estimate he considered to be excessive in regard to the number of sheep and cattle likely to be carried on the line, the quantity of tin ore, and the number of bales of wool. But at Inverell it was contended before the Sectional Committee that, with their local knowledge, the residents were in a much better position for making a proper estimate of the probable traffic on the railway than the Railway Goods Superintendent could be in, and elaborate details were given in explanation and support of the statistics placed before the Committee in Sydney.

Sydney. No statistics of probable traffic on the railway have been collected by the Railway Department since 1889, at which time they represented estimated earnings to the extent of £8,200, or £1,062 more than the estimated working expenses of the line. This estimate of £8,200 was arrived at by calculating the traffic at ordinary through rates. By applying local rates to the statistics upon which the estimate is based the amount may be increased to about £13,000, and something may also be added as an allowance for increase of production and trade in the district since the time the Railway Department's statistics were collected. The Railway Goods Superintendent admits that it is possible for the traffic on the line to develop during the next ten years in a manner to make the railway pay working expenses and interest on capital.

Reduction in the cost of constructing the railway.

8. The revision of the survey, which reduces the estimated total cost of the railway by £6,000, and the cost per mile from something over £8,000 to £7,975, may be followed by further consideration of the survey, and of the details of construction, with the result of bringing down the cost of constructing the railway to £7,000 per mile. The Sectional Committee, as will be seen from their Report, consider that the cost should not exceed this sum, and the Committee are of the same opinion. The country through which the route of the line passes is not suitable for what is understood as cheap railways, and though it appears to be possible to reduce the cost as estimated by nearly £1,000 a mile, there is not much prospect of it being brought lower. But the Engineer-in-Chief thinks that after the revision of the survey the line can be improved. "I think the line capable of improvement," he says, "and I believe it would be worth while to work out the survey more completely." While he does not believe the cost can be reduced "very considerably," he is of opinion that a further reduction may be made. £8,000 a mile, he describes as a maximum estimate, and he states "that when the survey comes to be worked out again the cost will be found to be less." He therefore is not averse to the idea that the railway may be constructed for £7,000 a mile. In a minute paper, published as an appendix to his evidence, he indicates how this reduction may be carried out. First, the complete survey will probably show a reduction in the cost of earthworks. A further reduction to the extent of £602 per mile may be obtained by using roughly split sleepers of ironbark or box with 3 inches of ballast under them and not boxed up, instead of using ironbark sleepers exclusively with, according to the usual practice, 6 inches of ballast under them and boxed up over them. This change from the usual custom will not interfere with the safety of the line, though it will make the maintenance of the line more costly. Another direction in which a saving may be effected is in the freight charged by the Railway Commissioners for the conveyance of rails and fastenings to the works as they are carried on. "If the Railway Commissioners consent to reduce this charge," the minute of the Engineer-in-Chief states, "as they do in all cases where return freight is obtainable," the item representing it in the estimate of the total cost of the railway "might be halved." Then, "if the greater part of the fencing could be dispensed with, the cost of crossings, which includes gates, would be correspondingly reduced." Cattle and sheep stops will, on the other hand, have to be provided wherever a dividing fence crosses the line, but the minute goes on to say, "as the traffic on the railway would in all probability be worked only by day, it is, perhaps, worth consideration whether the fencing might not be, in great part at least, done away with." A saving may also be effected in regard to "platforms, buildings, earthworks in station yards, and signals," as is being done on the railway from Lismore to the Tweed. The Engineer-in-Chief would rather see the proposed line constructed in the substantial manner usual in New South Wales, and fully equipped from the first; but, at the same time, he points out in his minute how the estimated cost may be reduced, and, in evidence given before the Committee after his minute had been received by them, he makes the statement that he thinks a line which would meet requirements can be constructed for £7,000 per mile.

Weight of opinion in favour of the Glen Innes to Inverell route.

9. The question of the best route for connecting Inverell with the Great Northern Railway has been, in each of the inquiries held by the Committee, one of importance, and it is a significant fact that the people of Inverell are, as a community, in favour of the route from Inverell to Glen Innes. The Sectional Committee, who visited the district in 1891, found that the feeling of the people, "as almost

almost unanimously expressed by the numerous witnesses examined there, was in favour of a connection with Glen Innes;" and the Sectional Committee recently at Inverell say in their report that "the overwhelming majority of the residents were in favour of the Inverell-Glen Innes route." As the principal population the railway is intended to serve, their desire in respect of route is entitled to consideration, and repeatedly expressed as it has been in the two inquiries which have been carried out by Sectional Committees it may be regarded as overriding one of the objections to the construction of the railway stated in the Committee's previous Report.

Sectional Committee's opinion.

10. As will be seen from their Report, the Sectional Committee came to the conclusion that the railway ought to be carried out between Glen Innes and Inverell, but that the cost of constructing it should not exceed £7,000 per mile, and that the Bill authorising the construction should provide for the imposition of special local rates upon the railway until it pay working expenses and interest on capital cost. Their reasons for concluding that the railway ought to be carried out with the main line connection at Glen Innes are:—that the fertility of the land around Inverell, and the population and varied resources of the district, justify the construction of a line to connect the district with the Great Northern Railway; that the land on the Inverell to Glen Innes route is more fertile than that on the Guyra route, and more suitable for subdivision and settlement; that it is the desire of the people of Inverell generally to have their existing trade relations with the Glen Innes district continued by the adoption of the Glen Innes route; and that the Glen Innes route is suitable for any trade that may be established between the district of Inverell and Queensland.

Decision of the Committee.

11. The Committee consider that the railway may now, under the new circumstances disclosed in the evidence, be constructed, provided the cost of construction does not exceed £7,000 per mile, that special local traffic rates are charged until the railway pay working expenses and interest on cost of construction, and that the betterment principle be applied to the land served by the line. The reduction of the cost of construction from rather more than £8,000 a mile, the amount placed before the Committee in their previous inquiry, to £7,000, will effect a material saving. Whether the earnings of the railway will prove as large and satisfactory as the new local statistics represent is open to some doubt, but on the evidence of the Railway Goods Superintendent it appears to be tolerably certain that by the application of local rates the revenue may be brought up to about two-thirds of what the Inverell people say it will be. Actual experience in the working of a railway is of course the only true test of the traffic available to it; but if the results show from the outset what is represented by the local statement with Mr. Harper's calculations applied to it, the position, in view of the importance of the Inverell district, and the prospect of the railway increasing settlement and production and therefore promoting additional traffic, will be satisfactory. The application of the betterment principle to the land along the route of the railway will also greatly assist the line. At the present time this land is in the hands of a few landholders. As the Committee pointed out in their last Report, there is very little settlement between Glen Innes and Inverell, and most of the country there is held in three or four large estates. Settlement and production throughout the district are necessary to the success of the railway, and if these cannot be promoted to the requisite extent by the construction of the line, the betterment principle will do much to bring them about or to provide their equivalent.

Objections to the railway in the Committee's previous Report.

12. In the Committee's previous Report there were stated three objections to the railway as proposed which so far have not been mentioned in this Report. One was that "the connection of Inverell with Glen Innes would not be the shortest route to the present markets for Inverell produce"; another, that "while the question of connecting Inverell with the coast is intimately associated with a railway connection with the Great Northern Railway, there is no information before the Committee to enable them to decide as to which of the routes to the coast before them would be the best," and the third the possibility of improving the survey which had been made of the route for the railway to Inverell from Guyra. The first the Committee consider may now be regarded as disposed of by the repeatedly expressed desire of the people of Inverell to have themselves connected by the railway with Glen Innes. With respect to the second, the Committee during the present

present inquiry elicited further evidence, which is much more definite than that given on the subject in the last inquiry, though it does not set the question at rest. It shows that with regard to the coast connection the Minister for Works in the present Government is very much of the same opinion as the Minister for Works in the Government preceding the present, and this information carries the matter an important step beyond the point at which it stood in the last inquiry. It will be many years, the present Minister points out through the Under-Secretary of his Department, before such a connection with the coast will be made, "on account of the great cost due to the engineering difficulties to be overcome," but he is of opinion that when the connection is made it will be "with Glen Innes or further north, instead of with some place south of Glen Innes." The question of the desirableness or otherwise of improving the survey of the route from Guyra to Inverell is partly answered by the general expression of opinion at Inverell in favour of going to Glen Innes. There is also the fact that a thorough revision of the survey and the staking of the line by this route would entail a large expenditure and cause considerable delay. Furthermore the Sectional Committee who travelled along the Guyra route found, as already mentioned, that the land along the route was neither so fertile nor so suitable for subdivision and settlement as that along the route to Glen Innes.

Resolution of the Committee.

13. The resolution passed by the Committee is shown in the following extract from their Minutes of Proceedings of 22nd December, 1892 :—

The adjourned debate upon the following motion moved by Mr. McCourt, was resumed :—

(1.) "That as the Legislative Assembly has referred back to this Committee the proposed Railway from Glen Innes to Inverell for reconsideration, the Committee are of opinion that further surveys should be made of the line from Guyra to Inverell, so as to enable the Committee to determine the best point to connect Inverell with the Northern line."

(2.) "That the above resolution be forwarded to the Minister for Works."

The motion was negatived on the following division :—

Ayes, 4.	Noes, 9.
Mr. Suttor,	Mr. Garrard,
Mr. Davies,	Mr. Hoskins,
Mr. McCourt,	Mr. Humphery,
Mr. Neild.	Mr. Trickett,
	Mr. Ewing,
	Mr. Wall,
	Mr. O'Sullivan,
	Mr. Collins,
	Mr. Dawson.

Mr. O'Sullivan moved,—"That, in the opinion of this Committee, it is expedient to carry out the proposed line of railway from Glen Innes to Inverell, as referred to the Committee by the Legislative Assembly."

Mr. Trickett seconded the motion.

Mr. Hoskins moved,—"That the motion be amended by the addition of the following words :—'provided that the cost does not exceed £7,000 per mile; that special local rates should be charged until the railway pays working expenses and interest on cost of construction, and that the betterment principle be applied to the land served by the railway.'"

The amendment was seconded by Mr. Collins, and passed on the following division upon the question "That the words proposed to be added be so added" :—

Ayes, 10.	Noes, 3.
Mr. Garrard,	Mr. Suttor,
Mr. Hoskins,	Mr. Davies,
Mr. Humphery,	Mr. McCourt.
Mr. Trickett,	
Mr. Ewing,	
Mr. Wall,	
Mr. Neild,	
Mr. O'Sullivan,	
Mr. Collins,	
Mr. Dawson.	

The motion as amended was passed on the following division :—

Ayes, 9.	Noes, 4.
Mr. Garrard,	Mr. Suttor,
Mr. Hoskins,	Mr. Davies,
Mr. Humphery,	Mr. McCourt,
Mr. Trickett,	Mr. Neild.
Mr. Ewing,	
Mr. Wall,	
Mr. O'Sullivan,	
Mr. Collins,	
Mr. Dawson.	

J. GARRARD,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Sydney, 10 January, 1893.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

RAILWAY FROM GLEN INNES TO INVERELL.

[*THIRD REFERENCE TO THE COMMITTEE.*]

THURSDAY, 17 *NOVEMBER*, 1892.

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM HENRY SUTTOR.	WILLIAM CHANDOS WALL, Esq.
The Hon. JAMES HOSKINS.	WILLIAM MCCOURT, Esq.
The Hon. FREDERICK THOMAS HUMPHERY.	JOHN CASH NEILD, Esq.
The Hon. JOHN DAVIES, C.M.G.	EDWARD WILLIAM O'SULLIVAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	CHARLES COLLINS, Esq.
THOMAS THOMSON EWING, Esq.	HENRY DAWSON, Esq.

The Committee proceeded to consider the proposed Railway from Glen Innes to Inverell.

Joseph Barling, Esq., Under Secretary for Public Works, sworn, and examined :—

1. *Chairman.*] Do you desire to make a statement to the Committee giving the reasons why the Minister has re-submitted this proposal to the Committee? Yes, the reason which induced the Minister to ask the House to agree to the re-submission of this proposal for the consideration of the Committee will be found expressed in the resolution which, on the motion of Sir George Dibbs, for Mr. Lyne, was passed on the 27th October last, and reads as follows :— J. Barling, Esq. 17 Nov., 1892.

That it is expedient that the report of the Parliamentary Standing Committee on Public Works, upon a proposed line of railway from Glen Innes to Inverell, be remitted to the said Committee for its further consideration and report, for the following reasons :—That since the said report was made fresh evidence concerning the commercial value of the said line of railway has been obtained, which was not before the said Committee when that report was completed, and which evidence would probably have led the said Committee to arrive at a different and favourable conclusion.

In proposing this resolution Mr. Secretary Lyne had in view the fact that no Sectional Committee of this Committee had visited the district for the purpose of collecting statistics and taking evidence, and further, that the Sectional Committee which was appointed by the previous Committee came to a conclusion in favour of the line; and especially Mr. Lyne had in mind a portion of their report, which, if the Committee will not think me unnecessarily prolix, I will read, as it helps me to make a consistent case :—

The feeling of the people of Inverell, as almost unanimously expressed by the numerous witnesses examined there, was in favour of a connection with Glen Innes, and the Committee think some consideration should be given to the wishes of those who are most immediately concerned in the question. Their chief reasons for preferring this route are that it will give them more direct communication with Queensland, where they hope to find a market for their produce, and that the land on that route is better. On the question of a probable wheat market in Queensland the Committee found a considerable difference of opinion. It was contended by some that Inverell would not be able to compete with the Darling Downs, the principal wheat-growing district of Queensland, while it was shown, on the other hand, that the yield on the Darling Downs was very uncertain, owing to bad seasons, of which there were five in the ten years from 1880 to 1889 inclusive.

The Committee are inclined to think that the probability of a future wheat market in Queensland cannot be left out of the question, and this, together with the fact that Glen Innes is nearly midway between the proposed coast connections at Tenterfield and Guyra, must have some influence on their decision. They think it important also to consider these points : that the population in the Richmond and Tweed districts, which will be connected with the Great Northern Line at Tenterfield, will be much greater than the population in the Clarence district, which will be connected with the Great Northern Line at Guyra ; that a connection at Guyra would involve a longer railway carriage for Inverell produce on its way to the Richmond and Tweed Rivers, which are non-wheat producing districts, and will, in the near future, carry a large population ; that the land along the Glen Innes route, although mostly held in large estates, is of such a fertile character that, with railway communication, it must inevitably come into cultivation ; that, though Tingha would be better served by the Guyra line, it will be within a distance of 11 miles from Brodie's Plains, on the Glen Innes line ; and that even with direct railway communication there would be no reason to expect any rapid growth of population in the locality of Tingha, where the evidence shows that the population and yield of tin are rather diminishing than increasing.

After carefully weighing all the circumstances the Committee recommend the construction of a line of railway from Glen Innes to Inverell, according to the amended survey *via* Wellingrove and Swanbrook.

The consideration of these facts led Mr. Lyne to the conclusion, when additional statistics were submitted to him which put the trade of the district in a considerably more favourably light than previous statistics had done, that the Committee would consider that *primâ facie* evidence was produced which would justify them in appointing a Sectional Committee to visit the locality for the purpose of verifying these statements. I now hand these papers in, and may perhaps be permitted to give a brief summary of their contents.

When

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When this projected line was before the Committee on the first occasion statistics were furnished to the Commissioners by the local railway league, estimating the probable traffic as under, in 1889:—Inwards goods, 3,843 tons; outwards goods, exclusive of live stock, 7,950 tons; total, 11,793 tons; and total receipts from all sources of traffic, including live stock and some extra mileage, which was not included by the local committee, £7,689 15s. The Commissioners in their report estimated the probable receipts at £8,200, but did not give details. The statistics now submitted from the district show an estimate of traffic as follows:—Inwards goods, 6,000 tons; outwards goods, exclusive of live stock, 14,000 tons; total, 20,000 tons. Receipts:—Local traffic of all kinds, £16,825; increased traffic to main line, £1,980; probable saving in roads maintenance, £3,000; total, £21,805. Since the project was last before the Committee the survey has been revised, resulting in the cheapening of the line by about £6,000, and shortening it by 47 chains. The total length now therefore stands at 52 miles 67 chains, as against 53 miles 34 chains, and the total estimated cost £421,400, as against £427,400. The financial statement would therefore on this basis appear to be as follows:—

Interest on capital cost, £421,400, at 3½ per cent.	£14,749
Estimate of working expenses, as made by Commissioners.	7,138
Total	£21,887

The estimated revenue, as per the local statistics, is £21,805, as before shown. It will be seen, therefore, that if these statistics and calculations are correct the revenue and expenditure about balance. I wish distinctly, however, to point out that I do not in any way answer for the accuracy of these statistics. I have not been able to check them; this, I presume, will be done by the Committee on the spot. I have now to refer to the reasons which led the Committee on the previous occasion to reject the proposal. The Committee, in their report, say:—

> The Minister for Works in the last Government appeared to favour a line from Tenterfield to Casino, but no indication of any preference of route has been made to the Committee from the Minister for Works in the present Government. In the absence of this information, and as the connection from Inverell with the Great Northern Railway is in an important manner associated with the extension to the coast, it is not possible for the Committee to properly deal with this part of the question before them.

In reply to this, I am authorised by the Minister to state that the question of the connection of the tableland with the coast has not been dealt with by the Cabinet, and that, in the opinion of Mr. Lyne, it will be many years before such a connection is made, on account of the great cost due to the engineering difficulties to be overcome. The distance between Tenterfield and that portion of the proposed North Coast Line with which it will connect, is 92 miles 69 chains. I should here remark that a clerical error, which I cannot explain, has in some way occurred regarding the length of this line, as given to the Committee in May last. If the Committee will refer to page 96 of the evidence, they will see that the line is there given as 84 miles, whereas it should have been 92 miles 69 chains. It is proposed to connect with the North Coast Line 12 miles to the south of Casino. This portion I, perhaps, need not take into consideration, as it will be part of the North Coast Line. Taking, therefore, the distance as 92 miles 69 chains, an estimate has been made of the probable cost, which is set down at £1,591,373, or at the rate of £17,136 3s. 4d. per mile. This will give a grade of 1 in 50, with 10-chain curves. The next suggested connection with the coast is that between Glen Innes and Grafton. The survey for this line is being revised and improved, but sufficient is known to warrant me in saying that it can possibly be constructed at the rate of £15,000 per mile, with a similar grade to that of the Tenterfield line. This gives a total cost of £1,710,000. The mileage is about 114. The next connection to the south is that between Guyra and Grafton, with a grade of 1 in 40; the distance being 128 miles 66 chains, to connect with the North Coast Line at Glenreagh, or 27 miles from South Grafton. The estimated cost of this is £1,719,083, or at the rate (say) of £13,344 per mile. The Tenterfield route is thus cheaper than the Glen Innes–Grafton route by £118,627, and by £127,710 than the Guyra-South Grafton route. From the foregoing, therefore, it will be seen to be improbable that the connection of Inverell with the main line can be made further south than Glen Innes. With regard to that portion of the report of the Committee in which they point out the excessive cost of the line, viz., at the estimated rate of £8,000 per mile, I have already pointed out that the cost has been somewhat cheapened, although only to a small extent; and although it is possible that further exploration will reduce this the Minister does not hold out much hope of any substantial decrease being made. He thinks the consideration of the character of the country precludes any hope of the construction of what may be termed a cheap line. With regard to the Guyra route, the Minister desires to point out that when, in March last, he asked the House to refer the Glen Innes–Inverell route to the Committee, he made the following remarks with regard to the Guyra–Inverell route:—

> A great deal has been said on former occasions in reference to this proposed railway, and also in favour of a line from Guyra to Inverell. I may say this: that if it were possible within the four corners of the Act to submit rival routes, I should be prepared to do so in this case. But I can only submit one route. I wish it to be distinctly understood, however, that in submitting that route, I shall also submit to the Public Works Committee all the papers and documents and all the evidence taken in connection with the other route, so that the Committee may have both routes before them, in the same way as they appear to have been before them on a previous occasion. Upon reading the report of the Sectional Committee, I find that they took evidence as to two or three, if not four, different routes; and I wish the Public Works Committee to understand clearly that it is the desire of the Government and of myself that these various routes should be taken into consideration. What is the object with which these matters are submitted to the Public Works Committee? It is to obtain information which will guide the Government and this House in coming to a final decision. I find that the Sectional Committee of the Public Works Committee were in favour, apparently, of the route from Glen Innes to Inverell; but I desire the Committee to consider other routes side-by-side with that which I now submit. I shall submit such papers to them, without absolutely submitting the railway itself, as will enable them to take that course.

And Mr. Lyne desires me to again emphasise his wish, viz.: that if the Committee think it desirable to have any further evidence on the points referred to before coming to any conclusion, he is perfectly willing that any necessary revision of any part of the survey should be made, but he wishes to point out that to permanently stake this line would entail a very large expenditure and cause considerable delay. The whole question has been gone into so thoroughly that I do not think I need enlarge any further upon it.

2. The Minister considers that a connection with the coast is very much in the future? Yes.

3. And that when a connection is made it will be with Glen Innes or further north, instead of with some place south of Glen Innes? Yes; that is his opinion. The evidence before the Department seems to point to that conclusion.

4. He has formed that opinion from the estimates which you have just given us as to the distances from Tenterfield to Casino, Glen Innes to Grafton, and Guyra to Grafton? Yes; those are some of the reasons that lead him to that conclusion.

5. Can you tell us whether the survey of the Tenterfield to Casino line is complete now? Yes; that survey has been completed.

6.

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6. So that the data which you have given us concerning it are reliable? Yes.
7. The survey of the line from Glen Innes to Grafton is not complete? Not quite complete.
8. Are the Department in a position to say how long it will be before it is completed? It will take about two months to complete the survey, and a little further time will be required to work up the details in the office. There have been three surveyors on that line—Mr. Little, Mr. Kennedy, and Mr. Cumming. The two latter are still there; but it is believed that in two months they will have completed their work.
9. Do you know what portion of the survey they are on? I cannot tell you the particular point at which they are working now.
10. Have they been engaged on the work all along? They have been engaged on the work all the time.
11. So that if a Sectional Committee went to Glen Innes they could give all the information up to date? I have no doubt they could.
12. With reference to the line from Guyra *via* Don Dorrigo to Grafton, is the information you have got concerning it as complete as the information which you have concerning the Tenterfield to Casino line? Yes; it is complete. The surveyors who carried out the work were Mr. Jamieson, Mr. Thornbury, and Mr. Cumming, all of whom, I daresay, would be available.
13. Nothing more has been done with reference to the survey from Inverell to Guyra? No.
14. Have you any information concerning the last survey? No; not here. I think it was not a very complete survey.
15. Who furnished the fresh statement of trade which you have given to us? The return which I read was furnished, I understand, by the local committee of Inverell.
16. Are the surveys for the proposed line from Glen Innes to Inverell absolutely complete? Yes; they are complete.
17. There is no work going on now? Not that I am aware of. A small deviation has been made near Made's Valley which would shorten the line by about 47 chains.
18. We are not to expect any other alterations besides that? I said that it might be possible to further cheapen the line, but we are not doing anything in that direction that I know of at the present moment.
19. Is it the intention to make any further exploration? Not that I am aware of.
20. You only anticipate that in the event of the line being permanently surveyed to get it ready for the contractors some improvement may be made? Yes.
21. It is only in that event that you would devote any more attention to it? Yes.
22. Since this matter was last before the Committee has there been any agitation with regard to the Uralla, Kentucky, or Bundarra routes? I do not remember any; but there has been considerable agitation with regard to the Guyra route.
23. We are limited to the choice of a connection with Glen Innes or with Guyra? Practically so.
24. Am I to understand that the survey to Grafton *via* Don Dorrigo goes from Guyra or from Llangothlin? From Llangothlin, just close to Guyra.
25. Have you received any information from persons interested in the Guyra route as to an increased volume of trade through Guyra since the Sectional Committee were there? Not that I remember.
26. Was the information which you have read furnished to you by a railway league? The document is a petition from the inhabitants of Inverell, and is signed by the Mayor, Mr. T. K. D. Mayne.
27. When was it sent to you? In July of this year.
28. Do the Department propose to call any other witness before the Committee, or do they rely wholly upon your statement? I think not; they rely wholly upon my statement.
29. There has been no further communication with the Railway Department? We take it for granted that the Committee will call them and get any information they desire directly from them.
30. You have obtained no further information from them? I have obtained no direct information from them.
31. Has the Minister had under consideration the advisibility of cheapening this line by adopting sharper grades and using special rolling-stock? Not the advisibility of cheapening this particular line. I think I pointed out that the Minister had very little hope of cheapening the line because of the unsuitable character of the country.
32. Can you give the Committee any idea as to how long it would take to get information—the same information concerning the Guyra to Inverell route as you have got concerning the Glen Innes to Inverell route? I think it will take four or five months.
33. *Mr. O'Sullivan.*] In again referring this proposal to the Committee, does the Minister intend that rival routes shall be considered? I can only refer you to what I have read from his speech in the Assembly, where he very clearly shows that he wishes the Committee to have information before them concerning all the routes.
34. That speech was made at the time of the first reference to the Committee? But I have just stated that he desires me to emphasise those remarks now.
35. Does he mean that he is willing to have a fresh survey of the Guyra route made? He points out that to permanently stake that line would entail a very considerable expense and considerable delay, but I am perfectly certain that he is anxious that the Committee should have all the information they wish before them to enable them to come to a conclusion, and he will give them all the assistance in his power.
36. But you say that it would take four months to get the information? Yes, though perhaps the survey could be revised here and there in different parts in a shorter space of time, perhaps in about two months.
37. *Mr. Humphery.*] Have the local statistics now presented by you been submitted to the Railway Department? As a matter of fact, I believe they have, but not by us.
38. Who has examined them? I have reason to believe that Mr. Harper has examined them, but I prefer to say nothing about that matter, because it belongs to the work of another Department.
39. *Mr. Hoskins.*] You spoke about the cost having been reduced since the last estimate was made. What is the reduction per mile? The total reduction is £6,000, which would not be very much per mile.
40. *Mr. Davies.*] Has the Minister given any instructions to the Surveying Department since the Committee came to the determination to report against this line, to ascertain if a cheap line could be found? I do not know if he has given any definite instructions on that point, but he may have had conversations with Mr. Deane about it. At any rate he has come to the conclusion that there is little hope of getting a sensibly cheaper line.
41. You are not aware if Mr. Deane has obtained a report from the surveyors with regard to the possibility of reducing the cost of construction? The evidence I have given is the result of the investigation.

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gation made in the office since the Committee last inquired into this matter, namely, that the cost of the line could be reduced by £6,000 by shortening it a little near Made's Valley.
42. Has an official report been furnished? No; but you may take my evidence as an official report. The details were worked up with a view to preparing them for the Committee.
43. Then it has been reported to the Minister that it is not possible to reduce the cost of a line from Glen Innes to Inverell by more than £6,000? I have stated that Mr. Deane says that when they come to lay out the line again some reduction of cost may result, but in any case it is hardly likely that a sensible reduction will be made.
44. I presume that the statistics which you have furnished to the Committee will have to be verified on the spot? Undoubtedly; and by the aid of the railway officers.
45. You are not aware whether they have been confirmed by the Traffic Department? I know very well that they have not been confirmed, but I have not obtained this information direct from the Railway Department.
46. The Traffic Department should be asked for the information? Yes.
47. There has been no alteration with regard to the survey from Guyra to Inverell? No.
48. But a survey of that line was made? Yes.
49. But not staked? Yes.
50. Do you know who carried it out? I think Mr. Hogg did.*
51. Is he in the Department now? No.
52. Is he in the Colony? I believe he is in Sydney.
53. At any rate his evidence could be obtained? I think so.
54. I understand that it is the wish of the Minister that the Committee, if they feel disposed, shall obtain further details with regard to the line from Guyra to Inverell? Undoubtedly.
55. But the work would be very expensive and would cause delay? To permanently stake the line would cause considerable delay and be very expensive.
56. *Mr. McCourt.*] Have you plenty of railway surveyors in the Department now? We have quite enough for the work on hand.
57. But they are not very busily engaged? They are all engaged, but their services would be at the disposal of the Committee.
58. If the Committee required a further investigation into the line surveyors could be put on at both ends? I have no doubt of it. The Minister has said that if the Committee desire to have further information with regard to the line before coming to a conclusion, he is perfectly willing that any necessary revision of any part of the line should be made.
59. If a number of surveyors were put on, the work could be done within a couple of months? Yes.
60. *Mr. Wall.*] Is it customary for the Department to make an estimate before permanently staking a line? Yes.
61. It is not usual that there is any great difference between the estimate made prior to the staking of the line and that made afterwards? I think not.
62. We might infer that we know the grade and the cost from the information supplied by the survey already made? I do not think you have got that with regard to the line from Guyra to Inverell. The first survey there was for a line with a grade of 1 in 40, and the mileage was 55 miles 10 chains, and the estimated cost £403,900, afterwards reduced to £390,900. If we make the grades easier the line will be lengthened by 3 miles, and the cost increased to £427,400.
63. It would not be necessary to permanently stake the line to give us an estimate? I think not.
64. We could get the information from the surveyors who have been engaged on the line? I daresay you could.
65. *Mr. Neild.*] This work having been referred back to the Committee on the understanding that certain information is now available which was not available for the information of the Committee a few months ago, are we to understand that the statistics which you have given us with regard to the estimated revenue and other figures form part of that information? Undoubtedly.
66. I think you gave the length of the line from Teuterfield to Casino as something over 92 miles, but that, I understand, will only take the railway to within about 12 miles of Casino? Yes.
67. So that the total length of the line to Casino would be from 104 to 105 miles? Yes.
68. You regard the last 12 miles as forming part of the Great Northern Coast Line? Yes.
69. But until the Great Northern Coast Line is decided upon it will be necessary to take the whole length into consideration? Undoubtedly. I have considered the line—the North Coast Line—as part of our national system of railways.
70. The Committee have not recommended the construction of the coast line south of Casino? I understood that they refused to recommend its construction until the whole policy of the north coast system had been decided.
71. In the figures which you read this afternoon you introduced what I think is a novel item, namely the expected saving in the maintenance of roads—some £3,000. Can you tell the Committee whether there has been a similar saving in the maintenance of roads in other districts where railways have been constructed? I think there can be no doubt about it. Take the western road for instance. Though we maintain that road to a certain extent, it does not require the same expenditure as it would require if there were no railway.
72. Do you refer to the whole of the road, or to some particular section of it? I have no details at hand—I am speaking generally.
73. Do you refer to the road on this side of Bathurst, or the other side of Bathurst? I was thinking of the road on this side of Bathurst.
74. Do you think there has been a corresponding saving on the road west of Bathurst? I have not gone into the matter very carefully. If you are asking me my opinion as to whether there will be a saving in roads generally I should think not, though that really does not tell against their argument, because the necessity for an additional expenditure upon roads will mean additional traffic to the railway, which will far more than compensate for it.
75. If the traffic on the railway is light these roads will not require so much maintenance as heretofore, whereas if it is heavy the earnings of the railway will very satisfactorily compensate for an increase in the cost of maintenance? Undoubtedly. I should consider an increase a very healthy sign.
76. Have your Department any information with reference to the probable effect of the construction of the proposed line upon districts north and west of Inverell? I have not gone into the matter. The Railway Department will doubtless give you that information.

77.

* NOTE *(on revision)*:—I find the surveyors were Messrs. Edwardes and Jamieson.

77. No inspector or examiner of your Department has made any fresh inquiry? Not since Messrs. Price and Scarr went over the line. Their report is before the Committee. J. Barling, Esq. 17 Nov., 1892.
78. Have you any information that would lead you to believe that the production of the country to the west of Inverell has been more active of late? I have not collected any statistics with regard to that. I do not consider it as part of my business.
79. *Mr. Ewing.*] Departmentally you consider any coastal connection a matter of the future? Yes.
80. In building railways in the future we shall not be controlled by the environment of to-day? No; except, of course, what may be termed the permanent physical ones.
81. The only thing that we consider to-day is the question of cost? I have brought the question of the relative cost of the suggested coastal connections prominently before the Committee.
82. Therefore departmentally it would be better to remove the coastal connection out of the way altogether? I should not like to say that.
83. Its construction will be controlled by two considerations—what the line will pay and what it will cost? Yes, and our ability to raise loans satisfactorily. I understand you to refer to the coastal connections.
84. The reason you think it not a matter for the present is that we cannot afford it? Yes.
85. We can only consider part of the question to-day—the matter of cost? Yes.
86. But the cheapest line might not be the best, regarded from a national standpoint? Of course that is possible.
87. The future may produce some change which will control the question of cost? Quite possible.
88. You do not believe that it is reasonable to come to a conclusion with regard to a coastal connection at present? Except so far as the cost has a bearing on the particular line before you.
89. But the cost need not be the determining thing? Not entirely.
90. You believe that we cannot really consider the matter at present? Well, I should not like to go beyond what I have stated already.
91. I suppose Mr. Deane can supply exact figures as regards the cost of the various connections? I have given you the figures.
92. I do not think that they are quite exact. The Glen Innes line comes in to the south of Grafton, so that there would have to be a bridge over the Clarence; can you tell us what such a bridge would cost? No, I could not at the present moment.
93. I am dealing with the question of the future railway policy of the country; if we are to connect the lines already in existence how will they be most cheaply connected; you cannot give us that information? I do not know that anyone could give fuller information at present. As to the river connection at Grafton, the trains may perhaps be punted across.
94. But you have not got the information? I daresay the information could be got if the Committee think it important that they should know how it is proposed to connect the line south of the Clarence with Grafton.
95. *Chairman.*] You cannot tell us in what part of the proposed line the cheapening has taken place? Mr. Deane will be the best person to get that information from.

Henry Deane, Esq., Engineer-in-Chief, Railway Construction Branch, Department of Public Works, sworn, and examined:—

96. *Chairman.*] You were examined by the Committee in May last with reference to a proposal similar to that which we are now considering;—can you tell the Committee whether at that time the whole of the information which you now have concerning the Tenterfield to Casino survey was at your command? Not at that time. H. Deane, Esq. 17 Nov., 1892.
97. Was all the information with regard to a possible connection between Guyra and Grafton, *viâ* Don Dorrigo, in your hands? Yes; I have given the Committee all the details of that survey.
98. That information, as given to us by Mr. Barling, is briefly this: Length, 128 miles 66 chains; grade, 1 in 40; estimated cost, £1,719,088, or at the rate of £13,344 per mile? I have not checked the figures; but no doubt they are correct. Mr. Barling got the information from my office.*
99. Had you the information when you were last before the Committee? Yes; I believe so.
100. No further information with regard to that survey has come into your hands since then? No.
101. But you have got further information with regard to the proposed connection between Tenterfield and the North Coast Line at a point between Grafton and Casino? Yes; the surveyors have finished that work.
102. Did the result of the survey come up to your expectation with regard to grades and cost? My expectations were exceeded in the matter of cost. We can get a grade of 1 in 50.
103. We have been informed by Mr. Barling that the complete survey of that route shows a length of 94 miles 62 chains, and a grade of 1 in 60, there being some slight error in your previous statement? The grade there would be 1 in 50.
104. The grade on the line from Glen Innes to Grafton will also be 1 in 50, while the grade on the Guyra connection will be 1 in 40? Yes.
105. The estimated cost of the Tenterfield connection is £17,113 per mile? Yes; that is what it amounts to.
106. Have you come to any conclusion as to which would be the best connection with the coast? Do you mean from an engineering point of view?
107. Well, it is not fair to ask you to consider the question from any other point of view? As a matter of actual cost, I suppose the Tenterfield-Casino connection will be the cheapest. It would be the shortest.
108. The cost per mile would be greater than the cost per mile of the Grafton-Glen Innes connection; but the whole line would be cheaper, because it would be shorter? Mr. Barling told me that he had mentioned £15,000 as the possible cost of the other line; but I cannot guarantee that estimate. The cost may be more.
109. You will not be in a position to make a fair estimate for at least two or three months? I should be in a better position then.
110. Within about two months you will be in as good a position to judge of the cost and actual length of that line as you are in now to judge of the Guyra and Tenterfield connections? Yes.
111. Have the two officers now engaged on the Glen Innes to Grafton survey been in the field all the time you have been trying to improve the line? They have been taking certain parts where it looked likely that the line could be improved, and where there were grades of 1 in 40.

* NOTE (*on revision*):—The length and cost given here are not for the line from Guyra to Grafton, but from Guyra to the junction with the North Coast Line.

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112. The same men have been there all the time? They have not been on the work very long.
113. Were they not engaged upon it when the Sectional Committee visited Glen Innes? I think not. Do you refer to the survey between Tenterfield and Casino?
114. No, between Glen Innes and Grafton. Have you an officer named Little? Yes; but he is not engaged there. The two men engaged on the work have not been there very long. They are Mr. Cumming and Mr. Kennedy. Mr. Little, who was working on the top end to try and get rid of the bad run down into the Mann River, was there about eighteen months ago. He has finished his work.
115. The other men are further along? Yes.
116. If another Sectional Committee visited Glen Innes, would either or both those surveyors be available? I could give them instructions to meet the Committee at any point it is thought desirable.
117. Is the information which you now have with regard to the survey of the proposed line from Glen Innes as complete as when last you gave evidence before the Committee? Practically so, I think. A small deviation has been recommended which will shorten the line, but I am under the impression that I mentioned it before.
118. Where will it be? I think somewhere near Wellingrove.
119. At the northern end of Made's Valley? Yes. There is about half a mile of deviation I think, but I am speaking from memory.
120. That would be the only alteration made since you last gave evidence? I am inclined to think that it was made about the time I gave evidence, and that nothing has been done since, except to work out the details in the office.
121. So far as your work is concerned the survey from Glen Innes to Inverell is complete, and you are not taking any steps to improve it? No; nothing has been done since I last gave evidence.
122. Do you think it likely that it can be improved? I said before that if the line were permanently surveyed there might be some improvements made with regard to the location which would reduce the cost. I think I laid stress upon that.
123. Since you were last examined before the Committee, have you obtained any further information as to the possibility of cheapening or improving the Guyra to Inverell route? Nothing further has been done with regard to it.
124. *Mr. Hoskins.*] What is the extent of the rough country on the proposed line from Glen Innes to Inverell? I could not tell you from memory.
125. What portion does it form of the whole distance? The estimate for the earthworks is about £3,000 a mile for the whole line.
126. Will or will not only a small portion of the country be heavy? I should think it will be fairly heavy.
127. Could you not cheapen the line in the way in which you suggested that the Bega to Eden line might be cheapened, namely, by reducing the earthworks by the adoption of 6-chain curves? Of course that would cheapen it.
128. Would it reduce the cost by one-third? It would only affect the earthworks.
129. Well, I am speaking about the earthworks? Very likely it would.
129½. It would considerably reduce the cost of the line as a whole? Yes; probably it would, but I do not wish it to be understood that I advocate the adoption of such curves on this particular line.
130. Do you think you could make a line with 6-chain curves on the standard gauge for about £6,000 per mile? If I had instructions to put in 6-chain curves, and the Commissioners were willing to get out rolling stock to run over them, I should think the cost could be reduced to very nearly £6,000 per mile.
131. Do you consider that traffic could be safely conveyed over such a line at a rate of 15 miles an hour? Yes, I have said that I think the line capable of improvement, and I believe it would be worth while to work out the survey more completely. The survey which has been made has been merely a flying survey.
132. You think you could reduce the cost considerably if a careful survey were made? Not very considerably, but a reduction could be made.
133. Upwards of £1,000 per mile? I do not know about that, unless you left out some of the station works, and did without fencing in some places, and made various other reductions, such as using less ballast and rougher sleepers.
134. *Mr. Davies.*] Mr. Barling has stated that a revision of the survey from Glen Innes to Inverell has been made since we last inquired into the matter with the result that a saving of £6,000 is seen to be possible? I think that was worked out subsequently.
135. What officer checked the work? I believe the information was in the office when I last gave evidence, and that I referred to it, but I have not looked into the matter.
136. Have you been requested by the Secretary for Public Works to again report upon the survey and to see if any reduction could be made in the cost of the line? No, I have not done anything more with regard to it.
137. The only reduction you can recommend is the deviation at Made's Valley? Yes, except that I consider that £8,000 a mile is a maximum estimate, and that when the survey comes to be worked out again the cost will be found to be less.
138. You think that the line could be constructed for less than £8,000 a mile? Yes, the cost would be something less than that.
139. But you have no idea what it will be? No, I cannot say exactly how much it will be reduced.
140. You are aware that the original estimate is £11,000 a mile? That was for the other route—the Wellingrove route—marked on the plan by a black line.
141. In consequence of the Committee not having recommended the adoption of that route, another route has been found along which a line could be constructed for something like £8,000 a mile? Yes, the country has been re-examined with that result.
142. Having regard to that reduction—£3,000 a mile—do you consider any further reduction possible? I do not believe that any better route could be found.
143. Could you furnish the Committee, at a later date, with an estimate of the probable reduction which you think could be made on the cost? Not without sending a surveyor into the field to work it out by taking cross sections.
144. Have you any surveyors in the district? No, not now.
145. How long would it take to get the information? It would take two or three months to cross section it all along.

146.

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146. Was the survey from Guyra to Inverell a flying survey or a permanent survey? A trial survey.
147. But it was sufficient to enable you to form an estimate of the probable cost and grade? It was quite sufficient for the estimate that was made at that time.
148. It has not been staked? It has not been staked in a secure manner.
149. But the Department have sufficient information to enable them to form an estimate as to the length and cost of the line? Yes; an approximate estimate.
150. *Mr. Trickett.*] Do you think it necessary to have a further survey of that line made? That depends upon the information which the Committee desire. I have stated before that I was convinced that that route could be improved, and that by making some deviations, which would lengthen the line to the extent of about 3 miles, a grade of 1 in 60 could be obtained.
151. Without reducing or increasing the cost of construction? That would bring the total cost to about the same as the estimated cost of the Glen Innes to Inverell line.
152. How long would a revised survey of the Inverell to Guyra route take if it were pushed on? A good deal of the line would have to be gone over again to make a satisfactory survey, but I suppose a couple of surveyors could do the work in something like three or four months—probably four months would be the right time to allow.
153. With regard to the line from Glen Innes to Inverell known as Hogg's line, the objection made to it was that the ruling grade was 1 in 40? Yes.
154. Can it be improved? It could be improved, but it would be lengthened to a proportionate extent, and it would not be as good a line as this, because it goes over higher elevations.
155. Would it be a suitable route for a cheap railway, such as that suggested by Mr. Hoskins? I do not see any advantage in adopting it.
156. You are confident that it would not be desirable to adopt it? Yes; I consider the other line a far better one.
157. *Mr. Neild.*] A line of tramway with a 4-ft. 8½-in. gauge is in course of construction between Deepwater and Galena;—have you any official knowledge whether an application has been made to Parliament for permission to extend that tramway to Inverell? I have not heard anything about it.
158. Do you know anything of the country between Emmaville and Inverell? No; I have not been through it.
159. Has any flying survey or any other survey been made in that direction by your Department? I do not think so.
160. Emmaville lies somewhat to the north of Wellingrove? Yes. An exploration was made by the Department from Inverell north-east towards Tenterfield, but I cannot say what particular route they took.
161. Recently or long ago? Long ago.
162. You have no details at hand now? You will find the details in the printed papers having reference to trial surveys which were laid before Parliament.
163. Has any exploration been made of the country between Guyra and Glen Innes to ascertain if a connection could be made with Inverell from some point on the northern line between those places? No, those places were looked upon as the only two available points of connection.
164. You have not taken any further action with reference to a coastal connection since you last gave evidence here? No; all that has been done is to complete the survey from Tenterfield to Casino, and to commence certain improvements at the lower end of the Glen Innes to Grafton survey.
165. The Under Secretary mentioned that in some evidence given by you on the last occasion that you were before us, an error crept in with regard to the distance between Tenterfield and the connection with the Casino line? Yes.
166. That appears to be something over 92 miles? Yes; I do not exactly know the cause of the mistake, except that when I gave evidence the distance was not exactly known.
167. You confirm the evidence of the Under Secretary as to the distance being somewhere about 92 miles? Yes.
168. *Mr. Ewing.*] You said, in reply to Mr. Hoskins, that traffic could travel comfortably and safely over a line with 6-chain curves at a rate of 15 miles an hour? Yes.
169. You were telling us a short time ago, in reference to another railway, about a special engine with bogey wheels—have you ascertained anything more about the construction of such engines? No; I have written for information, but it will be two or three months before I receive it.
170. From the information which you then had, it appeared that those engines could travel as quickly round a 6-chain curve as round an 8-chain curve? Yes, they travel at a good speed.
171. So that they could travel as quickly on a railway costing £6,000 a mile as on a railway costing £8,000 a mile? Well, I should like to know something further about them.
172. But it appears possible? Yes.
173. Can you get a better grade between Guyra and South Grafton than 1 in 40? I think not. On the worst part of the line that grade will have to be adopted; although I reckon that a grade of 1 in 60 could be got for about half the line.
174. Have you sufficient information at present to give a fairly close estimate of the cost of a line from Inverell to Guyra? I gave you an estimate when I was last examined.
175. You consider that your information enables you to speak with fair certainty in regard to the cost? Yes.
176. *Mr. O'Sullivan.*] Mr. Edwardes and Mr. Jamieson surveyed the line from Guyra to Inverell? Yes.
177. They were instructed to make merely a trial survey? Yes.
178. How long would it take them to make another survey if they commenced at each end of the line? It would take between three and four months to get a revision of the survey finished, and to complete the plans and estimates.
179. Even although a surveyor commenced at each end? Yes; there would be a good deal of new work, and I daresay the old line would be difficult to pick up here and there. Perhaps the whole of the line would have to be revised more or less.
180. I understand from the evidence which you have given us before, and which you have repeated to-day that you are in a position to give a fairly good opinion as to the probable cost of the line from Guyra to Inverell? Simply what I stated before.

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181. You think the figures which you have given us are somewhere near the probable cost? Yes.
182. Then it would be hardly worth our while to wait four months for another survey? I am quite convinced that the alteration to which I have referred should be made, but if the Committee are not satisfied, I am ready to send a surveyor into the field.
183. *Chairman.*] Mr. Hogg was employed in your Department for some time? Yes.
184. And was engaged not only in connection with the survey known by his name from Inverell to Glen Innes, but also in connection with the Guyra and Uralla lines? He made some explorations for those lines. I think he was the first to explore them; but that information can be obtained from the papers.
185. He left the Department of his own free will? I am not quite sure at the present moment if he did not leave on account of a reduction of the staff. There was nothing against him.
186. You do not know how long he had been in the Department? I do not remember, but I could soon find out.

TUESDAY, 22 NOVEMBER, 1892.

Present:—

JACOB GARRARD, Esq. (CHAIRMAN).

The Hon. WILLIAM HENRY SUTTOR.	WILLIAM CHANDOS WALT, Esq.
The Hon. JAMES HOSKINS.	WILLIAM MCCOURT, Esq.
The Hon. FREDERICK THOMAS HUMPHERY.	JOHN CASH NEILD, Esq.
The Hon. JOHN DAVIES, C.M.G.	EDWARD WILLIAM O'SULLIVAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	CHARLES COLLINS, Esq.
THOMAS THOMSON EWING, Esq.	HENRY DAWSON, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Charles Edward Hogg, Esq., formerly Surveyor, Railway Construction Branch, Department of Public Works, sworn, and examined:—

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187. *Chairman.*] You are a civil engineer? Yes.
188. And you were at one time connected with the Railway Construction Branch? Yes, for ten years.
189. How long is it since you left the Department? About five years ago, since which time I have been employed in the construction of railways and water works at Broken Hill and in Tasmania.
190. Did you leave the service of your own accord? Yes.
191. During the time you were in the Department you undertook a considerable amount of work in connection with surveys to connect Inverell with the main line? Yes; I was in the district for some years.
192. Will you briefly state to the Committee the order in which your work was carried on? Do you include the Grafton district?
193. No, only the connection of Inverell with the main line? My first duty was to report upon the merits from an engineering point of view of a railway from Kentucky to Inverell, and from Uralla to Inverell, and subsequently upon a line from Guyra to Inverell.
194. How long ago was that? In the year 1883.
195. Was your work on those three routes continuous? It was practically continuous. I think I had a little to do in the city between times.
196. What was your next work? The making of a trial and permanent survey from Glen Innes to Inverell.
197. Did you complete that survey? Yes.
198. Was it known as the King's Plains route? Yes.
199. From your knowledge of the country which do you think would be the best point on the main line to connect with Inverell? I always felt that you had to begin at the other end altogether, and make up your mind first as to where you were going to connect with the coast—that the connection between Inverell and the main line should be made at a point as convenient as possible for a further connection with the coast; but I was never asked in any way to give an opinion. At that time it was not the custom for engineers to express any opinion.
200. Independently of a possible connection with the coast, which do you think is the best route—from an engineering point of view—from Kentucky, Uralla, Guyra, or Glen Innes? From Guyra, I think.
201. Why? I think if the survey were properly worked out better gradients would be obtained on that line. It struck me at the time that it promised to give lighter work.
202. From a purely engineering point of view you think that a connection with Guyra would be the best? I did think so, but I had other reasons besides. If the railway were not to go to the coast it would seem absurd to carry heavy traffic to Glen Innes and then bring it part of the way back over the main line. If you go to the coast, however, you alter the problem.
203. Which of the four lines I have mentioned would go through the best country? The best country for settlement, if you could get it out of the hands of the present holders, is undoubtedly that between Glen Innes and Inverell.
204. And on which line is the next best country to be found? On the Guyra route. The Uralla country is the worst of all. It is miserable country. The Kentucky and Uralla routes are much the same as far as the country is concerned, but the Kentucky connection is of no importance, I think.
205. You think the choice lies between Guyra and Glen Innes as the connecting point? Certainly.
206. *Mr. Davies.*] You made a trial survey of the line from Guyra to Inverell? No; I only examined it for a report to the Engineer-in-Chief.
207. Has anything been done with reference to the survey since? I understand that a trial survey has been made since.
208. You did not take part in making that trial survey? No.
209. You only made a sufficient survey to enable you to report to the Department as to the practicability of the route? That is all, and the probable nature of the works.
210. You favour a connection between Guyra and Inverell? Yes.* It struck me at the time that there would not be so much "up and down" on that line. There was a more uniform grade. 211.

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* NOTE (*on revision*):—Subject to reply to question 202.

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211. But the line would be somewhat longer than the Glen Innes line? Yes; perhaps 6 or 7 miles longer.
212. On the Guyra route you pass through Crown land? Yes.
213. While the Glen Innes line runs through private property? Yes; almost entirely.
214. The engineering difficulties on the Glen Innes line are greater than those on the Guyra line? I think so.
215. Do you think a connection with Guyra would serve the people of Inverell as well as a connection with Glen Innes? Better, I think; but I am still assuming that you are not going down to the coast. The Chairman asked me to give evidence on that assumption.
216. The connection with the coast is not before us now? Yes, though it entirely governs this matter.
217. Have you given much attention to it? Yes, I have. I made some of the surveys for connections with the coast.
218. From Tenterfield to Casino, and from Glen Innes to Grafton? Yes, from Tenterfield to Casino.
219. And you reported on each of them? I reported on the Tenterfield route by letter, and verbally on the Glen Innes route.
220. Which did you favour as the most practical route to reach the coast? The Tenterfield connection.
221. If a connection with the coast were to be made at Tenterfield, you would not recommend the railway being taken from Guyra to Inverell? No, I would say, "Take it from Glen Innes."
222. *Mr. Trickett.*] Was yours a trial survey? My surveys from Glen Innes to Inverell were both a trial survey and a permanent survey. At the time I was instructed to carry out the permanent survey no trial survey had been made. My instructions were to make as short a line as possible, with no grades steeper than 1 in 40.
223. You said just now that the grades on the Guyra to Inverell line were better than those on the Glen Innes to Inverell line? They should be better.
224. You said they were? I merely judged by my reports. I do not know what subsequent surveys have done.
225. Are you aware that the grades on the proposed line from Glen Innes to Inverell have been much improved by recent surveys? I have seen the plan, and I notice that they have made the line 9 miles longer.
226. With improved grades? Yes, of course.
227. Seeing that the grades have been improved, do you still think that the Guyra to Inverell line is a better one than the Glen Innes to Inverell line? If you are not going to the coast.
228. For what reason? Because the amended route from Glen Innes to Inverell is nearly as long as the route from Guyra to Inverell, while it would cause an extra amount of haulage.
229. You have not gone into the question of traffic? Yes; I was there such a long time ago it may have altered.
230. But not recently? No. The Guyra line went through the best populated districts.
231. In your report did you recommend the line from Glen Innes to Inverell? No; we never made any recommendations. We just stated the facts, and left the Engineer-in-Chief to come to a decision.
232. *Mr. McCourt.*] Did you explore the country between Guyra and the coast? No; but I explored the country between Tenterfield and the coast, and from a little north of Glen Innes to the coast.
233. I suppose you are aware Messrs. Scarr and Price have explored the country? Yes; I recollect reading their report.
234. They recommend that the connection should be made with Guyra? Yes, they do.
235. If that connection were made, you would be in favour of connecting Inverell with Guyra under any circumstances? Yes.
236. *Mr. Wall.*] It is only on the assumption that the traffic from Inverell will come to Sydney that you prefer the Guyra line? Yes.
237. If it went *via* Glen Innes north, you would prefer a connection with Glen Innes? Yes.
238. Is it not a fact that the Guyra connection joins the main line at an acute angle, and that it would deprive that line of a portion of its legitimate traffic for probably 30 miles? I do not think it would affect it so much as that.
239. In constructing feeders to main trunk lines is it not preferable to take them away at right angles? Very much preferable.
240. The Glen Innes connection would start from the main line at right angles? Yes, it would.
241. *Mr. Neild.*] To what extent did you carry out your survey between Guyra and Inverell? I merely examined and reported on the line. I rode through the country and examined it carefully.
242. You did not do more than travel over the ground? I travelled over the ground, and I worked out a table showing what I thought the gradients would be, and I also made a rough estimate of the quantities.
243. The route marked "trial survey" on the plan is the route you travelled? I think so.
244. Would your inspection be deemed a trial survey? No, it would not.
245. Something has been done subsequently? Yes.
246. Do you know by whom? No, I do not. It was since I left the Department.
247. Did you make a similar tour through the country which you afterwards carefully surveyed, between Glen Innes and Inverell? No, I did not; I was instructed to run the shortest line I could get compatible with a 1 in 40 grade between Glen Innes and Inverell.
248. You complied with instructions from headquarters rather than exercised your intelligence and engineering skill in designing that line? Oh, yes; we were not allowed any intelligence then. Those were the old times.
249. You are aware that there have been several surveys made between Glen Innes and Inverell? Yes.
250. The line you worked out has since been lengthened, and the grade is reduced? Yes; I understand that it has been lengthened 9 miles.
251. Had you been allowed a free hand, you could have done all that in the first instance? Yes, I could have; our orders were quite imperative. We were told to get 1 in 40 grades with the shortest possible line, and we had to carry out our instructions.
252. Will you point out on the map the line which you surveyed between Glen Innes and Inverell? Yes; it is the route shown by a black line, and marked "permanent survey."
253. Did you make any of the other surveys? No; I examined the route shown by a red line after it was surveyed, and reported against it.
254. You see the route shown by a brown line at the top of the map;—had you anything to do with that? No, I had not; but I examined the whole of the country very thoroughly.

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255. You see the route shown by a puce-coloured line, and marked "line now proposed";—that is the deviation from your survey? Well, it is rather a big deviation.
256. It is an entirely new line? Yes.
257. It only touches your line twice in crossing it? Yes.
258. The work done by you is not under consideration at the present time? I suppose my survey settled the point as to which was the best line for a 1 in 40 grade, but when they altered the grade to 1 in 60 they had to take the line elsewhere.
259. From your knowledge of the country between Guyra and Inverell, and Glen Innes and Inverell, you are of opinion that a line giving a grade of 1 in 50 can be obtained with the least expense between Guyra and Inverell? I do not know that it could be got at less cost. What I look at is this, that if you are not going to the coast or to Queensland, you save haulage by connecting with Guyra. I should certainly say that the Guyra line would probably work out as cheaply as the route coloured puce.
260. Have you been considering the various proposed routes from a commercial standpoint—as to where the produce of Inverell is to find its market? Yes.
261. Have you any knowledge of the country between Inverell and Emmaville? Yes; I went partly through from there to Ranger's Valley, and I made it a point to examine the whole country.
262. Are you of opinion that a railway line could be constructed for a not very great expense between Inverell and Ranger's Valley? Yes.
263. There are no difficulties between Ranger's Valley and Deepwater? No; but approaching Ranger's Valley from Inverell there are some ranges which would require careful work.
264. You are aware that Parliament has sanctioned the construction of a private tramway on the standard gauge from Deepwater to Mount Galena, a place somewhat to the westward of Emmaville? Yes.
265. From your knowledge of the country, are you of opinion that it would not be a difficult or expensive thing to construct a line from Inverell to meet that tramway? I should not like to say that off-hand. It is a big order.
266. Could you express any opinion on the point? From what I saw of the district, I thought that the general contour of the country lent itself to railway construction. I did not see any difficulties then, but little things often crop up when you are making a close examination.
267. If a railway connection were to be made between Tenterfield and the coast, I suppose a connection with Deepwater would be very much more advantageous to the people of Inverell than a connection with Glen Innes, because it would so much reduce the haulage? It would reduce the haulage, but it would increase the length of line to be constructed.
268. You would be taking a diagonal line instead of a line at right angles? Yes. I once proposed to Mr. Palmer to make that survey; I thought it was a logical thing to do, if you were going to start from Tenterfield.
269. You said just now that in your opinion the coastal connection would have to be sought *via* Tenterfield? Of course I do not know anything about the new route *via* Armidale; but as far as I know, I do not think there can be any question as to the Tenterfield connection being the best.
270. Had you anything to do with the survey between Glen Innes and South Grafton? I went up with the view to doing part of that survey, but it struck me as such a waste of time, that I obtained permission to go and do the line from Tenterfield. I went over the line, but the country seemed so impracticable, and such a horrible wilderness, that I got permission to go and spend my time, and the services of my men, on work that might be useful some day.
271. You looked upon a connection between Glen Innes and South Grafton as out of the question, because of the engineering difficulties, and the poverty of the country? Yes; it is a miserable country.
272. To your mind a connection between Inverell, Glen Innes, and South Grafton is out of the question? Quite.
273. Therefore it would be wise for the Inverell line to be discussed in view of a possible connection with the coast, either at Guyra or at Tenterfield? I have no doubt of it.
274. Have you any recent knowledge of the course of commerce in local produce in New England? No, not very recent.
275. Have you any knowledge of the country west of Inverell? Yes; I went through to near Moree, just for information.
276. Do you consider that railway construction beyond Inverell would be expensive? Oh, no.
277. You get into plain country there? It is very little good making the Inverell line unless you are going further on.
278. In your opinion, when the line is extended beyond Inverell should it be taken north or west? Moree is about the point to which I think it should go. Then you follow the head waters of the Gwydir, and get on to very good land where there is plenty of water that would do for irrigation settlements.
279. You are aware that it is proposed to make a connection with Moree from Narrabri? Yes.
280. Which would be the more expensive—a line from Narrabri to Moree or from Inverell to Moree? I could not tell you that.
281. Could timber for sleepers be obtained on the line from Guyra to Inverell or from Glen Innes to Inverell? Yes. The best timber is on the Guyra route. There are large clumps of ironbark all along that line.
282. Sleepers could be obtained almost on the line? Yes, I should think so; but it is eight or nine years since I was there, and they may have been slaughtering the timber since then.
283. Would the same remarks apply to the Glen Innes route? That land is much better improved there and has been ringbarked.
284. Which line would offer the greater advantages for obtaining ballast? I suppose the Guyra line. It goes through country that would probably give ballast readily. I reported that ballast is procurable at several points on that line.
285. In a general way, and on engineering grounds, you advocate a connection between Inverell and Guyra in preference to a connection between the former place and any point on the railway further north? Yes, only on those grounds.
286. For the purpose of a connection with the coast, you consider it an open question whether Guyra or Tenterfield should be the point of departure? Though I have not been over the route from Guyra to the

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the coast, I shall be very much surprised if it is found to be as good as the route from Tenterfield to the coast. The line from Tenterfield would complete the Byron Bay system.
287. *Mr. Collins.*] Why do you prefer a connection with the coast from Tenterfield? I only had an opportunity of comparing that line with the line from Glen Innes to Grafton, which is a wretched one.
288. You think that the cost of a line from Tenterfield to the coast would be less than the cost of a line from Grafton? I have no doubt of it.
289. What sort of country is it? For the first 15 miles it is good table-land country, and then you get into rough mineral country. After that you come to Tabulam, and the valley of the Clarence, which is lovely country. I have not seen anything better since I left the district. There are, I suppose, about 25 miles of poor country altogether *en route*.
290. Do you know if that country is in the hands of the State, or if it is owned by private individuals? In my time the river frontages were in the hands of private people, but a great deal of the land was in the hands of the State, though I expect that it has been snapped up since.
291. Do you know anything of the country between Guyra and the coast—the Don Dorrigo Scrub? That is near Grafton. I have been from Grafton a little way south, towards Armidale.
292. Is it good country on the Orara River? Magnificent country.
293. If the country between Guyra and the coast were in the hands of the State, and the country between Tenterfield and the coast in the hands of private people, which line would you recommend? I should always recommend the construction of railways through land owned by the State if the people could be induced to go on to that land.
294. Evidence has been given that this is splendid country? I have heard that.
295. Would you advocate the construction of that line? It all depends.
296. That is if it could be constructed as cheaply as a line from Tenterfield? I must say that I have always been opposed to a railway to Grafton, where you come down to a river where there is only about 8 feet of water. A railway should go to the Heads, to places like Coff's Harbour, or elsewhere.
297. If a North Coast Line were constructed from the Hunter, the Guyra line would meet it? Yes.
298. In that case would you favour the construction of the Guyra line? As against the Tenterfield line?
299. Yes? Well, there are a lot of "ifs" in the question. You have to go over the ground to see if people would settle there.
300. We are told that the land is equal to that in the Richmond River Scrub? In that case I think I would construct both lines. If a line goes through country which can be settled, I think its construction is justifiable.
301. Seeing that the land between Glen Innes and Inverell has all been taken up, would you advocate the construction of a line from Guyra to Inverell? Unless the people who hold land between Glen Innes and Inverell are prepared to give up some of it, I should not give them a line at all.
302. *Mr. Ewing.*] Do you think the betterment principle ought to be applied here? I think there is a good deal of difficulty about it. I think the better plan is to have a sliding scale of rates. If you commence with the betterment principle, you have to apply it to towns and everything else.
303. You said a little while ago that the land between Guyra and Inverell is in the hands of the State? It was in my time.
304. Why? Because it undoubtedly was not as good as the country between Glen Innes and Inverell.
305. In point of fact, it was not worth taking up? Well, it is a hard thing to say. There are so many reasons that influence people in taking up land. That land was heavily timbered and a great deal of it was very spuey country. I daresay a good deal of the country has been taken up by the squatters.
306. You spoke about there being good ironbark there; what does the presence of ironbark in New England prove? Poor ridges. But still there are beautiful flats and deposits.
307. You say that the survey shown on the map by a black line could be improved? Do you mean without making it 9 miles longer?
308. Yes? Yes, I should think so.
309. Do you think that is the cheapest route for connecting Glen Innes with Inverell? I think it is a serious thing to lengthen a line by 9 miles, and so tax the people with extra haulage for ever.
310. Do you think you could get a 1 in 50 grade on that line? By making it 2 to 3 miles longer.
311. It would then be 7 miles shorter than the departmental line? I have been examining the sections this morning, and I think that that would be the result.
312. In that case the Department are expending about £56,000 more than they ought to? Though that line might be longer it might be cheaper, but to add 20 per cent. to the length of a line you must reduce the cost very considerably.
313. Do you think that if the line surveyed by you were adopted the distance to Inverell would be 7 miles less? Yes, I think so; if the survey were worked out thoroughly.
314. You cannot express an opinion with regard to the cost of the line? No, but I see my way to cheapen it a good deal.
315. Could you get a line from Glen Innes to Inverell under £8,000 a mile? I should feel inclined to say so. I have been employed a good deal lately upon railways in which I have been a considerable shareholder, and it is wonderful how that makes you cut down things. I should not like to be positive about this line, but £8,000 a mile seems to me to be a pretty big amount.
316. You are aware that at Guyra you are practically at the highest point on the northern line? Yes.
317. You are practically up the hill when you get to Guyra? Yes.
318. To a person going to Queensland or to the coast the right line would be the most direct one? I have always been in favour of the shortest line.
319. You think there is no doubt that produce from this district will eventually go to the coast rather than to Newcastle? I have no doubt of it.
320. Though a line from Inverell to Guyra may at present be the most direct it will not be the best in the ultimate interests of the country? I have been saying all through that the answer to that question hinges upon your determination with regard to a coastal connection.
321. It would be narrow-minded to make a railway which would only be the most useful for a few years? Yes.
322. What is your object in getting to the coast? To secure the shortest means of transit for produce grown in New England, and an interchange of commodities.

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323. Is there any other reason? To bring up what is produced on the coast. It would give a shorter transit for the return produce.
324. You want to get to a port? Yes; of course you want to get to a port. You could not exchange commodities unless you got to a port.
325. The question of the best port on the coast has also to be considered? Yes; that is important.
326. Do you think that the northern rivers are likely to make good ports? No; those I am familiar with would make very bad ports.
327. Which are you familiar with? The Clarence, at Grafton, and the Richmond.
328. You think we cannot look there for a port? You might look to the Clarence Heads for a port; but not to Grafton.
329. *Mr. O'Sullivan.*] At first you seemed to entirely favour the Guyra route; but having answered the questions put to you by Mr. Ewing and other members of the Committee about the desirability of giving access to a port, are you still of opinion that Guyra should be the point of connection with Inverell? If you ask me to give evidence on this matter, having in view the possibility of a connection with the coast, I say that if you are not going to the coast *via* Tenterfield you should make the line from Inverell to Guyra, and if you are going to the coast *via* Tenterfield you should make it from Inverell to Glen Innes, or at some point north of Glen Innes.
330. It is probable that there will be a connection with the coast at some later date;—that being so, should we choose the Guyra route? One member of the Committee has said that there has been a very good line found from Guyra, *via* Armidale, to Grafton.
331. Of course you know that that is a very much longer line? I do not; but if it is very much longer the length must be almost a fatal objection. If you are going from Tenterfield to the coast you must make the railway from Inverell to Glen Innes, or some point north of Glen Innes.
332. Since Glen Innes is the central point between the Queensland Border and Guyra would it not be safer and better to make the connection there? As a compromise? It seems a pity that you do not make up your mind regarding the coast junction before you commit yourselves.
333. *Mr. Humphery.*] The cost of your line was estimated, I believe, at nearly £12,000 a mile? It was.
334. I think that that was the amount voted for it by the Assembly? I believe it was.
335. Are you aware that the reduced cost of the proposed line is about £8,000 per mile? So I understand.
336. Although the difference in length will be about 9 miles? Yes. I think, however, that without deviating materially from the route shown by the black line its cost can be very largely reduced. At the time the survey was made the policy was to hurry on the railway engineer and surveyor so that he had not time to do anything. It was absurd to expect work involving such a large outlay to be done with that care with which it ought to have been done.
337. Is it your experience that the cost of construction usually exceeded rather than came under the estimated cost? Yes.
338. Why do you think that if the route shown by the black line were permanently staked it would be found to cost less? A great deal of that line is on sideling ground. Having staked a line along sideling ground you plot it, and you can then see how you can alter it by shifting it up or down the hill. By making a slight change you may save thousands of pounds, but it would take days or perhaps weeks to go through the work in that way, and we were not allowed the time.
339. Where would the deviation in your line take place which would give you a grade of 1 in 50? I have looked through the sections and have made some notes as to where the deviations might be made. Of course I am speaking from a recollection of eight years ago, and there is some little difficulty in remembering exactly where it was. But I have no doubt that by adding 2½ miles to the length of the line, you could knock out all the 1 in 40 gradients and adopt gradients of 1 in 50.
340. I suppose you have not made any estimate of the cost of the line with gradients of 1 in 50? No. I am surprised to hear that a 1 in 50 grade would cost £12,000 a mile.
341. It might not cost that at the present time, but when the line was submitted to Parliament the estimated cost was very nearly that? That line was graded by Mr. Palmer, and in looking through it to-day I feel sure that Mr. Deane or Mr. Burge could re-grade it and knock out thousands of pounds worth of earthworks, making the grade as good as they wanted it.
342. Would it be possible, perhaps, by increasing the length by 2 or 3 miles, to get a grade of 1 in 60 upon your line? I do not think so. I have carefully examined the sections to-day, and I think that probably 1 in 50 would be the ruling grade.
343. We may take it that the only surveyed line between Glen Innes and Inverell which would give a grade of 1 in 60 is that now under consideration? Yes, apparently.
344. Can you speak positively as to the instructions issued by the Railway Department in making surveys for railways. You say that as long as you have got a grade of 1 in 40 you could be satisfied? Quite so. No instructions were ever given in writing—they were always verbal. That was before Mr. Deane's day.
345. Was it understood that so long as you could report a grade of 1 in 40 you were never to go out of your way in order to get a better grade? Quite so. A grade of 1 in 40 was looked upon as the fair requirement. I do not say that we were not to look for a better grade if the line were not lengthened, but we had to take a short line with a grade of 1 in 40 in preference to a longer line with a better grade.
346. Even though the longer line would not cost so much? Yes; shortness was the great desideratum.
347. I think you said that the land between Glen Innes and Inverell was superior to that between Guyra and Inverell? Yes, it is beautiful land.
348. That being the case, and seeing that we have not under consideration a connection with the coast, would you recommend a line from Glen Innes to Inverell in preference to a line from Guyra to Inverell? No, I would not, although the land is better.
349. You recommend the line from Guyra to Inverell because the distance to Sydney would be shorter, and the haulage would not be so severe? Quite so.
350. Those are the two grounds? Those are the chief grounds.
351. In what way would the occupants of land between Glen Innes and Inverell take advantage of the railway? I am very doubtful if they will take advantage of the railway. The land is in the hands of people who, from my personal knowledge, are not likely to alienate it.

352.

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352. Your opinion is that the owners of land between Glen Innes and Inverell have no intention of cutting up their holdings? When I was there they certainly had not the slightest intention of doing so. In two or three years you can pick up a lot of the local feeling.
353. And so far as you have heard, they do not now wish to alienate the land? Yes.
354. Do you think that before the line is made the owners of that land should be charged with a part of its cost? Yes, by increasing the rates; I might say that I have not seen land on other lines which have been constructed cut up as it was anticipated it would be cut up.
355. Leaving out the connection with the coast, and assuming that there was some legislation compelling the owners of this land to pay a portion of the cost of the railway from Glen Innes to Inverell, would you still be in favour of the construction of the line from Guyra to Inverell? I should stick to the Guyra line.
356. Except in view of a possible connection with the coast? Yes. If you are going to connect with the coast at Tenterfield you must go to Glen Innes, or some point north of Glen Innes.
357. *Mr. Hoskins.*] Did you notice when you were making your trial survey between Inverell and Guyra, whether, excluding the Tingha tin-fields, there were many settlers along the route? There were very few.
358. Between Guyra and Tingha, and Tingha and Inverell? Very few.
359. *Chairman.*] Is there anything else that you desire to state that we have not yet touched upon? I do not think so, except that I think that if the people between Glen Innes and Inverell want a railway, and the line is found not to pay, they should pay a higher rate until it did pay.
360. *Mr. Neild.*] When you referred to the old system that obtained of hurried or short surveys, up to what date was the system in vogue in the Department? Certainly up to the time of my leaving, which, I think, was in 1886 or 1887.
361. *Mr. Wall.*] Did you make any report to the Department after surveying these lines? Yes.
362. Did you report in favour of the Guyra line? No; I did not. We were not asked to give any opinion at all. The engineers merely stated the bald facts.

John McMasters, Esq., grazier, sworn, and examined:—

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363. *Chairman.*] You are a resident of the Inverell district? I do not reside there just now, but I have been resident there. I lived in the district for thirty years.
364. What are we to understand by the district? Glen Innes itself.
365. What was your occupation? I was a grazier.
366. You are not engaged in that occupation now? Yes.
367. Where is your holding situated? I am now living near Warialda, about 90 miles west of Glen Innes.
368. As an old resident of the Glen Innes-Inverell district, can you tell the Committee the opinion of the people there as to whether Inverell should be connected with Glen Innes or with Guyra? What they desire is that Glen Innes and Inverell should be connected.
369. Where do you find your market now—where do you tap the line with your produce? I send my produce—principally wool—to Tamworth and Glen Innes.
370. But most to Tamworth? According to the carriage. If I send it *via* Glen Innes I can get it to Sydney a week earlier.
371. If the line were constructed from Inverell to Guyra would not that save you some haulage? No, the road is not so good.
372. But it would have to go to Inverell now, so that the road from Inverell would not matter? The carriers would not go to Guyra, whereas they do go to Glen Innes.
373. But supposing the railway were constructed from Inverell to Guyra, would that not save you a certain amount of carriage on the main line? Yes, certainly.
374. The reason why you do not save that main line carriage now is that the road between Inverell and Guyra is not so good as that between Inverell and Glen Innes? Yes.
375. If the road between Inverell and Guyra were as good as that between Inverell and Glen Innes would you send your loading to Guyra instead of to Glen Innes? I would send it the nearest way to market—the cheapest way.
376. Do you think that the people of Inverell would prefer a railway to Glen Innes or a railway to Guyra? I have always advocated, and I believe the principal people of Inverell advocate, a line from Inverell to Glen Innes. I should prefer that line myself.
377. Would it serve the greater number of people? Certainly.
378. And it passes through better country? Yes, through better country.
379. Do the people of Inverell attach much importance to a possible market north of Glen Innes? I do not know. I think the people of Glen Innes are quite as anxious for a railway to Inverell as the people of Inverell are for a railway to Glen Innes, so that they may get an outlet for their produce to the west.
380. Do the people of Inverell anticipate a market north of Glen Innes. Is that one of their reasons for desiring a connection with Glen Innes? I believe they do.
381. Do you believe that that anticipation is well founded? Yes, because I know that if I had any produce and sent it in through Glen Innes, it would be consumed before it got to Tamworth.
382. Do you think there is a market in the northern part of this Colony, and the southern part of Queensland, for anything produced there? I think the present production is pretty well consumed in the district surrounding Glen Innes.
383. Do you think there is likely to be a market for surplus products in southern Queensland? It just depends upon whether there is any import duty levied in Queensland. There would be a great consumption in the district between Emmaville and Grafton. At present the millers buy up all the wheat grown in the district.
384. *Mr. Davies.*] As an old resident of the district, and one who has a large interest in the neighbourhood of Inverell, if the railway were constructed from Glen Innes to Inverell, would you send your wool along it to Sydney? Yes. I am sending it now by teams through Glen Innes.
385. Supposing the line were constructed from Inverell to Guyra, would the distance, so far as you are concerned, be much reduced? Yes.
386. You would prefer to go the shorter way? Certainly.

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387. Thirty-six miles would be a matter of some concern? My wool would be but a small item. I would have other advantages if the railway went to Glen Innes; because I could get potatoes, chaff, and other produce from Glen Innes in return.
388. You could not get that produce at Guyra? Well, there are no inhabitants there, whereas there is a farming population at Glen Innes.
389. Are not very large crops grown at Guyra? They are grown about Ben Lomond; but that is some distance twards Glen Innes.
390. If a connection with the main line were made at Guyra, would not that serve your district very much better than a connection with Glen Innes? There is no doubt that we should take advantage of the shortest route.
391. Would not 37 miles make a considerable difference to you? I suppose it would make a difference.
392. Would you construct 37 miles more than was necessary to enable you to reach your nearest market if a suitable route could be obtained? I should go the shortest way, no doubt, and probably be equally well served.
393. The only argument you seem to use in favour of taking the line to Glen Innes is that you would in that way have an interchange of commodities? Yes; there is a larger settled district there. We send fat sheep to Glen Innes. There is a great consumption there. There would also be a direct communication with the coast, and fat sheep would be sent there.
394. Do you send many sheep to the coast now? I send them to South Grafton, through the agents.
395. How many have you sent during the last five years? I could not tell you; I sell them to the agents at Inverell.
396. About how many? I could not give you any idea. I have sent 1,000 at a time. When I lived at Glen Innes, I sent 1,200 in a flock.
397. How many have you sent in the five years? I have not sent any direct; I sell to the agents.
398. Do you know any one who has sent any large number of sheep to South Grafton during the last five years? Yes.
399. Who? They go through the agents at Inverell—Mr. John Sinclair is one of them. Sheep go regularly from my part of the district to Grafton.
400. Do you know how many go? I should say 500 or 600 a week. I have sent thousands to Grafton to boil down some years ago.
401. Just to supply the butchers? Yes; and there are dry seasons when we send lean stock to Glen Innes.
402. But you have not done that for the last three years? No; but we had to do it before that time.
403. Supposing the railway were constructed from Glen Innes to Inverell, what additional trade would be developed to pay for its construction? I think myself, from what I know of the country, and of the way in which wool is sent to Glen Innes now, there would be 11,000 or 12,000 bales of wool sent, together with return loading in the way of salt, and other stores, and produce of all kinds.
404. The trade would be increased? Yes.
405. To the extent of 12,000 bales a year? Yes.
406. Where would that come from? From Taluna, Yallaroi, Bogamundi, Welltown, and other places.
407. Where does the wool from those places go at present? A lot of it is taken by teams to Glen Innes.
408. Does not the whole of it go there? Some of it goes to Narrabri and some goes through Bingara to Tamworth.
409. Would not the wool still go to Narrabri, because that place would be nearer than Inverell? No; it goes to Glen Innes now from the stations I have mentioned. Taluna is about the extreme end, and yet a great quantity of that wool goes to Glen Innes. The Yallaroi teams pass my place daily in the wool season. A very small part of the wool has gone to Tamworth. They take back loading, although the trade is very dull in some parts of the year.
410. After the wool had been carried, what would the railway be used for? For the conveyance of produce and stock.
411. Does much fat stock come from that district by rail? Yes; that would be the direct route to Tenterfield or Grafton for fat sheep.
412. Does very much stock or fat sheep go to Grafton now? Yes; any number.
413. There is only a small population at Grafton and on the whole of the Clarence? Yes, but stock is also consumed in Glen Innes. A great deal is consumed there. Sheep come there from Queensland.
414. Are not the people in the Glen Innes district producers of stock? Not of fat stock generally. There is only one season of the year when they can get anything fat in Glen Innes.
415. They have to depend on Inverell? Yes; and very often stock is brought by rail from the Liverpool Plains.
416. You favour the construction of a line from Inverell to Glen Innes in preference to a line from Guyra to Inverell? Yes; I would rather be at the expense of sending my wool to Glen Innes than to Guyra, considering all the circumstances.
417. You would rather have 37 miles of additional haulage and go through Glen Innes? Yes.
418. *Mr. Trickett.*] Do you know the country between Inverell and Glen Innes? Yes.
419. Is it better or worse than that between Guyra and Inverell? There is no comparison between the two. This is magnificent box country; the other is a green swamp with tolerable timber on it, but nothing else.
420. Do you think the landowners would be likely to part with their land if a line were made from Glen Innes to Inverell? Yes, with the present returns from wool it would be an advantage to get a little advance per acre for agricultural land.
421. It would be better to use the land for farms than for sheep runs? No doubt.
422. Has not the complaint of the Inverell people for years past been that the place has stagnated, because there has been no market for its crops? Yes; I have been under that disadvantage myself. I reaped thousands of bushels of wheat year after year until at last I would not grow any more. That was before the railway came to Glen Innes.
423. What had you to pay a ton for carriage? We never attempted to move it. We fed horses on it at 3s. a bushel—mail horses, and so on.
424. Could you tell us the number of sheep running within 30 or 40 miles of Inverell? I could not give you the number, but the sheep country is continuous west of Inverell.
425. Would the people there be benefited by the railway? Yes.

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426. Do you know anything about the Tingha tin-fields? I have been through there.
427. Is it a progressive place now? It is almost quite deserted.
428. Then there is very little to be got by taking the line from Guyra? Yes, the land is so scrubby that it would be an enormous expense to clear it, and the good patches are only in small areas on which you could keep a family, but nothing more.
429. You have no property on either route? No.
430. But as an old resident you think the best way would be to go to Glen Innes? Yes; I believe that that would be the best and easiest route that could be got.
431. Do you think there would be any passenger traffic? I often travel now, and everyone else would use the railway instead of going by coach to Bingera.
432. *Mr. McCourt.*] If the railway were constructed to Inverell what would be the chief heavy produce taken over the line—wool, potatoes? Produce and stock.
433. There would be as much of one thing as of another? Yes, wheat would also go.
434. There would be a very large wheat traffic? Yes.
435. Do you know what it is estimated at? No; I never made out any estimate. I suppose that more wheat has been cultivated at Inverell this year than ever before, but it was unsaleable for want of means of carriage in previous years.
436. Are you aware that the Commissioners state that if all the wheat supposed to be grown in the Inverell district were carried over the line it would only produce a revenue of about £200 a year? They limit the quantity to what is now grown.
437. Supposing the reduction were doubled the revenue would only be £400? Well, you have no idea of the area that would be suitable for wheat growing out there.
438. *Mr. Dawson.*] How much could it be increased? Five-fold at the very least.
439. Would more stock be fattened? I could not say, but I think that they could fatten stock out beyond the agricultural area. You could not cultivate the land and keep stock on it, too. The cultivation of the land would reduce the number of stock.
440. If you only grew £1,000 worth of wheat you could hardly expect a railway to be constructed to carry it. Would you grow anything else? Stock would come from further out.
441. The production of wool would not be increased? No, I do not suppose it would.
442. You have vineyards there? Yes.
443. Is there much fruit grown there? A great deal. I have a large vineyard there myself.
444. Is there likely to be any large traffic in wine or fruit? I cannot say. At present there is none.
445. *Mr. Collins.*] If a line were constructed from Narrabri to Moree, where would your wool go to? The nearest way to market would be Glen Innes.
446. Seeing that a line could be constructed at a cheaper rate from Narrabri to Moree, it is possible that the carriage from there would be cheaper than from Inverell, and the people out west would therefore send their produce that way? It is quite possible that wool would go that way.
447. None of the wool grown on the plains would go to Inverell? I do not know that much of it would.
448. Consequently it would not benefit the proposed line? No.
449. Are you aware that produce is carried on the railways at a loss? I am not aware of that.
450. If you knew that a railway carried produce at a loss would you advise its construction? Where?
451. Anywhere? I could not afford it.
452. The produce on the proposed line would be carried at a loss, while the wool produced in the district would go by the Narrabri line? A good deal of it would. The wool would be divided.
453. Most of it would go that way—from Taluna and most of the big stations? Undoubtedly.
454. Therefore not much would go from Inverell? No. We could not take produce from Moree.
455. *Mr. O'Sullivan.*] Is much stock driven in from west of Inverell to the mountain country about Glen Innes in dry seasons? Yes. At one time I had a station near Glen Innes and another out west, and I had to be continually travelling with my stock.
456. They are brought in in the dry seasons in order to obtain grass and water for them? Yes.
457. Do you think that they would add to the railway returns? No doubt they would.
458. If it has been stated that the estimated stock traffic is 80,000 sheep a year, would that be anything near the mark? Yes, I believe it would. There would be far more fat stock going that way. I do not think there are 80,000 going now.
459. If the railway were made from Inverell to Glen Innes do you think it probable that 80,000 sheep would travel on it? I think that is a very reasonable number. I think that there would probably be more if the railway were made.
460. Some of the wool you referred to comes in from a very long distance—right in from the Queensland border at Goondiwindi? Yes, and up by Wallangra?
461. That comes into Glen Innes by team? Yes.
462. Does it go on from Glen Innes to Grafton? I could not say. I know that some of the wool has gone there and still goes there occasionally.
463. From what you know of the landowners between Inverell and Glen Innes do you think they would be likely to cut up their land if the railway were taken through it? I think so.
464. Do you know them personally? Yes.
465. Have you ever heard that they would be inclined to follow that course? I have heard that Mr. Arthur, of King's Plains, through which the longest stretch of the railway passes, has offered to give his land at a very small price, and would offer every inducement to the construction of the line.
466. Would it be more to the interest of the graziers at the back to have the line *via* Glen Innes or *via* Guyra? So far as the wool is concerned the Guyra route would be the shorter, but the main traffic will be sent by the farmers as return loading from Glen Innes.
467. The interests of the people of Inverell are more connected with Glen Innes than with Guyra? Yes.
468. There is a natural traffic now between those points? A very large traffic.
469. Most of the residents of the Inverell district who desire to go to Sydney go by way of Glen Innes? No doubt they do.
470. Does not that point to the fact that Glen Innes is the natural point of connection with Inverell? Yes.

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471. *Mr. Humphery.*] You spoke of the Taluna wool going through Glen Innes;—does it not sometimes go through Narrabri? I never heard of it.
472. Is not the station as near to Narrabri as Glen Innes? I could not say.
473. Is not Taluna close to Warialda? It is over 100 miles from Inverell.
474. Do you think that that wool would go through Glen Innes if the railway were constructed to Moree? No; I think it would be divided.
475. Do you think that much of the wool that now goes through Glen Innes would be diverted to the Narrabri line if an extension were made to Moree? Yes; a portion would be diverted to Moree.
476. That would considerably lessen the Glen Innes traffic? Yes.
477. How long is it since you have been over the country between Guyra and Inverell? About a year, I think.
478. Can you say if there was much timber on it then? I made a cut across country. The best of the timber has been taken off. A good deal of it has been used by the miners.
479. That is timber for railway purposes? I did not see any such timber left? I do not think there is any such timber now between Guyra and Inverell.
480. So far as the timber is concerned the two routes would be in the same condition? You could not calculate on getting timber.
481. *Mr. Hoskins.*] Mr. O'Sullivan asked you whether the stations about Goondiwindi and the southern parts of Queensland did not send their loading to Glen Innes;—is it not a fact that if the railway were extended from Narrabri to Moree that district would be nearer to Moree, and have a much better way of sending its produce? I do not know if it would. The country all down the Macintyre is a long way from Moree.
482. How far is Callandoon from Moree? I could not tell you; but I think that wool would still go into Queensland. I have not heard of any of it coming this side.
483. Do you think that a lot of the wool in places north of Inverell and north-west of Moree would not be sent to Moree, but to Inverell, which is further off? Yes.
484. Why? Because there is a different kind of country to travel over. The low flat land holds water when it is wet, but directly the dry weather comes there is no water at all. On the hills, however, there is both pasture and water.
485. Then this is not flat country about Inverell? No; undulating country.
486. Black soil? No; red ridges mixed with black.
487. It is country which cuts up a good deal in wet weather? It cuts up, but it soon dries again. It is is not like the black soil country.
488. Is it not a fact that the best market for the Inverell produce is to the north and west? Yes, there is a market that side for the whole of the produce, instead of its coming this way.
489. If the railway were constructed, do you not think that the market to the north and west, of which they have at present almost a monopoly, would still be used by the people of Inverell, instead of sending their wheat to Sydney to compete with that grown at Armidale, Tamworth, and other places? Yes, no doubt.
490. The greater part of the produce of the district, instead of being sent by railway, would be sent by teams to the northern district of which you speak? A great deal of it would.
491. Did you ever hear of maize grown in Queensland being sold in Inverell? Yes.
492. Why? It comes by rail to Glen Innes as return loading at a reduced rate.
493. If the Inverell district is a good agricultural district—and I know it to be so, because I have been there—and maize can be grown extensively if the people are disposed to grow it;—how do you account for Queensland maize being sold there when there are about 50 miles of road carriage from Glen Innes? I cannot account for it, because I know that maize grown there was sold at 2s. a bushel this year, and that it has been up to 5s.
494. Still you know it to be a fact that Queensland maize has been sold there? I know it to be a fact.
495. *Mr. Dawson.*] What is the value of land per acre between Glen Innes and Inverell? I do not think it is above 25s.
496. If the railway were constructed what would it be worth? Perhaps 30s.
497. Have you got any land on the line? Not an acre. I sold a small estate near Glen Innes some years ago, and I got 25s. an acre for it.
498. What is the Guyra land worth? It is not land at all;—there is no comparison.
499. I suppose if a man got it for nothing he could not get a living on it? Right.
500. *Mr. Hoskins.*] Do you know that evidence has been given before this Committee by people owning land between Glen Innes and Inverell to the effect that they expect that if the line is constructed they will be able to lease their land at 10s. an acre, the lessees clearing it, and that they are prepared to sell it at from £4 to £7 an acre? There is as much land to the north and west of Inverell as would swamp the whole of that land for agriculture.
501. *Mr. Davies.*] Do you know of anyone along the line of railway who is prepared to sell his land for 25s. an acre? Mr. Arthur will sell all the land required for the railway at £1 an acre.
502. But for what would he sell it to a private individual;—is any land available at 25s. an acre? No. I do not think that these gentlemen would like to reduce their estates while they are growing sheep, but I think they would sell right out at 35s. an acre.
503. Do you think that Mr. Sinclair, or Mr. Arthur, or Mr. Anderson, would sell their estates at 25s. an acre? No; I believe they would take from 35s. to 40s. an acre for the whole estate.
504. You stated before that they would sell their land for 25s. an acre. Now you say that they would require 35s. or 40s. an acre? Yes, for the whole estate, improvements included.
505. Do you think it is possible that anyone would purchase the land for that price? I do not think they would break up their estates unless in the vicinity of a railway.
506. Are you of opinion that the construction of a line of railway through their properties would greatly add to their value? I do not think it would make much difference. There is too much other land available.
507. It would not give additional value to those properties? Not to the extent people suppose.
508. It would not make the land worth £5 an acre? Not at all. There is no land there that would be worth £5 an acre at any time.

509.

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509. Do you know whether the present proprietors would be prepared to give the land required for the railway? I think there is a feeling in that direction with some of them, though some of them do not care whether the line goes through their property or not. Those who wish to have the line through their property I think would be prepared to do something in the direction you suggest.
510. If you were a landowner, would you be prepared to give your land? I should. I might mention that the whole of the King's Plains Station is for sale at 30s. an acre, and that the railway goes through that land to two-thirds of its length.
511. *Chairman.*] Are you sure that the railway goes through King's Plains;—do you not know that the line which we are considering is that shown by a puce-coloured line on the map? I was referring to Mr. Hogg's line.
512. The line before the Committee would not touch Mr. Arthur's station at all? No.

John Harper, Esq., Goods Superintendent, Department of Railways, sworn, and examined:—

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513. *Mr. Trickett.*] Mr. Barling, on being examined before the Committee the other day, stated that a fresh lot of statistics had been submitted to the Department showing the total receipts from traffic as £21,805. Have you gone over those statistics? I have analysed them as a matter of figures, not as a matter of fact.
514. With what result? They do not bear out the statement made.
515. Can you tell us in what way;—but will you first tell us who sent in the statistics? They were handed to me by the Chairman. I did not know who sent them in. I was asked to analyse them, and to state whether they would produce the revenue it was said they would produce. I find, however, that under any circumstances, even if we apply local rates to them, they would only produce £15,000. As far as the figures themselves are concerned they are not at all in accordance with the statistics obtained by our Department.
516. When were your statistics obtained? In 1889.
517. These, I suppose, were supplied in 1892? In 1892.
518. Have you any reason to doubt their correctness? I am sorry to say that I have every reason to doubt their correctness. With regard to the quantity of sheep estimated to be carried, we have not carried so many on the northern line between Tamworth and Jennings during the period mentioned.
519. What other discrepancy do you think you have discovered? It is estimated that 1,200 tons of tin-ore would be sent over the line, whereas we have only carried 801 tons of ores of all descriptions on the line from Guyra and Glen Innes. These are audited returns from which I am quoting.
520. Is there anything else? It is estimated that 3,300 tons of wool would be sent along the line, or, roughly speaking, 23,000 bales. But that we have reason to believe is a wrong estimate.
521. Why do you think so? We only carried 11,992 bales of wool from Glen Innes during the period named. The total number of bales carried over the whole of the line from as far as Uralla—between Tenterfield and Uralla—was only 30,000.
522. Would not a great deal of that wool have gone from Guyra? Eleven thousand nine hundred and ninety-two bales went from Glen Innes, and 1,613 bales from Guyra, making in all 13,605 bales.
523. As against their estimate of 23,000 bales? Yes. Allowing six and a half bales to the ton.
524. With regard to the stock carried on the railway, might not that have gone to other places? Taking the whole of the stock carried between Tenterfield and Tamworth, the estimate is not reached.
525. But may not a great deal of it have gone down to the coast? I scarcely think so. This line would not carry it down to the coast. It may be said that some of the stock would go there instead of to Gunnedah, or to Narrabri, but I cannot think that stock-owners would take the risk of carrying their stock 120 or 130 miles further and paying higher rates for it.
526. You said just now that you applied local rates to these figures;—what rates are they? We would start a new mileage altogether from Inverell to Glen Innes, instead of taking the through mileage. Our rates are tapering rates, and if you added to the 422 miles from Sydney to Glen Innes the 53 miles from Glen Innes to Inverell they would come in at the tapering end. That has been the practice with the branch lines hitherto, but on the last two branch lines which have been constructed the Commissioners have applied local rates.
527. Can you tell us the average rate per ton? No; it would vary so much in the different classes.
528. Would it come to 10s. a ton? No; it would not be 10s. a ton. Seven thousand tons of potatoes are estimated at about 5s. a ton.
529. My recollection of the evidence taken before the former Committee is that the people stated that they would be prepared to pay 10s. a ton for carriage between Inverell and Glen Innes? Yes; but we give them more than that. Our estimate is:—

Inward, general goods, 6,000 tons at 3d. per ton per mile, 13s. 4d.	£4,000
Wool, 3,300 tons at 3½d. per ton per mile, 13s. 10d.	1,787
Maize, wheat, and potatoes, 7,000 tons, 5s. 3d.	1,848
Hay, 2,000 tons, 400 trucks, 21s. 6d.	430
Tin-ore, 1,200 tons, 5s. 8d.	340
Miscellaneous, 500 tons at 3d. per ton per mile, 13s. 4d.	334
Sheep, 80,000, 800 trucks at 35s. 4d.	1,412
Cattle, 2,000, 220 trucks at 35s. 4d.	389
Total goods	£10,540
Coaching.—6,000 first-class passengers, 53 miles at 8s. 6d.	£2,550
4,000 second-class passengers, 5s. 6d.	1,100
Mails, at £12	636
Parcels as per estimate	500
Total coaching	£4,786
Grand total	£15,326

530. Do you allow anything for inward traffic? Yes, both inward and outward traffic are calculated. Six thousand tons is the local estimate for it.

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531. How does that amount compare with your former estimate? Three thousand four hundred and eighty-three tons was the estimate at that time.
532. I mean the total? The total estimate was 11,433 tons.
533. But in money. You say that £15,000 is the estimated revenue? Assuming that the local figures are correct and if we apply local rates to them.
534. What was the estimate in 1889? About £8,200, speaking from memory.
535. You do not vouch for the accuracy of the items by which the £15,000 is made up? No.
536. Have you reason to doubt their accuracy? I have from the figures before me. My instructions were to analyse them in the light of our returns.
537. Have the Department obtained any information since 1889 with a view to determining what the present traffic is? No, none.
538. Can you tell us whether the trade to and from Glen Innes station has increased since 1889? It has increased.
539. Much? Not to a very large extent. I may explain that during a portion of 1889 the differential rates were not in operation and our business had fallen off. They were brought into operation during the latter part of 1889, and our receipts have since increased by reason of our increased business.
540. Where does the traffic chiefly come from? It is traffic which before that time went to the Clarence.
541. *Mr. McCourt.*] You are of opinion that the estimate of revenue made in 1889 is practically correct now? Allowing for a small natural increase.
542. I notice that in Mr. Barling's evidence credit is taken for £4,980 probable saving in roads maintenance and increased traffic to main line. I suppose if the other figures are unreliable those figures are unreliable, too? I could not say, and I do not think the Chief Commissioner could tell you what the increased traffic to the main line would come to—no living man could tell you that.
543. Is this the first time in your knowledge when the traffic brought to the main line by a branch line has been estimated? I am not aware of any attempt having been made before to reduce it to figures.
544. The saving in roads is a new item which may or may not be borne out? Decidedly; but I am not in a position to speak about that.
545. *Mr. Wall.*] When you made your estimate of the passenger traffic on a previous occasion what did you base it upon—the population of the district? The population of the district; I compared it with places similarly situated.
546. What did you estimate the population of the district of Glen Innes to be at that time? Six thousand, I think.
547. Did you get your figures from any official document? I obtained them in the district.
548. If the Government Statistician's figures show the population of the district at 8,475, or 2,475 in excess of your estimate, that would make a difference? No doubt the increased population would lead to increased travelling. The only question is how far the district referred to would embrace.
549. In making the estimate, did you fix any number of trips per annum to each individual? I took the population and found out the number of trips made in similar districts where the railways had been carried.
550. If the figures of the Government Statistician were one-third in excess of your figures, you would have to increase your estimate of the passenger revenue by one-third? Yes, certainly.
551. *Mr. Dawson.*] If the passenger traffic were increased one-third, I suppose it would be only fair to make a reasonable increase in the goods traffic? I do not know that that is altered.
552. There would be an increased number to supply? That is, assuming that all these people are adults, but I should imagine that a number of them have since been born in the district.
553. Perhaps your estimate was too small? No; it was obtained from local sources. I have not heard of any immigration into the district.
554. Did you make any investigation with reference to the Guyra line? No.
555. What is the country between Glen Innes and Inverell like? It is very nice country.
556. Is it suitable for agriculture? Yes.
557. *Mr. Collins.*] When you were forming your estimate, did you take into consideration the fact that the railway might be made from Narrabri to Moree? No.
558. Such a line would take a lot of traffic from the Inverell line? Yes. My information referred to the country within a radius of 35 miles of Inverell. An extension of the railway from Narrabri to Moree would affect that district.
559. And would reduce the returns? Yes.
560. *Mr. Ewing.*] You know the Colony very well? I know a little of it.
561. Do you think as good a case could be made out for a railway to Inverell as to any other part? I should not like to say that because I do not know the whole Colony.
562. Do you know where a better case could be made out? I have not been to any town which is more wanting railway communication. That is my private opinion.
563. If a case cannot be made out for Inverell a case cannot be made out for any place? I should not like to say that.
564. *Mr. O'Sullivan.*] In making your investigations into the probable traffic on this railway, did it come under your notice that traffic comes from the Queensland Border through Inverell to Glen Innes? There was not very much at that time. From Goondiwindi, you mean?
565. Yes, and from its neighbourhood? I do not know of any from there.
566. If it has been sworn that traffic comes from there, there must be some foundation for the statement? I should think so.
567. If the railway were pushed out to Inverell, 53 miles further than it goes now, would it not be likely to draw in more trade from the Goondiwindi district than comes now? That is assuming that Queensland does not take any steps to obtain the traffic by constructing a railway in that direction. I think she could construct a railway there at a far less cost than we can.
568. *Mr. Humphery.*] In analysing the returns, did you give the railway the benefit of any doubt you had as to the probable earnings? The recent returns?
569. Yes? I gave the returns the fullest benefit of any doubt.
570. You know that it is estimated that there will be a considerable loss on this line? Yes.
571. I think you, in your former evidence, expressed an opinion that the railway should be made. Were you in favour of the construction of this line? Yes.
572. Do you think that within a reasonable period, say five or seven years, there is a prospect of such an increase

increase in the earnings of this line that the estimated loss could be largely diminished? I should not like to commit myself definitely on that point. I think the opinion I expressed was that Inverell was entitled to a railway. It may be that this is not the best route for the line. J. Harper, Esq. 22 Nov., 1892.

573. Have you given consideration to any other route? No; and I have not in my official position been called upon to do so.

574. Then why do you express a doubt about this route? Because there may be others that have never come under my observation.

575. As far as you know this would be the best? Yes; the only route as far as I know.

576. You still think that the railway, if constructed, would lead to a large annual loss? Yes.

577. For many years to come? I do not say for many years to come. It might probably pay working expenses in ten years.

578. *Mr. Hoskins.*] Would those portions of Queensland near Mungundi be better served by a railway to Moree than by a railway to Inverell? I do not know the relative distances; but speaking approximately I should imagine that it would be about 570 miles from Bogalilla to Sydney, and about 573 miles on the other route.

579. The distance would be about equal? Yes; but I do not know the country sufficiently to be able to say which would be the cheaper line.

580. Did you not say in your previous evidence that your estimate for the goods traffic was 50 per cent. in excess of what really existed at that time? I do not remember saying 50 per cent., but it was in excess. I think I mentioned that I made a liberal allowance.

581. *Mr. Davies.*] In dealing with the figures submitted to you, I understood you to say that you took the tonnage over the 52 miles of railway between Inverell and Glen Innes, and that you could not make the receipts come out anything near the estimated amount? There is £4,980 put down for saving on the maintenance of roads and for increased traffic on the main line. That would require to be added to my estimate.

582. Your calculations are based on the highest freight rates and passenger rates now in existence? They are in existence on the Cobar line and on the Corowa line; but very emphatic protests have been entered against their existence.

583. Your calculation brought out the earnings at about £15,000 a year, and you based it on the figures supplied to you by the Railway Committee? Yes.

584. You stated that you have great misgivings as to the estimated haulage, 6,000 tons inwards, and 14,000 tons outwards, or 20,000 altogether? Yes.

585. You have substantial reasons for your misgivings? Yes.

586. What has been the haulage on the railway between Tamworth and Glen Innes during the past year? Approximately about 71,000 tons.

587. What is the distance from Tamworth to Glen Innes? About 141 miles.

588. What would be the freight charged on that haulage? I could not say what the freight was.

589. You have great misgivings as to the possibility of getting 20,000 tons of haulage on the line between Inverell and Glen Innes? Yes.

590. *Mr. Collins.*] It would be to the interest of the Department to take the railway from Inverell to Glen Innes; it would give more haulage? Yes; it would give more haulage.

WEDNESDAY, 23 NOVEMBER, 1892.

Present:—

JACOB GARRARD, Esq. (Chairman).

The Hon. William Henry Sutton.	William Chandos Wall, Esq.
The Hon. James Hoskins.	William McCourt, Esq.
The Hon. Frederick Thomas Humphery.	John Cash Neild, Esq.
The Hon. John Davies, C.M.G.	Edward William O'Sullivan, Esq.
The Hon. William Joseph Trickett.	Charles Collins, Esq.
Thomas Thomson Ewing, Esq.	Henry Dawson, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

Edward Pulsford, Esq., sworn, and examined:—

591. *Chairman.*] You are the proprietor of the *Armidale Chronicle*? Yes. E. Pulsford, Esq. 23 Nov., 1892.

592. *Mr. McCourt.*] Are you acquainted with the district of Inverell? I am not personally acquainted with the Inverell district.

593. Are you acquainted with the Glen Innes district? Nor yet with the Glen Innes district.

594. Do you know the various routes which have been proposed for a railway to connect Inverell with the main line at Glen Innes? I have no personal knowledge of them. The evidence which I desire to put before the Committee is in the form of a memorandum which I have prepared.

595. Will you read it? Yes, it is as follows:—

The report of Messrs. Scarr and Price contained the following paragraph:—"The area put under wheat in the three districts in the Darling Downs, viz.: Allora, Warwick, and Toowoomba, was, for 1889, 14,242 acres."

The Queensland Statistical Register for 1891 shows last year 17,746 acres under wheat in those three districts; the yield being 333,000 bushels, about 19 bushels to the acre. The same Register also shows:—*Imports*, flour, wheat, maize, oats, barley, &c.—1887, £610,933; 1888, £542,858; 1889, £653,296; 1890, £530,069; 1891, £447,135.

During 1891, Queensland exported 311,575 bushels of maize. Since the Committee last considered the proposal to construct this railway, Queensland has imposed a duty of 4d. on wheat.

I wish to draw attention to a few facts showing the relative relation between the Glen Innes route and the Guyra route on the welfare of the railway service generally.

Glen Innes is a point which has caused much trouble to the railway authorities for years—it is the point of the greatest conflict between public and private competition, and with a view to retain traffic for the railway and prevent it being taken to Grafton, it has become needful to adopt specially low, or in other words, differential rates, for that portion of the northern line. As a matter of course, this has caused considerable loss to the general railway revenue. The proposed line of railway would be the means of bringing a still larger amount of traffic under the influence of this competition. It is tolerably certain that, with a line from Inverell a portion of the traffic now reaching Newcastle and Sydney by

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by way of Narrabri would be diverted to the Inverell branch, and once on the route for Glen Innes it would become an object of competition on the part of the Grafton-Sydney steamers. It is noteworthy that several supporters of the Glen Innes route openly give as one of their reasons for its advocacy the fact that traffic would go to Grafton. The *précis* of papers published with the report shows that in 1889, Mr. Cruickshank, addressing the Minister for Works in support of this line, said that wool, &c., could be conveyed by team to Grafton, and thence by steamer to Sydney for £2 a ton less than it could be carried by railway. Mr. Cruickshank has supported this by evidence before this Committee. Mr. Utz, of Glen Innes, has done so likewise, and both of them have spoken of contracts of this nature undertaken by themselves. Messrs. Scarr and Price have urged that the line be carried through to Bingera, and doubtless there is a general expectation sooner or later of extending the line to the west or north-west. I submit that all such extensions would, if Inverell were connected with Glen Innes, tend to throw traffic into the hands of competitors with the railway. As an advocate of the Guyra route, I ask the Committee to consider that the adoption of this route would very greatly lessen the risk of this competition, and that the great bulk of the traffic of the north-west intended for export would be almost certain to come right through to Newcastle or Sydney if once on the Inverell-Guyra route. This is a matter of vital concern. A connection at Glen Innes might be the means of losing £5,000 or £10,000 a year to the revenue which would be secured if the connection were at Guyra, and as the traffic of the north-west increased so might this difference. This is a consideration which I submit cannot be ignored. A branch that would tend to strengthen the main line should have the preference over a branch that would weaken it, especially when the main line itself has not yet reached the paying point.

As regards the connection with the coast, I desire to point out that even were this an imperative consideration the facts with regard to a line through the Don Dorrigo Scrub are in favour of the Guyra route from Inverell and not against it. If nothing had to be thought of but connection between two points then the shortest route would be the only consideration; but when the land between the two points has also to be considered then, as the Don Dorrigo Scrub land is fine land capable of sustaining a large population, the fact that such a long line can be had for comparatively little extra cost is in its favour, and consequently, as far as the coast is concerned, the Guyra route to Inverell seems to be supported.

But as regards a coast outlet for the northern produce, I ask the Committee to consider whether there is not grave danger of doing harm instead of good to New South Wales by opening up another port for foreign trade before there is population and trade to support it. Newcastle at present is the port for the north, with Sydney, 100 miles further on, as a second one. Wheat could be brought from Inverell to Newcastle for 4d. per bushel, while at a northern port the rate would be a little under 3d. The shipping, capital and appliances, always available at a large port tend to destroy all chance of success in a port lacking in these essentials. The fact that even up to this date the great bulk of the English-Australian trade remains centred in the port of London is conclusive proof of the difficulty of opening up new ports.

Although these views are put together very briefly, I believe that they are very important, and that they are worthy of being placed before the Committee.

596. You do not think there would be much trade between Inverell and Queensland if the proposed railway were made? I do not. I do not see any chance of it.

597. All the trade of Inverell, whether Inverell were connected with Glen Innes or with Guyra, would come to Sydney or to Newcastle? Well, there is a chance of considerable business being done along the line. For instance, in the district embracing Armidale, Hillgrove, Uralla, and two or three other places there is a population of between 10,000 and 20,000 people. The consumption of the Inverell produce, however, would be in districts south of Inverell.

598. If that is the case, Guyra would be the best point at which to connect Inverell with the main line? That seems conclusive to me.

599. *Mr. Wall.*] A line from Inverell to Guyra would run along near the main northern line for a considerable distance, and would therefore deprive it of a portion of its traffic? Judging from the map it does not seem to me more likely that the Guyra line would take traffic from the main line than that the Glen Innes line would do so.

600. A great portion of the country within a radius of 25 miles of the Guyra line is served by the present line of railway? I should not like to say 25 miles; that is about half the distance to Inverell.

601. Have you any extensive knowledge of the character of that country? I have no personal knowledge of the district.

602. Do you not think that the people of Glen Innes and Inverell are likely to know which line would suit them best? From the attention which I have given to this matter I am perfectly certain that the large population in Inverell and Glen Innes are largely being agitated to support a connection with Glen Innes in the interest of a traffic to Grafton which would weaken the railway revenue.

603. One of your strongest considerations in favour of the Guyra connection is that it would bring the whole of the Inverell traffic to Sydney? Or to Newcastle. I take Newcastle to be the natural shipping port for the northern district.

604. If a connection with Glen Innes would suit the Inverell people better than a connection with Guyra, that is, supposing that Newcastle is not their legitimate market, do you think the Guyra connection should be made? The term "legitimate market" is a strange one. Any district is entitled to go to the market where it can get things cheapest. The people on the Richmond and on the Clarence are in ready communication with New Zealand, and they could get grain from there as cheaply as from Inverell, supposing the railway were constructed.

605. You seem to lay great stress upon the necessity for these people to get their grain to Newcastle or to Sydney;—are those places their proper market? Their proper market is where they can get the biggest prices, and that place I hold to be where there are the largest number of consumers.

606. If they are under the impression that their market lies in the direction of Queensland, do you think we should be justified in connecting them with Guyra in order to deprive them of that market? I think the people in the neighbourhood of Inverell have been completely stuffed and misled on the point of trade with Queensland. The facts before the Committee are altogether against any such supposition.

607. But assuming that it is their legitimate market, do you think any advantage is to be gained by forcing the trade of country districts to Sydney or to Newcastle? I would not force it at all. My contention is that you should not force the trade into Queensland.

608. Why not, if that is their legitimate market? If the people of Queensland want what New South Wales produces a railway exists by which they can get it.

609. If the opening up of a trade with Queensland would tend to the development of that country, is there any reason why that trade should not be opened up? I do not see that it would. The Queensland people are producing near and nearer their consumption; so that a market does not exist there for us.

610. Supposing a market does exist there—your evidence goes to prove that it does not exist there; but the evidence of people in Glen Innes and Inverell goes to show that it does—would there be any advantage in giving the people of Inverell a connection with the main line which would not suit their interests? Wherever the connection is made, even if it is made with Glen Innes, the bulk of the Inverell traffic must inevitably, under all circumstances, come to the south. The whole of the wool traffic, or that portion which the Grafton people cannot get, and the passenger traffic, must come to the south, so that there

there would only remain a small portion which Queensland could get under any circumstances, and I dispute the possibility of Queensland being able to purchase that produce. E. Pulsford, Esq. 23 Nov., 1892.

611. Would it be any advantage to the people of Inverell to give them a connection with Guyra and lessen the haulage to Sydney or Newcastle by about 30 miles, if those places were not their market? You ask a question which supposes circumstances which do not exist. If all their wool ——

612. I want an answer to my question; I do not care about a dissertation on it. I ask would it be an advantage to make that connection if Sydney and Newcastle were not the market of the district? Well, if they did not have traffic which must go to Newcastle or to Sydney it would be rather stupid to construct such a line.

613. You cannot say which line would open up most country suitable for settlement, the line from Guyra to Inverell or the line from Glen Innes to Inverell? I cannot give any evidence on that point from my own knowledge. I could only repeat what I have read; but as I am asked the question I would like to draw attention to the fact that a much more considerable population exists on the southern route than on the northern route which, because it is a scattered population, cannot unite and agitate, and I think that it is a cruel thing that that population has been ignored as it has been. By the southern route you would get all the traffic that would go by the northern route, and there would be a considerable traffic between the terminal stations—a much larger traffic than on the northern route.

614. If evidence has been given before us to the effect that there is no probability of a connection being made with the coast except at Tenterfield, the advantages which you expect would be derived from the construction of the Guyra line fall to the ground? If the Committee understand that there is no possibility of a connection with the coast except by a line from Tenterfield to Casino there is no use talking about the Don Dorrigo route.

615. I have been referring to the evidence of Mr. Hogg? Supposing that were the case, it would not give a market in the north for the Inverell products.

616. One of the advantages to be derived from the construction of a line from Guyra to Inverell would fall to the ground if there were no probability of a further connection through the Don Dorrigo Scrub? That was one of the arguments in support of the line.

617. *Mr. Neild.*] When you spoke of the southern and northern routes were we to understand the line from Guyra to Inverell to be the southern route, and the line from Glen Innes to Inverell to be the northern route? Yes.

618. You spoke of the slight difference in the probable cost of the carriage of breadstuffs from Inverell to a northern port of shipment compared with the cost of carrying grain to the present ports of shipment, and you pointed out the advantages that already existed in Sydney and Newcastle for over-sea traffic. From your knowledge of mercantile transactions, do you not know that any reduction in the cost of carriage from Inverell to an inferior port would have to be set off against the increased cost of over-sea freight from that port—in other words, the rate from a comparatively small port in the northern district would be higher than the freight from places like Sydney and Newcastle? Certainly; that is quite my contention. The small saving that might be effected in the carriage of grain from Inverell to a northern port would be much more than counterbalanced by the extra freights and charges which would have to be incurred to get shipping to go to such a port. I would support that contention by reference to the well-known fact that the great bulk of the British-Australian trade remains, after all these years, still centred in London. Goods are carried to London past port after port, because of the advantage of having the merchants congregated there, and everything ready for the transaction of over-sea business.

619. Is there not at the present time in Sydney, and to a lesser extent in Newcastle, a local market, in which a very large portion of the Colony's clip is sold? Yes; that in itself is an important consideration. I may say that the fact that a certain amount of wool is now sold in Newcastle has caused some trouble, because buyers in the Sydney and Melbourne markets do not care to have to run about to a great many purchasing centres.

620. *Mr. Hoskins.*] The Newcastle sales have been discontinued? I am not surprised at that.

621. *Mr. Neild.*] The cessation of wool sales at Newcastle would point to more than a dislike on the part of wool-buyers to go to places where only a limited quantity of wool can be offered for sale? Yes.

622. From your knowledge of the wool trade you do not expect that the opening of a northern port for the shipment of wool would lead buyers to go there to make purchases? Certainly not.

623. It is almost inevitable that the wool of this Colony must be centred at one port of shipment? Yes; and more and more, so as foreign buyers come to Australia to purchase.

624. Foreign buyers will not run all over Australia to attend sales, and that shows that the prospects of an over-sea trade from the northern ports are not satisfactory? Yes.

625. You have given us some information with regard to the grain grown on the Darling Downs and in other districts in that vicinity;—I suppose you are aware that in the Roma district a very large area has recently been put under wheat? I am not personally aware of that fact, and the Queensland statistics for 1891 do not show what has been done since the Government there placed an import duty on wheat. The yield of wheat in the Darling Downs district last year was equal to 19 bushels per acre.

626. That is a heavier average than usual? It is heavier than the average for New South Wales, much heavier than the average for Victoria, and nearly three times as heavy as the average for South Australia.

627. Can you point out any year in which the wheat average of New South Wales came to as much as 19 bushels an acre? I cannot say positively, but as our average is somewhere about 17 bushels an acre, I think that it might in an occasional year have gone as high as 19 bushels.

628. I think you will find that an average yield of 17·60 bushels is about the highest yield we have had. The rainfall in the Darling Downs district is uncertain, is it not? I am not sure, but I believe that wheat does not require a heavy rainfall. The fine kind of wheat is generally grown in very dry districts.

629. The deduction which you draw from the increased progress of the Queensland wheat-fields, is that Queensland is becoming less and less dependent on New South Wales and other places for her supply of breadstuffs, and that, consequently, there is an increasing likelihood of no trade being done with Queensland from the Inverell district? Yes; that is a self-evident fact, if the Queensland statistics are taken into account.

630. Under these circumstances you advocate the shortest connection that can be made to bring Inverell in contact with the southern markets of the Colony? Yes.

631. Does Armidale produce much wheat? A fair amount, but not very much—not sufficient for its own consumption.

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632. Is there any reason why it should not supply its own wants? I think not. I believe there has been a little lack of enterprise. The district certainly could produce sufficient for its own supply.
633. The soil is good enough? Yes.
634. Sheep have been more profitable and less troublesome, I suppose? That is it.
635. *Mr. Dawson.*] When you spoke of an average yield of 19 bushels to the acre in Queensland, you referred only to the Darling Downs district, not to the whole of Queensland? Yes, the three Darling Downs districts named are Allora, Warwick, and Toowoomba.
636. Those are about the only wheat-producing districts in Queensland? I believe so.
637. In looking over the statistics of Queensland, did you notice what was the shortage in the production? No. I have given figures showing the imports of grain of all descriptions, which prove that Queensland as a whole is a rapidly decreasing market.
638. *Mr. Collins.*] Do you know anything of the Don Dorrigo Scrub? No.
639. *Mr. Ewing.*] I presume you look at the railways in a broad sense. You take the future into consideration? Certainly.
640. Do you think that Inverell is a wheat-producing district? I judge so.
641. It bears the name of it? I believe so.
642. Do you believe that eventually there will be large populations north of the Clarence? I think so.
643. Populations quite sufficient to create a demand for a considerable amount of wheat? Yes.
644. Still you think it would be a good thing, I gather, to send wheat from Tenterfield or from Glen Innes, 500 miles, to Sydney by rail, and then 400 miles back by sea, instead of bringing it 130 miles across to the coastal districts? I believe that the coast district—the Richmond and the Clarence—has such easy communication by sea with the other colonies that it will always be able to supply itself with wheat at a low price, and that consequently it will never offer very great inducements to the importation of wheat from Inverell, such as districts lying further to the west would.
645. But New South Wales, regarded as a Colony, has two districts separated from each other by 100 or 150 miles of land carriage, one growing wheat, and the other wanting wheat. Under those circumstances, do you believe it is a wise economy of national industry, to bring produce nearly 500 miles to the metropolis by rail, and take it 400 miles back again by sea, to supply the coastal district? Is it not perfectly apparent that that will not be done in the future? The wheat trade of Inverell is only a small factor in a very large matter, and to make this small factor the dominating factor is not business-like. According to the railway rates the carriage to the north-east districts would be about 3d. a bushel, whereas it would only take 4d. to bring wheat to its natural shipping port—Newcastle.
646. I asked you whether you thought that districts separated by a little over 100 miles, one being sufficiently populous to demand a large quantity of wheat, and the other sufficiently fertile to grow it, should have to send their produce very nearly 1,000 miles? I think that if the Colony has sufficient money to throw away in the construction of a railway to supply a district with breadstuffs which could be got equally well from over-sea, the line might be made; but unless the country grows more than it has done up to the present, and the trade becomes a natural one, its construction would not be justifiable. A trade that leaves a great loss does not benefit national interests, although the districts between which it is carried on may be quite close to one another.
647. But is it a wise economy to take produce 1,000 miles that need only be taken 100 miles? We see lots of things like that done. In many cases it pays better to let stuff go to the other side of the world and be brought back again.
648. They will not make two railways to Inverell? I think that perhaps in the course of fifty years there may be half a dozen. I do not see why these districts may not grow and extend, but I do not think that railways should be constructed, and certainly not in these hard times, unless there is a reasonable prospect of the State receiving from them what it pays away.
649. Would it not be possible that it would be better to suffer 20 miles of additional carriage for ten years than 30 miles of additional carriage for all time? It would depend upon the money result. If it turned out that there was a very heavy loss in ten years which the State was ill able to afford, and you could not look into the future and see how things would be, I should think it would be the duty of the State to avoid needless expenditure.
650. And to centralise as much as possible? I believe that there is no subject on which more humbug is talked than decentralisation. I believe that if it is carried out to its extreme it will ruin New South Wales.
651. Therefore you think that people should become accustomed to travel long distances to get to the metropolis instead of short distances to get to the seaboard? It is all a question of £ s. d.
652. You regard Guyra as the natural point of connection, because a line there would enable the State to more effectually kill the personal enterprise of the shipowners? No; it would enable the State service to defend itself against what you might call the piracy of private enterprise. I do not think the State should spend £10,000 or £100,000 to get hold of traffic which if taken to its natural destination would pay, and neglect to take steps to prevent it at certain points from getting into the hands of private enterprise. If the time comes when the traffic between Glen Innes and Inverell is so great as to make a line pay of itself, it will not matter where the produce is carried.
653. Supposing the produce of the Colony is situated at Glen Innes, the end in view, I presume, is to take it to the consumer? Well, to get it to the purchaser.
654. Call him the person who wants it. Is a very great injury done to the State if private enterprise takes that produce to the person who wants it. Why call private enterprise piracy, because it chooses to take what the railway would otherwise get? I do not do so, but I say that if the State brings produce from a remote district to Glen Innes, expecting to recoup the loss from the profit derived in carrying it from Glen Innes to Sydney, it ought not with open eyes to permit that produce to be snatched from it at Glen Innes, and thus incur a heavy loss.
655. You think the State railway should be used, and differential rates charged in order to destroy private enterprise? I do not say anything of the sort. I say that the State, having undertaken a certain thing, must not run costly railways for the express purpose of serving private steamship companies.
656. Do you think there will be many people in years to come living to the north of Glen Innes, and in Queensland? I have no doubt there will.
657. Is it reasonable to suppose there will be as many people living north of the New South Wales boundary as are now living between the Queensland boundary and the Murray River? I am unable to answer that question.

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658. There is a very fine territory there? I understand so, and that will naturally result in a large future settlement.

659. *Mr. O'Sullivan.*] You appear to think that if the railway were taken to Glen Innes it would encourage the transit of wool and other produce to Grafton? I say it would, basing that statement upon the evidence given before this Committee by Mr. Cruickshank and Mr. Utz. I have no personal knowledge of that district. The Railway Commissioners have for a long time had considerable difficulty in dealing with the district, and have had to lower their freight, in order to obtain possession of the traffic.

660. Are you aware that a little while ago before the railway rates were altered there were 200 teams on the road between Glen Innes and Grafton, and that now there are not more than twenty or thirty? No, I am not; but that shows how desirable it was to lower the rates. According to the railway returns there was a considerable loss on the line between Armidale and Wallangarra.

661. Does that fact not show that the competition of Grafton for the trade has been practically killed? Yes.

662. That being so why do you dread a revival? The fact that thirty teams are still on the road will show that if the Glen Innes trade increased considerably by a connection with the north-west, arrangements would be made to compete for it again, and the railway rates would have to be cut down still lower before the railways could obtain it, so that the revenue of the country would suffer loss.

663. If produce from the north-west were put on board the train at Inverell, do you think it would be unshipped at Glen Innes to be taken by teams to Grafton? It is simply a question of profit and loss. People would do anything if it would pay.

664. Do you think it would pay, since the Railway Commissioners could reduce their rates? If the Commissioners again reduce their rates it would still further increase the loss on the railway.

665. But you admit that there would be very little competition from Grafton if the rates were reduced? I admit that the railways can always get the traffic if they go low enough, but the Commissioners should not have to cut down the rates more than can be helped.

666. As a matter of fact there does not appear to be any great probability of the competition reviving. Is not the fact that the teams on the road have been reduced to twenty or thirty a proof that the trade has been practically taken away from Grafton? It is very good evidence that the trade has fallen off, but the fact that three teams out of every twenty originally on the road are still in use shows that the trade might spring up again at any time, and that the Commissioners might again be compelled to reduce their rates to keep possession of it, though even now it is being taken at a loss.

667. The principal wheat-growing districts of New South Wales—Cootamundra, Orange, Yass Plains, Young, Wellington, and other localities in the western and southern districts are very much nearer to Sydney than Inverell is? Yes.

668. Are you aware that Inverell is very nearly 480 miles from Sydney? Yes.

669. Some of the districts I have named are not two-thirds of that distance away? You must remember that Newcastle and not Sydney is the shipping port for the north.

670. I understood you to argue in favour of centralisation, which would mean that all the trade should be brought to Sydney? I was not arguing in favour of centralisation. I was not arguing in favour of forcing centralisation, but of allowing trade to run in its natural channels—that there should be no attempt made to secure a port for every agricultural district in the Colony.

671. Even taking off the distance between Sydney and Newcastle, do you think it possible that Inverell wheat, having to travel so much further than other wheat in order to get to a central market, could possibly compete with it? Certainly I do, because I believe the Inverell district is a good wheat-producing district, and that it would produce more bushels to the acre than a good many other districts do. The railway rate at present is only 4d. a bushel to Newcastle, which would mean that the farmers of Inverell would probably be able to sell wheat shipped at Newcastle at a price which would yield them more per acre than would be obtained by the farmers in some of the districts which you have named who have to pay less for freight.

672. I presume you are aware that you could buy Cootamundra wheat in Glen Innes? I daresay. They would get wheat from the ends of the earth if necessary—they would not hunger. It is simply a question of price. It just depends who offers the wheat at the lowest price. Some of the wheat up there instead of having come from Cootamundra may have come from Victoria.

673. Bearing in mind the future of our railway communication and the probability that at no distant date we shall have a connection with the coast, is it not likely that the true market for Inverell will be in the north-coast districts rather than in Sydney? The Richmond and Clarence districts will almost always be able to purchase wheat from the neighbouring colonies for which they will have to pay only a comparatively small rate of freight, so that there would not be much gained in that way. Then, as I pointed out, the wheat production of Inverell forms only a portion of the traffic and the line ought not to be made so as to prejudice the wool and passenger traffic and the large inward traffic.

674. You think that the wool will come on to Sydney for all time? I think so.

675. Is there not a possibility of a shipping port for wool being opened up at Byron Bay or even the Clarence? I think there are great possibilities in the future, but not in the immediate future, not in a future near enough to influence any decision in respect to this railway.

676. But we are not building for the immediate future; we are building for all time. That being so ought we not to have some regard to the time when there will be a port on the north coast? When there is a sufficient population on the north coast, if the Inverell wheat must go there, it can go by way of Guyra.

677. Then you would saddle the district for all time with a lot of extra haulage? As far as the produce is concerned, because that line would save a lot of haulage as far as the wool traffic and the passenger traffic are concerned.

678. If we really have in view the establishment of a port on the coast, ought we not to take the most direct route to the coast? I cannot form any idea in my mind of a trade being opened on the north coast within the next quarter of a century of sufficient proportions to warrant the enormous expenditure which the construction of a railway and a shipping port there would require.

679. Have you been in the northern districts, on the Richmond or on the Tweed? I was there once for a few weeks, but I cannot speak about them.

680. Are you aware that there are 25,000 people settled there? I know that the districts are rich, and that there is a considerable population there.

681.

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681. Are you aware that the greater part of the development of these districts has taken place during the last ten or twelve years? Yes.

682. Is it not possible that we may have the same progress during the next ten years? I think it is doubtful. The bulk of the progress has been due to the development of sugar growing, and I think it probable that the sugar industry has developed as much as it can.

683. Do you think that we are supplying ourselves with enough colonial sugar? No; I do not think those districts contain enough sugar-growing land to do that.

684. Whether the development of those districts be due to the development of sugar growing or of dairying there, those industries give employment for a population that must naturally increase within the next ten years to 50,000 people? That is quite likely; the population might increase to a still greater extent.

685. If that is so, would not those districts open up a very good market for the produce of Inverell? The more markets around Inverell the better it would be for the district.

686. Having that probability in view, do you not think it would be better to join Inverell with that point on the Northern line, at which connection with the coast could be most readily made? If it were simply a question of supplying wheat there might be something in that suggestion, but there is very little in it, because the districts you speak of are able to supply themselves from oversea.

687. Did I hear you say that it would do more harm than good to New South Wales to open up another port for foreign trade? Yes; I said that there is great danger of doing harm instead of good to New South Wales by opening up another port for foreign trade before there are sufficient population and trade to support it.

688. I should like to know how the establishment of a thriving port at Byron Bay and Grafton could harm New South Wales? The difficulty is to establish a thriving port. I have given evidence to show that the British-Australian trade continues year after year to centre in London. I suppose, if you opened a port at Byron Bay, or somewhere on the northern coast, the expense would be enormous, and you would not be able to get merchants to settle there and ships to come there without greatly increasing the freight per ton.

689. Are you not aware that besides London there are Liverpool, Glasgow, Newcastle-on-Tyne, and many other thriving ports in Great Britain? Yes; but the British-Australian trade centres in London. Nine-tenths of our shipping trade comes from London.

690. Our trade from Australia may go to London, because that is the nearest port, but the American trade centres in Liverpool? Yes; you have concentration there again.

691. I should like you to explain how it could be injurious to have another port in New South Wales? While the population remains as it is, or only increases slightly, the production of wool and agricultural produce cannot largely increase, and you cannot get carriage on produce more than once. You might multiply your expenses, as you would do by creating new railways and new ports, but after all you have only a certain amount of revenue against which to place that increased expenditure, and the result would be that you would do harm to New South Wales by increasing the deficit on railways and other public works.

692. Would not that be an argument against the construction of railways altogether? It is an argument which gains strength in proportion as money becomes difficult to obtain. I do not suppose that the Committee at the present time would be prepared to recommend the construction of a railway on which there would be an enormous loss.

693. Do you not think that the loss on a railway might be made up by the development of the country? You cannot develop the country until you have population to do it with. The population of New South Wales is already too much scattered. It would work to better advantage if it were not spread over so great an area. The danger seems to be in enlarging the railway system and increasing the deficit.

694. I suppose you are aware of the wonderful development that has taken place in the western district, and you have read of the marvellous development which has followed the construction of railways in the back district of America, where population is sparse? That is a country with 70,000,000 people.

695. Do you not think a proportionate advance would be made by New South Wales under the same circumstances? I think that New South Wales has extended her railways, and spent money in various directions, in a way far exceeding anything ever done in the United States, simply because it has been done, not with private, but with public money, and the time has come when it is the duty of all parties who have any influence to try and alter that state of things.

696. You stated that last year Queensland imported £447,000 worth of agricultural produce;—does not that give a fair prospect for Inverell produce, supposing a railway is made from Inverell, on which it can be carried cheaply? I do not think so. Those imports will show a great decrease, since a duty has been placed on wheat to force its production in the Colony. The production of wheat there must increase so as to break up any market.

697. Have you followed the returns of wheat production in the Darling Downs district for the last seven or ten years? No.

698. I think that if you do you will notice that at times the wheat crops there almost fail, so that while they might have excellent returns in a good season there are seasons when a crop cannot be depended upon at all? Just so, but I do not suppose you would construct a railway from Inverell to Glen Innes on the chance that there might be droughts in Queensland, and a consequent failure of the crops.

699. If those crops fail, as we have it in evidence they do, three times out of four, or at any rate very frequently, the wheat supply of Queensland must be a precarious one? Whenever their wheat supply failed, and they wanted Inverell wheat, they would be able to obtain it.

700. For that among other reasons, ought we not to connect Inverell with the nearest point to the Queensland Border? If that were the only reason for the construction of the line.

701. For that among other reasons? I say no.

702. *Mr. Humphery.*] Is it probable that there will be any interchange of traffic between Guyra and Inverell? I do not think so. There are no merchants that I know of at Guyra at the present time, but there are between Guyra and Inverell a number of places such as Wandsworth, Tingha, Stannifer, and other towns, which would give traffic to the line.

703. There would not be much traffic between Guyra and Inverell by reason of the interchange of products? There would be no interchange of local products. The traffic would be right through.

704. From Inverell to the metropolis? Yes, and from the other places that I have mentioned to the metropolis. E. Pulsford, Esq.

705. I understand that your advocacy of the Guyra route rests upon the desirability of connecting Inverell with the metropolis? Yes. 23 Nov., 1892.

706. And not because of the value of the probable earnings of the line? Certainly.

707. Do you think there would be any interchange of traffic between Glen Innes and Inverell? I am not aware.

708. Glen Innes is a fairly populated town? Yes.

709. Do you think there would be no interchange of local products? There would be a little; but I do not think there would be as much as between Armidale and Inverell. If Inverell were connected with Guyra, there would undoubtedly be a certain amount of traffic between Armidale and Inverell, and that traffic would probably be larger than the traffic already existing between Inverell and Glen Innes.

710. Would not the distance be nearly double? Yes; but then the population of Armidale and its immediate surroundings is more than double that of Glen Innes.

711. Is there any trade at the present time between Armidale and Inverell? I believe there is a little.

712. What is the character of it? A trade in agricultural produce.

713. The distance between Armidale and Inverell by way of Guyra would not be so great as by way of Glen Innes? No; it would be much shorter.

714. Nearly 40 miles less? Yes.

715. Is there any trade between Tenterfield and Inverell? I am not able to say, but I do not think so; I have not heard of any.

716. Tenterfield is very well settled? Yes.

717. If the residents of Glen Innes or Tenterfield traded with Inverell, would they not have to send their produce 40 additional miles if the line were taken to Guyra? Yes.

718. Would not the construction of the line to Guyra leave them entirely out in the cold? It would tend that way.

719. Do you know if there is not at the present time a very considerable trade between Inverell and Glen Innes? The tendency of the railway tariff has been to bring it about, to the detriment of the southern towns. The Commissioners, because of the competition at Grafton, have been compelled to make Glen Innes the point at which the differential rates begin; and that has tended to increase the traffic between Glen Innes and Inverell.

720. The differential rates have operated to make Glen Innes a depôt to some extent? Yes; two years ago the differential rates commenced at Guyra, and there was then a considerable traffic between Guyra and Inverell; but since then the Commissioners have commenced the differential system at Glen Innes, and that has tended to remove the trade to Glen Innes.

721. But by reason of the differential rates you can take goods from Glen Innes at about the same cost as from Guyra? Yes. In fact it costs more to send goods to Guyra from Sydney than to Glen Innes, although the distance is less.

722. *Mr. Davies.*] You supplied Mr. James Inglis, M.P., with some information when he was examined before us? I did.

723. Most of the information then supplied to him has been put by you before the Committee to-day? I have amplified that information to-day.

724. If I am correct in my inference, you are in favour of a line being constructed from Guyra to Inverell, as the shortest and most direct route to the metropolis? Yes.

725. You do not believe in going round by Glen Innes, and thus increasing the mileage? I object to that.

726. It would make a difference of about 37 miles? Yes.

727. Do you think that any possible trade which could be developed in the Inverell district, either with Guyra or Glen Innes, would pay for 52 miles of railway, costing £427,000, on which sum the interest at 4 per cent. would amount to something like £17,000 per annum, and the expenses to about £7,000 per annum? I do not think so at present.

728. Do you think it would be possible to make good that large amount in the near future? I think so, especially if you had a connection with Guyra, because you would get a large traffic from the north-west. You would catch up the deficiency much sooner by getting the north-western traffic.

729. Do you know what the Traffic Department estimate the annual income to be? No.

730. If the railway is to be constructed, you favour a connection with Guyra? I do; I say that the revenue must of necessity be better if a connection is made with Guyra, because you would get all the trade that at present goes to the north, and you also get trade from various places between Inverell and Guyra.

THURSDAY, 22 DECEMBER, 1892.

Present:—

JACOB GARRARD, Esq. (Chairman).

The Hon. William Henry Sutton.	William Chandos Wall, Esq.
The Hon. James Hoskins.	William McCourt, Esq.
The Hon. Frederick Thomas Humphery.	John Cash Neild, Esq.
The Hon. John Davies, C.M.G.	Edward William O'Sullivan, Esq.
The Hon. William Joseph Trickett.	Charles Collins, Esq.
Thomas Thomson Ewing, Esq.	Henry Dawson, Esq.

The Committee further considered the proposed Railway from Glen Innes to Inverell.

John Harper, Esq., Goods Superintendent, Department of Railways, sworn, and further examined:—

731. *Mr. Sutton.*] Can you give us any information as to the probable traffic likely to take place between Inverell and Glen Innes? I cannot add anything to my previous evidence on that subject. I have had no further opportunities to make inquiry. J. Harper, Esq. 22 Dec., 1892.

732. Referring to your evidence on page 17, how are we to understand that that estimate was prepared? It was furnished by the local committee.

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733. You do not adopt that as your estimate? No.
734. Can you explain to us how you disagree with that estimate? The actual estimate that we arrived at in 1889 by examination of our station books did not disclose that as representing the traffic of the district—our ascertained returns for 1892 from the district which would be affected by this proposed line did not indicate that tonnage as coming from it.
735. Are we to understand that you do not adopt that as your estimate at all? Not of tonnage.
736. I understand that you have no further information to furnish to the Committee with reference to the traffic? None whatever.
737. At what do you generally estimate the traffic between Glen Innes and Inverell? In 1889 our estimate was about £8,200, as expressive of its value in freight.
738. You are not prepared in any way to give us any more information than you have given us already? No.
739. *Mr. Collins.*] The Sectional Committee stated that Mr. Harper was mistaken in stating that the local committee had exaggerated the probable returns;—did you see the returns made by the local committee? Yes.
740. Do you think that the local committee exaggerated them? Yes, I do.
741. Mr. Utz, a general merchant, gave evidence to show that the Departmental estimate was £8,200 for the probable traffic, but that it should be put down as £13,687? I do not know how Mr. Utz arrived at that.
742. When you were making up your estimates of the tonnage from Inverell, did you make it at local rates, or at a special rate from Inverell to Sydney? A through rate in the first instance.
743. Then you were mistaken in that instance? No; it was the rate then applied generally on the railways of the Colony.
744. But if a local rate were to be charged for goods from Inverell to Glen Innes? It would produce more if it were found desirable to impose that rate.
745. Do you think that if it were found desirable to impose that rate the estimate made by the local committee would be somewhat more than yours? Decidedly.
746. That is if a local rate were charged? Yes; if we found we could apply a local rate.
747. If you could apply a local rate you would get more returns than your estimate has made out? Yes.
748. *Mr. Neild.*] In your estimate did you take anything more than the goods passing over the line between here and Glen Innes;—did you allow, for instance, for goods that were dray-borne, team-carried, say from Grafton? Yes.
749. You did provide for that? Yes.
750. Did you provide for the local traffic between Glen Innes and Inverell? Yes.
751. Can you tell us how you estimated that? We broadly estimated it at 2,400 tons, as being the local traffic for the whole mileage, that is to say as between Inverell and Glen Innes, irrespective of any other local traffic, which of course would have produced less freight.
752. Did that estimate include the goods that might pass by team through to Grafton? Yes; it included the whole of the traffic.
753. Had you any data to go upon in that estimate, or was it a rough and ready guess? It was very nearly ascertained, for at that particular time we were making investigations into the competition from the coast—from Grafton—and we had an officer specially deputed to watch the loading on the route. This information was not in the first instance intended for purposes connected with this line, but was used in estimating the quantity.
754–5. Did that estimate of the traffic extend to between Glen Innes and Inverell, as well as to between Grafton and Glen Innes? The whole of the traffic passing the railway line at Glen Innes in the direction of Inverell was included. We were preparing an estimate to find out the probable loss of revenue to the line by reason of the diversion of the trade of that district to Grafton.
756. Did you estimate the Tingha traffic also? Yes, the whole of the Tingha traffic; tin ore is taken into account.
757. It is all included in your estimate? The whole of it. The whole of the traffic that went to Guyra or Glen Innes, which of course embraces the whole of the district.
758. How long ago was that officer deputed to make these local investigations? During the winter of 1889, and in the spring of 1889.
759. Do you not think that during the three years that have elapsed since then there would have been a considerable increase, or have you allowed for that increase? I have not prepared any estimate since 1889. The evidence I have given here has been simply upon an analysis of figures furnished from the district.
760. In 1889? No; supposed to have been furnished up to date.
761. I suppose it will take some two or three years to construct this line if it be determined upon? I should scarcely think so at the present rate of railway construction.
762. It would take a couple of years, would it not? Yes.
763. There would in all probability be a further increase in traffic during the two years required for the construction of the line? Yes.
764. That increase would probably bring up the returns somewhat higher? If you will pardon my asking a question;—would that be an increase due to the construction of the line, and the fact of the people being engaged on its construction there, or do you anticipate people going on the line in anticipation of its opening?
765. I am speaking of the produce of the district—the produce of the district would probably be augmented by increased cultivation? In anticipation of the opening?
766. In anticipation of the opening? Well, it might be of course, if people were prepared to wait for the opening of the line for the purpose of getting their produce to market.
767. But has the information which you had obtained, pointed in the direction of an increased tillage in the district? Oh; I think most decidedly. Whatever railway is opened, no doubt there will be increased tillage.
768. But at the present time, is there not an increased amount of cultivation? I think there is. I have not carefully analysed the statistics published by the Government Statistician, but I should think there is.

769.

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769. Then apart from traffic connected with the construction itself, you think it is possible, and indeed probable, that by the time the railway was opened for traffic, there would be an increased local production? Yes.
770. And a consequent increase in the supplies required for the population? Yes.
771. And some increase also in the passenger traffic? Yes.
772. You have not allowed in your figures for those possibilities, I think? Oh, yes; in 1889 we allowed a very large margin indeed.
773. Oh, you have done so? We allowed a margin, which I am doubtful would be covered up to the present time. We are dealing with two different sets of figures. The evidence I gave before the last Committee was on figures supplied by the local committee. The only figures that I can deal with authentically, as our own are those of 1889, and we allowed a liberal margin for any possible increase.
774. *Mr. Hoskins.*] What margin? Equal to 33 per cent.
775. *Mr. Humphery.*] In your estimate for 1889, did you allow for the probable increased earnings of the railway upon the construction of the branch line to Inverell? We dealt of course entirely with a branch line between Inverell and Glen Innes. I do not probably catch your question.
776. Assuming the line to be constructed to Inverell, that would take it nearly 50 miles westward of Glen Innes. Did you allow for the increased earnings of the line by reason of people beyond Inverell making use of it instead of going to Tamworth and other places previously used? Yes. We embraced an area of about 35 miles. When you get beyond 35 miles in one direction from Inverell you then approach the North-western line, where the distance to the ordinary markets, both Sydney and Newcastle, would be about 130 or 140 miles shorter, with probably only a difference of 20, 30, or 40 miles of team carriage. The disposition would still be to use these railway stations in preference to going to Inverell and paying the long mileage rates through to their markets.
777. Then you have included in your estimate of earnings a radius of 35 miles beyond and around Inverell? Yes.
778. You have seen the figures supplied by the local committee? Yes.
779. Their estimate based upon the probable tonnage, I think, comes to nearly double your own estimate; does it not? Yes; very nearly double.
780. Do you think it is possible that you have under-estimated the earnings of the railway, having regard to the development that would follow in agriculture? No; I have not the least hesitation in saying that the estimate was very carefully arrived at. It has not since been realised by the actual return from traffic carried from the district on our road.
781. Notwithstanding the representations made by the local witnesses who have been examined, you adhere to your statement? I adhere to my statement.
782. That the earnings will not exceed your estimate of £8,000? If they are carried at the through rates; but if they are carried at local rates they will exceed it.
783. Assuming that special local rates were charged,—say, double the existing rates;—how would that affect the probable earnings of the railway? Then the question arises as to whether the people, as far as produce is concerned, would be in a position to pay local rates. In the case of the Corowa line, in connection with produce we attempted to impose local rates, but in order to get their produce to market we have had to reduce the rates to through rates, to deal with it at all.
784. How do you mean, "to get their produce to market"? To get it to their natural New South Wales markets.
785. That is to say, if you did not reduce the rates the produce would be sent on to the Victorian railways? Yes.
786. Well, as far as Inverell is concerned, those conditions do not exist, do they? No; the only question is, whether wheat borne over so great a distance to its point of consumption, or in view of our having a surplus wheat supply, as everything appears to promise we shortly will have, the question is, whether it will bear the cost of its long transportation to the port of shipment if local rates were applied.
787. How much a bushel have you allowed for the carriage of wheat between Inverell and Glen Innes? Five shillings and threepence a ton for wheat between Inverell and Glen Innes—37 bushels to the ton. That is about 2d. a bushel in round numbers.
788. Do you not think they could afford to pay 4d. a bushel? Yes; but they would have to pay 5d. a bushel at main line rates.
789. But leaving that out of the question, what are they paying for carriage from Inverell to Glen Innes? Tenpence per ton per mile would be the average rate by team.
790. Would they not then save about 6d. per bushel, even if they paid double your estimate? Oh, decidedly; that is to say, if they are seeking outside markets. But the question is to what extent they could afford to pay whenever they have no surplus wheat crop there and Glen Innes and the surrounding populated neighbourhoods have the opportunity of obtaining wheat borne from the seaboard.
791. I am endeavouring, as far as possible, to ascertain whether by charging special local rates the earnings could be made to cover working expenses and interest on the cost of construction? I fully understand that, but I want to point out in connection with it that if local rates were applied too rigidly that would place them really outside the market.
792. Will you show, if you can, in what way the producers around Inverell would be in a worse position than at the present time if you were to charge local rates for the carriage of produce? Assuming that local rates were applied over that 53 miles of line, they would be required to pay 5s. 3d. per ton for haulage over 53 miles. Our rate for haulage over 300 miles is 14s. 5d.
793. What is your rate from Glen Innes to Sydney—422 miles? Sixteen shillings and sixpence.
794. And the ordinary rate would be 5s. 3d. added from Inverell to Glen Innes, if you applied local rates—that would make 21s. 9d.? Yes.
795. You say a special local rate would mean how much per ton? 5s. 3d. For 53 miles practically, you would pay one-third of the rate you would pay for the other 400 miles. Sixteen shillings and sixpence is the ordinary rate to Glen Innes, and 5s. 3d. is the local rate between Glen Innes and Inverell.
796. That is the ordinary rate? The ordinary rate to Glen Innes.
797. Assuming a special local rate were applied, what would be the carriage between Inverell and Glen Innes? Five shillings and threepence.
798. What would the ordinary rate be? Seventeen shillings and fourpence.

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799. That is, the ordinary rate from Inverell to Sydney would be 17s. 4d.? Yes.
800. But by charging a local rate? You would practically add 4s. 5d. to it.
801. That would make 21s. 9d.? Yes.
802. How much a bushel would that be—a little over 7d.? Yes.
803. That would be the rate from Inverell to Sydney? Yes; charging a special local rate and the through rate to the junction.
804. In making your estimate, did you take 10d. between Glen Innes and Inverell as the earnings of the railway per ton? No.
805. What did you take? I took 1s. 6d.
806. Why did you take 1s. 6d. instead of 10d.? Because it was then the rate which we had in application all over the railways.
807. Well, deducting that 1s. 6d., 3s. would be the difference? Yes.
808. Then, the proper rate to charge would be 3s. per ton? Yes.
809. So, by adding 3s. per ton to your estimate, what would the probable earnings of the railway be? That would increase them by about £700 on my estimate.
810. Where did you get your other figures from in your estimate of 1889? There are 1,000 tons of hay at 1s. 10d.
811. What would the local rate be? £1 4s. per truck.
812. To Sydney or Glen Innes? To Glen Innes. That would be at the rate, roughly speaking, of 5s. per ton.
813. What is the ordinary rate? The ordinary rate that I estimate is 1s. 10d.
814. Then, if you were to charge 5s., that would be 3s. 2d. per ton in addition? Yes, that would give us £190, assuming we got it; but I doubt whether hay would bear that charge. We do not find it in our experience.
815. You have estimated 1,000 tons of hay at 1s. 10d.? Yes.
816. And if you charged a local rate that would be 5s.? Yes; and would mean an increase of £190.
817. What is the next? "B" class. That is the class which embraces a good deal of colonial produce.
818. How many tons have you estimated? Two hundred and fifty.
819. What have you estimated it at? 4s. 6d.
820. What would the special local rate be? 8s. 2d.—practically double. The estimate for that is £56. That will add, say, £100.
821. What else? There are 1,000 tons of tin ore which, at that time, were carried at "B" rates, but are now carried at "A" rates, so the estimate is over-estimated; and if we applied local rates it would be less than the estimate then given.
822. What was the estimate then given? At 7s. 8d. per ton. The present local rate would be 4s. 9d.
823. Then it would be less than your estimate? Yes; there is actually a decrease. The classification has been reduced.
824. How much less? Nearly 50 per cent. less. That would be £100 off.
825. What else have you? There are 400 trucks of sheep at 12s. 4d.
826. What would the local rate be? £1 15s. 4d.
827. What difference would that make? About £450 increase.
828. Next? Four hundred trucks of cattle. If that were increased to local rates the difference would be about £1 a waggon.
829. That would be about £400 increase there? Yes.
830. Next? Wool—2,200 tons. If local rates were applied there, it would mean a difference of 14s. a ton—that is, roughly speaking, £1,106.
831. What else have you? The next item is 1,452 tons of third-class goods at 15s. 9d. as against £1 10s.
832. That is nearly double? About £1,140 increase.
833. What about maize and potatoes? The 3,500 tons included wheat, maize, and potatoes—they all come under the same class.
834. Have you not anything for "miscellaneous? That is all carried on into "B" class. That is a higher class. That is practically three times as high as miscellaneous class.
835. Now take second-class goods? There are 1,161 tons, producing £580. That is about one-third more—say £740 for that.
836. Now you come to coaching, do you not? No; there is something else yet. There is £152 5s. from 872 tons of "A" and "B" classes. You can put down another £152 5s. This is inwards traffic. You dealt only with the outwards first; we are dealing with the inwards now.
837. Next? That practically represents the whole of the goods.
838. Now take the coaching? My estimate was 3,000 passengers at 10s., producing £1,500.
839. Was that the total inwards and outwards? That 10s. represented what would practically be a return fare.
840. But would that be a full local rate? That is fuller than the local rate, which is only 8s. 6d. You cannot add anything to that, because it was an exceedingly liberal estimate. The local rate is 8s. 6d.—that is, for a single fare. In the through rate we allowed 10s. all round as covering all the intermediate distances, that is assuming that all the traffic came from Inverell to Glen Innes over the whole mileage, and that is so liberal that a local rate would not affect that—that is on the value of it. I allowed 8s. for a second-class travel—that is, assuming there would be a certain proportion of return fares. As a matter of fact, the local rate is only 5s. 6d. for a single journey.
841. What is the coach rate between Inverell and Glen Innes at the present time? I do not know. I have not been there for some time.
842. Assuming that the coach fare between Inverell and Glen Innes at the present time is for one way £1, or for return 30s., your allowance would be 8s. 6d. for a single journey? Yes, and 12s. 9d. practically for a return journey, over the whole distance.
843. Twelve shillings and ninepence as against 30s.—is that it? Yes.
844. You estimated the passenger traffic at £3,000? Yes, first class, and 2,000 second class. I estimated altogether for 5,000 at practically return fares.
845. You think that by charging local rates there would be an increase on that item? I should not expect an increase, but a decrease on it if we charge higher.

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846. You have not cast up the figures which you have given to me, but I have done so, and they come to £4,972, less £100—that would be £4,872? Yes.
847. That would be added to your estimate, assuming that local rates were charged? Yes; and assuming the people were able to produce the same traffic as we allowed for—assuming the local rates would not crush the produce in the district.
848. Upon the assumption that your estimate of the traffic is correct, by charging local rates your estimate of the returns would be increased from £8,200 to about £13,000? Yes; that is assuming, of course, that they would produce the same amount.
849. That is the largest increase you think is possible by charging local rates? Yes; I do not think that anything more could be imposed.
850. Do you think the local committee and witnesses who gave evidence before the Sectional Committee, in estimating the passenger traffic at £10,000, are very much in excess of what it would probably be? I should think so—very much in excess of it.
851. How long is it since you made any inquiry as to the traffic between Glen Innes and Inverell? I have not made any inquiry since 1889.
852. Are you prepared to say, then, that during the last three years there has been no increase in the passenger traffic? I can simply judge from the stations which are associated with the district, and there is nothing in the revenue either at Glen Innes or at Guyra to indicate that any such improvement has taken place or that any such traffic exists. I take it, of course, that the people travelling from Inverell would use the railway to a certain extent, and that the people of Glen Innes have progressed probably in the same degree as they have at Inverell.
853. Have you taken into consideration the probability that a great many people who now travel from Guyra, Armidale, and places in that direction would probably use the Inverell railway, it being so much nearer to them, in the event of this branch line being constructed? Well, I do not know that we get so much travel from any of those places as to lead us to expect that we should get £10,000 of revenue.
854. No—10,000 passengers; the estimated revenue is only £3,600? Well, practically, my estimate of 1889 covered 10,000 passengers in one direction, and if they claim it both ways it means 20,000 passengers.
855. Will you explain that? I say that in 1889 I estimated 3,000 first-class passengers at 10s., which was practically a through first-class return fare; that really meant 6,000 passengers using the road first-class, and 2,000 second-class passengers at 8s., which was also the return fare, representing 4,000 travels.
856. Of course that would be a very great reduction in the cost of travelling, would it not? Yes; a very great reduction indeed to them. But the difference between local rates and others would be this: Of course, I assume that the whole travel would take place over the whole 53 miles; as a matter of fact we know that some of it would be from intermediate distances. On the local estimate of 10,000 passengers which they have furnished us with, the first-class passengers at local rates would only be charged 8s. 6d. as against my estimate of 10s. for 3,000 passengers; 4,000 second, at 5s. 6d., they estimated, and I estimated 2,000 at 8s.
857. *Mr. Wall.*] In making your estimate of the passenger traffic in connection with this line, I suppose you based it on population? On population, and guided by our experience of similar districts.
858. You estimated the population, I think, at 6,000, did you not? About 6,000, I think it was.
859. In the returns furnished to this Committee in connection with the report on the Eden to Bega line I find this paragraph, which, I think met with the endorsement of the officers of your Department:—"The estimate of passenger traffic is based on the total population of the district, liberally considered. The population is taken as 12,000, and it is assumed that every adult would make two double journeys each year, and each child one double journey"? I do not know anything about that; I did not estimate it.
860. The estimate of passenger traffic between Inverell and Glen Innes is entirely different? Entirely different. I would not be responsible for that estimate; I may tell the Committee that.
861. Have you formed any comparison between the Inverell district and other districts which have railway communication? I have simply kept my eyes open, observing things.
862. From some evidence adduced to us, and statistics during our investigations at Inverell, it was shown that there was a great similarity between the Mudgee district and the Inverell district; I find the population of the towns (municipal) are very similar:—Mudgee, 2,371; Inverell, 2,566; and from estimates furnished I find there is a strong comparison between the number of stock in the district; you are thoroughly conversant with both districts? Yes; I know them both.
863. And if there is the same number of stock, the same population, and the same amount of settlement likely to accrue from the construction of a railway, is it reasonable to suppose the returns would correspond practically? As between there and Mudgee?
864. Yes? Well, we get a lot of traffic over the Mudgee line, which we do not anticipate exists or will exist on that line—mineral traffic. We get lime and coal, and other traffic of that description, and we get travel between those points, which produces revenue. I cannot see any immediate prospect of having that on the other line.
865. Do you know what the mineral returns on the Mudgee line, as between Wallerawang and Mudgee, have been during the last twelve months? We had 2,700 tons of coal, and associated with that we had a lot of ores.
866. That would be conveyed from Piper's Flat? Yes; about there. Then we had other minerals—silver, lead, bullion, and other things coming from that line.
867. Your haulage on the coal would be from about Piper's Flat? Yes; in this direction.
868. That would give a very small return? Yes; it would not give much; but it would mean a population there. Then, also, we have several intermediate stations from which traffic is hauled out beyond Mudgee.
869. What revenue would that coal traffic give from Piper's Flat? I cannot tell.
870. What is the distance from Piper's Flat? About 20 miles, I think.
871. And your average charge is about 1d. per ton per mile? Yes.
872. What is the number of tons? Two thousand.
873. That would be 2,000 times 1s. 8d.? Yes.
874. Something under £200? Yes.
875. What was last year's total revenue from the Mudgee line? We carried 15,000 tons of coal on the Mudgee line during the year 1892. We also carried 17,000 bales of wool.

876.

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876. I do not want the details;—I think that, roughly speaking, the Secretary for Railways gave the earnings of the railway as about £34,000? Yes; I think that is it.
877. What have you estimated the total earnings of the Glen Innes-Inverell line? At £8,000.
878. Then if there is any comparison to be drawn between the two districts, taking the coal trade out, and looking at the character of the districts, the estimate is very small compared with Mudgee? Yes; very small.
879. You stated in your previous evidence to the Committee that then, notwithstanding the small estimate of earnings, you would recommend the construction of the line, because you thought that in time it would pay? Yes.
880. You said in seven or eight years? I have a strong impression that it is a very good district and the line will pay eventually.
881. I think you said in seven or eight years? Ten years, I think.
882. If the line will pay in ten years, in accordance with your calculations, that is by adopting ordinary rates, if you were to adopt local rates probably the line would pay much sooner than under the other system, or do you think it would tend to retard the development of the district? I am rather inclined to think that the imposition of local rates would, especially on account of its long mileage to parts where it must get rid of its surplus produce. My impression is that, assuming that local rates were applied there and not on the north-western line, the general effect would be to divert all the stock traffic which is estimated here from it to the north-western line, and to cripple the productiveness, so far as wheat is concerned, and generally to prove detrimental to some of the estimates we have made.
883. If the district possesses the same facilities for settlement as the Mudgee district, and if the adoption of the ordinary rates after the construction of this line, would tend to further settle the district, do you think it is reasonable to infer that this line would not in every respect, except with regard to minerals, have the same traffic as the Mudgee line? I do not think it would have the same passenger traffic, because it is so very much more distant from the centres of population from which the travel emanates.
884. *Mr. Ewing.*] You object to local rates, because they might prevent development? I do not object to them, but rather approve of them.
885. You think the result will be the prevention of development? Under certain circumstances, where lines are very far distant from the centres of consumption, I think that is so to a certain extent.
886. Can you explain what would be the result of the present state of things without a railway at all? Scarcely anything will be produced at all, I suppose.
887. If they cannot afford to pay one-half or one-quarter as much as they pay to get their wheat from Inverell to Glen Innes, and if that would delay production, there is reason to suppose that the rate they are paying now, does so? Yes, far more so.
888. If one would render it difficult, the other would prohibit it? Yes; but these estimates were based on more than local consumption.
889. *Mr. Davies.*] When you were last examined before the Committee I think you were examined with reference to a statement put before your Department by the local railway league? Yes.
890. It was after you had thoroughly examined the figures as to the tonnage both inwards and outwards, where the local authorities represented something like 20,000 tons, I think you stated that you had no doubt that that was not likely to be realised as far as the carriage of produce is concerned as respects the district between Glen Innes and Inverell? Yes, that is my evidence.
891. If you turn up page 17 I think you will find that, taking the tonnage of inward goods at 6,000 tons at 3d. per mile, and charging the highest rate you are charging on any of the railways at the present time, making 13s. 4d. per ton, the total sum you made out was £4,000? Yes.
892. Have any facts come under your observation to alter your opinion with reference to the estimate you made then? None whatever.
893. Your estimate is based on the highest rate charged on any of our lines of railway? Yes; that we had realised under circumstances of similar traffic.
894. Then the local committee estimate 3,300 tons of wool? Yes.
895. And you estimate something like 3½d. per ton per mile, making 13s. 10d. per ton on the journey between Glen Innes and Inverell, making a total of £1,778? Yes.
896. Do you know of any circumstances which would cause you to alter your opinion with reference to that estimate? None whatever.
897. Do you think it possible that that large tonnage would in any way be realised in the shape of wool to be carried between those two points? I very much doubt it.
898. You know of no circumstance to alter your opinion? None whatever.
899. Nothing has happened since to alter that opinion? No.
900. With reference to the amount of wheat you estimated, 7,000 tons, at 5s. 3d.? That is the estimate.
901. That is a high rate which you propose to apply to the carriage of something like 7,000 tons? Yes; at local rates.
902. Had the local people estimated that they would have that to send by this railway if it were constructed? Yes.
903. You still hold to your opinion with reference to that amount? Still the same right through the whole of these figures.
904. Without going into details, I may ask you generally with reference to the estimate which you furnished to the Committee only a few weeks ago as far as the rates proposed to be charged and applied to the carriage of goods are concerned, do you still hold to that opinion? Yes; I have no reason to alter any evidence that I gave.
905. Then I gather from your answer that you are very sceptical as to anything like 20,000 tons of goods being available for carriage on this line of railway if it were constructed? I am.
906. You do not believe it is possible that there will be such a large quantity of tonnage as that given on this estimate? No.
907. Then, with reference to the coaching or passenger traffic, do you know the total population? It is about between 7,000 and 8,000, I think, in the district.
908. That is young and old? Yes.
909. You are aware that the electoral district embraces about 2,000 electors? Yes.

910.

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910. Do you think it will be possible to have something like 6,000 first-class passengers during the year with a population such as we have in a district like this? It is a very high estimate.
911. Have you in any portion of the Colony where you have a like number of people anything like that proportion of people travelling by the railways? No; I do not know any district similarly situated where we would average ten first-class passengers a day, for that is practically what it amounts to.
912. What is the highest proportion that you get in the best districts of the country of first-class passengers? I could scarcely answer that question.
913. Would it approach anything like ten? It depends so much as to where people are living; for instance, at places like Moss Vale and Bowral, and other places close to Sydney, we have a lot of travel, but the further you get away into the interior the more it decreases.
914. But, taking a branch line away from the main line in any part of the country, can you form any estimate of the probable number of people who will travel first-class with a population with only 2,000 electors in the district? Well, here is a fact I just happen to have before me: from and to Mudgee 7,600 tickets were issued during 1892, that is first and second class.
915. But as to first-class passengers? Well, as a rule, the proportion of first-class to second-class passengers is about one to five.
916. You think that the estimate made by the local railway league is very excessive? It is very liberal; but, as I estimated the same thing myself, I must not say too much about it.
917. But you were very liberal in your estimate? Yes.
918. You see no reason why that should be enlarged? No; I do not.
919. At what did you estimate second-class passengers? Two thousand; or practically 4,000 journeys.
920. But you are aware the local railway league represented them at 4,000? Well, that is precisely the same as I did.
921. Taking the passengers over a double journey? Yes; allowing the double journey.
922. What did you estimate the return for double journey, second class? Eight shillings each; the single fare is 5s. 6d.
923. That is based on the same calculation? Yes; it is an average over the whole distance. We are dealing in these figures really with 53 miles, and assuming that the whole of the travel will be over the 53 miles; but there will be a certain proportion of it within the 53 miles.
924. Taking your estimated number of passengers, and 20,000 tons of goods of various kinds to be carried, as a basis, your estimate is based on the highest rates of freights and passenger rates? Yes; over the whole distance.
925. And, with all that, you do not estimate an income sufficient to pay the working expenses and the interest on the capital cost of the construction of this line? My estimate of earnings does not reach what the estimate of working expenses and interest on capital does.
926. Do you think that if a branch line were constructed from Glen Innes to Inverell it would be possible in the near future for any traffic to develop which would pay the cost of management and the interest on the capital cost of construction? It is a very hard matter for anyone to say what will develop in a district like that. It is a district of which I have a high opinion, and what its development may be it is hard for me to say.
927. Do you think it is possible that in the near future anything like £25,000 a year could be got from freights and passenger rates on the 53 miles of railway? What would the near future mean?
928. The next ten years? It might be realised. I would not say that it would be—it is so difficult to tell. We have had such extraordinary developments in connection with some sections of road that we have opened, that I would not like to commit myself to any opinion. When I gave evidence before, I said that in ten years this line might pay working expenses.
929. You said it might probably pay working expenses in ten years? Yes.
930. But that is not the interest on the capital cost? No.
931. And I presume you are aware that the cost of the construction of the line was based on borrowing the money at 3½ per cent.;—do you think it is possible to borrow money at 3½ per cent.? I do not know. I cannot.
932. Do you think we could borrow at 4 per cent. at the present time? That is a very difficult question for me to answer. I know we are charged more than 3½ per cent. altogether—the Railway Commissioners have to make more than that good.
933. If money cannot be borrowed at the rate estimated here, it will add to the annual cost? Decidedly.
934. And that will mean a further loss? Yes.
935. *Mr. Trickett.*] You, of course, admit that any of your evidence with regard to the future earnings of the railway is purely problematical? Purely speculative.
936. And the gentlemen who have given evidence locally are just as likely to be as right in their surmises as you are? They are likely to know more about the development of the district than I am.
937. You admit that this Inverell district is progressive? Yes; it is a very good district.
938. Are you aware that when the Sectional Committee was there the other day the postmaster gave evidence that the business for this current year has increased by 20 per cent.? I am not aware of the evidence that has been given. I have not been there myself since 1889.
939. Would you be surprised to hear that the postmaster there has sworn that in his department alone there is an increase of 20 per cent. of business during the current year. Of course there may be reasons for that.
940. That shows progress? Yes; that does not show retrogression, at all events.
941. As regards your estimate of the carriage of wool, would you tell us the wool of how many sheep you have allowed for as likely to be carried over this railway? I have allowed the whole number estimated by the local committee. At the time it was somewhat in excess of the returns, but I think they took 6 lb. a fleece.
942. Will you tell me the wool of how many sheep you allowed for as likely to be carried over this line? I think it was about 875,000. I am not sure whether it was 5½ lb. or 6 lb. to the fleece that was allowed. I have not the papers with me.
943. In the evidence recently taken locally, it has been sworn by several of the witnesses that the wool of 1,000,000 sheep would be sent;—have you cause to doubt that? Not a bit. It would only correspond with what we know of the natural increase that has taken place throughout the Colony; but, as a matter of fact, we carried from that place during the year ended in June last only 11,000 bales of wool.

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944. But you have only allowed for the wool of a little over 800,000 sheep? But I allowed for more than that in weight. I took their very high estimate, which was far beyond that of the rest of the Colony per fleece per sheep.
945. Do you think you allowed for the wool of 1,000,000 sheep to be carried? It was less than 1,000,000.
946. I suppose the difference between the wool of 800,000 and the wool of 1,000,000 sheep would make a considerable difference, would it not? A difference of 20 per cent.
947. Would you also tell us what area around Inverell you have calculated as likely to affect this proposed railway? Thirty-five miles.
948. Well, if witnesses in Inverell have sworn that, looking at the natural trend of traffic, they would get it over 60 miles, do you feel disposed to doubt that statement? I am very much disposed to doubt whether they would get any traffic down towards Moree and Narrabri, because the mileage to Sydney or Newcastle would be so much in favour of the north-western line for their produce that the disposition would be to go there.
949. That is purely a matter of opinion? Yes; it is our experience generally. When two roads are open like that, we find the people generally select the shorter one, especially for stock.
950. But if people who are connected with the roads and the district generally have sworn that that would be the trend of traffic, do you not think they are likely to know more about it than you are? No doubt they say it with the best intentions at the time, but unfortunately in connection with a lot of railways we have built, that has not been realised afterwards.
951. With regard to passenger traffic, does the quantity not increase to a very great extent after railways are opened? Yes; over coach travelling.
952. For instance, it has been sworn here that in 1884 when the railway was opened to Glen Innes, the number of passengers for that year conveyed by coach from Inverell to Glen Innes was only 189; but two years after that the passengers had increased to 2,370 in that short space of time;—do you not think there will be a corresponding large increase of passengers here? We have allowed for a very large increase. In 1889 I went there and analysed the way-bills of every coach for two years, and the estimate of passenger traffic is five times that which was carried by coach.
953. Can you tell us how many people you have allowed for in your calculation as not travelling by the coaches at the present time? Really, I did not take into consideration the coaches at all, beyond asking what the way-bills were, but based it on experience of other towns connected with the railways.
954. Have you made a pretty liberal allowance for passengers who do not travel by coach? My estimate represents five times the ascertained travel by coach. I got the information in a confidential way. I got the way-bills. I have not brought the fact prominently forward before now.
955. Did you strike an average of the number of travellers? No; I had the way-bills for two years, and went through them.
956. What years? 1888 and 1889.
957. Are you aware that since then there has been a considerable increase? Probably there may have been, and I estimated for it by allowing five times the number to travel by train.
958. Speaking about this north-western line, did that pay at the start? No.
959. How long did that take before it paid? I suppose it is fourteen or fifteen years since it was built. In 1879 it was opened to Breeza, and to Gunnedah in 1879, and to Narrabri in 1882—that is ten years ago.
960. Can you tell us how long it was before it became a paying line? Last year was the first year.
961. It actually paid only last year? Yes.
962. That is about nine years? Yes.
963. *Mr. McCourt.*] Does the railway between Glen Innes and Sydney now lose any traffic by reason of its going from Glen Innes to Grafton by road? Yes; some traffic. Sugar comes up, and the waggons take return loads that ought to come to the railway.
964. Any considerable quantity? Not very much now. In 1889 there was a good deal going that way.
965. But in case the Inverell traffic were concentrated at Glen Innes, do you not think there would be greater competition between Glen Innes and Grafton for the trade of Inverell—that is, if there were a greater volume of trade at Glen Innes, do you not think that the people at Grafton, or rather the shipowners, would compete against the railway? It would be the natural disposition to do it.
966. And you would lose a good deal then? I think so.
967. If the junction were made at Guyra, you would command the whole of the trade of the Inverell district, would you not? No; I do not know that we should command the whole of it. Of course we would get some going into Inverell, and some going down the coast—all that lying nearer to Glen Innes.
968. But the people there would not take their produce to Inverell? Oh, yes, they would, from the intermediate district between Glen Innes and Inverell.
969. What proportion? Probably the wool would go there.
970. That would only be a very small proportion? Yes; there is not much population between those places.
971. Probably that would go in any case? Yes.
972. *Mr. O'Sullivan.*] How did you obtain your information outside of the railway stations? The information in this case was furnished to me by the local committee in 1889.
973. What induced you to discount their statement of 1889? For the simple reason that our railway returns did not represent the same as they represented to me.
974. Do you imagine that you get all the coach traffic which runs into your stations? No, decidedly not; but we know very well in cases like that, where the traffic has to pass the railway line; we know in this case how much passes over our railway line and in that direction.
975. How do you gauge the number of passengers between Glen Innes and Inverell by buggy or other private conveyance? The only way in which we can do that is to take towns similarly situated, and then see the number of tickets issued to and from those towns.
976. You know that a number of persons drive in from Inverell and different stations to Glen Innes without going to the railway station at all? Yes; but we take towns similarly situated, such as Murrurundi and Mudgee, and estimate how many tickets were issued to and from those stations.
977. But you cannot have an exact estimate? As a matter of fact, this estimate represents five times the ascertained coach traffic.

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978. But even allowing for the progress of a district like that of Inverell, you cannot be at all sure? No, it is only approximate; but of course it can be gauged by reason of its being compared with other districts.
979. I find that some of the witnesses during the recent visit of the Sectional Committee up there contradicted some of your evidence; for instance, Mr. Trickett has brought out one feature about 1,000,000 head of sheep, and I think you estimated them at about 800,000? Yes.
980. Did you make any allowance for starving stock travelling between the New England country and the country at the back? I made allowance for far more stock than our experience teaches us will be carried on that line. I estimated for 400 trucks of sheep, that would be 40,000 sheep, and 400 trucks of cattle. That was their local estimate at the time. Their estimate since has been increased to 80,000 sheep and 2,000 head of cattle.
981. Is this for starving stock? No; their total estimate.
982. I find that a witness, Mr. Fitzhardinge, a gentleman of repute in Glen Innes, states you have not taken into account the population in the districts west of Inverell;—did you do that? Within a radius of 35 miles of Inverell the whole was included.
983. Do you think you allowed a fair radius for the north and north-west—not the country towards Narrabri, but to the north and north-west—by stating 35 miles for a district like Inverell? I think it was a fair radius. It is extremely doubtful if you get south or go west whether that traffic will fit in there at all—whether it will not go down to Tamworth. I may say that this was the estimate of the local committee themselves. They considered in 1889 that 35 miles was a fair radius.
984. But, as a matter of fact, there is traffic now between Inverell and Goondiwindi, and between Glen Innes and Goondiwindi? I think there may be.
985. If there is traffic, will it not be larger with a railway to Inverell? The question is, how much the trade is, and what circumstances take it that way. I think Mr. Utz, of Glen Innes, and the storekeepers of Inverell say they send their stores up there, and there is a considerable traffic in stock from that direction. We do not get it at all on the main line in any way. If we get anything at all in that direction we get it at Narrabri—anything worth noticing comes in there.
986. Do you say the wool all goes in there? Yes.
987. The whole of it? Well, there may be small clips that go another way, because they have local teams, but practically the whole of the wool from the whole of the district north of Narrabri goes into Narrabri, and east of Narrabri, as far as Bingera, it goes into Narrabri.
988. Is not Inverell the principal centre of that portion of the country towards Goondiwindi? I do not think so. Most of our goods for Goondiwindi are sent to Narrabri.
989. Do not all the pastoralists go through Inverell to their stations? They may go that way, because they have a shorter journey by road.
990. Would they not be likely to further use it if it were shortened more? I expect they would; but I do not know whether they represent very much travel.
991. *Mr. Hoskins.*] Do you believe that if the railway were extended from Narrabri to Moree, the railway station at Moree would not take all the trade from Goondiwindi, and the country to the north-west of Bingera? I think that that line if ever built must take all that trade.
992. I understood you to say that your estimate of the probable traffic which would be derived if this railway were opened is 33 per cent. in excess of the traffic in 1889—that you ascertained in 1889? Yes; that is the quantity we ascertained from our local stations as falling into that district.
993. Is that the usual estimate of probable increase of traffic that would take place consequent on the opening of a railway? That would depend to a large extent upon the character of a district. A district like that, so regarded, is one that must progress. It was felt—at all events, I felt it strongly at the time I was there—that it would progress very rapidly. There are other railways for which I have not allowed that much.
994. Therefore, the estimate of 33 per cent. in excess of the traffic in 1889, when you were making inquiries on the subject, is a very liberal estimate of the probable increase? I think so.
995. Will you have the kindness to tell the Committee what was the state of the passenger traffic at the Glen Innes and Guyra Stations in 1889, 1890, 1891, and 1892? I have not a comparative statement here; I have only 1892. I can give that to the Committee if they wish for it.
996. Well, compare that with 1889? I can give you 1891 and 1892.
997. Have you not 1889? No; not here.
998. Have you 1890? No; only 1891 and 1892.
999. How could you tell us, then, in reply to a question put to you, the amount of the increase in passenger traffic, based on the receipts of Glen Innes and Guyra? From my estimate at the time. I am now quoting from the official return.
1000. But what was your estimate in 1889? In 1889 I estimated for 3,000 first-class and 2,000 second-class passengers.
1001. What station? From Inverell.
1002. What was the number of passengers booked at Glen Innes and Guyra in 1891 and 1892, when you got the data? I have not the official returns before me, but I should say that it was less than that, but how much I cannot say; I have not the information here.
1003. Have you any returns here? Only 1891 and 1892.
1004. Well, give me 1891 and 1892? From Guyra there were 2,418 tickets in 1892. From Glen Innes 5,736 tickets were issued.
1005. How much is that in excess of your estimate in 1889 in point of numbers? It is less; my estimate was 10,000.
1006. Therefore, the actual number booked was very much less than your estimate? Yes.
1007. *Mr. Davies.*] In answer to one of my questions you said the district was a progressive district? Yes.
1008. Will you be surprised to learn that the number of electors according to the electoral list for the past thirteen years, has been almost stationary? Well, it would not accord with my experience of what I saw in the district.
1009. Will you kindly look at that return, and see what has been the number of electors on the electoral roll, starting first of all when the electorate was created; will you kindly read out the numbers for the different years? One thousand seven hundred and eighty-three in 1880; 1,882 in 1881–2; 1,779 in in 1882–3; 1,908 in 1883–4; 1,883 in 1884–5; 1,899 in 1885–6; 2,049 in 1886–7; 2,177 in 1887–8; 2,336 in 1888–9; 2,367 in 1889–90; 2,220 in 1890–91; 2,062 in 1,891–92; 1,999 in 1892–3.

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1010. So that for a period of about five years there has been only a falling off of about 500 electors? Apparently, from this return.
1011. The return as placed before you shows that at the time when the electorate was created the number of electors was almost the same as at the present time? Yes; there is a difference of about 110.
1012. Do you regard a district showing such a result in twelve years as a progressive district? Well, probably some of the people have left, and have gone where they have been more fortunate in the direction of getting railways.
1013. Do you think that is very likely? I think that is a very strong inducement for people to settle, but I think all the elements of progression exist there.
1014. Is there any district in the country which you know of that has been in a state of standstill the same as that district appears to have been as far as population is concerned? I am not sure that many districts were invaded as this was during the time the tin mines were in existence there.
1015. Would not the opening of the line to Glen Innes have been the means of increasing the population there? I think so. We generally find it is so. If we may take Glen Innes as an instance, there is, apparently, a large increase of population, but I do not know that that has been owing to the railway.
1016. But would not the opening of the line to Glen Innes have had an influence on the population of Inverell? I should say there is a very big increase in the population of Glen Innes. In 1880 there were on the rolls 1,575; last year there were 2,740.
1017. But I am speaking of Inverell? But they have not a railway. I would not like to attach very much to this, but my own personal impression is that the fact of the tin-mines having failed has to a certain extent had a good deal to do with the falling off in population.
1018. You think that would make a difference of 400 people? I think so. At the time I was there it was practically falling off through people leaving.
1019. But supposing you leave out the tin-mines, still there has been no progress;—supposing you allow a loss of 400 people for that, there is a difference between the number at present on the route of the line and what there was four years ago, is there not? Yes; these figures indicate there has been a falling off.
1020. *Chairman.*] Is there any stock carried between Wallangarra and Glen Innes at present? Nothing to speak of.

Henry Deane, Esq., Engineer-in-Chief, Railway Construction Branch, Department of Public Works, sworn, and further examined:—

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1021. *Mr. Sutton.*] Can you give us any further information with reference to the proposed construction of the line from Glen Innes to Inverell—as to whether any reduction could be made in the cost of the line? I do not think I can give anything further than what I have already stated in my letter of the 19th of November. I gave all the details of the estimate there. I showed how the construction might be cheapened.
1022. When Mr. Barling was examined before the Committee, he made a statement that the possible reduction was £6,000;—does that letter of yours include that reduction? Yes, this is an estimate per mile; so whatever the length of the mileage would be it would have to be multiplied by that amount.
1023. *Mr. Ewing.*] Does this estimate include the station buildings on the limited scale mentioned in your fifth section;—you say on the Lismore-Tweed line they will do without the station yards and signals and that sort of thing? No.
1024. So if you have no platforms, and only ladders, as it were, from the carriages, it will lessen the cost still further? Yes; that will be the kind of reduction I have indicated here.
1025. What will that bring it down to;—have you any idea? I cannot say without working it out in detail.
1026. I see "platforms, buildings" are £195? Yes.
1027. "Stations, earthworks," £150? Yes.
1028. Do you think £7,000 a mile would make a safe railroad? Do you mean by cutting out ballast and sleepers, and reducing freight and all that?
1029. Cutting out things without impairing the safety or efficiency of the line? I think it is very likely, when the survey is worked out, that it can be done in the way that is indicated.
1030. You think it is possible? I think it is likely.
1031. *Mr. Collins.*] Have you been over the line yourself from Glen Innes to Inverell? Yes.
1032. You know the nature of the country? Yes.
1033. Did you have this estimate made up or did you make it up;—did you have it made up by officers of the Department? I always make up the estimates or revise those made under my orders by my staff.
1034. Of course going through the country would be of great assistance in making up the estimate? It is sometimes of assistance to know the class of country, of course.
1035. *Mr. Neild.*] Has anything further been done in connection with the proposed route *via* Guyra? No; nothing.
1036. Mr. Edwardes, of your Department, was the surveyor engaged on that line from Guyra to Inverell, was he not? Yes.
1037. At least a portion of it—about half the distance? Yes.
1038. He states that the grade has been altered from 1 in 40 to 1 in 60;—is that so? No; only in the way indicated—in the way that I explained. It has not been laid out on the ground; I reported that the question had been investigated.
1039. From the levels in your possession, you think it could be altered to 1 in 60? Yes; I have convinced myself that it could.
1040. Was that the course adopted with reference to the Glen Innes-Inverell connection, in the alteration from 1 in 40 to 1 in 60? No; it was necessary there to survey a new route.
1041. That matter was dealt with upon the ground? Yes. In the case of the Guyra-Inverell line it was easier to deal with, because the route was not materially deviated from; but in the case of the Glen Innes-Inverell line, in order to get a better grade, an entirely new route had to be taken.
1042. The estimated cost per mile between Guyra and Inverell and between Glen Innes and Inverell is something over £1,000 per mile in favour of the Guyra route, is it not? Not quite £1,000 per mile, but nearly £1,000. The estimate of the Guyra line is a little over £7,000.

1043.

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1043. £7,090, is it not? That makes about £910 per mile difference.
1044. That is a difference arrived at with a re-survey? Yes.
1045. From your experience of these matters, do you think it is likely that if this revision were made upon the ground rather than upon the plans the reduction per mile will be increased or lessened? It is, of course, very difficult to say, but I should not think it would make very much difference.
1046. Is not the nature of the country between Guyra and Inverell much easier for the purpose of railway construction than between Glen Innes and Inverell? I cannot speak from personal observation, because I have not been over the Guyra to Inverell line, but I understand from the surveyor's reports that it is somewhat easier. I think the estimates formed show that the quantities taken out for earthworks and so on are less per mile in the case of the Guyra to Inverell line than the Glen Innes to Inverell line.
1047. In reference to the Guyra line, does the estimate include the cost of a bridge across the Macintyre? Yes, it does.
1048. Could not a site for a railway station be found to the westward of the town bridge, and so avoid the necessity of crossing the river with an expensive bridge? The bridge, of course, could be avoided.
1049. Do you remember what the estimated cost of the bridge was? No.
1050. It would be a pretty large sum, would it not;—the crossing is an extensive one, is it not? I believe I have given evidence upon that.
1051. In connection with the present inquiry or a past inquiry? Present inquiry, I think.
1052. If a line were constructed between Guyra and Inverell and the crossing of the river were avoided it would make a very material difference in the cost per mile of the estimated cost of the line? I should not like to speak without having the estimate before me.
1053. *Mr. Humphery.*] You say, I think, in your appendix to your evidence, that the cost of the line may be estimated at £6,254—that is, the line itself? Yes; that is the cost per mile for the running line itself.
1054. How would the difference be made up? Fencing and other things.
1055. How much for fencing? £156 per mile.
1056. In your opinion, assuming the line were operated only in the daytime, could that be dispensed with? Partially, I should think.
1057. About how much? I should think about two-thirds might be dispensed with.
1058. About £100? Yes.
1059. The next item? The next is crossings.
1060. They could not be dispensed with, I presume? Yes, they would be dispensed with partly, because if there was no fencing in a large paddock, or in any property in fact, you would not require gates.
1061. How much might be saved on crossings? I should think that two-thirds of that might be cut out. I should put down fencings and crossings at about £100—the necessary fencing and crossings, if fencing generally were dispensed with.
1062. How much have you allowed for it in your estimate? £300 altogether.
1063. Therefore £200 might be saved of that? I should think so. Without considering each property in detail, it is impossible to say exactly.
1064. In sleepers and laying ballast, &c., I think you said £600 might be saved? £602 per mile.
1065. Do you think that that reduction in the cost would lead to any very large increase in the annual expenses of working the line? It would make some difference to the maintenance. If you had only 3 inches of ballast, and the ballast were not boxed up, you would have less support for the sleepers and the road, and there would be more labour expended per mile of line to keep it in order.
1066. Are you keeping in mind the fact that it is a branch line, and not a main line? Yes; I should like to point out that the quantity of ballast put under the sleepers in all these lines—6 inches—is a small quantity. It is not what you would put on a main line—on an express line—that is to say, if one had the money to spend. A much larger quantity of ballast is really required to keep the road in first-class running order. On a branch line 6 inches is enough, but the wisdom of reducing it to 3 inches is very doubtful.
1067. Why do you consider a reduction from 6 inches to 3 inches—it has not been suggested by any question asked by the Committee? No; but it has been done.
1068. Why do you discuss it in your appendix? Because the question of cheapening lines generally has come before me. The Railway Commissioners have made some suggestions about cheap lines, and the Minister for Works is very anxious to get construction cheapened in some cases, so I have gone into the question.
1069. Then you do not recommend any lessening of the thickness of the ballast? I think it is undesirable. Of course a safe line could be made with less ballast, but I think it is undesirable to do it. It means taking it out of the maintenance.
1070. But it would make a difference, would it not, in the cost of constructing that line of £600 per mile for 53 miles? That is not all ballast you see; it is partly sleepers.
1071. What would be the difference in the cost of ballast per mile? About £242.
1072. That taken from £600 would leave you £360 per mile? Yes.
1073. Do you think that that could safely be deducted from the cost of the line without in any way impairing its efficiency? Impairing its efficiency! It would impair its efficiency in this way, that its maintenance would be more costly.
1074. Would the additional cost be appreciable? I think it might be. If you take 4 per cent. on that £242 ——
1075. It is £360? But I thought you were referring to the ballast.
1076. No; leave the ballast, and then the difference between £240 and £600 would be £360, and that would probably represent the saving on sleepers, &c.;—do you think that that reduction in cost might fairly be made with impairing the efficiency of the line? It would be reducing the carrying capacity of the line. The sleepers would have to be of an inferior quality—they would have to be what is called "backed off." I think that is the best term. They would have the sap on the outside, and the adzing would have to be made of such a depth as to cut through the sap, but as the upper surface would be somewhat rounded the whole of the sap would not be cut away across the whole bearing of the rail, and the bearing would consequently not be so good. The sap in a sleeper always decays—it disappears entirely in the course of a few years.

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1077. Then you would not recommend the substitution of a cheaper sleeper for those for which you have estimated? I think it would do very well if you want really a cheap line, but it is not as good as having really well-formed sleepers.

1078. You think these sleepers would not be suitable for a branch line? No; I do not say they would not be suitable for a branch line, but they are not so good—they would not have the same carrying capacity as the better rectangular sleepers.

1079. Do you think the carrying capacity would be sufficient for the traffic of the line, judging from the information you have as to the possible traffic? I have not studied the question of traffic very much, but I daresay it would.

1080. You have some knowledge, have you not, of the district? Yes.

1081. And the character of line that would probably be required? Yes.

1082. Do you think you could recommend the construction of this branch line with the cheaper sleepers—that is, to effect a saving of £300 per mile? I have already stated in this letter——

1083. That is in a general way, but I am directing your attention to this special branch line between Inverell and Glen Innes; I know generally that you do not recommend it? If it were possible only to provide a certain sum of money—£8,000 per mile, less £300—and it was necessary that the line should be made, and it could only be made by reducing the cost of that item, I should say reduce the cost of the item; but if all the money could be obtained, I would say make a complete line.

1084. Do you see any objection to constructing the line at the reduced cost—assuming you were limited to a certain expenditure? I do see an objection to reducing the cost, but I do say it can be done, and done with safety. I do not think it is a prudent reduction, but still it can be done.

1085. Take the next item "platforms, buildings, stations, &c.," £345 per mile;—how much of that do you think could be saved; that comes to rather a large amount? I have taken these stations at less in cost than the cost of the stations on the Culcairn-Corowa line which was intended to be a cheap line; but if the Railway Commissioners are content to work the line with less in the way of buildings and station accommodation, of course I cannot object. It is not one of those items which affect the stability of the line at all.

1086. Can you recommend any saving upon that item? I state how a saving can be made upon it.

1087. But you do not say whether you would recommend it—of course we want your opinion, if you can express one? It is really a traffic matter, and I have some hesitation in giving an opinion on that. I may have an opinion, but I think the matter might be referred to the Railway Commissioners.

1088. Your attention having been drawn to those particular items which you have discussed in your appendix, do you think it would be possible to build, at a cost of £7,000 per mile, a line to satisfy the requirements of the district, and to constitute what you think would be required by the Railway Commissioners for operating that line? I think that a line that would answer the purpose could be built for £7,000 per mile.

1089. You think that? Yes.

1090. *Mr. Davies.*] On all previous occasions when you have been examined—and I think you have been examined on several occasions in reference to this matter—you stated the line could not be constructed for less than £8,000 per mile? I do not think that is correct. I have always said it could probably be reduced—that if any alteration were made it would be in the way of lessening the cost. I did not say that it could not be made for less than £8,000 per mile; but I said that that was my estimate, but when it came to be worked out it would probably be less.

1091. Have you worked it out to show it will be less? I have not complete surveys.

1092. Are you still under the impression that it might be built for less money? Only in the way that I state here. I have not altered my opinion in the least. I have stated before that when the survey comes to be worked out—and this is only the result of a flying survey—the earthworks will probably show a reduction, and then I have shown in this minute, which is printed here, how, if the requirements of the line are less, a reduction can be made by putting in materials such as sleepers of a less expensive character, and leaving out things. That is the main point—you leave out things.

1093. That is to say, you can construct the line for £7,000 but it will be an unfinished line? It will be an unfinished line.

1094. It will be a line which is safe but unfinished? It will be a line partially fenced, partially ballasted, partially provided with stations, and so on.

1095. Practically an unfinished line? Yes.

1096. Which would have to be finished at some later period? Sooner or later.

1097. You do not recommend that course of action as the head of the Constructing Department? No; I do not recommend that.

1098. You prefer to recommend a line to be constructed that would be finished, and handed over to the Traffic Department in that state? Of course it is my business to carry out instructions, and so long as a line is properly constructed, and capable of carrying traffic with safety, I must be satisfied. If my instructions are to leave out a portion of the works which are not necessary to the strength and stability of the rest, I can have no objection; but of course at the same time I would point out that they will have to be made sooner or later.

1099. In laying this road you would prefer to lay heavy rails—that is 60 lb. a yard—would you not? Yes; I think the heavier rails are always the best.

1100. And the cheapest in the end, are they not? Yes, they are the cheapest in the end, when you consider the possible large increase of traffic in the future.

1101. You have based your calculation for the construction of this line on laying a 60 lb. rail? Yes.

1102. So that if you increase the weight of the rail you increase the cost of the whole of the road right through, do you not? Yes.

1103. What would be the difference in the cost—what do you usually use—75 lb. rails? Seventy-one and a half lbs. is the size we have.

1104. What would be the difference between 60 lb. rails and 71½ lb. rails, approximately? About £140 per mile.

1105. You have been asked already with reference to fencing in this particular proposed line;—would it not be absolutely necessary to fence by reason of the deep cuttings on each side all along the route of this proposed line? That would be a matter for consideration. I do not think it would be absolutely

necessary

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necessary over the greater part of the line. Possibly where deep cuttings are, it will be desirable to fence there, although in a sheep country it is scarcely necessary. Sheep would not fall over.
1106. Is this not a cattle as well as a sheep country? Well, you can put light barriers up to prevent cattle and horses from tumbling down.
1107. Would not one action alone against the Government for compensation be as much as would pay for the whole of the fencing, the action being brought by reason of your leaving the line unprotected? No; I do not think that.
1108. Not if half a dozen human lives were sacrificed, and compensation were claimed by the friends and relatives of those killed? Possibly, if it could be shown that the loss of life was attributable to that, and it could be brought home to the Government.
1109. Would it not be very culpable on the part of the railway authorities if the road were left open on each side, where stock might find their way over the cuttings on to the railway, and turn over a train? There would not be much fear of that.
1110. Under the present Railway Act, are you not compelled to fence? Yes.
1111. Then you cannot leave the question of fencing out of the estimate here? Oh yes, you can; because in the Nyngan-Cobar Act, there is a special clause providing for the leaving out of fencing.
1112. That was a special Bill, of course? It is a special clause in the Bill.
1113. But the Railway Act provides that the lines should be fenced? There would have to be a special clause in the Bill.
1114. Then with reference to crossings—where you sever people's property, you will be compelled to put in crossings, will you not—where you cut through people's property on each side of the line, you must put in crossings and roads? You would have to give them crossing-places.
1115. Does not the law make it compulsory on your part to do that? Well, you would not want crossings for horsemen to get across, or for sheep or cattle.
1116. How then would they get from side to side with cuttings in some places 30 feet deep? They would get around the ends.
1117. Have you a section here of your earthworks to show how they would get around the ends? Yes; there is a section before the Committee.
1118. Do you not estimate your earthworks at £3,160 per mile? But cuttings and banks are entirely different. The ends where they join are level.
1119. What lines have you where there are heavier cuttings than in this proposed line? Well; the Sydney to Newcastle line is very much heavier than this would be.
1120. That has been finished a good while—I mean lines of recent date—within the last three years? We have not finished any heavy lines within the last three years.
1121. You have been very slow, then? We did not have any to finish in that time.
1122. The earthworks in connection with this line are very extensive, are they not? Yes.
1123. The very fact of your estimate of £3,157 per mile shows that? Yes; it is the earthwork item that is heavy.
1124. That proves there must be a necessity for crossings and for fencing, does it not? I do not know; I do not think it follows necessarily.
1125. You do not think it is necessary to fence? I do not say that; I say I do not think it necessarily implies that fencing should be erected.
1126. Do I understand you to recommend that the fencing should be taken out of this item of construction? No; I would rather have £8,000 per mile and complete the line entirely.
1127. Do you recommend that the crossings should be abolished—no provision made for crossings? If fencing is left out I should only put what crossings are necessary, and these crossings would be less costly than if you have fencing—gates would be avoided.
1128. Then with reference to stations—the earthworks of the stations on this line will be pretty heavy, will they not? Yes, they would.
1129. And also for platforms and sidings, the earthworks necessary would be heavy? Yes.
1130. It is only a question of the cost of the buildings? If you put in less accommodation, of course the earthworks would be reduced as well.
1131. That is to say, if you put up simply wooden waiting-rooms? You would reduce every item in that class.
1132. Did I understand rightly that you suggest in the minute which you have written, and which is before the Committee, that a saving might be effected of £602 per mile if a reduction of ballast under the sleepers from 6 inches to 3 inches were adopted? A reduction of 3 inches, and sleepers of a different character used.
1133. Undressed sleepers? Yes.
1134. Do you recommend that as a safe policy in connection with the construction of this line? It is quite safe.
1135. And economical? No; I did not say that.
1136. Which do you think is the wise course to adopt in connection with the construction of this line? I prefer good rectangular sleepers.
1137. And sufficient ballast? And sufficient ballast.
1138. Would that be the cheapest in the end? I believe it would be the cheapest in the end.
1139. And as far as you are concerned as Engineer-in-Chief for the Construction of Railways, you would not recommend the line to be constructed at less cost than £8,000 per mile—that is to say, a good, safe, finished line? I would recommend a class of line provided for in this estimate.
1140. That is, at £8,000 per mile? Yes; the estimate amounts to £8,000. I think that money should be provided.
1141. And you are of opinion that it would take all that money to construct a line such as you suggest in this estimate? Excuse me, I did not say that. I said that, for instance, the earthworks might be reduced.
1142. Well, that would reduce the cost from £8,000 per mile to something below that? Yes.
1143. Do you think that the sum of £8,000 should be provided? £8,000, or something near that should be provided.
1144. Do you think a line could be constructed according to your estimate for £7,000 per mile? Not in the way I have indicated—I do not think it is at all likely. 1145.

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1145. Not according to your estimate on the lines on which you propose to construct the railway? No.
1146. You would not recommend its construction? No; I do not recommend it.
1147. But if Parliament orders a line, as you state here an unfinished railway line, to be constructed, you can construct one that would be safe for people to travel over, but it would be an unfinished line? Yes.
1148. *Mr. McCourt.*] Very great extra attention has been given to the line between Glen Innes and Inverell with a view to reducing the cost of it? Yes.
1149. And the cost has been reduced from an estimate of £11,000 to £8,000? Well, it is a different line.
1150. Between the same two points? Yes.
1151. Well, if the same attention were given to getting a cheap line between Guyra and Inverell, do you not think the cost of that could also be reduced considerably? No; not in that way. The circumstances are quite different.
1152. Why different? Because, on the Guyra to Inverell line the route which has been adopted is, generally, the right one. In the case of the Glen Innes to Inverell line the £11,000 per mile route was the wrong one.
1153. Do you not think a better route could be obtained between Inverell and Guyra than the one already adopted? Only by deviating for the grade.
1154. Would that cheapen the line? No; it would not cheapen the line.
1155. Do you mean to say, then, that the line between Inverell and Guyra could not be cheapened from the present estimate of £7,090 per mile? I think it is unlikely. I have not been over the line, but I have looked into the reports and quantities.
1156. There was only a flying examination of the country? No; it was a careful survey—a more careful survey than the one which has been made between Glen Innes and Inverell.
1157. You know nothing of the country of your own knowledge? No; I have not been across there.
1158. *Mr. Neild.*] Have you now particulars of the estimated cost of the bridge over the Macintyre River on the Guyra to Inverell line? Yes.
1159. What is it? This is an estimate which was made about three and a half years ago. The bridge over the Macintyre River, provided for, consists of five spans of 42-feet timber trusses, with 24-feet timber openings at the ends. The estimate for that bridge is, I here find, £5,431. It appears to me rather low.
1160. It is a bridge of over 200 feet in length? That comes to over £20 per foot. I do not see any reason why it should not be made for a little over that sum.
1161. Do you think it could be done for £10,000? Yes.
1162. Would £10,000 be an excessive sum at the present rates? I should prefer to put up a steel bridge. A steel bridge would cost very much more than this, but I should prefer it as being a permanent structure—a steel bridge with cast-iron cylinders. This is the amount which has been provided in the estimate.
1163. Only £5,000? Yes.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

Railway from Glen Innes to Inverell.

APPENDIX.

A.

[To Evidence of H. Deane, Esq.]

GLEN INNES-INVERELL RAILWAY, *via* MADE'S VALLEY—DETAILS OF ESTIMATE OF COST.

Department of Public Works, Railway Construction Branch,
Sydney, 19 November, 1892.

Minute Paper.—Subject: Glen Innes-Inverell Railway, *via* Made's Valley.

I HAVE the honor to forward herewith details of the estimate furnished. As already explained, I think it probable that when a complete survey is made it will show a reduction in the cost of earthworks. The estimate is the one which I recommend should be adopted, subject to such alteration.

I am quite willing to admit that saving can be effected if certain items are carried out in a less substantial and cheaper manner and others left for later construction. In this case it means that either a further sum of money must be voted on some later occasion or deficiencies must be made up out of revenue.

Glen Innes to Inverell, *via* Made's Valley; length, 53·4 miles.—Details of Estimate.

Single line—Cost per mile.

Earthworks	£3,157		
Culverts and bridges	695		
Permanent way—laying, 1s. 9d.; sleepers, 6s.; ballast, 5s. 6d. ...	1,238		
Rails and fastenings	674		
Freight, at 2d.	290		
Engineering and supervision	200		
		£6,254	
Add fencing	156		
Add crossings	144		
		300	
			6,554
Add—			
Stations, earthworks	150		
Platforms, buildings	195		
Sidings	106		
Miscellaneous, water supply—signals, turntable	152		
		603	
Contingencies		843	
Total			£8,000

It will be seen that the running line itself is estimated to cost £6,254 per mile.

The earthworks I have already referred to. The item, culverts and bridges, is heavy, but I do not think it can be reduced. On the contrary, waterways are almost invariably increased during construction, as it is then only actual requirements can be decided. Under permanent way I have included 60 lb. rails as being heavy enough for the traffic, although I am strongly in favour of using heavier ones. Ironbark sleepers are expensive in the district. I have allowed 6 inches of ballast under the sleepers according to usual practice, the same being boxed up over the sleepers. If, however, roughly split sleepers of ironbark or box are considered sufficient, and the ballast is reduced to 3 inches under the sleepers, and not boxed up, the item may probably be reduced to one-half, or £602 per mile, but I do not recommend this step as maintenance will be made more costly.

The item of freight on rails and fastenings I have already explained—it is taken at 2d. per ton per mile from Newcastle. If the Railway Commissioners consent to reduce this charge, as they do in all cases where return freight is obtainable, the item might be halved.

Next come fencing and crossings. If the greater part of the fencing could be dispensed with, the cost of crossings, which includes gates, would be correspondingly reduced, but cattle and sheep stops would, on the other hand, have to be fixed wherever a dividing fence crosses the line. As the traffic on the railway would in all probability be worked only by day, it is perhaps worth consideration whether the fencing might not be, in great part at least, done away with.

The next series of items depends entirely on the requirements of the district as judged and decided upon by the Railway Commissioners under the powers conferred upon them by the Railway Act. (See clause No. 28.) Sidings are taken at about 5 per cent. on the cost of the whole permanent way, a proportion arrived at from actual experience. As regards platforms, buildings, earthworks in station yards, and signals, the estimate is a moderate one, but perhaps, as on the Lismore-Tweed line, these can in a great part be dispensed with. Some kind of waiting sheds, accommodation for tickets and officers, goods sheds, and platforms, wool loading platforms, &c., must, however, be provided, and the probability is that if these are cut down too much in the first estimate they will soon be found to be deficient and the residents will be clamouring for increased accommodation, and the Railway Commissioners will find they are losing traffic and incurring increased working expenses through deficient arrangements having been made in the first instance.

Lastly, as to the item for contingencies, there are many miscellaneous items not included previously—telegraph lines, junction arrangements at Glen Innes, part cost of maintenance for first year, and, unless a special vote is taken, cost of resumption and land compensation, also any expenses that may arise as the result of slips, additional cost of road approaches and metalling, road diversions which may prove necessary, and other expenses which cannot be estimated at present, would be paid for out of this item.

I consider it would be unwise to reduce the amount, as from experience I know that with the greatest possible economy there is a great deal of expenditure which it is impossible to foresee.

The whole amounts to this. If Parliament orders an unfinished railway, the same can be constructed so that public travelling can be conducted in a perfectly safe manner, but I do not recommend such a step, as the money for completion must sooner or later be found, either from a fresh vote or out of revenue.

When railway companies have to borrow money at a high rate of interest it may be good business to open a line in an unfinished state, but where a Government can obtain money for railway construction at 3½ or 4 per cent. the best economy would seem to be to make a substantial line and fully equip it at the commencement.

H. DEANE,
Engineer-in-Chief.

The Secretary, Public Works Committee.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

SECTIONAL COMMITTEE.

RAILWAY FROM GLEN INNES TO INVERELL.

REPORT.

THE Sectional Committee appointed on the 23rd November, 1892, to inspect, take evidence, and report on the proposed Railway from Glen Innes to Inverell have to report as follows:—

The members of the Committee left Sydney by the 6·15 p.m. train on Sunday, the 27th November, 1892, arriving at Guyra on Monday, 28th November. Evidence was taken at Guyra at 8·30 a.m. Mr. Richard Pearson, produce merchant, was in favour of the construction of a railway from Inverell to Guyra, on the ground that large quantities of produce, principally potatoes, would be sent from Guyra to Inverell and the districts further to the west. Mr. William Moore, farmer, stated that potatoes, wheat, hay, and oats were grown in the Guyra district, and potatoes would be sent by rail to Inverell. Mr. William Arthur Stevenson, hotel-keeper and mail contractor, stated that before the differential rates to Glen Innes were established there was a large traffic between Inverell and Guyra, and he believed that if the railway were taken between those two points the traffic would again be very great. Mr. Archibald F. Dutton, grazier, stated that a great deal of the land between Guyra and Inverell was inferior, with patches of good land. Mr. Joseph Monteith, farmer, gave evidence supporting the statements of Mr. R. Pearson. At 9·30 a.m. the Committee left Guyra for Tingha, arriving at Ollera Station at noon, when evidence was taken. Mr. Donald Stewart, farmer, stated that wheat, potatoes, turnips, and hay were grown in the neighbourhood, but that at present the keeping of sheep and cattle was more profitable. Mr. E. Everett, proprietor of Ollera Station, stated that if a railway were constructed from Guyra to Inverell, sheep would be trucked in winter to Inverell to fatten, and would be trucked back in spring. Mr. W. Willis, farmer and grazier, gave similar evidence. Mr. Wm. Relton, sheep farmer, living 7 miles from Ollera, stated that wool was now sent to Guyra, and a railway from Guyra to Inverell would not take that traffic. Such a railway would only be useful to carry agricultural produce to Inverell and the west. The Committee arrived at Tingha at 7 p.m. Mr. Thomas Jones, wine-grower and storekeeper, was examined the same evening. He spoke strongly in favour of the construction of a railway from Guyra to Inverell, as it would serve the Tingha tin-mining district, which was not falling off in population, and which would then be properly developed as a mining-field and fruit-growing district.

On Tuesday, 29th November, the Committee met at the Tingha Court-house to take evidence. Mr. W. Leitchfield, tin-buyer, stated that during the present year there had been a slight falling off in the yield of tin—800 tons as against 900 tons in the previous year—but some promising lodes had been opened up. There was some of the best volcanic soil in the Colony in this district, which would be best served by a railway from Guyra to Inverell. Mr. R. Mitchell, postmaster, stated that the business of the department had steadily increased, and especially the deposits in the Savings Bank. Mr. E. Warland, fruit-grower, stated that all English fruits grew well in the district, and if a railway were made from Guyra to Inverell a good market would be provided east and west. Mr. G. Dart, Public School teacher, stated that in January, 1891, there were 150 children attending school in Tingha, and at the present time 216. Mr. C. Bowers, farmer and miner, stated that there was abundance of good land and timber in the locality. Mr. G. Staschen, miner, stated that the tin-miners were fairly prosperous, and the mining population was not diminishing. Mr. Wm. J. Howes, a tin-miner of experience in Tasmania and

Australia, stated that he had discovered true tin lodes in the district, and that it was only necessary to procure suitable machinery to work them profitably. Mr. J. Rank, senior constable, stated that in the Tingha portion of the Inverell electorate in January, 1892, the European population numbered 2,090, and the Chinese 450. The European population had been increasing since 1887, and the Chinese were decreasing rapidly. The Committee left Tingha at 4 p.m. and arrived at Inverell at 6·30 p.m.

On Wednesday, November 30, at 10 a.m., the Committee met at Inverell Court-house to take evidence. The Rev. R. K. Ewing stated that the towns of Inverell and Glen Innes had the strongest claims to be connected by a railway on account of the large population in the two localities, their existing commercial relations, and the necessity for securing the traffic from a large portion of the Warialda district. To make a railway from Inverell to Guyra would perpetuate centralisation as it would compel the Inverell and western districts to regard Sydney as their only market, instead of giving them a market on the coast and in Queensland. The overwhelming majority of the residents were in favour of the Inverell-Glen Innes route. Mr. E. Grainger, manager of the Inverell branch of the Bank of New South Wales, quoted statistics showing the prosperity and rapid growth of the district. He then referred at considerable length to the evidence given before the principal Committee by the Hon. H. Copeland, Secretary for Lands, and gave an absolute denial to that gentleman's statements as they affected him personally. Ninety-five out of 100 of the farmers and landowners in the Inverell district were in favour of the Glen Innes route. Mr. W. H. Rowland, post and telegraph master, stated that the business of his department showed an increase of 20 per cent. during the current year. Mr. C. T. Worboys, engaged by the Department of Agriculture as a judge for the National prizes for mixed farming, gave highly favourable evidence respecting the agricultural capabilities of the Inverell district, and the necessity for a railway to provide a market. He was of opinion that the best route for that purpose was from Inverell to Glen Innes. Mr. J. M'Ilveen, auctioneer, gave statistics showing that Inverell compared very favourably with districts in the north with regard to agriculture, minerals, and probable railway receipts. The wool of 1,000,000 sheep would be sent by the proposed railway. Mr. J. Sinclair, stock and station agent, dealt with the figures supplied to the Parliamentary Committee on Public Works by the local committee at Inverell, showing the probable returns from traffic on the proposed railway. He went into the figures in detail to show that Mr. Harper was mistaken in stating that the local committee had exaggerated the probable returns. Mr. D. S. Anderson, grazier, residing 15 miles from Inverell, on the route to Glen Innes, on Newstead Station, said that if the railway were made he would rent or sell his land, and he believed the other landowners on the line would do the same. The present value of his freehold he fixed at £2 to £2 10s. an acre, and he did not think the construction of the railway would improve its value much. If he leased the land he would expect to get 10s. per acre per annum for the best agricultural land near Glen Innes.

On Thursday, December 1, the Committee inspected several farms in the vicinity of Inverell. At Marinka, the evidence of the proprietor, Mr. M'Clymont, was taken. He stated that he had 350 acres in grain, and 12 acres in hay. He expected to get 220 tons of wheat this year; and if the railway were made he would at once double the quantity of land under cultivation; 26 to 28 bushels to the acre was his average yield. He was in favour of the Glen Innes route. In the evening evidence was taken at the Court-house, Inverell. Mr. P. Allwell, mineowner, Boro Creek, 16 miles south of Inverell, said his was a silver and lead mine. If the railway were made, he would be able to send away 100 tons of concentrates per month, and as the mine was developed a much larger quantity would be sent. The concentrates from the mine assayed 80 oz. to the ton. There were other mines equally as good in the vicinity. He thought the Inverell to Glen Innes route was the best. Mr. A. Menzies, manager of Reedy Creek and Graham's Valley Stations, between Glen Innes and Inverell, said that about 100 tons of wool per annum were sent *via* Glen Innes to Sydney by rail. Fat stock were also sent to Sydney, Grafton, Brisbane, and to the local markets. The present value of the freehold land on the Reedy Creek Station was £2 an acre, and if a railway were made he believed that the bank which held the properties would be glad to sell

the

the land at that price, and the freehold land on Graham's Valley at 30s. per acre. Mr. G. T. T. Butler, manager of King's Plains Station, said the proprietors would be glad to sell their freehold land at 35s. an acre if the railway were made. Mr. R. Stout, storekeeper, Inverell, said that during the last few months he had paid cartage for 88 tons of goods from Glen Innes to Inverell, and 64 tons of that quantity came by rail to Glen Innes. Trade with Glen Innes was increasing every day. Mr. J. W. Moore, builder, Inverell, said that if the railway were constructed to Glen Innes there would be a large timber traffic, as there was no timber suitable for building purposes in the neighbourhood of Inverell. Mr. M. Calder, grazier and farmer, residing 12 miles from the proposed railway line, north of Inverell, stated that he cultivated 200 acres, and expected a yield this year of 25 bushels of wheat to the acre. Inverell was the finest wheat-growing district in New South Wales, if not in Australia. Glen Innes would be the best point of distribution for the railway traffic.

On Friday, 2nd December, the Committee took further evidence at the Court-house, Inverell. Mr. T. Mason, publican and farmer, 13 miles north of Inverell, said he had to give up wheat-growing owing to want of communication with the market. The average yield was 25 bushels to the acre. He would put a large acreage under wheat if a railway were made. He had sent wheat and cattle to Queensland on several occasions. Mr. J. Goodyer, hotelkeeper, Inverell, stated that within 40 miles of the town there were 250,000 acres of the best agricultural land in the Colony. Mr. T. Mather, wine-grower, 1½ mile from Inverell, stated that he had had fifteen years' experience. He had 17 acres under vines. The prospects of the wine-growing industry would be very much better if they had railway communication with Glen Innes, as they would then be able to avail themselves of a market in Queensland and on the northern rivers. He made from 5,000 to 8,000 gallons of wine per annum. During the last fifteen years he had had an average of 300 to 400 gallons per acre. About 38,000 gallons per annum were produced in the district, and 60 tons of table-grapes.

The Committee left Inverell by coach on Saturday, 3rd December, for Glen Innes, proceeding by Brodie's Plains to Elsmore, and thence by the main road to Glen Innes.

On Monday, 5th December, the Committee took evidence at the Court-house, Glen Innes. Mr. H. C. Holmes, licensed surveyor, stated that he estimated the present average value of the land within 2 miles on each side of the proposed railway from Glen Innes to Inverell at £3 per acre. That would be £7,680 per mile. Mr. M. H. Fitzhardinge, solicitor, stated that the population of the electorate of Glen Innes in 1891 was 10,000. A large population in the districts west of Inverell would also use the railway, and Mr. Harper had omitted that population in his estimate of traffic. Mr. J. F. Utz, general merchant and miller, gave evidence to show that the departmental estimate of £8,200 as the probable yearly railway traffic was too low, and that it should be put down at £13,687.

On Tuesday, 6th December, the Committee left Glen Innes by train for Armidale, where a meeting was held at the Town Hall, at 11·30 a.m. A petition was presented by the Mayor of Armidale, Mr. W. Drew, from 318 residents of East and West Hillgrove Gold-mines, submitting as a reason for constructing the railway from Guyra to Inverell that a line from Glen Innes to Inverell would entail upon a large number of Hillgrove residents additional travelling over a distance of 53 miles when visiting their families and permanent homes at Tingha. Mr. W. Drew gave evidence that the residents of Armidale were interested in any line of railway that might be constructed in New England, as it was the natural and official centre of that part of the Colony. If any railway extensions radiated from Armidale, they would be more economically worked. The present population of Armidale district was 15,000, and one-third resided within a radius of 5 miles of the town. A railway from Guyra to Inverell would convey a large quantity of wheat to Armidale, where the bakers were at present importing 500 tons of flour per annum. Mr. P. Wade, hotelkeeper, Armidale, stated that for fifteen years he had been contractor for conveying the mails between Armidale and Inverell, and Guyra and Inverell. From Guyra to Moredun Creek the country consisted of black soil flats and basalt ridges. It was good agricultural land; along the proposed railway line from Moredun Creek through New Valley it was pastoral country. It was rich in

minerals

minerals down to Tingha, and beyond there to Inverell it was rich wheat and fruit-growing country. In the Bundarra district, which would be served by a railway from Guyra to Inverell, there were some very rich agricultural flats about the creeks; the rest of the land was very good breeding and fattening country. There was a large number of selectors in the Bundarra district. Mr. W. E. Potts, forwarding agent, residing at Glen Innes, said that if the railway were taken from Guyra to Inverell it would serve a greater number of people than a railway from Glen Innes to Inverell. Such a line would serve the people of Armidale and other towns in New England, and the tendency of the traffic was decidedly in favour of the Guyra route. Mr. J. T. French, architect and city engineer, Armidale, stated that he had resided in Queensland for fifteen years, and he was sure that it would be impossible for the Inverell district to find a market for wheat in Queensland, where wheat production was rapidly increasing and would soon meet local requirements. Mr. J. I. Moore, auctioneer, Armidale, stated that a railway from Guyra to Inverell was necessary to enable the settlers at present living on the proposed route to obtain a market at Armidale. Mr. C. Edwards, Railway Surveyor in the employ of the Government, stated that on the proposed railway line, Guyra to Inverell, he had surveyed 28 miles 50 chains—from Guyra to New Valley Creek. He explored the line beyond Tingha to near the Gilgai. He laid out the survey with a ruling grade of 1 in 40; and the sharpest curve 12 chains radius. The grade had since been improved and the ruling grade was now 1 in 60. That necessitated an increase of about 3 miles in the length of the line, so that the total approximate length from Guyra to Inverell was 58 miles. The estimated cost of the line from Guyra to Inverell with a grade of 1 in 40 was £7,090 per mile. With the increased distance and reduced grade, the estimated cost per mile was the same. The land between Guyra and Inverell was fair average basaltic country. By increasing the length of the line it might be made at a cheaper rate per mile, but that would not make any material difference in the total cost. Bundarra could be connected by a road 18 miles in length with the proposed line at Tingha.

On Wednesday, December 7th, the Committee left Armidale and arrived at Sydney at 11 p.m.

On Friday, 9th December, the Committee met at the office of the Parliamentary Standing Committee on Public Works. Mr. Wall moved, "That it is desirable to construct the line of railway from Glen Innes to Inverell referred to the Parliamentary Standing Committee on Public Works." Mr. Dawson seconded the motion, which was passed on division, as follows:—

Ayes, 3.	Noes, 2.
Mr. Wall,	Mr. Suttor,
Mr. Collins,	Mr. Neild.
Mr. Dawson.	

The Sectional Committee are of opinion that the fertile character of the land around Inverell, and the population and varied resources of the district, justify its connection with the main trunk line by means of a railway, the cost of which shall not exceed £7,000 per mile.

Having carefully examined the proposed routes to Inverell, *via* Guyra and *via* Glen Innes, and considered the resources of the districts, the Committee are of opinion that the connection of Inverell with the main line should be made at Glen Innes. Their principal reasons for coming to this conclusion are as follow:—The land on the route from Inverell to Glen Innes is of a more fertile character than the land on the route to Guyra, and of greater suitability for subdivision and settlement; the generally expressed desire of the inhabitants of Inverell that their existing trade relations with the Glen Innes district should be continued by the adoption of this route; and the prospect of a trade being established between the Inverell district and Queensland.

The great difference of opinion with regard to the probable earnings of the railway, as disclosed by the evidence of the Goods Traffic Superintendent, Mr. Harper, and the local witnesses, renders it necessary that the recommendation for the construction of the railway be accompanied by the following condition: That the Bill authorising the construction of the line should contain a provision requiring the Railway Commissioners to charge special local rates until the railway pays working expenses and interest on the cost of construction.

W. H. SUTTOR,
Chairman.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

RAILWAY FROM GLEN INNES TO INVERELL.

TAKEN BEFORE THE SECTIONAL COMMITTEE.

MONDAY, 28 NOVEMBER, 1892.

[*The Sectional Committee met at the "Guyra Hotel," Guyra, at 8·30 a.m.*]

Present:

THE HON. WILLIAM HENRY SUTTOR (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	JOHN CASH NEILD, Esq.
THOMAS THOMSON EWING, Esq.	CHARLES COLLINS, Esq.
WILLIAM CHANDOS WALL, Esq.	HENRY DAWSON, Esq.

The Sectional Committee proceeded to consider the proposed Railway from Glen Innes to Inverell.

Mr. Richard Pearson, produce merchant, Guyra, sworn, and examined :—

Mr. R. Pearson. 28 Nov., 1892.

1. *Chairman.*] Do you desire to make any statement with regard to the proposed railway? I consider the line from Guyra to Inverell would be the most suitable. We send a lot of produce from here to Inverell, principally potatoes. We should be able to send that produce westerly if there were a line in existence. We grow oats, potatoes, and wheat in this district. The land between here and Inverell is of fairly good quality.
2. *Mr. Humphery.*] Are potatoes not grown at Inverell? Yes; but they are not a certain crop, as a rule. Oats and wheat can be grown there.
3. Why do you think that there would be an interchange of products? There would be an interchange with regard to potatoes.
4. *Mr. Dawson.*] How many tons of potatoes do they take in that district? I have sent over 500 tons this year, principally southward. There would be more sent than at present if a railway were constructed. Our principal market from here is southward and westward along the north-western line. I have sent a great deal of produce as far as Walgett from here.
5. Would it not be as near to send it to Narrabri? I daresay it would be.
6. So far as the Warialda traffic is concerned would the proposed line be any good? It would not go anywhere near Warialda unless it were continued westward.
7. Do they not grow as much wheat at Inverell as you do here? They grow more than we do. It is a better wheat-growing district. Our produce consists of oats and potatoes principally. I think the Inverell people will find that their market is principally southward. For several years I have been in business here and I have done very little trade with Queensland—only one year in five. We send potatoes principally to Queensland, and sometimes hay, but no great quantities.
8. *Mr. Collins.*] What is the cost of carriage from here to Inverell? Three shillings or three shillings and sixpence per cwt.; the distance is over 50 miles. It takes a team four days to travel the distance.
9. Do you send potatoes at that price? As a rule the farmers take the potatoes themselves. I have never sent any potatoes to Moree.
10. Would there be any market at Moree for your produce? I think so. I think they would take potatoes principally.
11. What is the price of potatoes here in a good season? This year it is £4. The average price is £3, or £3 10s. a ton.
12. What would it cost to take potatoes from here to Moree, which is about 100 miles from Inverell? More than the potatoes would bring.
13. Would it not be cheaper for the Moree people to get them by railway from Narrabri? Undoubtedly, because the train runs to Narrabri.
14. What is the carriage from here to Narrabri for potatoes? About 15s. per ton.
15. Do you think that a line should be constructed from Inverell to Moree? I think the railway should be constructed westward from Inverell.
16. Would that open a good market? Yes, for all our produce.
17. Do you find any market for your produce on the coast? Not at present.
18. If a railway were constructed to the coast and you found a better market there, would you not send your potatoes there? Yes.
19. Is the country between here and Inverell pastoral or agricultural? It is very good for both purposes.
20. Are there many farmers settled on it? Yes; agriculturists and sheep farmers. They principally find their market southward, and a good many take their own produce to Inverell.
21. Do you send much chaff from here? A great deal, but no further than Tingha.

Mr. William Moore, farmer, Guyra, sworn, and examined:—

Mr. W. Moore. 28 Nov., 1892.

22. *Chairman.*] What produce do you grow? Potatoes, wheat, hay and oats. I have about 90 acres under crop this year.
23. *Mr. Neild.*] Do you produce wheat or oats? Formerly I went in a great deal for hay. I shall have oaten hay this year.
24. Which is your proper market? The proper market for chaff is Hillgrove. When I grow wheat I send it to Armidale. Wheat is also grown there. I send a good deal of potatoes to Hillgrove, and I sent some to Kookabookra.
25. Do you do any trade between here and Inverell? Yes, for years back there has been a great deal of trade in potatoes principally, and sometimes chaff.
26. Do you send any north? About 10 tons of potatoes to Drake, *via* Tenterfield.
27. Where do the people between here and Glen Innes find their market? I do not think they have hitherto supplied their local requirements. They grow potatoes in the vicinity of Glen Innes, but not of good quality. Our potatoes are supposed to be the best in the Colony for keeping and carriage.
28. What advantage, if any, would the construction of the railway from here to Inverell be to you or to this locality? We could send several hundred tons of potatoes yearly to Inverell and westward. They do not grow as well there as they do here.
29. Is it your opinion that in the Inverell district they cannot grow potatoes? In exceptional seasons they will grow an extraordinary crop; but there is a cooler climate here, and more rain.
30. Do you anticipate that the construction of a railway from here to Inverell would not so much tend to the carriage of produce from Inverell to this district as from this district to Inverell? I contend that Inverell's best market is Hillgrove, Armidale, Newcastle and Sydney, for wheat and hay. They could produce all the hay and chaff required in the Colony. With their splendid climate for making hay, they have the advantage over us. Inverell already has sent wheat to Sydney, although Brisbane is 40 miles shorter.
31. Do you think that the construction of a railway would give Inverell a market in Queensland? No.
32. Would you look for a trade between here and the coast? Yes, in the event of a railway being constructed from here to the coast.
33. Would the question of a route between New England and the coast affect the trade? Yes; I consider that the route which would be the most advisable would be through Don Dorrigo Scrub to South Grafton. I believe that in any case passengers from Inverell would go direct by rail to Sydney. This district is a favourite resort for people who wish a change of climate, and for pleasure seeking. The Lake is a great attraction.
34. *Mr. Collins.*] What is the character of the land between here and Inverell? It is very mixed. Some very good agricultural land and some very poor. There is more good than bad. A good deal of it is taken up in selections.
35. Has all the land been alienated? No, but there are large mining reserves.
36. Would much profit be derived from the sale of land if a railway were constructed from here to Inverell? No, nearly all the land is now included within the reserves.
37. Would the reserves still be required if the railway were constructed? A portion of the reserves has been thrown open lately as special areas. Some was taken up at £5 an acre and some at £8 an acre.
38. What is the value of farm land here? My father sold his farm within the last month at £3 an acre. It consisted of 100 acres freehold; fairly well improved, but not all fenced. The improvements were worth £1 an acre, and the land would be worth about £2 an acre.
39. Are you in favour of the line from Guyra to Inverell and opposed to the line from Glen Innes to Inverell? Yes.

Mr. William Martin Stevenson, hotelkeeper, Guyra, sworn, and examined:—

Mr. W. M. Stevenson. 28 Nov, 1892.

40. *Chairman.*] Do you wish to make any statement with regard to the proposed railway? Yes; I am an old resident and know all the proposed routes. I have been here for fifty years, and I have been a mail contractor for thirty years. Before the mail was taken away from here the passenger traffic between this place and Inverell was very considerable. I think there would be a larger passenger traffic if the railway were taken from here to Inverell instead of from Glen Innes. There are forty people living on the Guyra route to one person living on the Glen Innes route.
41. Do passengers come from Inverell this way now? No; the communication is cut off by differential rates. The population between Glen Innes and Inverell is 250, but between here and Inverell there are about 3,000. There are 2,000 people at Tingha. At present the passenger traffic is diverted from Tingha to the south—some come here from Tingha when they are going to Hillgrove, which is east of Armidale. The people between here and Tingha come here to catch the train to Sydney. They come here in their own vehicles. More than twenty persons per week travel between here and Tingha. If the railway were constructed from Guyra I am certain there would be more traffic than at present, because the Bundara traffic would then come this way. It now goes to Uralla.
42. Would there be any traffic out west on this line? Yes; the Bingera traffic would come to Stanifer. The Bingera people go to Tamworth at present by coach.
43. What is the nature of the country between Inverell and the west? It is splendid flat country as far as Goondiwindi. It carries sheep and cattle. That traffic is diverted from here at present. If the line were made the wool would come here from the west, and all the wool from Inverell would come here.
44. *Mr. Ewing.*] Where is the population of 3,000 people between here and Inverell? There are five parishes between here and Tingha. There are 500 or 600 people at Wandsworth. That, however, is only a supposition. It is estimated that there are 2,000 people at Tingha.
45. Is your estimate of the population based on what you think? Yes.
46. *Mr. Humphery.*] How many people are there within 2 miles of the surveyed route? Eight miles from here there are twenty-seven farmers, with an aggregate of about 10,000 acres.
47. Are the 2,000 people at Tingha a mining population? Yes.
48. Are there not more Chinese than Europeans? No; the Europeans are all coming back. Some of the miners have gone away to Kookabookra, and some to Hillgrove, but their families reside at Tingha.
49. Which is the nearest settlement to Guyra between Guyra and Inverell? Wandsworth, a small place. The next place is Kangaroo Camp, about 4 miles from the surveyed route. The next is Tingha, which is 40 miles from Guyra and 16 miles from Inverell.

Mr. Archibald Francis Dutton, grazier, Guyra, sworn, and examined:—

Mr. A. F. Dutton. 28 Nov., 1892.

50. *Chairman.*] Which do you think is the best route for the railway to Inverell? Wherever there is a practicable route to the coast to a decent port. The best route for a railway to the coast on the northern line is from here to Guy Fawkes, east from here. There are 40 miles of good, level, rich country. It is the finest country I have seen in Australia.
51. *Mr. Collins.*] Have you any evidence to give with regard to the trade with Queensland? There is no trade between here and Queensland. They can grow corn very much better than we do here. They can only take potatoes from us, and only a limited quantity.
52. Is there much land open here for selection? Yes; it is not taken up because there is no inducement. The long land carriage kills everything. If we had a railway to the coast within a reasonable distance we could do much better than by sending produce to Sydney.
53. If it is decided to make a railway from Tenterfield to Casino, where do you think the line should go from Inverell? To Tenterfield. If a line were constructed from Glen Innes to Grafton the railway should, of course, be taken through Glen Innes.
54. What is the nature of the country between here and Inverell? A great deal of it is very inferior. There are patches of good country, and a good proportion of fair country. There is not much of it good for agriculture.
55. If a railway were made from Guyra to Inverell, would much traffic come from the west? Yes; all the wool.
56. Do you get much fat stock from the west now? No, because there is no market.
57. If a line were constructed from Inverell to Guyra and there were no coast lines constructed, would all the produce go south to Sydney? Yes.

Mr. Joseph Monteith, farmer, Guyra, sworn, and examined:—

Mr. J. Monteith. 28 Nov., 1892.

58. *Chairman.*] How much land do you cultivate? I hold about 590 acres, and I cultivate up to 100 acres. I grow wheat, oats, and potatoes.
59. *Mr. Humphery.*] What additional evidence do you desire to give? If a railway were made from Guyra to Inverell, potatoes would be taken to the flat country, and there would be a good demand. There would not be much demand for chaff except in a bad season.
60. *Mr. Collins.*] Have you a good market now for your potatoes? Yes; they are taken out west. £3 10s. per ton is the average price.
61. Do you send any out west now? Not at this season of the year.
62. Do you send any to Narrabri? Yes; a great deal has been sent this year.
63. Do they find their way to Moree? Yes; the carriers take them from Narrabri.
64. If the railway were constructed from here to Inverell, would the potatoes go that way instead of going round by Narrabri? Yes, carriage would be less.

MONDAY, 28 NOVEMBER, 1892.

[*The Sectional Committee met at Ollera, at noon.*]

Present:—

The Hon WILLIAM HENRY SUTTOR (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	JOHN CASH NEILD, Esq.
THOMAS THOMSON EWING, Esq.	CHARLES COLLINS, Esq.
WILLIAM CHANDOS WALL, Esq.	HENRY DAWSON, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Donald Stewart, selector, Ollera, sworn, and examined:—

Mr. D. Stewart. 28 Nov., 1892.

65. *Chairman.*] Where is your holding? Two miles from here. I have been twenty-six years on Ollera Station. I carry on sheep farming chiefly, and also cultivation. I grow wheat, potatoes, hay, and turnips.
66. *Mr. Neild.*] Where do you find your principal market? Inverell for potatoes. We send produce further west by team. We consume the turnips for feeding cattle and horses. I have sent wheat to Inverell for grinding, but not very often. I only sent 2½ tons last year. Some years ago on the station we produced 50 or 60 tons of wheat. We are not turning out anything like that now, because we go in for sheep and cattle.
67. Is that due to the want of a market? Partly. We find sheep and cattle pay best.
68. If you had railway communication, would the tendency of the people here be to go in for crops instead of cattle? Yes.
69. Would you look for a market to the east on the coast? I do not think that the farmers have considered that question. We have looked upon the railway as a means of reaching the country west of Inverell.
70. Is there any dairying carried on here? Yes, there is some. The soil in this district is very good.
71. Is there much Government land about here? Yes, between here and Tingha, but it is chiefly in reserves. A great deal of land has been selected during the last twelve months.
72. Are the selectors very well off about here? Yes.
73. *Mr. Humphery.*] What is the extent of your holding? From 7,000 to 8,000 acres. There are 60 or 70 acres cleared, and the rest is used for grazing both sheep and cattle. There are sixty to eighty head of cattle, and from 5,000 to 6,000 sheep.
74. Is that all selected land? Yes, with the exception of a little. I include my family in the area of selection.
75. Are all the holdings in this locality of the same extent as yours or are they smaller? I do not know many larger ones.
76. *Mr. Collins.*] Are most of the people here selectors, or do they lease land from the Crown lessees? They are selectors. I do not think any land is leased from the Crown lessees.

77.

Mr. D. Stewart. 28 Nov., 1892.

77. Have you conditional leases from the Crown? Yes, attached to the selections.
78. What rent do you pay for them? Twopence halfpenny, 3d., and 3½d. per acre per year; the average in the district is about 3d. per acre.
79. Do most of the farmers combine sheep-farming with agriculture? Yes.
80. Do the farmers send all their potatoes to Inverell? That is their market.
81. Do they send the wool to Newcastle and Sydney? Yes.
82. If the line were constructed from Guyra to the coast, would they send their wool to Sydney and Newcastle or to the coast? They would choose the most favourable route, but I have not considered the question.
83. Do you know the country between here and the west—that is, Warialda and Moree? Yes.
84. Do you think you could send your produce out there if the railway were constructed? Yes, and we would have cattle and sheep coming in from there.
85. Do you do a good deal of stock dealing with the plains? Yes, we buy young sheep there, and in winter, as a rule, we get our beef from there.
86. In times of drought does stock come from those districts here? Yes.
87. What is the character of the country between here and Inverell? It is poor soil about New Valley and Tingha. From Tingha to Inverell the greater part of it is very good soil. It is suitable for agriculture or grazing.
88. Has it all been taken up by selectors? I think so chiefly, but some is reserved for mineral purposes.
89. Are there many people settled between here and Tingha? Yes; the schools are a good guide. There are not less than eight or ten public schools on the road between Guyra and Inverell.
90. Would the attendance average twenty? Yes, and more. There are public schools at Guyra, Everett, Ollera, Greenbank, Morden, Wandsworth, Tenterden, Tingha, Gilgai, Summerhill, Sawmill, Paradise, and Kangaroo Camp.
91. How many people reside within 6 miles of the railway line? There are more than 136. There are also two saw-mills between here and Inverell which give large employment.
92. What timber do they use? Stringybark. There is some ironbark at Tenterden but not a great quantity.
93. Would there be enough for the sleepers for the railway? No.
94. *Mr. Wall.*] How far are you from the existing railway? Twelve miles, so that we are fairly well served.
95. Then the only advantage the proposed railway would be to you would be in giving you a connection with Inverell and farther west? Yes.
96. If a railway were constructed to Inverell, would not the people about there produce quite enough for their own requirements? No; they cannot produce potatoes. We have been supplying that district to the westward for forty years.
97. Are those practically all the agricultural supplies which they would require? Yes.
98. Would there be any trade in the direction of Moree if the line were constructed to Inverell? Yes; they would send their wool in this direction, and we would send produce in return.

Mr Edwin Everett, grazier, Ollera Station, sworn, and examined:—

Mr. E. Everett. 28 Nov., 1892

99. *Mr. Dawson.*] How many years have you lived here? I came out here in 1842, and my brothers took up the station three years before that.
100. Do you combine agriculture with sheep-farming? We do not cultivate much, except for our own use. We grow hay for the horses, but we have seldom anything to sell, besides it would not pay. All our men are employed in looking after the sheep and cattle.
101. What is the extent of your country? About 6 miles long by 2 miles wide. We have 15,000 sheep and about 1,000 head of cattle. We have more sheep than we can keep.
102. Are you already well served by the railway? Yes, if the road were good. If a line were made to Inverell we would look for a trade there, and to the west. From Inverell we could get maize.
103. Would you use 10,000 bushels? No; we mostly use oats which we can grow.
104. If a railway were made to Inverell, how many tons of potatoes would you send there? I have always heard that they would take as many as we could send.
105. If a railway were made could it not take all the potatoes that would be wanted in one week, and could you not get back all the corn you would want in the same week? Yes.
106. What produce would there be for the railway during the remaining fifty-one weeks of the year? We would send down sheep to fatten, and bring sheep back.
107. Cannot you fatten sheep here? No.
108. Do you not fatten cattle here? Very few. We could fatten them if we had more country, but we have no room. This kind of country cannot carry much stock, because they cannot eat down the grass in summer, and in winter the grass is long and it gets cut up with the frost.
109. Would you send stock from here to the western districts during the winter and bring them back in spring? Yes.
110. Are not the plains fully stocked up? No.
111. Do not droughts occur on the plains? Yes.
112. *Mr. Wall.*] What is the distance from here to Inverell? Forty miles.
113. Would it not be cheaper to drive stock than to truck them? I have had to truck the stock even for a short distance.
114. Do you know anybody who has sent potatoes to Inverell? Yes; Mr. Stewart and others have done so.
115. Cannot they grow potatoes there? No, the ground is too hot.
116. What is the approximate number of holdings between here and Tingha, within a radius of 6 miles of the line? I think there are at least thirty sheep owners who would be obliged to use the line for wool, and they want something to come back in the shape of produce.
117. Have you seen the list of selectors produced by Mr. Stewart? Yes.
118. Within what radius are those included? The farthest would not be more than 10 miles away, except at Paradise Creek.
119. Would the railway from Guyra to Inverell travel for the first 25 miles close to the present line of road? Yes.

120.

Mr. E. Everett. 28 Nov., 1892.

120. Within the first 25 miles of the existing line are the people already well served by the railway, except with regard to the outer trade? Yes; but I think that that is the case with every railway. People within 10 miles of the existing line would not use it.
121. The proposed line, striking off at an acute angle, would serve the people already well served for the first 25 miles? For the first 20 miles they would not use the line much. The proposed line, however, makes a large angle when it leaves the main line.
122. Do you not think the people are well served if they have a railway within 25 miles? Yes; but this proposed railway would be principally used by people at Tingha, Inverell, and the Newstead mines.
123. Would the main advantage to the people here in the construction of the proposed line be to give them connection with Inverell, and open up a local traffic between the two places? We want to send produce to Sydney, especially our wool.
124. Can you not already send your wool by railway? If the proposed railway were made we would use that.
125. Will this railway pass through your property? Yes, through a small corner.
126. Have you given any consideration to the betterment principle? I think that it is a good idea.
127. Would you be prepared to submit to taxation in order to pay a portion of the cost of the railway? Yes.
128. Do you think that other people along the line would be prepared to submit to it? Yes; many of them.
129. Failing that, would you be prepared to pay a special rate if it were shown that this line did not obtain sufficient traffic to pay for the cost of construction? Yes.
130. *Mr. Humphery.*] Have you considered what the earnings of the railway will be, and what prospect there is of its paying interest on the cost of construction? No; but I know that the Inverell people send to us for timber. The greater part of the timber used at Inverell and Tingha has come from this neighbourhood. At New Valley you get on to the mineral country, where there is any quantity of tin, and that is not fully worked yet.
131. It is estimated that the annual loss on the railway, if constructed between Glen Innes and Inverell, will be about £15,000. Do you think that the prospects of the district between Guyra and Inverell would lead to the recovery of anything like that loss? I do not think there would be any such loss on this line, because there are so many people here. The best parts of the Glen Innes to Inverell line are at the two ends. The traffic of that part near Inverell would come here if the railway were constructed this way just as well as it would go to Glen Innes.
132. Do you think that a line from Inverell to Guyra would pay much better than a line from Inverell to Glen Innes? Yes. If there was much trade coming from the other side of Inverell I think there would be a very good prospect of the line from Guyra paying interest on the cost of construction.
133. *Mr. Ewing.*] What is the smallest area on which a family could live in this district? A square mile, I suppose, and it must be good land; but the selectors have been taking up land everywhere on stony and stringybark ranges.
134. How much sheep could they run on that area? Not sufficient to keep a family. We are in the Eastern Division, and 1,240 acres is the total area which can be taken up. Families can select alongside of each other, and can live in one house.
135. Is your total area 9,000 acres, and is it purchased land? Yes, with one or two annual leases. Everything that is worth selecting has been selected in this neighbourhood.
136. *Mr. Collins.*] Do you breed much stock here? We are not breeding any sheep this year; we breed cattle.
137. Where do you get your stock from? We have bought sheep at Cassilis, Liverpool Plains. We get young wethers there. We have driven them up. I used to have a place at Cliffdale, Wingen, and I used to send cattle down there to fatten, and bring them up here when fat. When there was a drought we had to bring them all up.
138. *Mr. Neild.*] What did you bring the fat cattle up for? For our own use. We had a great many more men then, and we used to kill five head per week.

Mr. William Willis, farmer and grazier, Guyra, sworn, and examined:—

Mr. W. Willis. 28 Nov., 1892.

139. *Chairman.*] Where is your holding? About a mile and a half from here. I have 2,500 acres.
140. What do you do with it principally? Farming and sheep, and some cattle. I have 50 acres under cultivation.
141. *Mr. Neild.*] Where do you generally find your market? I send potatoes to Tingha and Inverell, and some as far as Warialda.
142. If a line were constructed between Inverell and Glen Innes, would it be of any use to you in developing the trade? No. It would pay me better to send teams through by Tingha if the road was in anything like good order.
143. If a railway were constructed between Guyra and Inverell would you use it for sending produce? Yes; and other producers here would do the same.
144. Do you find any market west of Inverell? I have sent potatoes to Warialda, but the carriage takes away all the profit. If a railway were constructed we could send produce much cheaper.
145. What is the nature of the soil on the Guyra route? Some very good. In one of my paddocks there is soil 10 to 12 feet deep. There is a great deal more soil of that kind. In the paddock I refer to there are 500 acres fit for cultivation, and I would cultivate it if I had a market.
146. Taking a strip of land 10 miles on each side of the surveyed line from Guyra to Inverell, what proportion would be good agricultural land? Nearly one half. Of the remaining half a lot is mineral country. The mineral country would do for grazing sheep. Cattle will do here, but not to get fat for market. Sheep get fat for market in summer. There is a market in Armidale for fat wethers.
147. Have you any trade direct with Glen Innes? No.
148. Have you any trade with Queensland? No; I have obtained corn from Queensland, but not much. That was about two years ago.
149. Is it customary to get Queensland maize here? No; I got it as a trial, but it did not pay. I then kept a produce store. There were a lot of teams at that time carrying tin, but owing to the change in the railway rates it now goes to Glen Innes. The differential rates have done this district a certain amount of injury. I lost £100 a year through the teams going to Glen Innes.

Mr. W. Willis. 28 Nov., 1892.

150. *Mr. Collins.*] Is there much fruit grown in this district? No; but I daresay it would pay. A lot of young orchards have been started.
151. How long have you been here? About fourteen years; but I have not done any fruit-growing.
152. Where would the fruit be sent? Armidale is always our market.
153. Is any sent to Inverell and the west? Yes.
154. What carriage do you pay for potatoes to Warialda? 3s. 6d. per cwt.
155. If a railway were constructed to Inverell, could you send produce there at a much cheaper rate? Yes.
156. What do you get for potatoes? £1 a bag. That pays well. If a railway were made to Inverell we could send potatoes to Moree.
157. *Mr. Wall.*] What do you cultivate? Potatoes, corn, wheat, oats, and a little barley. I have 5 acres under corn this year, and 16 acres under wheat. I had 3 acres under potatoes last year; but there was a poor crop. The yield is 3½ tons to the acre.
158. *Mr. Dawson.*] If the carriage from Newcastle to Guyra were 12s. per ton for potatoes, would it not pay better to take them by sea from Tasmania and Victoria to Newcastle, and send them up by rail? Yes; if you could get good prices.
159. At £4 a ton would it not pay? Yes.
160. How many tons could they use at Inverell? I cannot say. We have always found a good market there.
161. Have you ever sent 500 tons in one year? No.
162. If they had a railway from Glen Innes to Inverell, could they grow all the potatoes wanted for Inverell at Glen Innes? Glen Innes does not seem to be a great potato-growing place.
163. For all you know they might be able to supply Inverell? Yes.
164. Would not the fruits which you grow here be English fruits—apples, plums, cherries, raspberries, currants, and gooseberries? Yes.
165. Would not there be a better market for those fruits in Queensland? I cannot say.
166. *Mr. Wall.*] How far is your place from Inverell? Forty-two miles.
167. Taking the average railway freight, would not the cost of carriage be 3s. 4d. a ton? Yes.
168. In that case, your contribution last year to the railway would have been about 30s.? Yes; if the railway had been constructed.
169. Are there fifty people growing potatoes between your place and Inverell? Yes; they all find Inverell to be their proper market.
170. On an average, do you cultivate as much as other farmers? Yes.
171. Taking fifty farmers who would send potatoes to Inverell, their contribution to the railway would be about £70 per annum? Yes; but if they had a railway they would have more land under cultivation.
172. Is there any dearth of potatoes at present at Inverell? No, but at times they are very dear at Inverell.
173. If they brought a certain price, would they not be obtained from other places? Yes.
174. Do you know of any other exchange which is likely to take place between the farmers here and Inverell? There would be stock up and down. It would be better to send them by rail than to drive them. It might be a little more expensive, but the stock would not be knocked about so much.
175. *Mr. Humphery.*] When would the stock be moved? In the winter.
176. Would potatoes be sent in summer? From May up to about October.
177. What other traffic would there be to support a railway between October and May? The wool would come in from October up to the end of the year. There would be produce coming back. There would be traffic all the year round.
178. *Chairman.*] Is there any other traffic for the railway? There is plenty of timber on the line.
179. What kind? Stringybark. The Inverell people use a lot of the timber. There is a mill below Tenterden.
180. How much timber would be taken out of the district yearly? I cannot say, but there is some splendid timber all through New Valley.
181. Is there a great quantity of it still standing? Yes.

Mr. William Relton, sheep farmer, Guyra, sworn, and examined:—

Mr. W. Relton. 28 Nov., 1892.

182. *Mr. Neild.*] Where is your holding? About 7 miles from here. I have resided here six years. I do a little farming, but not on a large scale. I raise sheep for mutton and wool, but mostly for wool. I send my wool by Guyra.
183. Would a line between Glen Innes and Inverell be of any service to you? Not the slightest.
184. Would a line between Guyra and Inverell be of any service? The only advantage would be that I would have a western market for the surplus agricultural produce.
185. Would you use the line as far as Guyra for wool? Yes.
186. Do you think that the evidence with regard to the quality of the soil and the nature of the holdings on this line is accurate? Yes. We could not compete with the Hunter River and other northern districts.
187. Do you know that the freight of corn to Sydney is only 16s. a truck? That is if you fill a truck, but otherwise it would cost £1. We cannot all grow enough to fill a truck. The markets fluctuate so much that before we would know that the Sydney or Newcastle market was favourable the more favoured farmers would get the advantage of the market, and it would soon be overstocked.
188. Do you think that the success of agriculture in this district is dependent more upon the western than the southern market? Yes; there are times when we could avail ourselves of the southern market, but our principal market would be out west.
189. If a line were constructed from Guyra to Inverell, would it be necessary to take it further out in order to be of any real use? The first section would be beneficial.
190. Would you look upon Inverell as the proper terminus? No; that would be the starting point for taking it further west.
191. *Mr. Ewing.*] What is the carrying capacity of your run? Three acres to a sheep.
192. Is it a fair average for the country here? No; I think I am favoured with some of the worst land in the district. I came here at the eleventh hour and had to take what was left.
193. Are you due west from Guyra? Yes.

194. *Mr. Humphery.*] In what way would a railway between Guyra and Inverell benefit you? The only possible benefit would be in anticipation of a western market for produce. Mr. W. Relton. 28 Nov., 1892.
195. What produce? Potatoes and oats, perhaps occasionally we might give them wheat. They cannot grow potatoes at Inverell.
196. Is it not anticipated that if Inverell is connected with the existing railways the producers of Inverell will be able to send by that railway a large quantity of wheat? I think Inverell can outdo any other district in producing wheat. It is their natural product.
197. Would they require wheat from you? No; but they suffer from drought at times, and that would be to our advantage; but we could not expect a permanent market for wheat or flour there.
198. Is there likely to be a permanent market for any other produce, except potatoes, at Inverell? No; except in times of drought. But that is not the view I take of the line between Guyra and Inverell. I look upon that as the national route, but I look upon the Glen Innes-Inverell line as a political route. Personally, I do not expect one iota of benefit whether the line is constructed from Guyra to Inverell, or Glen Innes to Inverell. I am well served, because Guyra Station is within 4 miles of my holding.
199. What answer can you make to the Inverell people if they express a desire to be connected with the existing system at Glen Innes, instead of at Guyra? If they are in earnest they are labouring under a delusion. They have always in the far distance the Queensland market dangling before their eyes, but that is simply ridiculous. Last year we purchased Queensland-grown maize at 2s. 6d. per bushel. Inverell could not compete with that except in exceptional seasons. The only possible trade between Queensland and Inverell would be fruit. I think that is one of the best industries for New England, because we can always depend upon a market in Queensland for that.
200. *Mr. Collins.*] Were you for a number of years a produce merchant in Maitland? Yes; for twenty or thirty years.
201. Used you to send a lot of produce to the north and north-west? Yes.
202. Do you think that if a railway were constructed from Guyra to Inverell produce would go from here rather than from the Hunter River district? Not unless they were suffering from drought on the Hunter, where they sometimes have that disadvantage. Here, during the last forty years, they have only had a taste of drought once.
203. Could you send produce from here out west cheaper than they could from the Hunter? Yes; if we had a railway there is no doubt it would open up a new industry to the New England farmers. As far as stock is concerned I do not see that there is any probability of additional trade except in exceptional seasons.
204. Do you get a lot of stock here from the plains in times of drought? Yes; we are swamped with them. If there is a sign of drought stock is sent up here almost in millions. On the Guyra-Inverell route we have already a considerable amount of population settled, but on the Glen Innes to Inverell route they have not any population. It is well known that the land there is locked up, being held by three or four individuals, and they are hardly likely to open up their land and allow the public to settle upon it. Any of the land which is not settled upon on the Guyra route is Crown land, and if a railway were made there would be a great inducement for people to settle upon it. There is a strip of country from Ben Lomond running to Gilgai 4 miles wide. It consists of rich chocolate soil, heavily timbered with gum and stringybark, which will be very useful for sleepers, and no doubt it would be used at Inverell and other towns, perhaps at Armidale. It is the heavy freight which kills the market at present.
205. When you were a produce merchant at Maitland did you send produce up to Inverell in times of drought? Only one truck of potatoes and two trucks of hay during my experience.
206. *Chairman.*] How far is this stretch of good country which you refer to from the proposed Guyra route? The railway would run through part of it. We are not more than 6 miles from that tract of country now.
207. Is it all Government land? Yes.
208. *Mr. Ewing.*] Does the land consist of reserves or open Crown land? It is not open or it would have been taken up long ago. I think it is under mineral lease.
209. *Chairman.*] Is it all good agricultural land? Yes.

MONDAY, 28 NOVEMBER, 1892.

[*The Sectional Committee met at the "Tingha Hotel," Tingha, at 8 p.m.*]

Present:—

THE HON. WILLIAM HENRY SUTTOR (CHAIRMAN).

The Hon. Frederick Thomas Humphery.	John Cash Neild, Esq.
Thomas Thomson Ewing, Esq.	Charles Collins, Esq.
William Chandos Wall, Esq.	Henry Dawson, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Thomas Jones, wine-grower and storekeeper, Tingha, sworn, and examined:—

210. *Chairman.*] Do you desire to make a statement to the Committee? Yes. In considering the matter of constructing a railway from Inverell to the main northern line, I conclude, after nineteen years' residence in this district, that the greatest number of people will be best served by the construction of the Guyra-Inverell line. I have studiously read much of the evidence taken before the Committee on Public Works, and find that much of it is totally unreliable, misleading, and grossly exaggerated. Evidence has been taken by the Sectional Committee describing the country between Inverell and Guyra as "a sandy desert nearly the whole way" (see Report, page 47, question 1579), when on the contrary, some of the finest agricultural land is now open to view, within 2½ miles from Tingha, and under crop. This land extends from Inverell to Wandsworth. I solicit inspection of the same, in order that the Committee may have ocular demonstration, at this season of the year, of the fertility of the soil, and disprove interested statements. Misleading statements occur in numerous parts of the evidence. See page 75, question 2612, statement, "I do not think that any half-dozen, or even three producers, are in favour of the Guyra line." As the following synopsis Mr. T. Jones. 28 Nov., 1892.

Mr. T. Jones. 28 Nov., 1892.

synopsis is on the same page, I quote from it, accepting the figures as correct, showing "that 1,000,000 sheep were depasturing within 80 miles west and south-west of Inverell," the owners of 294,000 sheep are known to be strongly in favour of the Guyra-Inverell line, and it is exceedingly probable the owners of the remaining 706,000 sheep would gladly avail themselves of saving the additional haulage of 37 miles, *via* Glen Innes, in the transit of wool to Sydney. The total weight of wool being estimated at 2,455 tons, why should the country be at the expense of such needless additional haulage? I may here state that the owners of Wallangra, Graman, and Gragin Stations, representing 170,000 sheep, personally informed me they were in favour of the Guyra-Inverell line, and signed a petition in favour of a re-survey of such line. In the sheep return alluded to, the Grove Station is stated as being 16 miles from Inverell. It is worthy of notice it is only 6 miles from Tingha southerly, carrying 20,000 sheep—Cope's Creek Station described as 12 miles from Inverell, is 4 miles from Tingha; Longreach, Clerkness, and Beversley, situated near Bundarra, representing 76,000 sheep, could never be expected to use the Glen Innes-Inverell line, involving a needless northern circuitous route exceeding 100 miles to reach Guyra. On the contrary, if the Guyra-Inverell line were adopted all this traffic would increase the railway revenue. Further, cattle buyers, I am reliably informed, prefer the shorter distance to southern markets for fat stock. Wine-growers and orchardists would also avail themselves of the most direct route. I may here state that about 250 property holders at Inverell, including storekeepers, surgeons, bankers, chemists, millers, graziers, and farmers recently signed the petition for a re-survey, which militates against the statement of the honorable member for Inverell on page 35, question 1035, as follows: "As far as you know the free-hold farmers all round that district are anxious for this particular line of railway? They are all in favour of it." I am of opinion that the anticipated traffic or interchange of products with Queensland is without just grounds, and is grossly exaggerated, in order to favour the line running direct to Glen Innes; the evidence here is against such an assumption. Queensland maize is at present obtainable in this township at 4s. 7d. per bushel, while Inverell maize is at present sold at 5s., and 5s. 6d. per bushel. Further evidence was taken at Tamworth in support of southern markets, page 137, question 4519: "At all events, taking one year with another, you think the Inverell people would find a market for their wheat here at 3s. 9d.? Yes, I should think so; provided that locally-grown was not equal to requirements." In conclusion, I wish to say that the statements are so conflicting and the evidence so voluminous, that the people are heart-sick in reference to the construction of a railway to Inverell, where so much selfish opposition with regard to different routes is manifested. The European population which has been estimated at and surrounding the police district of Tingha is 2,285, exclusive of 763 Chinese; the former gradually increasing, further warrants the construction of the Guyra-Inverell line in preference to all other routes. In addition, Bundarra is but about 17 miles distant, including seven stations with about 160,000 sheep, estimating the traffic over 600 tons, with a population of between 200 and 300 living there. We have recently at Tingha had an addition to our population consisting of a watchmaker and a military tailor, and our tin lodes are gradually but surely being developed. In one portion of our field 20 tons of tin-ore now await washing up, in another claim there are some additional tons, probably about 12 tons, and in another direction about 10 tons, all being won from the bowels of the richest agricultural ground. I mention this as evidence of the value of the ground, both for mineral and agricultural purposes, which is rented from the Crown annually at 5s. per acre, included in the gold-field reserve, thus thought too valuable for alienation. Within a circumference of 4 miles, five public schools can be included. If permitted, I may add that a tangible premium is offered to all producers and importers to centre their business at Glen Innes. Wool and station supplies which would under ordinary rates be despatched from Tamworth to and fro, are, through the differential rates, conveyed to Glen Innes at a less cost of £16 per truck, in some cases, than they would be if sent to Guyra, which is 37 miles less distance from Sydney. The Guyra-Inverell line would further increase and encourage traffic as there would not only be less mileage, but it would take less time, and what is more important to many, less money to proceed to any of the southern centres of civilisation.

TUESDAY, 29 NOVEMBER, 1892.

[*The Sectional Committee met at the Court-house, Tingha, at 9·30 a.m.*]

Present:—

THE HON. WILLIAM HENRY SUTTOR (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	JOHN CASH NEILD, Esq.
THOMAS THOMSON EWING, Esq.	CHARLES COLLINS, Esq.
WILLIAM CHANDOS WALL, Esq.	HENRY DAWSON, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. William Litchfield, mining agent, Tingha, sworn, and examined:—

Mr. W. Litchfield. 29 Nov., 1892.

211. *Chairman.*] Do you desire to give any evidence with regard to the proposed railway to Inverell? Yes. I have not much to add to my former evidence. The production of tin last year was over 900 tons. This year will be about 800 tons, showing a slight falling off. We have one or two lodes being opened up in the district that promise well and tend to confirm my idea that this will be one of the principal mining centres in the Colony, and most permanent. I would ask for a survey of the Guyra line with the object of constructing a cheap branch line to Inverell, and as the line is not likely to pay for some years, I would suggest that an additional charge should be made on the line of 50 per cent. from the main line. This extra charge to be reduced as the line cleared its working expenses. There is not so much land to resume on this line compared with Glen Innes. Inverell has shown a number of statistics why they should have a railway. We contend that Inverell would be better served with the Guyra line than any other, and that the population would be served along this line at the same time, and contributing largely to the support of the main line. The population along this line that would be served by it is nearly that of Inverell. I am of opinion that if Glen Innes were the junction, that Grafton would be diverting a portion of the traffic from time to time, and that would detract from the main line. It would be absurd to send us and our trade, and the trade of our neighbours out west, all round

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Mr. W. Litchfield. 29 Nov., 1892.

the country at a greater expense to reach a point that we must go to for many years to come, viz., Sydney. The Tingha district will compare favourably with any other part of the Colony at the present time for the working men, and there is a general tendency for them to settle down here. The Chinese population is decreasing, but I think there is a tendency to increase with others in this district. I would urge the construction of the Guyra line in preference to that of Glen Innes, as it is, and must be, the natural outlet from the west for a great many years to come. This part has been condemned by our neighbours as useless except for mining. We have some of the best volcanic soil in the Colony that will produce anything suitable to the climate. I may point out to you that Inverell takes credit for all the traffic on the Glen Innes Road, ignoring Tingha. Now, all the tin being sent away, and all the goods coming here, would come *via* Guyra only for the differential rates on the railway. Inverell takes credit for all the traffic on the Guyra Road, including the Tingha tin. Now, all those goods and tin would come by Guyra if it were not for the differential rates.

212. What is the money-value of the tin that has been raised during the last two years? About £90,000.

213. Are there any other productions in the neighbourhood which would help the railway traffic? There are one or two vineyards, and several promising young orchards. No doubt there would be general settlement if the land could be obtained by selectors. We have a great deal of basalt country in patches of 40 to 200 acres which is capable of growing everything.

214. *Mr. Humphery.*] Do you desire to make any alteration in the evidence which you gave to the Sectional Committee in 1891? No; it was correct at the time.

215. Has there been any change in the cost of carriage between here and Glen Innes, and between here and Guyra? No.

216. Has the European population decreased or increased? It has slightly increased, and the Chinese population has decreased.

217. Have any new buildings been erected since 1891? Yes; dwelling-houses chiefly. There have not been any new business premises.

218. *Mr. Neild.*] Are the tin lodes which you refer to being worked or merely prospected? Prospected. It requires a large amount of capital, and poor people cannot carry it out. Several companies which it was attempted to float were not a success. They were floated to work the tin lodes. I think they were only formed for the purpose of realising a profit out of the company.

219. Since you last gave evidence has there been any new settlement on the proposed line? Not actually on the proposed line, but land is gradually being taken up and settled upon. At the Guyra end there are a number of selections. There have been no selections in the neighbourhood of Tingha, because it is all a mining reserve.

220. Is the land within the reserves suitable for agricultural purposes? A great portion of it. If it was thrown open for selection it would be quickly taken up. The construction of a railway would induce very rapid settlement. There would be great difficulty in throwing open the reserves because what would suit for the settlement of the miner would suit the squatter, and the latter would get the whole of it.

221. Where do you look for a market for fruit? All the fruit is now sold locally. If we had a railway there would be more land cultivated. At present you can buy apples at 3d. a dozen which are worth 3d. a piece, and you can only get 1s. for 13 lb. of grapes. Queensland promises to be a fair market for fruit.

222. Do you grow any maize about here? Yes, it grows very well. It is consumed locally. I am sure that a railway would induce the growing of more maize. There would be a market in the west for it but the difficulty is to get there. The construction of a line as far as Inverell would not be of value in securing the trade of the west.

223. Do you really look for a market in the south for your output of fruit and grain? Yes; we cannot look anywhere else under present conditions. Even if we had a line to the coast, although it might suit for heavy goods, as far as maize is concerned they would supply us with it. Sydney must be the great outlet for this part of the country for many years.

224. Therefore you desire the shortest and speediest route to the large southern markets of the colonies? Yes.

225. *Mr. Dawson.*] If apples are so cheap here, why do you not send them to Sydney? There is the cost, and the jolting and shaking about which they get on the teams, and they cannot be got to market quick enough.

226. Could you not send them to Inverell in a few hours, and send them by the proposed railway from there? Yes, but there would be extra freight.

227. Do you grow potatoes about here? Yes; they are consumed locally. If we had a market we could grow enough to export.

228. Where would be your market if you had a railway? We would have to depend on the southern market and the coast.

229. Do you think you could possibly grow maize to compete with the Clarence River and the south coast where they have water carriage? I think we could grow maize at a profit if we could get 2s. 6d. per bushel for it. At present it is worth 3s. 3d. and 3s. 6d.

230. *Mr. Collins.*] If a railway were constructed from Guyra to Inverell, where would the Bundarra traffic go? Most of the goods would come to Tingha.

231. Are there farmers and graziers about Bundarra? Yes. I do not think they have much corn in this year, on account of the want of a market.

232. If a line were constructed from Guyra to Inverell, would it materially assist the farmers here in sending their produce out west? Yes.

233. Do you get much produce from Guyra? Very little, except potatoes. A few loads of potatoes are sent to Inverell and out west. There is always a market for them.

234. Would 1,000 tons a year come to Tingha and the west? No; I do not think there would be 500 tons. We do not get any other produce from Guyra at present.

235. Could you send any produce from here which Guyra could not produce? No.

236. *Mr. Wall.*] You have stated that the yield of tin on this field for the present year will be about 800 tons;—how many men, directly and indirectly, are employed in procuring that? Seven hundred or 800—Europeans and Chinese.

Mr. W. Litchfield. 29 Nov., 1892.

237. The earnings of the railway from the carriage of the tin would be £160 per annum. I find that on the electoral roll the total population of the Tingha district is 582 persons. That represents the European population, not only of Tingha but extending to within 6½ miles of Inverell? The Tingha district extends there, but those figures refer to people entitled to vote.
238. The adult farming and mining population of Tingha is represented at 580? Yes.
239. The cost of the conveyance of the tin along a railway to Glen Innes would only amount to 1d. per ton, and if a railway were made would you send your tin *via* Guyra, or Inverell? *Via* Guyra.
240. Providing the Glen Innes-Inverell line was constructed, you would only have to cart the tin a distance of 15 or 16 miles to Inverell;—do you not think that this place would then be very well served? Yes; but it would be very much better served by a line to Guyra. If the line were made to Glen Innes we would have to accept it and use it.
241. Are you aware that the estimated cost of this line is £492,000, and that the annual expense will be £23,530, leaving an enormous loss? Yes.
242. Do you think that if the line is made the district is likely to be developed to such an extent that the earnings would reduce that loss? Yes.
243. Have you any knowledge of the country between Inverell and Glen Innes? Yes.
244. Assuming the land between Inverell and Glen Innes to be open for settlement, which it is not; and assuming the land to be open for settlement between Guyra and Inverell, which line would promote settlement to the greatest extent? I think it would be equal, taking the quality of the land, but our experience is that a squatter does not throw open his land for settlement.
245. Apart from the mining population of Tingha, which line is best fitted for settlement? I think they would be equal. We have a lot of valuable land running down on this side of Guyra. We have granite country round the mines, but there is a lot of good land from Ben Lomond to Inverell, within 1½ mile of the town. It is all beautiful basalt country.
246. How do you account for the people of Inverell dealing so largely with the people of Glen Innes instead of with Guyra? The differential rates are the principal cause. The people are compelled to do so.
247. Before the adoption of the differential rates was there a great deal of traffic between Inverell and Guyra? Yes; there was a great deal of traffic.
248. Had you differential rates to Guyra before they were extended to Glen Innes? Yes, a great deal of the Inverell trade then came to Guyra.
249. Including Europeans and Chinese, do you think there are 700 men engaged in tin mines? Yes.
250. *Mr. Dawson.*] How far is it from here to Bundarra? Seventeen miles.
251. How far is it from Bundarra to Uralla? Forty-five miles.
252. How far is it from here to Uralla by the railway? About 45 or 50 miles.
253. How far is it from Guyra to Armidale? About 20 miles, and about 15 miles from Uralla to Armidale.
254. Your argument in favour of the construction of this railway is that it is unfair to ask people to send their goods to Inverell, then to Glen Innes, and down to Armidale, thus imposing upon them extra cartage;—do you not see that you are putting the Bundarra people in exactly the same position in asking them to pay the 35 miles extra carriage? The Bundarra people advocated a line on their own account at Kentucky. That was thrown out, and they now advocate this line of railway.
255. Did the Bundarra people want a line from Inverell to Kentucky and Uralla? Yes; that would be very close to Bundarra.
256. Are they now satisfied with the Tingha line, so long as it does not go by Glen Innes? Yes, a line to Kentucky would suit the people at Bingera as well as the Bundarra people, but we agitate for what it is probable we can get. I think the officers have lately condemned the idea of the Uralla line.
257. *Mr. Ewing.*] According to figures you have given, the tin miners earn on an average £53 a year? Yes, and as is usual it is not evenly divided.
258. What effect would a railway have upon the mining industry? It would raise the price of tin a little, because the cartage would be less than at present and speculation might be stimulated.
259. What is the freight from here to Inverell? £1 a ton on an average.
260. The freight from Guyra to Sydney would be approximately the same as from Inverell to Sydney, so that it would be £1 a ton more on every ton of tin? Yes.
261. So that to the mining industry it would mean £800 a year? Yes.
262. Can you mention any further benefit which it would be to the mining industry? The mining industry will improve in the district. It will be one of the largest mining centres in the Colony in years to come. Tin mining is at present in its infancy.
263. What reason have you for thinking that? On mining fields the people first go over what is most easily obtained. They rarely touch any heavy or expensive work until the shallow ground is exhausted. Then they go in for the deep basalt runs which is more expensive and costly work. Ultimately they work the tin lodes, of which this country is full.
264. Is not all that surmise? We derive the theory from other countries, and we have had expressions of opinion to that effect from Mr. Slee and the late Mr. Wilkinson.
265. What do you think that Sydney will be a market for? For anything we can produce, such as hay, wheat, and corn.
266. You think that on mostly granite soil, 3,000 feet above sea-level, you will be able to grow much maize? We do not depend upon the granite soil. That is only a small portion of the district.
267. Does maize ever get frost-bitten here? No; I have grown all that I required for three years, and have obtained from 150 to 200 bushels a year.
268. Are you aware that on the coast 1½ or 2 acres would grow that quantity? Yes.
269. If a railway brings you into competition with Shoalhaven, will it not bring in maize and undersell you? I might say the same with regard to South Australia, where they have only an average of 7 bushels to the acre, yet they can compete with us.
270. Do you know that they have to do no clearing, and that they run a furrow 15 miles long? I know that they have great advantages.
271. Is there much farming settlement along the proposed Guyra route? Yes, principally at the Guyra end.

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272. What do they do with their produce? Some send it by rail, and some send the produce out west. Some is sent to the Queensland market.
273. Do you admit that from Inverell to Guyra, *via* Tingha, the country is not thickly settled at present? It is not so thickly settled as it would be if there was a railway.
274. Does the population at present give any justification for making a railway? Not in itself; but in connection with Inverell it would materially assist a railway.
275. Would you say the same with regard to Glen Innes as to Inverell? There is less settlement there. The difference is that on the Glen Innes line the land is not likely to be thrown open.
276. This country is primarily a granite country? Yes.
277. The country on the Glen Innes route is principally a basalt country? Yes.
278. Which is the better? The basalt country.
279. Where will the population ultimately be? On the basalt.
280. Although the squatters have that land at present, do you imagine that they are going to be permitted to hold it for ever? No.
281. Then owing to the quality of the land there may be good settlement on the country between Inverell and Glen Innes? Yes; that country will be capable of carrying a large population.
282. Will it be capable of carrying much greater population than the land between Guyra and Inverell? I do not think so.
283. Is there not all the difference between granite and basalt country? No; we have a basalt country here. The tin bearing streak of country is comparatively narrow. Along the road you came yesterday right up to Guyra and Wandsworth, and right down to Inverell, there is basalt country. If constructed from Glen Innes to Inverell you will compel us and every person out west to pay extra haulage for a distance of 35 or 40 miles. You will have to run the trains 70 miles extra per day if traffic comes in from the west.
284. *Mr. Wall.*] I understand from the officer of the Department that a very large quantity of land around Tingha has been reserved for mineral purposes. Considering that there will be an increase of settlement by the construction of a railway here, would it not be necessary to throw that land open for settlement? It is thrown open now to a certain extent. The Act provides that a person wishing to secure a residence can have 10 or 15 acres.
285. I am not speaking of that. Would the mining population consent to have the land in the tin district thrown open for alienation? They would and they would not. The squatter will take pretty well the whole of it. If it could be thrown open in small sections the miners would approve of it.
286. Do you know that when the land is thrown open for conditional purchase on proclaimed gold-fields, and taken up under the 45th section, that it takes from one to five years to get on to it in order to mine on it? No, I did not think it took so long.
287. Seeing the difficulty there is in getting permits to mine, do you think the miners would consent to the alienation of this land? I would not consent to the alienation of any mining land, but I would approve of residential occupation by miners.
288. Would it pay to grow maize on 10 acres? I think it would be better if the land were taken up in small areas.
289. Do you know that although provision has been made for four years for mining permits, 100 applications have not been received? I believe that is the case, but I think the provision will be availed of to a great extent in future.
290. Under all the circumstances, do you think it is likely that there will be any great rush for land in this district for settlement? I think people would take up holdings and settle down if they had land for occupation.
291. If a railway were constructed from Glen Innes to Inverell would they not be within 15 miles of it? Yes; but I object to the extra haulage. Many of the business people at Inverell are in favour of the Guyra line, and they ought to prefer it, seeing that there would be 37 miles less haulage.
292. Do you know any reason why the people of Inverell should prefer the line to Glen Innes when it will place them at such a disadvantage? Many persons are interested in land, and they may think that the line will improve their private property. Mr. Cruickshank, in his evidence, said that he held many thousands of acres, and no doubt a railway from Inverell to Glen Innes would improve the value of his land.
293. But I am speaking of the business people of Inverell? There are plenty of people in Inverell who dare not openly say that they are in favour of the Guyra route.
294. What is the general feeling in Inverell? We have 250 signatures in favour of the line to Guyra, including many of the business people in Inverell.
295. *Mr. Neild.*] Of the 580 persons on the electoral roll, are most of them married or single? A great many are married.
296. What population do they represent? About 2,000.
297. What is the average yield of wheat per acre? Some land yields 45 bushels, other land 35—I could hardly state an average.
298. What is the average in South Australia? Seven bushels an acre is reckoned a good crop.
299. Do you cultivate for all your wheat crops here? Yes.
300. Are you aware that a large proportion of the South Australian wheat crops is not cultivated, that it is self sown from the previous harvest? No.
301. Are you aware that the land there is only ploughed once in three years, and scarified the other two years? I am not aware of that.
302. *Mr. Humphery.*] Are you familiar with the surveyed route between Guyra and Inverell? Yes.
303. Is this a fair description of the land: From Guyra for a distance of 8 miles the soil is of a rich red volcanic character, capable of producing heavy crops of cereals? Yes.
304. Then for a distance of 23 miles from Guyra it consists of black alluvial flats and volcanic ridges? Yes.
305. Thence from near Moredun Creek the land is principally porphyry and granite? Yes.
306. That goes up to New Valley Range. From New Valley to Tingha it is decomposed granite of the worst quality? Yes; but I draw attention to the fact that within a very few miles to the east we have good volcanic country.

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307. How many miles from the surveyed railway route? In some cases not 1 mile.
308. Within easy access of the railway the land through which the railway would pass would be inferior? Yes.
309. Beyond Tingha for 4 or 5 miles what have you? We have the granite. The red soil borders on the granite within a mile or a mile and a half.
310. Then for 5 or 6 miles on this side of Inverell does the soil begin to improve again? Yes, on to Inverell.
311. Is there much timber between Inverell and Guyra fit for railway construction? No; the timber is bad.
312. On the Glen Innes to Inverell line is there better timber? No; it is worse still. But on the fall to the east of Guyra there is any amount of good timber.

Mr. Kenneth Mitchell, postmaster, Tingha, sworn, and examined:—

Mr. K. Mitchell. 29 Nov., 1892.

313. *Chairman.*] Have you prepared any statistics with regard to the business of your Department? Yes; I have gone back as far as 1890 and brought up the statistics to the 31st of last month. The returns are as under:—

1890.

No. of Letters posted	21,744			
,, Telegrams transmitted	2,326,	Value,	£139	Actual Revenue.
,, ,, issued	2,259,	,,	146	Telegraph £139
,, Money Orders issued	1,085,	,,	4,111	M.O. Comm. 40
,, ,, paid	225,	,,	871	Stamps 365
,, Savings Bank deposits	228,	,,	1,118	
,, ,, withdrawals	69,	,,	939	£544
Sale of Postage Stamps	.....	,,	365	

1891.

No. of Letters posted	20,000.			
,, Telegrams transmitted	1,857,	Value,	£112	Actual Revenue.
,, ,, issued	1,978,	,,	128	Telegraph £112
,, Money Orders issued	1,178,	,,	5,144	M.O. Comm. 45
,, ,, paid	308,	,,	1,028	Stamps 377
,, Savings Bank deposits	193,	,,	955	
,, ,, withdrawals	50,	,,	663	£534
Sale of Postage Stamps	.....	,,	377	

1892, up to 31st October.

No. of Letters posted	20,187.					Revenue.			
,, Telegrams transmitted	1,740,	Value,	£	90	s. 19	d. 7		£	s.	d.
,, ,, issued	1,711,					Telegraph...	90	19	7
,, Money Orders issued	1,060,	,,	3,898	10	0	Comm.	36	0	0
,, ,, paid	220,	,,	721	11	0	Stamps	320	0	0
,, Savings Bank deposits	210,	,,	978	0	0				
,, ,, withdrawals	60,	,,	840	0	0		£446	19	7
Stamps sold	.....	,,	320	0	0				

These figures show that for three years the decrease has been very small. I do not think there will be any decrease this year. I may safely say that altogether there has been a decrease of £500. The salaries for the office amount to £250 a year.
314. *Mr. Wall.*] What is the cost of mails? From Guyra to Tingha, £170 a year. We have a mail from Inverell to Bundarra three times a week. That costs £112 a year.
315. *Mr. Neild.*] It appears that the number of deposits is on the increase? Yes.
316. That shows that the people about here are saving money? Yes.
317. Have the people to go to Inverell to register births, deaths, and marriages? Yes.
318. How long have you been without a registrar here? We have never had one. The amount of money passing through my hands has averaged £9,000 a year. For the first five years that I was in Tingha, £68,000 passed through my hands. I have been here eleven years.
319. Have you a knowledge of the surrounding districts? Yes; I am a native of this district.
320. Do you see any material increase in settlement on the soil by the selectors? Owing to its being a mineral reserve there is little settlement.
321. Do you think there are persons growing up in the district who would settle here if the reserves were thrown open? Yes.
322–3. *Mr. Wall.*] Would the miners have any objection to the reserves being thrown open? Yes.
324. *Mr. Humphery.*] You heard Mr. Litchfield's evidence as to the character of the soil between here and Guyra? Yes.
325. Do you confirm that? Yes.
326. Do you confirm his evidence about the better character of the soil a short distance away from the surveyed line? Yes; the granite belt is only 4½ or 5 miles wide.
327. What distance away from that does the good land commence? 1½ or 2 miles.
328. Is there any width of good land when you reach the volcanic soil? Yes; there is a great belt of it. It extends right to the McIntyre.
329. Is this your evidence: that, although the line now surveyed will pass through some poor country, yet a short distance away from the railway the soil is good and fit for agriculture the whole distance from Guyra to Inverell? Yes.

Mr. Edward Warland, fruit-grower, Tingha, sworn, and examined:—

Mr. E. Warland. 29 Nov., 1892.

330. *Mr. Neild.*] What is the area of your holding? Forty acres, and I have an orchard of 8 acres. It has been planted sixteen years. I grow all English fruits remarkably well. The orchard is 2 miles from Tingha. It is on the edge of the granite country.
331. Where do you get your market? Locally.
332. Is there a demand growing up which induces you to increase the size of your orchard? No.
333. Is there any demand out west? Yes; but the carriage is too costly.
334. Would the construction of the line through Tingha to Inverell improve your market? Yes, considerably. The distance is sixteen miles.

335.

335. Is 16 miles dray carriage a serious objection? Yes; the fruit gets knocked about.
336. If a railway were constructed from Inverell to Guyra, would you have an opening for the export of fruit both east and west? Yes. Mr. E. Warland.
337. Where would you expect to find the best market? West; but we could send a little south at certain seasons. 29 Nov., 1892.
338. Do they grow fruit about Inverell? Yes; but they cannot grow apples, pears, and cherries as well as we can. It is too cold here for oranges. Within a few miles of the proposed line from Inverell to Guyra there are thousands of acres of land equally as well fitted for agriculture and fruit-growing as my own—soil that a person would not think of turning over for the sake of cereal crops.
339. If a lot of this land were put under fruit-cultivation, would you not more than overtake the demand in the west? Yes; but we would then send to the south, and if the size of the orchards were increased we could afford to sell cheaper.
340. Would a railway enable you to look for a market in Queensland? No.
341. Have you tried grape-growing? My land is not suited for it. The ground is too shallow. They can grow grapes at Inverell at a lower price. If we had a line constructed from Guyra to Inverell I would be prepared to cultivate 12 to 15 acres.
342. *Mr. Dawson.*] Are you a practical man? Yes.
343. What sort of soil do you want for grapes? Good sandy soil.
344. You do not want red soil at all? No; it is not absolutely necessary. My orchard is poo sandy soil, but I can grow fruit on it.
345. If you grow apples, plums, and pears, would not Brisbane be the best market? I do not think so.
346. Do you know that half the plums sold in Sydney are bought for Queensland? Yes, but they go by water.
347. If you had this railway from your door to Sydney, do you think you could compete with Bathurst, Goulburn, and other places nearer Sydney, seeing that you would have to pay extra carriage? Yes.
348. What makes you think so? From the crops we get.
349. Cannot they grow good crops as well as you? Yes, but we must compete—we do not expect to make a fortune.
350. If you sent in all these fruits would it not bring down the market? Yes; we know prices must come down. I am evaporating fruit that we can send away at less cost for carriage.
351. If you had this railway how many tons of fruit could you send away per annum? I could send away 10 tons.
352. So that you would pay the railway less than £10 a year? Yes; but at the same time that would be better than letting the fruit go to waste.
353. *Mr. Ewing.*] Do you know New England? Yes, for thirty years.
354. Do you know any better country in New England than the country between here and Guyra? I do not know that I do.
355. Is it as good as any in New England? Yes. Of course some portion of this land is indifferent—it is granite. I think between here and Guyra is the best part of it.
356. Is there any land to be taken up between here and Guyra? Yes, outside the mining reserve.
357. Is that as good land as this is? It is better.
358. And it is not taken up? I do not think it is all taken up.
359. Then other people do not agree with you as to this being the best part of New England? I suppose not.

Mr. George Dart, Public School teacher, Tingha, sworn, and examined:—

360. *Chairman.*] Can you give us any statistics with regard to the attendance of school children? Yes; the following are the figures for 1891 to 1892:— Mr. G. Dart. 29 Nov., 1892.

	No. of Children.	Relative Position.
Public School, Tingha	140	...
Convent School, Tingha	76	...
Pond's School, distance from Tingha, 5 miles	28	N
Stannifer School, ,, 7 ,,	45	N
Gilgai School ,, 12 ,,	64	N
New Valley School, ,, 17 ,,	18	E
Stanborough School, ,, 6 ,,	12	W
Darby's Branch School, distance from Tingha, 3 miles	21	E
Paradise School, distance from Tingha, 14 miles	24	E
Kangaroo Camp School, distance from Tingha, 13 miles	20	E
Goonoowigall School, ,, 14 ,,	53	N
Round Mount School, ,, 6 ,,	19	W
	520	

361. *Mr. Collins.*] Is the attendance increasing or decreasing? At my own school it is increasing; but I cannot speak as to the others.
362. *Mr. Ewing.*] How much has it increased during the last three years? Only slightly. Within the last three years the Convent School has opened. The enrolment at my school was 150 in January, 1891. It is 216 now, taking the two schools together.
363. Do you think Tingha holds its own in comparison with other parts of the Colony? Yes; fairly well.
364. *Mr. Dawson.*] Were those children born in what they call the good old times, when Tingha was at its best? No.
365. *Mr. Humphery.*] What area is embraced in these returns? Twelve miles from Tingha towards Guyra, and 14 miles towards Inverell. The children at Tingha School represent seventy-five parents.
366. *Mr. Collins.*] Do the people travel from here to Sydney when they go away on business or a holiday? They chiefly go to Sydney.
367. Do they go by way of Inverell? No; by Guyra.
368. Do people go from here to Queensland? Not many. They go shearing sometimes.

Mr. Conrad Bowers, farmer and miner, Tingha, sworn, and examined :—

Mr. C. Bowers. 29 Nov., 1892.

369. *Chairman.*] Where is your farm? Four miles east from here. I cultivate for my own use, and I have an orchard of 5 acres. I have been in the district twenty years. Most of the land is good, except for a few miles. There is a belt of good stringybark timber for a distance of 6 miles.
370. What is the general character of the soil between here and Guyra? Some of it is good for agriculture, and some for pastoral purposes. There are patches fit for cultivation. The red soil is all good for agriculture.
371. *Mr. Ewing.*] Do you know New England? Yes; I have resided in it for thirty years.
372. Do you think that a railway line between Guyra and Inverell would run through as good country as there is in New England? Yes.
373. *Mr. Wall.*] Do you think the mining reserves could be devoted to a better purpose than they are now devoted to? I certainly do not think so, unless a Bill is passed which will permit of mining on private property.
374. Have you ever applied for a permit to mine on private property? No.
375. If it takes from twelve months to two years to get on private property to mine, do you think it would be desirable to throw this land open for settlement? No; the miners could not work it for long.
376. Could the mineral reserves be devoted to a better purpose than they are at present? It would produce more revenue if this large reserve were thrown open for settlement, provided it was not closed to mining.
377. Do you think that under any other system this land could be made to support a larger population? Yes.
378. Notwithstanding the fact that great inconveniences are placed in the way of miners obtaining permits to get on the land, you would prefer to see it withdrawn from reserve, and alienated for agricultural settlement? I can hardly say that.
379. Supposing it took twelve months to get on the land after it was sold, do you think any miner would take any trouble to make an application for a permit? No.
380. Do you know any other tract of country which is as productive as this piece of land now under reserve for mining? No.
381. Does not this mineral reserve about Tingha support a very large population? Yes.
382. *Mr. Humphery.*] Where were the vegetables and fruits now exhibited grown? On my farm, about 4 miles from here.
383. What do they comprise? Potatoes, onions, walnuts, almonds, lemons, oranges, Chinese date plums.
384. Can the fruits and vegetables you now produce be grown in other parts of the district? Yes. The Department of Agriculture have done me the honor to ask me to report to them on this district. I have been going round to different places, and I find that everything seems to flourish surprisingly. The trees in most instances were making too much wood this year, but some of the trees are bearing very heavily. I have some hay over 6 feet high, and the lucerne is 4 feet high.
385. Do you think that it would be possible for this district to produce sufficient potatoes for the consumers of Inverell and further west? I believe so.
386. Is there any land available for cultivation? No. Only 10 acres of land are allowed to be taken up, and that is too small an area.
387. We have had evidence that potatoes have realised from £10 to £12 a ton out west, and that they were sent 30 miles further away from Inverell than Tingha is;—would it not be worth while for the people here to grow potatoes for the western market? Yes, if the land was available.
388. Is there no land available? There are 265 square miles of reserve around Tingha.
389. Are there any larger holdings than yours in private hands? I have 200 acres of a selection, of which I converted 120 acres into a mineral conditional purchase.
390. Would it not be possible for others to do as you have done? No; I took up the land before it was proclaimed a reserve.
391. Has no one near Tingha got a holding like yours? There are three others.
392. Are they cultivating the land the same as you are? Yes, most of them.
393. If there is a market for potatoes to a limited extent out west why has no attention been given to them? Mr. Jones has 10 acres of a vineyard, and 7 or 8 acres under orchard. It takes him all his time to look after that. Mr. Warland has 8 acres of trees, and that takes him all his time.
394. *Mr. Collins.*] Do you know the country between Inverell, Moree, and Warialda? Yes.
395. Would it not be better for a line of railway to go from Inverell to Moree rather than go the other way? I think that eventually a line will be carried from Inverell west to Goondiwindi. It is a beautiful basalt country.
396. Do you not think it would be better to connect Inverell with Moree, and Moree with Narrabri, than to connect with Glen Innes? No.
397. If it is nearer to go by way of Narrabri than to go by way of Glen Innes, would you not be favourable to the proposal? Yes, if it was nearer.
398. Would they not take all your produce? Yes.
399. Is there any dairying about here? No; but the country is very suitable for it.
400. Would they not take dairy produce in those districts? I should think so.
401. Do you send any fruit down there now? My trees are too young at present, but there is one man here who does so, and he gets good returns.
402. *Mr. Neild.*] What is the area of the mineral reserves? Two hundred and sixty-five square miles.
403. Is the whole of that reserve a mineral field? I do not think so.
404. What proportion is mineral-bearing? There are lodes right through the granite formation, and stream tin under the basalt formation.
405. Do you think any large proportion of the mineral reserves could be thrown open for selection without injury to the mining interests? It is very hard to say where the mineral really is. A miner had been living on a block of mineral leased land owned by a company; this block was forfeited. Another miner went there after the first miner left, and within 50 yards of the latter's hut found a good lode, which pays him from £10 to £20 per week.*

Mr.

* Note (*on revision*) :—This block has been floated since I gave evidence.

Mr. George Staschen, miner, Tingha, sworn, and examined:—

Mr. G. Staschen. 29 Nov., 1892.

406. *Chairman.*] Do you carry on any other occupation besides mining? Yes; I have a small fruit garden 4 miles from here, to the north. I am the only person here occupying a residential lease. I have 10 acres of land, and 2½ acres under cultivation.
407. What is your idea with reference to the permanency of this mineral field? It will all depend upon what will be found. We know that stream tin as well as gold cannot be obtained except from reefs. We expect to fall back upon the lode tin. We have not yet found the lodes. The means of those who were sinking for the lodes were not sufficient.
408. *Mr. Ewing.*] Are you quite sure about the permanence of the field? No one can be sure. I am quite sure, judging from analogy, that there are reefs here.
409. Could you not say the same thing with regard to any country where you find stream tin? Yes.
410. You only suspect that lodes are here? Yes, as a natural consequence.
411. *Mr. Humphery.*] Are the miners working on their own account or for employers? Mostly for themselves.
412. What are the average earnings? Very small on the average. Some men are making £20 a week, perhaps, while others do not make 20 pence. I think the average earnings would be about £1 a week.
413. Do you say that some men are earning up to £20 a week? Yes, in one or two cases at least.
414. You regard the mining community here as fairly prosperous? Yes; but at the present time it is a little depressed.
415. They manage to live and put a little money in the Savings Bank? Yes.
416. Are their numbers diminishing? No. Plenty of them go away, and they come back again. We do not produce potatoes, because we can do better at tin-mining.
417. How long have you had your residential lease? I applied for it one year and eight months ago, and I got it the day before yesterday.
418. If this land were withdrawn from reserve and alienated in larger areas than 10 acres, do you think the miners would object to that? Yes, very strongly.
419. Do you think it could be devoted to any better purpose than holding it for the purpose of mining? I do not think so.

Mr. William John Howes, miner, Tingha, sworn, and examined:—

Mr. W. J. Howes. 29 Nov., 1892.

420. *Chairman.*] Are you an experienced miner? I have been 33 years mining, and I have been 14 years on this field.
421. Can you give us any idea as to the permanency of this field? Yes; all that we want is plenty of machinery. We want capitalists, and we want a railway to take the tin away. We have any number of places which would pay well if we had machinery to compete with other places. There are large deposits here, but some of them are poor.
422. How is it that capitalists have not found you out? They do not seem to care about getting out of the train and riding in a coach for 30 or 40 miles.
423. *Mr. Neild.*] Do you know the tin-fields in the neighbourhood of Emmaville? Yes; I was there for ten years.
424. Are the deposits here the same as those deposits? Yes. The surface alluvial ground is rich, but it is nearly worked out.
425. Are the deposits of the same richness as they used to be about Emmaville? Some of them are.
426. Have they better appliances at Emmaville? Yes.
427. Have you any machinery worth speaking of here? No; it is all hand work.
428. Do you want machinery for the development of large, but poor deposits? Yes; we want machinery to lift water and to crush lodes.
429. Some of the witnesses say that lodes exist, while some are inclined to doubt it. Do you say that lodes exist? Yes. Some of them are 6 and 7 feet wide.
430. What percentage will 6-foot lodes give of good ore? Some give as much as 3, 4, 6, and 10 cwt. to the ton. That is 30 to 50 per cent. We have had some of the richest deposits in the world in Tingha.
431. What is the nature of the lodes? The best of our tin and the biggest deposits are in the porphyry—the same as in Tasmania.
432. Have you been to Tasmania? Yes.
433. Do you think that with the addition of machinery and capital you would be able to turn out a much larger quantity of tin than at present? Yes; more than was ever taken out of the field.
434. Do you think that the tin deposits underlie the greater part of the mining reserve? Yes.
435. Therefore you would not be in favour of the alienation of any portion of the reserve for agricultural purposes? No; I believe in throwing it all open to mining.
436. Are the alluvial deposits mostly worked out? No; there are miles of deep country which poor men cannot get into, and it is necessary to have machinery in order to sink to a depth of 200 or 300 feet.
437. Do you allege that there are valuable tin deposits below the basalt? Yes; lode as well as alluvial deposits.
438. Where are the lodes? In granite and trap.
439. From your knowledge of mining in other parts of New South Wales, in Tasmania, and so on, do you think that individual miners are doing as well for themselves here as in other districts? The men here have had very good chances, and they will only work shallow ground. They do not try to make up parties to work deep ground, or if they do they fall out; but there is any amount of tin here for people to do well on. We have millions of tons here quite as good as they have at Mount Bischoff, if we had machinery.
440. Do you think that the deposits here are of equal value with those at Mount Bischoff? I do not say that they are so big. We have lots of reefs with fine tin, but 5 per cent. is lost in dressing. Hundreds of tons of fine tin go away to waste. The appliances here are the commonest.
441. Do you use the old sluice boxes? Yes; that is the main thing. If a man gets a really good thing, he cannot make it pay.
442. If you had a railway would you have cheaper carriage for your tin? Yes.
443. Would it not throw a lot of teamsters out of work and reduce the population? Yes; but it would make the field. A lot of capitalists would come upon the field and speculate.
444. *Mr. Wall.*] Have you any samples of lode tin? Yes.
445. Have you any crushing plant here? No. If we cannot get 5 per cent. we cannot make it pay. We crush with hammers on a small scale.

Mr. W. J. Howes. 29 Nov., 1892.

446. Are there any lodes in the vicinity of Tingha? There are lodes which have been worked and abandoned for want of money to carry them on. Poor men cannot work them.
447. Has the principal work done here been done in alluvial? Yes.
448. Does tin occur in the porphyry? Yes; I believe all the alluvial deposits come from big dykes in the porphyry.
449. Does it occur in fissures between porphyry and other rocks? Yes.
450. Have you read Mr. Wilkinson's report? No.
451. Do you know that the general impression amongst geologists is that our stream tin has been brought from a higher strata-graphical position than that in which it is now discovered? It was certainly brought down from the mountains and overlaid with basalt.
452. Has the strata containing the tin been exhausted? No; in some places it has been. There are places 600 and 700 feet above the level of the old river beds.
453. Does the tin occur in hard substances here? The richest deposits of tin which we have got here occur in very hard country.
454. *Mr. Neild.*] What width of lode are the specimens now produced taken from? Six feet, sometimes 2 feet, sometimes 6 inches. Sometimes the 6 feet lodes are as good as the big sample produced. These shoots go hundreds of feet. Sometimes the lode is in fissures. We get tin in any part of the reef. All our gold, copper, and tin lodes are in big shoots.
455. *Mr. Ewing.*] What was the price of tin when Tingha was doing well? I believe Tingha was doing as well last year as in any other year.
456. What was the price of tin five years ago? Eighty-three pounds a ton.
457. Ten years ago? Sixty-two pounds a ton.
458. What is it now? Fifty-two pounds a ton.
459. Do you think there would be any difficulty in getting capitalists to invest in tin-mining if tin went up to £100 a ton? There would be no difficulty at all.
460. Therefore the main thing required by the industry is a rise in price, and not the construction of a railway? Everybody has given his mind to the alluvial deposits, and not to the lodes. I am the only man in the district who has followed the lodes right through. I have hardly worked at all in the alluvial deposits.
461. When you get £80 or £100 a ton at one time, and at another time £50 a ton, the industry must be depressed when you only get £50 a ton? Yes; but a great deal depends upon the water here.
462. *Mr. Collins.*] Would the mines be much better developed if you had machinery? Yes.
463. If the railway were brought nearer to you, would you be able to get machinery? Yes; and we would be able to get men here who would spend money.
464. Do you think it would be justifiable to open up the country for anything else except mining? No; all the basalt ridges would make good farms, but there might be hundreds of thousands of tons of tin lying under that basalt country.
465. Could you not combine agriculture with mining? Yes, as long as we could get on the land afterwards to work it for tin; but lots of people would like to lock up the land.
466. Would it be more in the interests of the Tingha people to have a railway coming this way instead of from Inverell to Glen Innes? Decidedly.
467. *Mr. Humphery.*] You spoke of tin being worth £53 per ton. Do you mean tin ore? Yes.
468. Was not tin ore worth only £48 per ton? Yes; it fell once to £23 per ton. The price of tin ore six years ago was £62 per ton.
469. How much was it worth four years ago? £53 for a while, but it fell off again.
470. What was it worth two years ago? About what it is now.
471. In the evidence given before the Sectional Committee the price was stated to be £48 per ton? That might be the case. It is now worth £52 per ton.
472. So that the price is now better? Yes; but the whole difficulty is the water.
473. You think that it is the absence of water which depresses the mining here? A great deal of it.
474. You see from this evidence that it says in 1885 the average value of tin was £48 a ton? Yes.
475. In 1886 the average price was £50 a ton, and it continued at £50 a ton until 1889, when it was £52 a ton, and the average price in 1889 was £53 a ton, so that the price of tin has been steadily increasing since 1885? Yes.
476. *Chairman.*] Where was the tin which you have shown us found? Anywhere over the field.
477. Is it found in any quantity? Yes, as much as a ton or a couple of tons in a shoot. It is lode tin.
478. *Mr. Wall.*] Have you any knowledge as to what the metallic percentage of tin at Tingha is? No.
479. The price of tin here is regulated very much by the price of metallic tin in London, and your tin ore here averages 74? Yes; but we have not the appliances to dress it up.
480. If you could produce metallic tin you would get the same price here as in London, except the cost of carriage? Yes.
481. *Mr. Humphery.*] Are there only two buyers of tin here? Yes.
482. *Chairman.*] What would be the percentage of tin produced? From half a hundred weight to 10 cwt. to the ton of stone.

Mr. James Rank, senior constable, Tingha, sworn, and examined:—

Mr. J. Rank. 29 Nov., 1892.

483. *Chairman.*] Can you give us any information with regard to the population of this district? Yes; the figures are as follows:—

European population during January, 1887	1,960
Chinese	1,150
Aborigines	32
	3,142
European population during January, 1888	1,950
Chinese	1,000
Aborigines	3
	2,953

European

European population during January, 1890	2,120
Chinese	1,100
Aborigines	...
	3,220
European population during January, 1891	2,285
Chinese	703
Aborigines	...
	2,988
European population during January, 1892	2,090
Chinese	450
Aborigines	...
	2,540

Mr. J. Rank. 29 Nov., 1892.

The European population has been on the increase since 1887.

484. *Mr. Neild.* Do those figures refer to the adult population? No, the whole population.

485. Is the adult population represented on the electoral roll? A good many adults are not on the roll.

486. *Mr. Ewing.*] Has the decrease of population during five years been about 1 per cent.? Yes.

487. How do you account for the Chinese decreasing so much? A lot of them have made what they term a fortune, and they have gone home to China. I believe a great number of them have left here on account of the shallow ground being worked out.

488. Is the European population practically about the same? Yes.

489. *Mr. Collins.*] Have you been long in this district? Yes, for six years.

490. Do you think it would be more advantageous to this district if a line were made from Inverell to Guyra than from Inverell to Glen Innes? I believe that more persons would be convenienced, and that more country would be opened up.

491. *Mr. Wall.*] How long has this been a separate electorate? There has been no division for six or seven years.

492. Do you know what was the number of people on the electoral roll in this portion of the electorate in 1889? I think it was greater.

493. Has the increase been in a great measure by births? Yes.

494. How many voters are there on the roll? Five hundred and eighty.

495. Is that number of people on an area about 20 miles each way? Yes.

WEDNESDAY, 30 NOVEMBER, 1892.

[*The Sectional Committee met at the Court-house, Inverell, at 10 a.m.*]

Present:—

The Hon. WILLIAM HENRY SUTTOR (Chairman).

The Hon. Frederick Thomas Humphery.	John Cash Neild, Esq.
Thomas Thomson Ewing, Esq.	Charles Collins, Esq.
William Chandos Wall, Esq.	Henry Dawson, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Rev. Robert Kirkwood Ewing, sworn, and examined:—

496. *Chairman.*] Do you desire to make a statement to the Committee with reference to the proposed railway? Yes; the first statement I would make is that apart from all question of market, and apart also from the question of approaching the coast, the towns of Inverell and Glen Innes have supreme claims for direct railway communication. I base that general statement first of all upon the population of the two towns and district, the population of this district being nearly 10,000, the population of the Glen Innes district being nearly 11,000. I base it also on the commercial relations, in various respects of a very extensive character, carried on between those two towns in the buying and selling of stock and produce, and in various other commercial transactions. I base it also on the fact that by connecting Glen Innes and Inverell directly by railway it would bring a large portion of the Warialda district, which supplies an enormous amount of traffic, to within 40 miles of a railway, instead of being, as at present, some 82 miles distant. I base it on the fact further, that to carry a line from Inverell south, say to Guyra, instead of the length of line for traffic and for all kinds of communication, being as it is now 42 miles, it would then be not less than 100 miles; that we would need to travel first to Guyra, and from Guyra back 40 miles to Glen Innes. In other words, these two large and important districts would be thrown 100 miles apart, instead of as at present 42 miles, and a portion of the Warialda district from which an enormous traffic comes through Inverell to Glen Innes would then be thrown back 140 miles from Glen Innes, if they wanted to do their business there. Then, if instead of a direct line to Glen Innes a line were constructed to Guyra, it would be an attempt, at all events, on the part of the Parliament to destroy to a large extent the vested interests now existing in Glen Innes—the vested interests being three large banking establishments, public buildings of every kind, large stores, permanent dwellings, a settled population, and a railway station which has cost a very large sum of money. To carry a line to Guyra would then be an attempt necessarily to establish another town 40 miles south from which no advantage would be gained by Glen Innes, Inverell, or Warialda, but damage. It would be directly an attempt to interfere not only with vested interests, but to depreciate the whole value of the entire public buildings that have been constructed in the town and district of Glen Innes. In addition to that, instead of placing this town and the portion of Warialda from which the traffic comes through this town to Glen Innes in the most direct contact with the main traffic, the proposal to carry the traffic to Guyra would be to perpetuate, what I need not say every man knows is the curse of New South Wales. It would be to perpetuate centralisation in one of its worst forms. Then with reference to markets or a connection with the coast we

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we have a national right to choose our market. I would regard it as an act of tyranny, apart from all the evils of centralisation, if we were, by the construction of a line to Guyra, compelled to go to Sydney, and Sydney alone, as our only market. Out of that the question may arise—how are we to be connected with the coast?—that direction being our natural geographical outlet for ocean communication; and we have a right to get there by the nearest route. As things now stand, the connection between the lowlands and the main trunk line—I would not say must be—but it is already decided and fixed, will be at Tenterfield. I have read the evidence of one or two gentlemen who have been advocating the Don Dorrigo line from Guyra to connect the main trunk line with Coff's Harbour. I may be permitted to state as an opinion, although there is something lying behind stronger than my opinion, that those gentlemen could not be ignorant of what has already been done by the Parliament, which has fixed the connection between the lowlands and the main trunk at Tenterfield. There is a line of railway now being constructed from Lismore to Byron Bay and the Tweed at a cost of many hundreds of thousands of pounds. Unless those lowlands be connected with the table-land and slopes of New England, that railway will not only be comparatively valueless, but the money will to a great extent have been thrown away, for I am clearly satisfied that the originators of that line, with whom I have a perfect sympathy, had it in their view that ultimately the connection between the table-lands and the slopes of New England and the rich lowlands on the coast would be made. With communication from here direct to Glen Innes, thence to Tenterfield, and from Tenterfield to the rich lands of the Clarence and Richmond and on to Byron Bay, it would be a splendid expenditure of money by the Parliament. I would also like to state another claim to being connected directly with Glen Innes instead of Guyra. The whole of the soil between here and Glen Innes is of first class quality, and as you yourself must have seen yesterday the lands between Moredun and Inverell, at all events, are anything but first-class. Not very long ago I travelled from here to Moredun *via* Tingha, and I saw nearly all the marked lines on the wished-for railway, the country being decomposed granite, spewy, and boggy with little oases here and there of red soil making their appearance, and nothing more. During 25 miles I neither saw hoof, horn, nor human being, nor house. A very different state of things exists between here and Glen Innes by whatever route the railway may be taken, whether by Brodie's Plains, Spring Bank, or King's Plains. It is a very different class of land.

497. *Mr. Neild.*] You have stated that the population of the Inverell district is 10,000? Nearly 10,000.

498. Are you aware that sworn evidence which the Committee have already obtained places the population at 6,000? The police district of Inverell goes some 12 miles out of town, but the electorate extends very much further and contains a very much larger population. The police office cases of Little Plains have to go to Warialda instead of coming here, and the large population within the electorate extends beyond that.

499. When you name a population of 10,000, do you refer to the electorate or the police district? To the electorate.

500. Have you not made some statement with regard to the great occupation of the land between Inverell and Glen Innes, as compared with a total absence of population between Inverell and Guyra? I spoke of Moredun, 45 miles from here.

501. Does the occupation between here and Glen Innes that you speak of represent people or cattle? It represents cattle, sheep, and horses, but not to any extent people, because a large portion of the land there is held by large owners. I have heard from several of them that if a railway passed from here to Glen Innes by that route one of their first efforts would be to subdivide and let their lands so as to secure population. At present, without railway communication, that is impossible.

502. Do you say that there are no people between here and Moredun? I did not see them. I saw neither people nor cattle.

503. Did you travel along the road or along the surveyed line of railway? Partly along the surveyed railway, and partly along the road.

504. Did you not see any occupation along the road? Not along the road I travelled.

505. Then it must have sprung up very quickly? After you leave Tingha and proceed a few miles there is no occupation; that is going towards Moredun. That was about two years ago.

506. If there is a population there now I suppose it has sprung up since? No, but I did not see it; it may be lying backwards.

507. You have spoken with great positiveness as to the certainty of railway connection between the table-land and the northern rivers at or about Tenterfield:—are you not aware that the railway line in course of construction from Lismore to the Tweed is intended to be part of a line traversing the whole of the coast district, and connecting eventually near Newcastle? I was not aware of it, and I do not think that anyone else in this district is aware of the intentions of Parliament in that respect. All we know is that some proposal was made in the House at some time—not more than two or three years ago—that a line should go from near Newcastle right onwards at a cost of £6,000,000 or £7,000,000; and, in connection with the previous statement which I have made, I beg to state that that line, if ever carried out, would only intensify the evils of centralisation of which I have already spoken.

508. I am not discussing the question from the standpoint of public policy, but your statement showed that you based the idea which you expressed of a connection with Tenterfield wholly on the construction of this section of the North Coast Railway? Not wholly upon that, but the meaning of what I said is, that as the line between Lismore and Byron Bay, in course of construction, is to go to Casino, that indicated an intention to carry that line onwards to a junction with Tenterfield, and unless that were carried out, it occurred to me there would be an enormous waste of money. If that is to be prevented by the outlay of £6,000,000 or £7,000,000 more to bring the whole of the trade down to Sydney, it will only be intensifying the evils which would exist if this railway were carried from Guyra to Inverell. I cannot myself for a moment separate the outlay of money on the construction of railways, and the opening up of the country, from policy. Policy and outlay of money must go together.

509. Another part of your statement was to the effect that a junction of the railway at Guyra would necessitate a new town there; are you not aware that there are several railway connections existing in New South Wales, quite as important in character as the one under discussion, where no townships have grown up; for instance, take Werris Creek, the junction of the Narrabri line, there is no township there? I did not say a township, but it would be an attempt to establish another town. I said it would take the traffic. The intention is to take the traffic.

510. Have you not forgotten that part of your statement? Allowing that I did say so, my meaning and intention were to show that it would be an effort to direct the traffic from Glen Innes, and so depreciate the

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the value of that town, and depreciate and interfere with vested interests as well. A town might spring up in the inhospitable climate of Guyra, or it might be that a large shed might serve merely for goods, but traffic is wanted to go there.

511. Is the climate of Guyra more inhospitable than the climate of Glen Innes? Yes, very much so.

512. *Mr. Humphery.*] Within what radius of Inverell would your estimated population of 10,000 be settled? The electoral district of Inverell goes 37 miles from here. The bulk of that population would be served within 10 or 15 miles of Inverell.

513. Would the railway be accessible to the whole of that population? Yes.

514. Assuming that there might be no connection for many years between the existing railway and the coast, are you of opinion that a connection should be made between Inverell and Glen Innes? I do not think that there can be any doubt that those two points should be immediately connected. That would place the whole of this large and rich district in connection with the main trunk line at the shortest possible distance.

515. Do you think that you express the feeling of the majority of the population likely to be served by a railway to Inverell? Yes. It has gone abroad, and there has been some foundation for it, that the people here are greatly divided—that a large number wish for a line to Guyra. At one time there was not a single dissentient in this district; all wished for a line from here direct to Glen Innes, but the constant succession of delays led some to come to this conclusion: "Well, as we will never get the railway to Glen Innes apparently, let us have one to Guyra; half a loaf is better than no bread." The constant delays caused general dissatisfaction, and some who were anxious to get a railway immediately, instead of waiting till we got the right railway, began to contend for the Guyra line. Hold was taken of that, and it was said "the people are divided." But I am satisfied that at present, if it were put to the people of the district in this way, "Within twelve months a railway will be started, and we will leave it to you to decide whether it should be started from Glen Innes or Guyra," I would risk my honor that nine-tenths of the people of this district would say "Glen Innes." There might be a few dissentient voices at Tingha.

516. *Mr. Ewing.*] Do you regard the construction of railways primarily for the development of the country? Yes.

517. Do you therefore think it is a wise thing to consult the inhabitants? Yes.

518. Was your remark with regard to the inhospitable nature of the climate of Guyra based on the fact that it is 800 feet higher than Glen Innes? Yes; and on my own personal experience. I have been in both places in the depth of winter and in the heat of summer, and Guyra is much more inhospitable than Glen Innes. What is called the Mother of Ducks must always render it a cold bleak place.

519. Admitting the fact that Inverell ought to have a railway, you consider that it resolves itself into a question of where it should go? Yes, entirely. If a railway were built to Glen Innes the future of the country along that route would be decided either by the voluntary action of the large landholders or by compulsory action through a land tax, which would make them find that it would be much more advantageous to let and subdivide their lands than to run sheep upon them.

520. Therefore, with regard to the future of those proposed railway lines, you believe that eventually a railway from Glen Innes to Inverell would pass through well-settled fertile country, while from the very nature of the land between Guyra and Inverell, a line by that route must pass through unsettled country, except with regard to the mineral country? Most undoubtedly.

521. You spoke also with regard to markets;—do you not think that Sydney is the market for this district? It might be partly, but not entirely. I believe that a portion of our market for wheat will be found at Armidale, because they do not grow enough there for their own consumption; but my contention is that if it were to be our market to a large extent, and if a market were also to be found to a large extent in Queensland, upon what principle of justice or political economy are we to be compelled to go to Sydney, and not have the choice of going to Queensland, when the same expense would put us at a point in connection with the main trunk line which would enable us to have the choice of going north or south. If connected with Glen Innes, we could then go to Sydney, if Sydney offered the better market; but if Brisbane offered the better market we should go there. This is a very large and important district, but it is nothing to what it would be if we had railway communication between here and Glen Innes. Why should this large population be compelled *nolens volens* to go in one direction only when the same money would put us at a point where we could go in either direction?

522. Do you look eventually to the sale of produce from Inverell on the coast? Yes, undoubtedly.

523. Would the distance from Inverell to the coast, *via* Tenterfield, be 200 miles? Yes.

524. How far is it to Sydney from here? About 400 miles.

525. Would the distance from Sydney to the northern rivers be another 400 miles? Yes; a total distance of 800 miles.

526. Presuming that the people of this district eventually supplied the people on the coast with wheat, would they have to send the wheat *via* Sydney, 800 miles, instead of 200 miles on the other route? Yes.

527. Do you think that in the future it will be regarded as a reasonable thing that in the same Colony produce should have to travel 800 miles instead of 200 miles? No; neither in the future nor in the present.

528. Therefore, supposing your market is with Sydney for the present, it might perhaps be better to pay for 37 miles extra carriage than to permanently injure the development of the country by building a line in an unwise direction? That is an obvious truth; that is my contention.

529. *Mr. Collins.*] Do you say that the most of the good country lies between here and Glen Innes? No.

530. Which way does it lie? It lies everywhere. I have been accustomed for the last fifteen years to travel this district, and from where we now stand in a north-easterly direction you may travel 25 miles through first-class land. Then from here to Bukkulla there are 23 miles in a northerly direction consisting of first-class land. You can go westerly on Little Plains, and in that direction for 30 miles, and it is all good land. If you go out in the direction of Gum Flat and on towards Myall Creek, there is no end to the good land. If you go out into the direction of Newstead, Brodie's Plains, and back from Brodie's Plains out towards the east, the whole of it is first-class land.

531. Do you say that there is no end to the good land out west? Yes.

532. Would it be preferable for Inverell to be connected with a railway out west rather than with Glen Innes? At present it would not. When the railway was first constructed the contention here was to bring

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bring it westerly to Inverell and to proceed from Inverell to Glen Innes and Armidale. It did not succeed, and it would have been the better route at the time. Now that the main trunk-line is already formed between Sydney and Brisbane, and we are within 40 miles of it, that will give us an outlet in two directions, and would be the better connection. If a line were constructed now between Inverell and Werris Creek, say, that would again tie us for ever to Sydney, and then our produce would require to be taken from there to Sydney and up to the lowlands of the Clarence and Richmond.

533. Would it not be better in the interests of the producers of this district to take the line to a market where their produce can be sold and they can get better prices; that is, in the south-west? That will also be the case if we are connected with Glen Innes; we can then sell our produce where we like.

534. Would it not be advisable to connect Inverell with Moree? I would not talk about Moree just now. That is in the far future. I am talking about the construction of a railway which will join us to the main trunk-line. Supposing we were connected with Moree, there would be left 40 miles between us and Glen Innes, which would be left a blank, and we would be entirely cut off from Queensland and the lowlands.

535. If you could get a better market out west, would it not be more advantageous than being connected with Queensland? I do not see that.

536. For what produce is there a market in Queensland? Other witnesses will deal with that question.

537. Have you stated that the persons who hold land between here and Glen Innes would voluntarily open up that land? I have had it from some of themselves that they would only be too glad to do so.

538. Are you aware that in the case of railways similar to this one (for instance, the railway running through land of the Peel River Company) the owners of the land said the same thing, but they have not up to the present opened up that land? In my life I have come across many people who have said that they would do a certain thing, but they did not do it. I have also come across other men whose word was their bond, and who, when they said they would do anything, always did it.

539. Do you think that in Inverell they will fulfil their word? I know they will.

540. You say that the shortest possible distance to connect Inverell with the main line would be at Glen Innes; are you aware that if the line were taken to Glen Innes the Inverell people would have to pay for 37 miles extra haulage for all time for produce and goods between here and Newcastle and Sydney? I am quite aware that if they go to Sydney they will have to pay for 40 miles extra haulage, but they would rather pay for 40 miles extra haulage. If, however, they wanted to transact business with Glen Innes, and a line is made by way of Guyra, they will have to go a distance of 100 miles, which would be very expensive. If we want to go to the lowlands of the Richmond or the Clarence, or to Brisbane, we should have to go round by Guyra to Glen Innes, a distance of 100 miles, whereas a direct line would reach it in 45 or 50 miles.

541. Have you expressed the views of the majority of the people in this district? Yes; any division which has arisen has been caused by the delays which have occurred. Men's hearts being depressed, they have said "Sooner than not have a railway, let us have it anywhere."

542. Do you belong to the Glen Innes-Inverell Railway League? No, and I do not possess one acre of land. My interest is entirely patriotic, and based on fifteen years' experience.

543. *Mr. Dawson.*] Is it a fact that the only settlement between here and Guyra is at Tingha? There is a little settlement at Moredun; Tingha is a mining settlement.

544. In the event of the Glen Innes-Inverell line being constructed, would not Tingha be within 16 miles of the station? It would be less. Between here and Glen Innes there would be a station in the direction of Newstead, and from there across to Tingha the distance is not more than 11 miles.

545. Then Tingha would be amply served by that line? Just as well served as the farmers living 12 or 14 miles beyond Inverell, if not better.

546. Would the Glen Innes line serve the Warialda people? It would bring them within 42 miles of a railway, instead of as at present 84 miles.

547. Do you get the Warialda traffic now? Yes, a large amount of wool comes through to Glen Innes.

548. *Mr. Collins.*] If a line were constructed from Narrabri to Moree, would the Warialda wool come here? It might; Moree is 60 miles from Warialda, and they would only have 42 miles to travel by team to the railway here, instead of 60 miles to Narrabri.

549. But would it not be nearer to take it to Sydney and Newcastle by way of Moree? Yes, but the portion of the traffic from Warialda which comes here would not be benefited in that direction; we do not claim the whole of the traffic from the Warialda district.

550. *Mr. Dawson.*] Is it all good country between here and Warialda? Yes, the whole of it. If a railway were made, settlement must spread out in that direction. It is already settled extensively to within 20 miles of Warialda, and it must go beyond there.

551. Which is your market for local produce? It has gone to Glen Innes and Goondiwindi.

552. Is the trend of the produce traffic north or south? It trends here largely to Glen Innes; but hitherto we have grown little more than what is required for local consumption.

553. Is it a fact that you cannot grow potatoes here? I have eaten as good potatoes here as anywhere. The red soil here will grow potatoes as well as any place.

554. *Mr. Wall.*] Was there not an error in the estimate of the distance from Inverell to Sydney by Glen Innes, which you stated to be 400 miles, whereas approximately the distance is 472 miles? Yes, I find that it is 468 miles.

555. Would the 60 miles of land carriage from Warialda to Moree be equal, according to the ordinary rates, to 200 miles of railway carriage? Yes.

556. In that case the probability is that the wool from that district would still come to Inverell? Yes.

557. Are you aware that under the present differential rate system, the rates from Glen Innes to Sydney, and from Guyra to Sydney, are about equal? Yes.

558. If this extension takes place from Inverell to Glen Innes, would not the differential rates be abolished? They might be, but it is hard to say what would be done sometimes.

559. Do you know what the Railway Commissioners had in view in establishing those differential rates? I never did thoroughly understand it.

560. Is it not a fact that before the differential rates were established, a large portion of the trade of Inverell went towards the coast, and it was in order to compete with the coastal trade that the differential rates were established? Yes, the bullock teams were taking the trade down there.

561. Are you aware that the connection with Glen Innes would entail a perpetual charge upon the people of 37 miles extra haulage? I am quite aware of that.

562. Do the people of this district quite recognise that fact? Yes.
563. Do you think that the local development would more than compensate for the extra haulage? Yes.
564. Do you think that the development in that direction would tend in the course of a few years to cover the interest on the cost of construction and the working expenses, say within six or seven years? I do not think any man who has lived so long as I have in the district and who has seen the steady development under most disadvantageous circumstances could for one moment doubt that long within six or seven years it would pay its expenses if not more.
565. Do you regard the present trade between Inverell and Glen Innes as of more importance to the development of this district than the shorter connection with the metropolis by way of Guyra? Yes.
566–7. You referred to good land in different directions within a radius of 30 miles from Inverell—is all the land in the hands of private owners? Selectors and squatters.

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Mr. Edwin Grainger, manager of the Bank of New South Wales, Inverell, sworn and examined :—

568. *Chairman.*] How long have you been in Inverell? Eighteen years.
568½. Have you any information to give the Committee? I have previously given evidence, but I have prepared a few statistics which may be of some service. In 1875, there were two banks, employing five hands. In 1892 there were three banks employing ten or eleven; in 1875 the bank buildings and land were valued at £2,000. In 1892 they are valued at £17,500. The value of the bank buildings and land at Glen Innes is £18,500 at the present time. The value of the bank buildings and land at Bundarra, Tingha, and Guyra is only £300. The number of solicitors in Inverell in 1875 was one; in 1892 there are five; in 1875 there was one doctor; in 1892 there are four. The number of municipal assessments in 1880 was 541; in 1885 679; in 1892 822. The rateable value in 1880 was £126,130; in 1885 £254,140; in 1892, £283,500. The revenue from rates in 1880 was £595; in 1885, £1,071; in 1892, £1,246. I obtained these figures officially from the town clerk. Now I wish to refer to evidence given by the Hon. H. Copeland, which affects myself. In his evidence at page 70, he says that I, amongst others, forced people into acquiescence with regard to the Glen Innes line. That statement is untrue. I never asked one individual to advocate that line. I believe in the line myself thoroughly, but every man must answer for himself. Mr. Copeland goes on to say that I hold a vast number of mortgages over selectors in the district. I hold one mortgage between Glen Innes and Inverell, and I am astonished that a Minister of the Crown should give evidence such as he did. Then he goes on to say at page 73, that I hold land in my possession through which no doubt this railway would pass. He goes on to say that having these mortgages that I myself compelled people to vote for this line so that I may be benefited by its construction. You will be astonished to hear that I do not own one single acre in Inverell, or between Inverell and Glen Innes. There is not one word of truth in those statements. The story of the Inverell syndicate was circulated in Armidale to prejudice our claim to a railway; over and over again our papers denied it. To establish the truth certain men in Armidale went to the Lands Office for information, but found the whole story to be an untruthful fabrication. In all justice to us and to your Committee, Mr. Copeland should be compelled to substantiate his statements.
569. If you look at the evidence given by Mr. Copeland, do you not see that he simply says he has been informed that these were facts? That is the case, but the Committee came to a decision on evidence like that.
569½. *Mr. Humphery.*] You said just now that Mr. Copeland stated these things;—would it not be better to say that Mr. Copeland stated he was informed that these were the facts? Yes; that is the case; but I swear that those statements were incorrect. In another part of his evidence, Mr. Copeland stated that there are 2,285 Europeans living at Tingha. Now the Committee saw Tingha yesterday. I ask them do they think there are 500 people living there.
570. *Chairman.*] We have had evidence that there are 2,000 people living there? Yes; but not in the township of Tingha. That is the police district, which extends over 2,000 miles. In that police district there is only one man for a mile. One thousand five hundred of these people, by reason of their situation, would derive more benefit from the Glen Innes line than from the Guyra line. Mr. Copeland refers to the rising township of Bundarra. Fourteen years ago I was interested in a station there, upon which there were twenty selectors. To-day there are not more than eight on the run. Unfortunately the same circumstances exist all through the district. The land is very poor, and the selectors, not being able to make a living from their poor holdings, have sold to the squatters.
571. *Mr. Collins.*] Does not that also happen in rich country? Yes; but to a very great extent in this country. For many years a flour-mill was working at Bundarra, now it is in disuse and rotting. There is no agriculture or it would support its own local mill. For some years the A.J.S. Bank had a branch there, but it is now closed, and the manager transferred to Inverell. That is not evidence of prosperity. Mr. Copeland's flourishing townships never had a solicitor nor a doctor. The mill is shut down, the bank is closed, yet these are districts which he says are flourishing. Mr. Copeland says that there being no railway, or if the railway comes here from Glen Innes, the people of Bundarra will have to take their stuff to Tamworth. Tamworth is 90 miles distant from Bundarra; the nearest station is 44 miles away at Uralla. Is it right to say that they take their stuff to Tamworth under such circumstances? If you construct the line from Inverell to Guyra you will almost throw into disuse the northern line from Glen Innes to Guyra. The line cost the country £400,000. At present the northern line pays 2½ per cent. Assuming that that part of it pays 2½ per cent., £10,000 a year would be withdrawn from the traffic.
572. We lose a large amount from Armidale to Wallangarra at present? If you withdraw the traffic by constructing a line from here to Guyra, the loss will be very much heavier than it is at present from Guyra to Glen Innes.
573. *Mr. Wall.*] Are you aware that a connection with Glen Innes would entail extra haulage on all goods going from here? It would only be a small charge.
574. Would it not entail a charge for haulage over 37 miles? Yes.
575. Where was the trend of traffic from Inverell before special advantages were offered to induce people to trade with Glen Innes? I have had more to do with the traffic of Inverell than any man here. For many years 2,000 or 3,000 bales of wool were sent to Grafton, because they could get it from Grafton to Sydney at a very low rate. If those differential rates were disposed of that traffic would again go to Grafton on account of the cheap water carriage.
576. If there were a connection between Inverell and Glen Innes, and a connection between Tenterfield and

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and the coast, would the people of this district avail themselves of their natural market, and ship their wool at the coast? Only wool would go to the coast. It now costs 14s. a bale to Newcastle—then we could get it down to the coast for 8s.
577. Then the general merchandise required by the district would in all probability come in the same direction except such things as were required specially? I should think so.
578. Then the people of this district would lose nothing by the extra haulage of 37 miles if they did not avail themselves of the railway to the metropolis? They would be gainers directly.
579. Do you think the natural market for Inverell would be Glen Innes, and the country lying towards the Queensland border and the coast? I am very positive about it. There is a very large population in Glen Innes and from Tenterfield down to the coast. There is a great settlement about the Clarence and Richmond.
580. Would a larger volume of trade trend in that direction than towards Sydney and Newcastle? I am certain of it.
581. *Mr. Collins.*] Do you say that you are only interested in one land matter at Inverell or between Inverell and Glen Innes? I have only one mortgage, and I do not own a single acre. I have owned the half of a small allotment in the town of Glen Innes for ten years.
582. Do you hold much land in Inverell? Not an acre.
583. Are you not interested in any way? I think I have an interest in 15 feet.
584. Do you own any land to the west of Inverell? Yes, 14 or 15 miles to the west I own a couple of hundred acres of land which I would be very glad to sell for £400.
585. Would it be more valuable if a railway came here? Very much more valuable.
586. In what position are the farmers financially in this district? They are sounder now than they have been for a long time. During the last few years they have had large crops, and through our connection with Glen Innes they are sending a large quantity of produce to Glen Innes and Tenterfield. The farmers have taken courage, and have put large areas under cultivation. This year the crops are larger than ever and there is a far larger area under cultivation.
587. Do you know if there are many mortgages existing between the farmers, and the storekeepers, and the banks? I think most of the selectors borrow a little.
588. Are most of them mortgaged? To some slight extent, yet there is no more solvent district Australia than this is.
589. Do you know if many of the commercial people are in favour of the line from Glen Innes to Inverell? I do not know so much of the opinions of the commercial people as I do of the farmers and the owners of land, and if a vote were taken of the farmers I am sure that ninety-five out of 100 would vote for the Glen Innes connection simply because they look to establishing their trade with Glen Innes, and north and south.
590. Would it not be more advantageous to the farmers to get a better market out west? That market does not yet exist. Two or three farms about Inverell would supply the whole of Warialda. Two or three would supply Moree at present.
591. Do you know much of that district? Yes.
592. Do the farmers of Inverell send much produce out that way? They send a third or a fourth of what they produce? I think they supply the whole of the requirements of Warialda, and they send a lot of flour down to Moree, and the squatters about there.
593. Putting aside the question of a connection with the coast by way of Glen Innes or Tenterfield, would you as a business man advocate that there should be 37 miles extra haulage for goods both ways? Yes, where the compensating advantages are so enormous.
594. Is that in selling wheat at Glen Innes? If you take the railway to Guyra, and we do business with the north, we should take the goods back again. Wheat being our great product we would have to pay a heavy charge to get it back.
595. Are not the people 15 miles on this side of Glen Innes already served by the railway? Yes, fairly well served.
596. The proposed railway would not be much advantage to them? As a wheat-growing district we are far better than Glen Innes. We get 2d. or 3d. a bushel more.
597. How much wheat do you send to Glen Innes now? This year I daresay we sent 30,000 bushels. In the coming year we think we should send 60,000 bushels.
598. Cannot you manufacture flour in your own district? Yes; but they are only too anxious to get the profit derived from grinding in Glen Innes.
599. Cannot they make flour equally as well here as in Glen Innes? Quite so; but the buyers in Glen Innes must import from somewhere, and they prefer to import from Inverell.
600. Would it not be more advantageous for Inverell farmers to sell their wheat here and send away flour? We have not the milling capacity at present to grind all that we produce.
601. Do they grind to the fullest extent now? I believe so. One mill has been grinding for eleven months.
602. Do they grind in the day-time? They are working twelve hours a day. One mill has been grinding for eleven months, and I suppose they will grind for the other month. The other mill has been grinding for ten months.
603. Are there three mills here? There are two roller-mills; the other is what they call a stone mill.
604. Was a lot of wheat sent from here to Bingera? I believe 12,000 bushels went there last year. They have a mill there, and they draw their supplies from this district.
605. Then I understand that the advantages gained by dealing with Glen Innes would more than compensate for the extra haulage of 37 miles? There is a greater market. They must have wheat at Glen Innes, and they must come to us for it. Every year the demand is increasing.
606. Is the storage capacity at Inverell capable of taking all the wheat of the district? I should say not for the coming year, the growth has been so rapid.
607. If they could get the wheat to grind, would they extend their storage capacity? Yes; there is a great desire here to meet the requirements of the trade, and no doubt they will do so.
608. Do you belong to the Railway League? There was a railway league here for many years; and I was an active member of it; but they have not met for some considerable time.
609. Have you taken no part in it lately? No.

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610. Do you know if any persons have been summoned to give evidence who are against this Glen Innes line? They are all privileged to attend. It is open to all.
611. *Mr. Ewing.*] You have heard the Rev. Mr. Ewing's evidence;—do you agree with that in general principles? I did not quite follow it; but it was very much the same as my own.
612. Speaking about the stability of the selectors, do you think they are more mortgaged here than in other parts of New South Wales? I think this is one of the most solvent communities in Australia.
613. In point of fact, the selectors in all parts of the country do borrow money and transfer land to the bank to get money to carry on with? I do not suppose I am divulging any bank secrets when I say that the selectors are at present much freer from debt than they have been for years. Past good seasons have enabled them to pay off and reduce their liabilities very considerably.
614. Do you consider that this district is fully developed? No; when we can grow 10,000,000 bushels we should be fully developed, but not before then.
615. What is the population in the west, towards Moree and Warialda, which legitimately look to Inverell for their supply of breadstuffs? About Warialda the district so far is pastoral, and therefore it is only lightly peopled. I should think the requirements of Warialda would be about 20,000 bushels.
616. Do you think that the population in the west which will legitimately look to Inverell for breadstuffs will be 10,000 people at the present time? Yes; that possibly would be the extreme.
617. How much flour would that population consume? Five and a half bushels to each man is the colonial estimate.
618. How many acres about Inverell would supply that western market? Taking 20 bushels to the acre it would be about 2,700 acres.
619. How many acres of land have you in this district fit for wheat growing? Nearly 30 miles east, 30 miles west, and 24 miles north, and 4 miles south. That is what I claim to be the Inverell district, but beyond that there is a great deal more wheat-producing land. That gives about 1,700 square miles.
620. Do you think you have 500,000 acres of land in this district fit for wheat growing? Yes.
621. The western district can take the produce of 3,000 acres? Yes.
622. Therefore in the west you might legitimately expect to sell one-eighteenth of your produce? Yes.
623. *Mr. Humphery.*] You stated just now that you expected to send 60,000 bushels of wheat to Glen Innes next year? In the statistics recently furnished to the Department, it was stated that the probable quantity of wheat to be sent from Inverell to Glen Innes this year was 200,000 bushels? In my answer I was simply referring to Glen Innes. I estimate that Mr. Utz will buy close on 60,000 bushels. Then there is the traffic north and south. The 60,000 bushels I mentioned will go to one man.
624. What customers have you at Glen Innes? I believe the bakers buy flour, but wheat goes to the south.
625. Are you in any way able to verify the figures recently furnished as to the probable earnings of the railway? I have never gone into that question.
626. Can you say that it is probable that instead of the quantity of wool to be sent by the railway being as represented by Mr. Harper, there will be 3,300 tons? I think Mr. Harper was here two or three years ago, but trade has developed immensely since then.
627. You have referred to your possessing a small holding worth £400; would the value of that be increased as much by a railway from Guyra to Inverell as by a railway from Glen Innes to Inverell? It would make no difference to me.
628. Is your evidence as to the point as to where the line should be carried to reach the main line entirely disinterested? Thoroughly so. I have not one particle of interest in it.
629. *Mr. Neild.*] When you say that you have no mortgage interests, are we to understand that you spoke for yourself or for your bank? Mr. Copeland spoke directly of myself and not as a bank manager. He spoke of me simply as a private individual. I simply answer as a private individual, and not for the bank.
630. Then your answer does not cover interests that your bank may hold in mortgages? I am speaking for myself, of my private investments.
631. You have spoken about a falling off in population about Bundarra, have you not previously given evidence before the Public Works Committee with regard to a falling off in the population between Inverell and Glen Innes? I do not remember it, I made reference to a few settlers selling out in the year 1890.
632. Did you not make this statement to the last Sectional Committee on the 5th May last year, "Within the last seven or eight years a number of farmers have left?" Yes.
633. The question was put in this way,—"The Committee as they came along the route to Glen Innes, observed that small holders had disappeared rather than increased, how do you account for that?" You replied, "Since 1880 there has not been the same demand for freeholds as there was previously?" Yes.
634. Somewhere else you said there was a falling off in small holdings between Inverell and Glen Innes? Yes.
635. With reference to the increased annual value of property about the town of Inverell, the increase which you quoted is from £126,000 in 1880 to £283,500 in 1892, was not the increase very much larger between 1880 and 1885 than in the subsequent seven years? The increase in the last seven years was £29,000, and in the first five years £126,000, so that the increase was much more rapid.
636. In the last seven years the increase has been about £4,000 per annum? Yes.
637. You stated that Glen Innes must get its wheat from Inverell and you mentioned Mr. Utz, are you aware that Mr. Utz gets his wheat sometimes from Cootamundra? I am likewise aware that he got nearly 30,000 bushels from us last year. I am aware that he has got wheat from Cootamundra, but we are now prepared to meet his demands and we should do so.
638. When you were last examined by the Public Works Committee you were asked as to the dying off of the farming industry which was noticed between here and Glen Innes and also in other districts around Inverell. You answered that question "Yes." Has there been any revival of the farming industry since you gave that evidence eighteen months ago? Yes; very considerably in Inverell. Mr. Utz became a buyer two years ago; he was a very much larger buyer last year; he will be a larger buyer this year, and he has inspired our farmers with an amount of hope.
639. Do you look more to a market at the hands of Mr. Utz of Glen Innes than you do to a connection with the northern coastal districts? It is immaterial how we should be connected so long as we are

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connected with Glen Innes. Glen Innes being the nearest point of connection we look upon it as a great distributing centre.
640. Is that not contrary to the evidence you gave before when you spoke of your hopes with regard to a large trade in wheat with Queensland? That hope still exists.
641. Are you aware that since you gave your evidence last year Queensland has placed a duty on grain? Yes; she has placed a duty on grain going over the railway. She has also placed the same duty on grain taken by vessels going up the river.
642. Are you aware that in the present year since the imposition of that duty in Queensland a very large area has been put under wheat in Queensland particularly in the Roma district? I am informed that they will have this year 375,000 bushels of wheat in Queensland. Hitherto their production never exceeded 300,000 bushels.
643. Where did you get that information? I got it here four days ago.
644. Would not the increase you speak of represent only a very small increase in the area of land under wheat? Yes.
645. Are you aware that a very extensive planting of wheat has taken place about Roma? I am simply guided by the statistics, but I will not swear positively.
646. Have you any knowledge of the extensive planting of wheat in the neighbourhood of Roma? No.
647. Do you know anything of the population between here and Glen Innes? I know there are very considerable settlements. When I saw a statement had been made before the Public Works Committee that there were more schools between Guyra and Inverell than between Inverell and Glen Innes I was astonished.
648. Are you aware that against 263 children representing seventy-three families between here and Glen Innes there are alleged to be 509 children representing 119 families between here and Guyra, excluding both the towns at each end? I am very doubtful of it indeed.
649. Can you question the accuracy of the statements made by the Public Works Examiners on that point? I question the accuracy of the information. I was not aware where they got it from. I do not know where the population comes from unless Tingha is included.
650. It includes Tingha of necessity? Then I daresay it is correct.
651. Is there not in existence at Inverell at the present time a railway committee or a league? No; I think it has all died out.
652. If it is stated in the press that such a body exists would that be inaccurate? Everybody attends those meetings. They are not set aside for any particular class of persons. A general meeting is convened and the people attend by impulse.
653. Then the meetings held in connection with railway extension have not been meetings of persons interested in any one proposal, but have been public gatherings of all concerned? They have just been the outcome of public feeling.
654. *Mr. Dawson.*] Do you say that according to your statistics there is an increase of about 75,000 bushels of wheat in the production of Queensland this year? I do not swear to it. It is simply information which was communicated to me last week.
655. What would be the average yield per acre in Queensland? I cannot say. I should say 15 bushels at the outside.
656. If the yield is 15 bushels to the acre that would be an extra area of 5,000 acres, assuming that your information is correct? Yes. If you distribute that along the whole western line of Queensland it is not a very great deal, but it is an increase.
657. *Mr. Humphery.*] Can you say if your fixed deposits have increased or diminished during the last three or four years? I can say that since I have come here the bank's business has increased tenfold.
658. I am speaking of fixed deposits? They have all very greatly increased.
659. Since you were last examined have they increased? Yes, very considerably.

Mr. William Henry Rowland, Post and Telegraph Master, Inverell, sworn, and examined:—

Mr. W. H. Rowland. 30 Nov., 1892.

660. *Chairman.*] Have you any statement to make to this Committee with reference to the business of your Department? I made a statement to the Sectional Committee which visited this district before with regard to the work and revenue of my office last year. The Postmaster General's Report for last year has since been issued. The actual figures were about the same, but I think the alteration that was made in the postages caused a slight decrease in the postal revenue, otherwise I think the revenue would have increased. The work altogether in the office has increased 15 to 20 per cent. Up to the end of October in this year there has been an increase of about 20 per cent., and as far as I can judge the revenue will not be any less than it was last year or the year before. According to the Postmaster General's Report for last year the letters posted were 188,000. This year I calculate there will be 220,000 posted. Last year the messages transmitted were 9,428. We cannot very well judge what the number will be this year, because November and December are generally good months. The number of messages is probably 10,000. The money orders issued were 2,479, the amount being £6,668. Up to October this year there have been 908 money orders paid, amounting to £3,702. The savings bank deposits are 549, amounting to £2,868. The savings bank withdrawals have been 160, amounting to £2,228 for 1891. Postage receipts £1,906, sundry revenue £286, registered letters 7,057. I think the revenue for this year will be the same as last year, if not more. The reduction in registration fees causes a loss of over £20 in our small office. I estimate that the increase of work this year will be 20 per cent. as compared with last year in every branch except the revenue. The penny postage on packets has reduced the revenue, and so has the reduction of postage to 2½d. on English letters.
661. Can you give us any idea how the receipts have increased for the last five years? I think they have increased at least 50 to 60 per cent. The work in some respects has doubled itself but the revenue all round has increased 50 to 60 per cent.
662–3. *Mr. Humphery.*] Are the savings bank deposits for ten months of this year equal to the whole of the deposits for last year? Yes, within a pound or two.

Mr.

Mr. Thomas Charles Worboys, farmer, Springhill, near Orange, sworn, and examined:—

Mr. T.C. Worboys. 30 Nov., 1892.

664. *Chairman.*] Do you desire to make a statement with reference to this railway? Yes; I am engaged by the Department of Agriculture as judge for the national prizes. I have been engaged last year and this year. My appointment is for the northern table-lands district. When I was travelling round last year I was struck by the capabilities of the Inverell district, and as I have a good opportunity of coming into contact with the farmers themselves and learning the facts, I thought it desirable that I should lay before the Committee my views on the subject. I advocated strongly when I got back to Sydney last year the importance of a railway to Inverell. It is not merely what is grown in Inverell at present, but the capabilities of the district are enormous. Almost every kind of produce can be grown successfully. Potato crops are something immense in portions of Inverell. I was thirty years in the Orange district, and I started before any railway communication was established, and I know the advantages to be gained by railway communication. Immense areas of agricultural land were thrown open, and the farmers were placed in a much better position when the railway came to Orange. One great advantage in opening up railways is that it will enable us to supply our own markets which at present are not supplied by our own farmers. The natural markets will always find their own level. We always look upon Orange, Bourke, and the interior as being our natural market; Sydney is supplied by the surplus. We send more stuff from the Orange district westward some seasons than to Sydney, because we find it pays better to send produce into the interior rather than to Sydney. I am not here to advocate any particular line, because I am not fully acquainted with the requirements of the district; but as far as I can judge, Glen Innes is the proper place for a railway connection, seeing that on one side they have Queensland where produce is required, which they cannot grow for themselves, and all the surplus produce could be sent on to Newcastle and Sydney. The capabilities of this district are surprising. The average yield of wheat this year will, I believe, be 25 to 30 bushels all round. Some of the farmers gave me their returns of produce, and sometimes the yield of potatoes has been 10 tons to the acre. Sometimes the return has been 4 and 6 tons. In an exceptionally dry season there is a failure in the potato crop, but as a rule, they tell me that the potato crops in many places are a source of very great profit. They can only grow a limited supply for their own market, as they have no outlet for surplus produce. The Inverell district is one of the primest agricultural districts I have ever seen in the Colony. It can grow any sort of produce and cereals. Railway communication is wanted very badly, and I think it will pay in the future, if not at present.

665. How does the average yield of wheat here compare with the average yield of wheat at Orange? It is a higher average here than in any of the places I have seen this year.

666. What is the general average of the Orange district? My own average as a farmer is a little over 20 bushels for twenty years, but the district itself will not average anything like that. The crops here are wonderful. There is such an immense area of good land, that once it is put under cultivation we could supply our own market without having to go to the other colonies. That is a matter of very great importance, which the railway authorities should take into consideration.

667. *Mr. Collins.*] Do you find it better in the Orange district to send your produce into the interior rather than to Sydney? Yes; we always get better prices westward.

668. Would it not be to the interest of the farmers here to send their produce westward? Decidedly; but the natural markets will find their level, and the surplus produce must be sent to Sydney. This district could supply ten times more than is really wanted in the west.

669. Even if the country out west were fully populated? Yes; it is capable of producing more than the population there will ever require.

669½. Do potatoes come here from any other place? The potatoes will not keep all the year. Although each farmer may cultivate 40 or 50 acres of potatoes they still come into the district.

670. Do you know that most of the potatoes used about the Inverell district come from Guyra and that district? The farmers say that they are frightened to plant anything beyond their own consumption, because they cannot get rid of it. Sometimes they do not supply their own requirements.

671. Do the farmers here go in mostly for wheat? No. Wheat and sheep are the principal products.

672. Is there much dairying? Not so much as in other places; some of the farmers go in for dairying. Most of the farmers, with the exception of one or two, have obtained a fair margin of profit from butter and eggs. Only a few have gone in for cheese making. Some have made £40 or £50 a year from bacon. That is the best article on the farm.

673. How is it that Inverell farmers have not produced much bacon? It is one of the things I am trying to educate the farmers to go in for.

674. Are the farmers so well off that they do not want to make money by producing bacon? No; I think it is want of system in going in for farming. The great drawback with farmers is that they do not take the trouble to ascertain what pays best and what does not pay. I believe that the Department of Agriculture will so stimulate the industry that our farmers will produce all that we want.

675. Do you know anything of the district between here and Guyra? No.

676. Why do you advocate a line from here to Glen Innes rather than to Guyra? I believe in joining the main line at the nearest point, because that will give the producers two markets—one to the right and the other to the left. There will be an immense surplus, and Newcastle and Sydney will be required to take away that surplus. Tenterfield cannot be compared with this district for agriculture.

677. Do they produce the same things as are produced here? Yes.

678. Then they would not require produce from Inverell? It would be required at Brisbane and further on.

679. Would not the Tenterfield farmers send produce on there? They cannot send enough.

680. Does Tenterfield send produce to Queensland? Yes; they are sending wheat there now faster than they can get it, and they are sending potatoes.

681. Do you know as a fact that they are sending potatoes into Brisbane? Yes; they look upon Brisbane as their principal market for potatoes and all their principal produce.

682. Do they send wheat? Yes, at times, according to the price.

683. Notwithstanding that there is a duty in Queensland, can they send wheat there and compete with the local farmers? Yes; but they are complaining that the duty cripples them. It will pay better to send potatoes away at 5s. a ton than to keep them.

684. Does it not pay farmers to grow potatoes if they have a surplus? Not under existing conditions.

Mr. T. C. Worboys, 30 Nov., 1892.

685. *Mr. Ewing.*] Is not the climate of Guyra different from the climate here, and consequently potatoes would come in at a different time there? Yes, but not much difference. They are planting potatoes now at Guyra, and I suppose they are also planting them here.
686. Would potatoes at Guyra come in at the same time as Inverell? I think the chief crop would.
687. But would there be times when potatoes would come here from Guyra, owing to the difference in climate? Yes.
688. Would this be a good fruit district? Yes, splendid.
689. Is it as good as the rest of the Colony? It is the best I have seen.
690. Is it as good as Orange? You can grow different kinds of fruit here.
691. Speaking generally, is this district as good as the Orange district? Yes, if it had railway communication. It is far richer soil.
692. *Mr. Wall.*] Have you ever known dairy farms to exist in any part of the Colony where there are 60 miles of carriage to a railway? No.
693. Ought that not to be a sufficient reason to account for the want of dairy farms here? Yes; my argument is that a ton of butter would pay to cart it a great distance when properly made and kegged up.
694. If, according to the official statistics, the average yield of wheat in the Inverell district is 4 bushels an acre more than at Orange, with railway communication to this district would not that yield place the Inverell farmers at an advantage as compared with the Orange district in competing in the metropolitan market? Yes.
695. Would not the cost of conveying the extra 4 bushels be a very small consideration? Yes.
696. Do you ultimately look for a market for wheat outside the Colony? Yes.
697. Do you think that if the people of this district had communication with the coast they would be likely to ship their produce in coastal boats in preference to sending to Newcastle and Sydney, where they could get large-bottomed steam-boats to take large cargoes? The natural outlet would be the coast.
698. What is the difference in the railway freight between Inverell and Sydney, supposing the railway were made, and between Orange and Sydney? The Orange railway freight is 4½d. I believe that according to the present railway freight at Inverell it would be something over 6d. Last year I found that the cost of getting wheat from Inverell to the Sydney market was a little over 1s. per bushel.
699. Does that include bags? No; it includes land carriage and railway freight.
700. Would the actual difference in railway carriage, assuming the line to be constructed, be more than 2d. per bushel? No.
701. Would not the advantage of railway communication largely tend to induce wheat cultivation in this district? Yes.
702. Do you know what is the cost of carriage between Inverell and Glen Innes at present? The farmers tell me they have to pay 9d. per bushel.
703. That places the farmers of this district at the present time at a considerable disadvantage as compared with the farmers of Orange? Yes.
704. The difference is something like 11½d per bushel? Yes.
705. If a railway were established that disadvantage would be done away with, and Inverell would be competing with a difference of only 2d.? Yes; and the extra yield of their crops would place them in a position equal to the Orange farmers.
706. Do you think that the construction of the railway, by giving Inverell farmers an advantage of 8d. per bushel in getting their wheat to Sydney, would largely tend to increase wheat cultivation? Yes.
707. Do you think that if there was railway communication direct to Sydney it would also give an impetus to dairy farming? Yes; to every industry connected with farming.
708. *Mr. Dawson.*] Are you a judge of mixed farms? Yes; that is sheep farming, dairying, and mixed farming, gardens, and orchards. That is where mixed farming is carried on systematically and in combination.
709. Have most of the farms about here been in use for many years? Some of them for fifteen, seventeen, and twenty years. Few of them have been in use for a longer time.
710. Do you think the average yield about here would be 25 to 30 bushels to the acre? Yes; as far as I have got estimates and as far as I could see for myself.
711. Within a radius of 15 miles from Inverell how much land do you think could be placed under wheat and orchards? It would be hard to give an estimate. As far as I have seen, 40,000 to 50,000 acres could be.
712. That would be virgin land? Yes.
713–14. Is most of it as good as that which has been under cultivation for a number of years? Yes.
715. That virgin land would produce more than the land which has been under cultivation? Yes.
716. There would be a much larger area and a greater yield? Yes.
717. Do you say that not much bacon has been produced here? Not sufficient for local consumption.
718. Could you produce as good bacon here as at Orange? I cannot say that.
719. Is it not a colder climate at Orange? Yes.
720. Is there not always a difficulty in the New South Wales climate in producing bacon? Yes, there is a slight difficulty, but the existing system is not adapted for curing bacon properly.
721. Have you had some experience in farming? Yes, for thirty years.
722. In the event of a railway being constructed from Guyra or Glen Innes to Inverell, would it be possible to adopt the American principle of sending the hogs to a colder climate to be killed? Decidedly, they might be sent to Glen Innes.
723. If railway communication were provided could a colder climate be reached in a few hours? Yes.
724. Are the fruits produced here principally the softer fruits? All kinds, except apples. The cherries are splendid, but not so large as at Orange.
725. Have the people here endeavoured to preserve fruit by evaporation or canning? Very few.
726. In the event of a railway being made is it likely that the surplus fruit would be treated in that way? Yes.
727. Are a great many grapes grown here? Yes, of splendid quality and in great quantity.
728. Have they attempted to dry the grapes and make raisins? Only one or two. They have not adopted the right system, and they have not succeeded.
729. In the event of railway communication, would raisin-making be an industry here? Yes, it would do admirably.

730.

Mr. T. C. Worboys. 30 Nov., 1892.

730. *Mr. Neild.*] You said just now that it would be quite possible for fruit preserving and canning to be successfully carried on in this district if there was a railway? Yes.
731. Which would be most valuable, a ton of wheat, or a ton of preserved fruit? I should think a ton of preserved fruit.
732. If it is possible to grow wheat here at the present time and to sell it at Glen Innes in large quantities, would it not also be possible and more profitable with regard to cartage to send fruit? Decidedly so.
733. So that a railway is not absolutely necessary to develop that industry? It all helps, because people will not go into anything largely until a railway is near them.
734. You strongly advocate that New South Wales should grow all its own wheat, and I understood you to advocate the construction of a railway to Inverell in order that that might be accomplished? Yes.
735. Do not existing railway lines pass through tens of thousands of acres of land suitable for wheat-growing, and yet not one acre of it is put under the plough? I am not aware of that. I know that in the Parkes and Forbes district, where a railway is now being constructed, land which used to be lying idle is being taken up by thousands of acres. I believe that hundreds of thousands of acres which are now lying dormant will be taken up for agriculture.
736. Are we to understand that along the 2,000 miles of existing railways there is no more land left suitable for wheat-growing? Yes, it is all being brought under agriculture.
737. Then is there a large amount of land adjacent to existing railways which is suitable for wheat-growing but which is not so used? It is not under wheat at present but it is being got ready.
738. Is there any wheat land between Goulburn and Albury, besides that which is already under the plough? I can say very little about that land.
739. Then perhaps the positive opinion you expressed just now was not of much value? I know several farmers living on the southern line, and I know their opinions on the matter, and I know they are putting thousands of acres under crop every year.
740. Assuming that there is a port at Byron Bay, would wheat from this district be sent to Byron Bay by rail and then be shipped by coastal steamers to Sydney or Newcastle for oversea ports? Yes.
741. Do you think it would pay to handle the produce twice? Yes.
742. Do you know the difference in the rates of railway freight per ton between Inverell and Sydney and Inverell and Byron Bay? No.
743. Would you be surprised to hear that the difference would only be 3s. 10d. per ton at the present railway rates? No.
744. Would that 3s. 10d. per ton difference pay for the steamer freight along the coast and all the handling? Yes.
745. Do you know if there is any steamer plying on the coast which carries freight for 3s. 10d. per ton? No.
746. Do you think that a large quantity of surplus breadstuffs would necessarily have to go to Sydney or Newcastle for shipment? Yes.
747. Do you think it would be desirable under those circumstances to construct a railway which would necessitate the carriage of surplus wheat 40 miles farther and over the steepest part of the railways of the Colony? Yes.
748. Do you think it would pay? Yes.
749. Is the whole of the land in the vicinity of the northern railway, between Armidale and the border, which is suitable for wheat-growing occupied for that purpose? I think so.
750. Do you know anything of the Armidale district? Only by going through it and judging certain farms. I have judged four or five there. There are no entries at Glen Innes. I have visited Uralla and Guyra, Armidale and Jerry's Plains. There were five entries at Tenterfield.
751. Is the whole of the land suitable for wheat-growing in the Tenterfield district occupied for wheat-growing? No, not nearly.
752. Then if there were a market for wheat at Tenterfield, it would be possible for them to grow more? Yes.
753. Have they no market there? I suppose they have a market—they grow maize largely.
754. Is there not a large quantity of maize coming into New South Wales from Queensland? Yes.
755. Is not Queensland maize sometimes sold in Inverell? I believe so.
756. Does not Queensland produce a great deal more maize than all these districts? I should think so.
757. Would it be possible to grow maize here to compete with Queensland maize? No.
758. Do you know that sometimes people in Inverell buy imported wheat and get it from Sydney? I cannot understand it.
759. Has it been done? I believe so.
760. Does it not look as if the folks in this locality do not grow all the wheat they can consume locally? Yes.
761. You know the Wellington district, is it not a good wheat-growing district and there is very little planted there? Yes; in proportion to what there will be in a few years.
762. Is there a great deal of land there suitable for wheat-growing? Yes; and it has been taken up rapidly.
763. That district has had a railway for twenty years, yet not more than one acre in every ten suitable for wheat-growing is occupied for wheat-growing? I should not think so.
764. Did you not tell me when I began to cross-examine you that there was no land along the railway lines of the Colony which was fit for the purpose that was not occupied for wheat-growing? They are getting the land under way for that purpose.
765. Yet in the Wellington district alone you admit that although they have had a railway for twenty years they have not grown wheat? Only a small quantity of wheat is grown to what would have been grown had not the land been locked up; it is only these last few years the land has been opened for wheat-growing.

Mr. James M'Ilveen, auctioneer and general commission agent, Inverell, sworn, and examined:—

Mr. J. M'Ilveen. 30 Nov., 1892.

766. *Chairman.*] Do you wish to make a statement to the Committee? Yes; I have prepared some statistics, and I wish to show the comparative importance of this district compared with other districts in the north as regards agriculture, minerals, and probable railway receipts. These statistics are as follows:—

In Cultivation and Proportion of Cultivation to Area Alienated, 1891.

INVERELL.

Total area alienated			411,047 acres.
,, electorate			1,905,280 ,,
,, in cultivation, 1891			13,568 ,,
Alienated to total area			21·57 per cent.
Cultivated to area alienated			3·30 ,,
In cultivation in 1884	12,674 acres.	Increase	894 acres.

NEW ENGLAND.

Total area alienated			1,237,042 ,,
,, electorate			4,564,480 ,,
,, in cultivation			13,428 ,,
Alienated to total area			27·10 per cent.
Cultivated to area alienated			1·09 ,,
In cultivation in 1884	18,906 acres.	Decrease	5,478 acres.

GLEN INNES.

Total area alienated			317,770 ,,
,, electorate			2,433,280 ,,
,, in cultivation			7,199 ,,
Alienated to total area			13·06 per cent.
Cultivated to area alienated			2·27 ,,
In cultivation in 1884	8,496 acres.	Decrease	1,297 acres.

TENTERFIELD.

Total area alienated			157,367 acres.
,, electorate			1,972,480 ,,
,, in cultivation			4,796 ,,
Alienated to total area			7·98 per cent.
Cultivated to area alienated			3·05 ,,
In cultivation in 1884	5,872 acres.	Decrease	1,076 acres.
1891 (under wheat)	1,870 ,,	Average	16·83 per cent.

Tamworth also shows a decrease since 1884 from 20,050 to 17,248 acres ..... 2,802 acres.

Sizes of Holding—Inverell.

Up to 1,000 acres each	486	Up to 10,000 to 15,000	3
1,000 to 1,500	15	15,000 to 20,000	3
1,500 to 2,000	11	20,000 to 30,000	1
2,000 to 3,000	12	30,000 to 40,000	2
3,000 to 4,000	2	40,000 and upwards	nil
4,000 to 5,000	4		
5,000 to 7,500	2		543
7,500 to 10,000	2		
Total holdings above 1,000 acres			59

Proportion of 9¼ to 1.

New England, total Holdings	1,159
,, above 1,000 acres each	193

Proportion of 6 to 1.

Glen Innes, total Holdings	504
,, above 1,000 acres	56

Proportion of 9 to 1.

Average size of holdings;—

Inverell	757 acres.
New England	1,067 ,,
Glen Innes	610 ,,
Average size of holdings for the whole Colony in 1891	816

Land Unalienated in Counties embraced in Electorate.

	Acres.	Population.	Alienated—acres
Gough, Glen Innes line	1,027,495	13,052	173,105
Hardinge, Guyra line	1,016,284	4,243	48,676
Arrawatta, Glen Innes line	1,232,373	1,789	119,307
Burnett	1,107,880	1,716	180,120
Murchison	1,119,087	2,909	89,223

Cultivation and Yields.

Inverell, year ending March, 1892.

Wheat for grain	6,552 acres.	118,196 bushels.	18·4 average.
,, hay	563 ,,	761 tons.	
Maize for grain	3,478 ,,	78,068 bushels.	
Oats for grain	71 ,,	1,635 ,,	
,, hay	1,034 ,,	1,276 tons.	
Lucerne for hay	524	775 ,,	
,, greenstuff	471 ,,		
Potatoes	236 ,,	523 ,,	
Fruit-trees	202 ,,	Value, £1,725, including 2,069 cases oranges	
Grape-vines	170 ,,	38,200 gallons wine.	
Other crops	267 ,,		
Total	13,568		

This acreage is exceeded this year by from 3,000 to 4,000 acres.
The Colony is divided into sixty-five districts:—
In acreage under wheat in 1891 Inverell stands sixteenth.
In quantity produced, tenth. Of the northern districts, second. Tamworth, with 11,596 acres, being first.
In average yield per acre Inverell stands ninth.

But

Mr. J. M'Ilveen. 30 Nov., 1892.

But the other districts which are returned as giving a higher yield cannot be called wheat-growing, as the whole eight only have a total area under wheat of 513 acres. They are as follows:—

Grafton	11	acres—Under wheat.
Hastings and Manning	46	" "
The Nepean	4	" "
Illawarra	3	" "
Camden	17	" "
Eden	32	" "
Wentworth	340	" "
Wilcannia	60	" "

Of eighteen centres into which the Colony is divided, though coupled with Glen Innes and Tenterfield, the average was 17·65 bushels; the next highest being Goulburn with 14·97.

Queensland only averaged, in 1881, 3·62 bushels; 1883, 4·30 bushels; 1886, 3·13 bushels; 1888, under 1 bushel.

Value of agricultural machinery, 1891.—Inverell, £22,920; Tenterfield, £11,277; Glen Innes, £16,360; New England, £32,809; Tamworth, £37,408.

Maize—showing comparison of returns for Northern Districts:—

	Acres.	Bushels.	Average.
New England, embracing Uralla, Walcha, Bundarra, and Guyra	1,069	19,823	18·54
Glen Innes	1,327	24,942	18·80
Tenterfield	1,503	34,077	22·74
	3,890	78·842	
Inverell	3,478	78,066	22·44

Tamworth, 2,514 acres, producing 49,959 bushels.

Population.—Inverell, 1891—males, 4,932; females, 3,715—8,647. As against Mr. Harper's estimate of 6,000, given in evidence on 28th April, 1892.

Tingha—total population 2,090, Chinese 450, showing a decrease from the previous year of 195.

County Hardinge, 1,705, of which 523 are Chinese.

Inverell, excluding Tingha, 1891—Europeans, 5,216; Chinese, 45; municipality, 2,534. 1889—Europeans, 4,661; Chinese, 41. Increase for two years—European, 555.

1891—Glen Innes, 8,986; Tenterfield, 6,978; New England, 18,713; The Richmond, 22,321; Grafton, 9,852; The Clarence, 8,221.

In 1889 Tingha had a population of 1,950 Europeans, 2,120 Chinese; total, 4,070. 1890, 2,285 Europeans, 703 Chinese; total, 2,288. 1891, 2,090 Europeans, 450 Chinese; total, 2,540.

Minerals—Tin.

	Tons.	Value.	Miners employed.
1880	1,720	£72,324	1,500
1882	3,110½	70,343	2,000
1886	1,649	89,940	1,500
1887	1,260	99,141	1,500
1888	1,007	69,683	1,200
1889	1,352	70,343	1871
1890	1,200	63,600	600
1891	862	44,824	.....
	7,330		
Average	1,221 tons		

Silver.—1891—Sent away as trial shipments, 22 tons, yielding 110 oz. silver per ton,—43 to 46 per cent lead. Thirty-one samples of silver ore sent to Mines Department for assay, averaged 110 oz. 10 dwts. 23 grs., and as high as 46 per cent. lead.

Emmaville.—Tin—1891—1,038 tons 7 cwt. 3 qrs.; value, £51,920 12s. 6d. Silver—1891—595 tons 9 cwt.; £11,329. Emeralds—24,000 carats.

Tenterfield (1891) has a total population of 6,978; cultivates 4,796 acres; produces wheat, 31,473 bushels; maize, 34,077 bushels; hay, 1,136 tons; potatoes, 759 tons; wool, 237 bales. Yielded a railway revenue for 1891—£10,887 1s. 5d.; 1892—£10,682 2s.; of which £3,077 0s. 10d. are derived from coaching traffic.

Inverell (1891) has a population of 8,647; cultivates 13,568 acres; produces 118,196 bushels wheat; 78,066 bushels maize—196,262 bushels; 2,862 tons of hay; 523 tons of potatoes; wine, 38,200 gals.; wool, 7,461 bales, from 542,667 sheep; tin, 1,200 tons; and is estimated to return only £7,790; cost of line £427,400; interest, £14,959; working expenses, £7,138—£21,097.

Glen Innes, 1891.—Has a population of 8,986; cultivates 7,199 acres; produces 16,245 bushels of wheat; 24,942 bushels of maize; 3,596 tons of hay; 15,422 bushels of oats and grain; potatoes, 1,841 tons; wool, 3,575 bales, from 260,060 sheep; tin, 20 tons; earnings, £25,081 14s. 2d.

Mudgee (1891.)—Size of electorate, 2,275,200 acres; cultivates 17,536 acres; produces from 6,870 acres of wheat, 62,770 bushels; produces from 4,770 acres of maize, 127,529 bushels; total, 190,299; produces from 117 acres of grapes, wine 35,600 gallons; has a population of 15,753; earnings for line, £34,600; cost, £1,035,021; interest on capital, £41,250; working expenses, £28,596; total, £69,846; increase for Mudgee alone from 1891 being £4,547 5s. 7d.

The acreage under wheat for Inverell which is given in these figures is expected to be exceeded this year by 1,500 or 2,000 acres, probably more. Farms which lay out of cultivation for a number of years were brought under cultivation when the proposal to make this railway was laid before the Public Works Committee. The Inverell electorate stops at Little Plains, about 14 miles between here and Warialda. That cuts off a great deal of cultivation and population from our district, although they naturally belong to us. The population and settlement on Big Plain and Reedy Creek is cut off from us and included in the Gwydir electorate. That would increase our acreage, population, and returns by a very large amount. A great deal of the population claimed by Tingha virtually belongs to the district through which the Glen Innes-Inverell line runs. I have here the Electoral Roll as collected this year by the Department for the Tingha portion of the electorate. The addresses of several of the electors show that a great many of them live at Elsmore, Swanvale, Brodie's Plains, and Newstead, and those are places through which the Glen Innes line will run. With regard to mining, there has recently been a very important discovery in the vicinity of Elsmore, which is on the McIntyre River, due east from here a distance of 14 miles and 3 miles from Elsmore. After a great deal of money had been expended and time lost in sinking shafts for two years they have got through the hard basalt and bottomed on 17 feet of wash-dirt. At a trial washing of 200 loads last week they turned out 12 tons. That is only taken out of the drive. Their estimated yield, when they get things straightened up, will be from 300 tons to 500 tons a year. There has never been any mine opened in that locality with such prospects. For diamonds, on the south-

west

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west we have a very large field. It is now partly lying idle for want of capital and a proper market for the disposal of the gems. In silver, the recent discoveries at Boro Creek give large prospects.
767. How far is Boro Creek from here? Fifteen miles south-west. By running a line from here to Glen Innes we would also be able to supply Emmaville and the mines at Mount Galena. The station would be at Wellingrove, which would bring us within 8 miles of Mount Galena, and 16 miles of Vegetable Creek, which is an important field. I wish to refer to an answer which was given by Mr. Worboys in his evidence. I think that partly through his lack of knowledge of the district, he was led into saying or admitting that wheat had been brought here from Sydney or other districts and ground. I have been in the Inverell district as long as I can remember, and I never knew of a bushel of wheat being brought here to be ground. I have known of wheat being brought here to be sown; but whatever we consume here we produce. There may have been some flour brought in in the years gone by.
768. *Mr. Neild.*] Then you virtually contradict the statement made by Mr. Copeland of his own knowledge? I think I know the Inverell district as well as anybody, and the stuff brought to it.
769. *Mr. Humphery.*] In your statistics you mentioned 486 holdings of less area than 1,000 acres;—how many of them would be within 15 or 20 miles of the proposed railway from Glen Innes to Inverell? Three hundred of them—probably more.
770. How many bales of wool do you say this district produces? Something like 7,500 bales.
771. Do not the local returns give 3,320 tons of wool? It must be recollected that a great deal of wool from outside of our electorate will come here.
772. Who prepared the returns recently furnished by Mr. Harper to the Public Works Committee? There was a conference between the Glen Innes and Inverell people.
773. Have you seen Mr. Harper's late evidence? No.
774. The estimate given by Mr. Harper of the probable earnings of the railway is about £8,200? Yes; £7,900, I think.
775. Have you any returns showing what, in your opinion, would be the earnings from goods carriage? No; but I believe that evidence will be given to-day.
776. Have you any estimate of the quantity of wool that would be carried? Not beyond what I have stated with regard to our electorate.
777. How many sheep are there upon the holdings which you think would be served by the proposed railway? Close on 1,000,000, and the wool of those sheep would be carried on the railway.
778. What quantity of maize would be carried? If we had a good season, probably thousands of tons.
779. How has the local estimate been arrived at? By the quantity grown, and the possibilities of the district.
780. Tin ore is estimated at 1,200 tons? That is an estimate based on the returns for six years.
781. Does not Mr. Harper estimate it at 800 tons? That is the return for last year.
782. Why do you think there will be more? On account of the recent discoveries of deep leads at Elsmore. I am sure there will be over 1,500 tons next year.
783. What will be the probable number of sheep carried? A great deal of fat stock will go east.
784. If the local returns give 80,000 sheep as likely to be sent by rail, is that an excessive or a fair estimate? Taking the number depastured here, and the nature of the country, it is not excessive. This is good fattening country.
785. If Mr. Harper is of opinion that, assuming the local returns to be correct, the total earnings of the railway will be about £15,000, do you think that that is an under-estimate, or an excessive estimate? I do not think it is enough.
786. Why? On account of our population and productions, by comparing the returns from other stations, and the capabilities of our district compared with others.
787. Have you examined Mr. Harper's returns, on which he bases his evidence? I believe he took the returns of two years ago.
788. Do you think it probable that there will be 10,000 persons travelling by the railway in a year? I think there will be more—probably not when the railway starts, but shortly afterwards.
789. Within four or five years? Yes.
790. How many bales of wool would 3,300 tons represent? Fifteen thousand bales.
791. Do you think that 15,000 bales would be a fair estimate? Yes, I believe it would be reached within a few years. The return from Glen Innes was 11,000 or 12,000 bales for the last year; but all the small railway stations through the Glen Innes district take a large portion of the Glen Innes wool, so that the bulk of the wool returned from Glen Innes station must have gone from Inverell and the surrounding district.
792. What makes you think that 80,000 fat sheep would be sent over the railway? On account of the fattening capabilities of the district, and the number of sheep in it.
793. Do you think there will be 2,000 head of cattle sent over the railway? Between 1,000 and 2,000, and probably more if a great many go to the Tenterfield chilling works.
794. Do you think that 200,000 bushels of wheat is an excessive estimate? We shall have nearly 200,000 bushels this year, if not more.
795. Is 60,000 bushels of maize a fair estimate? I do not know so much about maize. We cannot always depend upon getting a crop of maize.
796. Do you think it is probable that 2,000 tons of hay will be sent away? We can easily produce it, and send it away if we can get a market, which I think would be the case if we had a railway.
797. Can you send away 500 tons of potatoes? Yes, if we can get a market we can grow them.
798. Do you think £500 is a fair estimate for fruit, wines, tallow, &c.? It is certain to be reached.
799. So that on the whole you think that the local returns criticised by Mr. Harper are fair and will be realised? Yes; but probably not in the first year. They will be realised (say) in three years after the construction of the line.
800. *Mr. Ewing.*] Have you any doubt about the production in the district? No.
801. Where do you think you will find your market? Eventually on the coast, because we can produce what they cannot, and they can produce what we cannot.
802. Why will not Sydney do you for a market? Tamworth is a good producing district, Armidale is a fair one, yet their area under cultivation has considerably decreased. If Sydney is our market it must be theirs, and if they cannot send to Sydney we cannot. When we have surpluses which the other markets will not absorb we will probably send to Sydney when the line is constructed from Glen Innes or Tenterfield to the coast.

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803. You look upon that as a legitimate thing some day? Yes.
804. Do you believe that when that does come you will send your stuff direct? Yes; there are 40,000 people now in the Clarence and Richmond districts who have to buy all their flour and other things which we could send.
805. Do you think that in competing in the Sydney market you would be placed at a disadvantage in competing with the nearer places? Yes.
806. Do you think that a wise development of the country will enable you to find your way to those who will consume your produce? Yes.
807. You have spoken of an increase in the product of tin ore and the discovery of deep leads—where are they? In the immediate vicinity of Elsmore. The Glen Innes line will pass within 3 miles of it.
808. Do you think they will be permanent? Yes.
809. How do they compare with Tingha? The deep leads between Tingha and Stannifer have been pretty fully tested between the two places. The great bulk of it has been easy sinking, and not too wet.
810. Have you a knowledge of mining matters? Yes, a good deal.
811. Is this what you wish us to understand; that the permanent tin-mining in this district will not be along the Guyra to Inverell line, but along the Glen Innes to Inverell line? Yes; up the McIntyre River from Inverell, and it will be closer to the Glen Innes line. Probably mines will be worked right down to Inverell yet. I base that opinion upon recent discoveries.
812. Will there be a larger mining population close to the Glen Innes-Inverell line than there will be on the Guyra line? Yes, a great many of the Tingha people are shifting to the deep mines already. The finding of tin at Elsmore is not a recent affair. That was the first place where tin was discovered twenty years ago.
813. Why should they not find deep leads at Tingha? They have found them and worked them. There is only one deep lead now working there.
814. Do you believe that the permanent tin-fields will be nearer to the Glen Innes line? Yes.
815. *Mr. Collins.*] Where do you get your timber for this district? Partly from Myall Creek, partly from Bingera, and partly from the Stringy Bark Range between here and Wandsworth.
816. Then a line from here to Glen Innes would not benefit you with regard to timber? It will if it goes to the coast. There is also some timber at King's Plains.
817. Do you depend upon that for your timber? No; we get all our pine from the west.
818. Where do you get your fat stock from principally? About the stations at Yetman and Midkin.
819. What number of carriers are there in this district? There are more than fifty at present, I should say 100.
820. What do they generally do besides carrying? They farm. Some of them are permanent carriers, and do nothing else.
821. Do they bring in the wool from the west, and is it then taken on to Glen Innes? Yes.
822. Is it in the interests of this district that the railway should be taken from here to Glen Innes instead of Guyra, seeing that that will involve 37 miles of extra haulage, leaving a line to the coast out of consideration? You should not make the railway for to-day, but for all time.
823. But you will have to pay for the extra haulage for all time? I think a line to Glen Innes is the best in the interests of the district and the Colony, even without a coast line.
824. You spoke about traffic from Mount Galena. Is there not a line proposed from Deepwater now? It has been talked about, but I think it is problematical.
825. *Mr. Dawson.*] How do you account for the decrease in wheat production at Tamworth? I do not know, unless it is that they cannot find a market.
826. How long have they been cultivating wheat there? For several years.
827. Is not the wheat land there becoming too poor to put under wheat? I should not think so. It is not becoming poor here. We never think of using manure. Wheat has been growing here twenty-five years, year after year, and the returns are as good to-day as ever.
828. If Tamworth cannot find a market, how do you expect to find one? We expect to find a market east and north, and in Queensland.
829. *Mr. Collins.*] Do you know of your own knowledge that wheat production has decreased in Tamworth? The area under cultivation has decreased.
830. Do you think the quantity produced here this year will be larger than it was last year? Taking the Statistical Register it will be.
831. If Tamworth has not sufficient wheat could they not get it from this district? I think they have always sufficient there, and even more.
832. *Mr. Neild.*] Do you know how the total area under wheat in New England compares with the area under wheat in Queensland? No; but for five of the last ten years the average yield in that colony was less than 5 bushels to the acre.
833. Are you aware that in the three Darling Downs districts, there is a much larger area under wheat than in the districts of Inverell, Glen Innes, and Tenterfield? There may be, but they do not always get a crop.
834. Are you aware that the output of wheat is much larger in those three districts of Queensland than in the three districts of New South Wales I have mentioned? Probably it is in good seasons.
835. Do you know that the Queensland average is 19 bushels to the acre for the three districts I have named? No.
836. Do you think that with a larger area under wheat, and with a yield of about 19 bushels to the acre in those districts, that your prospects of a market in Queensland are satisfactory? Yes. We have one bad season perhaps in twenty, while they have one bad season in three.
837. When you would be without a market in Queensland what would you do with your wheat crop? We might have to give it to the pigs as we have had to do before.
838. So that a railway would be of no use to you? We should still have Glen Innes and Tenterfield, and the west.
839. Taking the rates of freight now current, the cost of conveying wheat from Inverell to Toowoomba, would be 6d. or 7d. In addition, there would be 4d. per bushel duty. The cost would thus be about 10½d. per bushel, while the rate of freight to Sydney, where there is no duty to pay, would be a little over 5½d. per bushel. In view of these facts, do you still think your prospect of a market in Queensland would

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would come up to your expectations? Yes; because we have to compete against water-borne wheat in Sydney, which is sometimes carried in ballast.
840. Do you know of any such case? Yes, at Newcastle. That happened on several occasions.
841. Do you believe all that you see in newspapers? No, nor what I hear.
842. Would not the bulk of goods that go from this district be wool? A good deal of it would be agricultural produce which would be greater than wool.
843. Would your market for wool be Sydney? Yes, but the coast eventually.
844. Then by the construction of a line to Glen Innes instead of Guyra you would have to send your wool 37 miles further? Yes; but at not more than 2d. a ton extra cost.
845. Have you investigated that subject? I am not certain about wool, but I know that for general goods it would be 7d. per ton.
846. Would you not get a better market in the large population of Armidale and Hillgrove than at Glen Innes? By the Guyra line we could get them, but we could not get the northern market as well, that is Tenterfield and Queensland.
847. Do you think you would supply Tenterfield with breadstuffs? Yes, they have to manure their land and we can produce wheat much cheaper and better.
848. What manure do they use? General manure.
849. Do you know that of your own knowledge? Yes, I have been there.
850. Is that an occasional event or the regular course of agriculture? I know that they use manure, and I know that the nature of the soil demands it. That is the regular course.
851. You spoke of there being a station at Wellingrove on the proposed line to Glen Innes:—are you aware that the proposed line does not go there? The Brodie's Plains line goes pretty close to it.
852. *Mr. Ewing.*] Some reference has been made to a line from Galena to Deepwater—what is the state of that project? So far as I know it is a preliminary project. They are only surveying.
853. Do you know definitely whether it is under construction? I have not heard of any tenders being accepted or called for. I believe it is not under construction. There is one thing which I omitted to mention. Between here and Swanvale, King's Plains, and Swanbrook there is a great deal of settlement and farming. They deal with the Vegetable Creek market. They bring their wheat here and take it to Glen Innes. There are several public schools along the line. It has been stated that the line to Glen Innes will run almost wholly through large estates. Speaking from actual experience I know that there are a number of farmers along the proposed Glen Innes line, and if the line is made from Guyra they will be entirely isolated. I refer to King's Plains, Swanbrook, and Swanvale. Two of the entries for the national prizes for farms are on that line.
854. *Mr. Neild.*] You are apparently not aware that a tender has been accepted for the construction of the line from Deepwater to Emmaville, and that the works were commenced about six weeks ago? I am not aware of that.
855. *Mr. Wall.*] Has there been any trade between the people of Inverell and Queensland in the past? I do not think so—the carriage to Glen Innes is too great.
856. The Rev. Mr. Ewing stated in his evidence this morning that the population of Inverell district was 10,000? That is the population of what should be the Inverell district.
857. Do you think that that is a fair estimate? Yes.
858. What proportion of that number of people would be served by the construction of the railway from here to Glen Innes? I should say nine-tenths.
859. If Mr. Harper based his calculation on a population of 6,000 to be served by the line, he erred to the extent of one-third? Yes, fully.
860. Are there any means by which you could verify your evidence as to the population? We have the Statistical Register, which gives the actual population as 8,647. Then a portion of the population in this district is included in Biogera and in the Gwydir electorates.
861. Do you think that if those districts were included in the Statistical Register as part of your population more people would be served by this line, making a total of 9,000? Yes.
862. If Mr. Harper bases his calculation on a population of 6,000, his estimate should be increased one-third? Yes, if not more.
863. Why should there be more? Because there is more settlement down the river, and those people draw their supplies from Inverell now. I think that 9,000 is correct.
864. Is it within your knowledge that the late Government Geologist (Mr. Wilkinson) referred to Elsmore as being the probable location of extensive tin leads in this district? Yes.
865. Is your opinion of the permanency of those leads based, not upon your individual knowledge, but on the report of the late Government Geologist? Yes.
866. What is the number of *bonâ fide* agricultural farmers who would be, according to your personal knowledge, served by the construction of the Glen Innes railway? I think every farmer in the district would be served by it. There are 500 holdings under 1,000 acres.
867. Is every one of them engaged in *bonâ fide* agricultural pursuits? I cannot say that every one is.
868. What is the average yield of potatoes per acre in this district? 2 to 3 tons.
869. If there are 400 farmers engaged in agricultural pursuits, and each of them cultivate half an acre of potatoes, they would produce 200 tons? Yes; the production for last year was over 500 tons.
870. Then you do not think that your estimate of 200 tons of potatoes is excessive? No.
871. If this line were constructed, do you think that the people of Inverell would be prepared to pay a special rate over and above the ordinary rates for the conveyance of their produce from Inverell until such time as the line would return working expenses and interest on cost of construction? Yes; seeing that we now pay 9d. per bushel for taking wheat to Glen Innes.
872. Do you think that a greater number of agriculturists would be served by the Glen Innes line than by the Guyra line? Yes; I am positive.
873. If the line were constructed to Guyra, what would be the average carriage entailed upon the agriculturists to bring their goods to the terminus? Those between here and Glen Innes would have to come 15, 20, and 25 miles.
874. Would that represent something like £1 per ton? Yes.
875. Would that cartage be avoided by the construction of a line to Glen Innes? Yes; it would bring the bulk of them within 5 miles of the railway. The furthest away would be 10 miles.

876.

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876. I presume that the people of Inverell have the ordinary business capacity to enable them to judge which connection would suit them best? Yes.
877. Is it the generally-expressed desire of the people of Inverell that they should be connected at Glen Innes? Yes; ever since the railway agitation has been started.
878. But rather than have no line at all they would take a line to Guyra? Yes; some of them say so.
879. *Mr. Collins.*] Do you say that you get most of the Bingera traffic now? We get a great deal of the timber traffic.
880. Do you get most of the passenger, goods, and wool traffic? We get a great deal of the wool from this side of Bingera.
881. If a line were constructed from Narrabri to Moree, would you get that traffic? Yes; it would not make the slightest difference. Bingera is only 40 miles from here, and it is nearly 90 miles from Moree.
882. Does not most of the Bingera traffic go to Tamworth? It does now. It is 100 miles to Tamworth, and 80 miles to Glen Innes. They have to travel 100 miles by road to Tamworth; but then they have less railway carriage.

Mr. John Sinclair, stock and station agent, Inverell, sworn and examined:—

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883. *Chairman.*] Have you any property in the neighbourhood of Inverell? Yes; about 16 miles down I have a small property. Before proceeding with my evidence I would like to refer to the fresh evidence prepared by the local committee of Inverell, and placed before the Public Works Committee in Sydney. I am one of those responsible for preparing that evidence which was animadverted upon the other day by Mr. Harper. I wish, as one who prepared that evidence, to defend myself from the charge of making exaggerations. I wish it to be distinctly understood that I do not imply that Mr. Harper made his remarks from any hostile feeling towards the district; but only from want of knowledge of its resources and capabilities, and through comparing it with other districts which are far inferior to ours.
884. Is not Mr. Harper bound to protect the railways from any loss? I quite understand that; but there are sources of information open to us owing to our local knowledge, which Mr. Harper is not in possession of. Mr. Harper's estimate is that the total revenue to be derived from the railway will be £8,200. The estimate given in the evidence prepared by the local committee is that the revenue will be £21,805. I will take each article *seriatim* and dispose of them as I go along. We estimate that there will be 6,000 tons of merchandise inwards at 12s. 6d. per ton—£3,750. It is made up in this way: In 1891, 8,771 tons were sent to Glen Innes. We can claim at least 5,000 tons of that, because Glen Innes station is surrounded by suburban places—Glencoe, Deepwater, and Dundee, which are all within 10 and 20 miles. Therefore, out of the 8,771 tons at Glen Innes station we claim 5,000 tons.
885. Are you quite sure that that quantity came here? Yes; I think more came here. There is to be added to the 5,000 tons 800 tons sent here by Mr. Utz alone. Then there is cedar, wattle bark, and sugar from Grafton, and there is the interchange between the two towns of which the Railway Department has no knowledge. To confirm our calculation I may mention that there are fifty regular carriers plying between here and Glen Innes. Allowing these teamsters to make forty trips a year taking 4 tons each way, that would give a tonnage of 16,000. Even if we reduced it to thirty trips a year it shows a carriage of 12,000 tons. To this must be added the additional carriers during the wool season, numbering about thirty, which would account for another 2,000 tons. That makes 14,000 tons. Then there are large quantities of salt and galvanised iron imported. Salt is largely used here for the sheep, and there are also station supplies. These are included in the railway goods. That, I think, exhausts the item of 6,000 tons. The next item is 10,000 passengers. We have put down 6,000 first-class passengers at 12s. 6d., and 4,000 second-class at 7s. 6d. I should explain at the beginning that in arriving at these passengers and the rates for goods we admit that we are not a competing line, and might be charged a little higher than the people on the other lines. That explains why the rates may be a little at variance with the ordinary rates on the main line. I still maintain that our estimate of 10,000 passengers per annum is not exaggerated. We have four coaches now running west and north from Inverell, viz., Wallangra, which will run to Goondiwindi on the Queensland border immediately the train reaches here, Warialda, Bingera, and Bundarra. Allowing that they only bring two passengers a day each, we have only seven more to account for in our own district with a population of 8,700. I think it will be admitted that it will not pay any coach to bring less than two passengers a day. This will give fifteen each way per day. A large number of commercial travellers and business men are continually travelling here. Mr. Harper estimates the population at 6,000, but he did us an injustice in that, to the extent of 2,700. Then we have mails £500. Then there is the cost of maintaining the present roads £3,000. That amount has been criticised and it may be unusual, but the railway will save the taxpayer £3,000 in the cost of the roads. That item can be struck out or kept in. Now I come to the traffic outwards. In our local estimate we have 3,300 tons, representing 16,000 bales. Last year 11,992 bales were trucked from Glen Innes, nearly all of which went from west of that town—certainly, 11,000 bales went from Inverell. Dundee, and Glencoe, take nearly the whole of the Glen Innes wool. If the railway is extended to Inverell, we expect to get 5,000 bales from the Goondiwindi district on the Queensland border. We look upon it as certain that we would truck 20,000 bales here when the railway is extended to Inverell. In addition to the new traffic and our own growth steadily expanding, Glen Innes is the twelfth largest wool station, and Inverell will be the seventh largest in the Colony. Mr. Utz in his evidence before a previous Committee, read the following letter from Mr. D. Sinclair, of Welltown, near Goondiwindi, Queensland, "The carriage to and from this station, during the past season of drought, has been 1,200 bales of wool, equal to 220 tons, and 51 tons return loading; total, 271 tons for 80,000 sheep. With ordinary seasons this amount is considerably increased both ways. At present all our trade is with Camboova; but should the railway open to Inverell, which is about the same distance from here, there is no doubt but that all our trade would go that way, for our wool was shipped from Sydney the last two seasons *via* Brisbane. Should the railway be opened to Inverell, I have no doubt whatever all the wool in the district around Goondiwindi would go by Inverell. There are, on the Queensland side of the border, about from 3,000 to 3,500 bales of wool which would go that way, and would certainly secure to Inverell the whole return goods and stores required in this district. There is at present a considerable quantity of wool grown on the New South Wales side of the border, which now goes to Brisbane, which, for a certainty, would not be the case if they could reach the railway at Inverell. The next item is fat sheep.

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sheep. Mr. Harper has made great capital out of that item. He says that we have taken credit for more sheep than are sent on the northern line from all the country between Tamworth and the Queensland border. If the Committee have any knowledge of that country they will know that no fat sheep are sent from there. We supply them with fat sheep now. I send fat sheep up to those places monthly, so it is not complimentary to compare us with those towns.

886. *Mr. Neild.*] Do you expect to carry more stock between Inverell and Glen Innes than the existing railway carries for 200 or 300 miles? Most certainly—fat sheep. We object to the comparison, because we now supply most of the towns in New England with fat sheep, and have done so for years. There are in the Warialda district 1,435,764 sheep. There are 800,000 sheep in Glen Innes and Inverell. Assuming that only one-half of those sheep belong to the Inverell district we have over 1,800,000 sheep in the districts. The Warialda boundary begins only 12 miles from here. I have asked many of the stock owners as to what is a reasonable way of calculating the fat sheep. All to the west of this town it is magnificent fattening country. They tell me that 10 per cent. is a fair estimate. That would give an enormous number. But 5 per cent. of the whole would give 90,000 sheep, while our estimate is 80,000. One station—Myall Creek—has 100,000 sheep, and they reckon that they would have 15,000 fat sheep a year. They sent from that station three years ago, 12,000 to Brisbane. Our estimate is not much over 4 per cent. I think that disposes of the fat stock question. I wish to point out that live stock is becoming a very important factor in the revenue of the country. It is only £50,000 below the wool carriage, and it is increasing very fast. The increase in 1892 over 1891 was £50,000. Mr. Harper drew a comparison between this town and Armidale, Glen Innes, and Tenterfield. If I were to draw a comparison between this town and Narrabri in the west, where they trucked 305,000 sheep last year, I do not think it would be fair. We do not claim to do more than 25 per cent. of what they are doing, but we can claim to do as much as Mudgee and Nevertire. They truck 65,000 at Mudgee, and 89,000 at Rylstone stations per annum. I have been through the Mudgee country and have a general knowledge of it. I think we have country to the west far superior to anything on that side, and it is as fattening as any in the Colony. If the rates are not prohibitive I see no reason for changing the estimate of 80,000 fat sheep from the stock we have. The same remarks apply to cattle, 2,000. The next item is wheat. We estimate that in two years we would have 200,000 bushels ready for export, equal to 5,000 tons—that is assuming that the railway will be constructed within two years from the present time. We have arrived at that now. We have this year 200,000 bushels, and 140,000 bushels of that must be sent out of the district, that is estimating that 6 bushels per adult is required. I think you will admit that we are considerably under the estimate with regard to wheat. I know that we would double the quantity if we had any guarantee that the railway would be here within a given period. There is no calculating what we could grow in this district if we had the means of transit. We might as well say 500,000 bushels as 200,000. There is no limit to the land available. Some members of the Public Works Committee imply that there is no profit in carrying wheat. We admit that the rates are specially reasonable and that the profit is small; but yet you must not forget the fact that there will be a corresponding increase in traffic inwards which will pay handsomely, as more farmers must settle in order to secure this production. Our population is now increasing and the quantity of wheat which we can produce is assured. Our returns for 1892, that is for last year, are 118,196 bushels, Tenterfield, 31,473; Glen Innes, 16,245; New England (Armidale), 53,802. So that we grow more than these principal towns of New England put together, although they have a railway and we have not. We are already the eleventh largest wheat-growing district in the Colony. The wheat returns for the whole Colony are 3,649,000 bushels, being 3,156,000 short of our requirements, that is estimating that 6 bushels per head are required. Inverell hopes to supply a large portion of this deficiency. We grow maize successfully also. In 1891 we grew 129,162 bushels, New England (Armidale), 29,875; Glen Innes, 36,209; Tenterfield, 33,441. In 1892 we grew less, viz., 78,066 bushels, Armidale, 19,823; Glen Innes, 24,942; Tenterfield, 34,097; Tamworth, 49,959. So that we almost grow more than the three principal towns along the railway. We grow the best quality of maize, but owing to the heavy dray carriage we cannot send it away at a profit.

887. If you cannot send maize away at a profit, how do you manage to import maize here from Queensland? That was simply because it was an exceptional time. It costs 9d. a bushel to send maize to Glen Innes. As to miscellaneous traffic I have not taken much account of that except 1,200 tons of tin ore. Mr. Harper said that that estimate was also exaggerated. We took that estimate in this way. Although only 798 tons were sent away last year the average of this district for several years, according to the Mining Registrar, has been 1,200 tons. A great deal has been said as to where we are to dispose of our produce. Messrs. Scarr and price in their report said they attached no importance to the outlet in Queensland. Mr. Harper says we must go south after supplying the northern rivers where he thinks we can compete with sea-borne grain. Perhaps it will be admitted that the people of those districts have given more consideration to this question than the officers named, and we emphatically claim that there is a market in Queensland for our wheat. They have a population of 410,000 and their biggest wheat yield has been 363,425 bushels, going down in 1888 to 7,352. I do not think they will ever succeed in wheat-growing, so that we have a prospect of doing a large business with our neighbouring colony, as they require nearly 2,000,000 bushels for their consumption. Then we can look to supplying all the northern rivers where they grow no wheat.

888. Is that provided you get a railway to them? No. We also anticipate finding a market in New England from Tamworth north.

889. Do you think you can wipe out all the rest of New England in grain production. We are doing that now. The population of the districts which we hope to supply is nearly 93,000, made up as follows:—Richmond 22,321, Clarence 8,221, Grafton 9,852, total for rivers 40,394; New England 19,713, Tenterfield 6,978, Glen Innes 8,986, Gwydir 8,284, Inverell 8,579, total 52,540. We look to supply all the above with wheat. The population on those northern rivers at present is only nominal. There will be millions of people settled there—Nature has destined it so—there is an abundant rainfall, and the soil, unsurpassed for richness, will carry a very large population. The leases in the Central Division will expire in two years, and then we look forward to a large increase of settlement around this town. The total area of the electoral district of Inverell is 1,905,280 acres. Of this 329,601 acres have been alienated, leaving unalienated 1,575,679 acres. The resumed area was 368,393—the best of that land is gone, all that is adapted for agriculture; but the inferior portions are still being taken up by graziers, and further settlement will take place. The leasehold area is 415,890 acres, within a radius of 70 miles of Inverell. I consider that if a railway is made that area will be benefited by it.

890.

Mr. J. Sinclair. 30 Nov., 1892.

890. If those leases are cancelled and the land occupied in some different manner from what it is at present, what will become of your estimate of sheep and 3,300 tons of wool per annum? The wool will go with the sheep—they will have to make room for wheat if settlement comes along.
891. You cannot produce wool and wheat from the same land—if the land is fully occupied with sheep you will have to turn the sheep off, and you will have to bring wheat and not wool? I can name a farmer in this district who now keeps more sheep than he did before he began to grow wheat. That is Mr. M'Clymont. He combines sheep-farming with grain-growing. Immediately the grain is taken off the land the sheep are turned on.
892. Do you mean to tell the Committee that if 100,000 acres are now fully occupied with sheep you can put that land under wheat and still run as many sheep on it as at present? Yes; more sheep can be run upon it. Any practical man on the Committee will bear me out.
893. *Mr. Wall.*] What is the average yield of wheat in this district? Last year the average yield was over 18 bushels.
894. What was the average in Queensland over a series of years? In 1882, 16·36; in 1883, 10·27; 1884, 17·21; 1885, 9·19.
895. *Mr. Humphery.*] In estimating the number of sheep to be sent from Inverell *via* Glen Innes, did you take into consideration the probability of a large number of sheep being sent to Tamworth instead of by way of Glen Innes, owing to the fact that there would be a saving of 170 or 180 miles? Yes; I know what they are doing at Tamworth now.
896. Is it not probable that instead of sending cattle from Inverell to Glen Innes and on to Sydney the cattle will travel to Tamworth? I do not think so.
897. Do you make every allowance for cattle which will be sent to Tamworth? Yes; I can speak positively. I consulted a very experienced person before I put down those figures.
898. You estimate 1,200 tons of tin ore per annum;—are you aware that the total quantity carried between Guyra and Glen Innes last year was 784 tons? Yes.
899. In the face of that evidence, do you adhere to the statement that there will be 1,200 tons? No; I have explained that we took the figures from the Mining Registrar. We took an average of 1,200 tons. I admit that Mr. Harper may be right in that matter.
900. How do you arrive at the estimate of 2,000 tons of hay? Simply from the quantity lying unproductive in the district which we cannot get rid of. If we can get £1 a ton for it, it will go—very likely to Brisbane, and it may go south.
901. *Mr. Collins.*] If a line could be constructed from Inverell to Guyra for £100,000 less than it could be constructed from Inverell to Glen Innes, and if there would be 37 miles less haulage, what route ought to be adopted? Glen Innes would be the best.
902. If a railway were constructed from Narrabri to Moree, would your anticipations with regard to getting stock from that part of the district be borne out? I was not dealing with Warialda. I anticipate that there will be a railway to Moree.
903. Would it not be better in the interests of the producers of this district that a market should be found out west rather than that a line should be made to Glen Innes? No; that market would be too limited.
904. Do you know the area of land that will be open there for settlement as soon as the Central Division is thrown open? Yes; but I do not think it would settle a population like the other would.
905. Do you not think that that country is capable of settlement? Yes; but it is not as good for settlement as this district. The best evidence is the settlement now existing. The population on the rivers on the coast is over 40,000, but there are only 5,284 people on the Gwydir—that is according to the last census.
906. Do you not anticipate that the population on the Gwydir will be very much larger than at present during the next four or five years? I do; but not in proportion to the country to the north and east of us. There are 90,000 people in New England and on the northern rivers.
907. Do you assume that a coast railway will be constructed? Yes.
908. If the coast line is not constructed for twenty-five years, do you think that a railway should go from Inverell to Glen Innes? Yes.
909. Why do you object to the line going from Inverell to Guyra? Simply because it will not serve us to reach the market on the coast.
910. Then you assume that the line to the coast will be constructed? I am positive it will be. We used to send wool to the coast before there was any railway, and we will do so again. We send flour to Tenterfield, and we may send flour by teams to the coast.
911. *Mr. Neild.*] With regard to the farmer who doubled his produce in wheat and sheep, does he breed sheep or fatten stores? He breeds some.
912. What proportion would the breeding bear to the stores? I do not know—the most would be 35 per cent.
913. If you fatten stores at one season of the year, would that represent the carrying capacity of the year? Yes; he has always got that number on the land.
914. You gave the whole population of Queensland as a market for the wheat product of Inverell? No; I gave the whole population of Queensland to show that they required a certain quantity of wheat.
915. Are you not aware that to reach the great bulk of the population of Queensland from the railway line it is necessary to take shipping? Yes.
916. Can you successfully compete with sea-borne wheat brought into Queensland? Yes; in some parts of it.
917. Could you do so where the bulk of the population lies, that is to the north of Brisbane? I do not know that we could truck it to Brisbane and send it on.
918. Would you be able to compete for the trade south and west of Brisbane? Yes.
919. Would you be able to compete successfully, not only against sea-borne wheat or flour which might reach Brisbane, but also with the wheat produced in the southern and western parts of Queensland, notwithstanding the duty of 4d. per bushel? Yes; I presume that it will apply all round.
920. It will not apply to wheat sent to other portions of New South Wales? No; I anticipate there will be an end to the internal demand, and that we shall have to look for outside markets.
921. Do you not think that the same observation would apply to Queensland? No; the tabulated statement I have read shows how fluctuating their seasons are.

922.

Mr. J. Sinclair. 30 Nov., 1892.

922. Has rust made its appearance in this district? Not to any extent; it has just shown, but not worth mentioning.
923. Has it appeared in the past? Yes; in 1858. I do not think any district in the Colony is freer from rust than this one is.
924. In wishing to have the line taken to Glen Innes, do you look in the face the fact that you will have to carry all passengers over 37 miles of additional railway? No; that will depend upon where they are going to.
925. Do not five out of every six passengers go south? No; but the bulk of them will.
926. Do many go north now? Yes.
927. The wool will have to go south also? Yes; everything. Mr. Harper has clearly shown that the difference of carrying wheat over 37 miles will be ¼d. a bushel, or 7d. a ton. It is not a very heavy tax.
928. *Mr. Wall.*] Do you anticipate doing any trade with Queensland in wheat, except when there is some dearth in that market? Yes, we do. We are the nearest portion of New South Wales, being only 113 miles from the border.
929. Do you not recognise that at times the average yield in Queensland is 19 bushels to the acre? Yes; but that does not supply the requirements of Queensland. They are 2,000,000 bushels short this year.
930. Do you suppose that the production of wheat there will remain stationary? They have not overtaken it in twelve years.
931. When Queensland has good crops do you expect to command a large portion of its trade? Yes. We send large quantities of flour to Queensland now by teams.
932. *Mr. Dawson.*] Have you been here for some time? Yes; twenty-five years.
933. Do you know the character of the land on the holdings between here and Glen Innes? Yes.
934. Is it in the hands of the few, or in the hands of the many? In the hands of the many. Three or four hold large portions, but there is a great deal of settlement on that route.
935. Do you think the landowners will be likely to cut up their properties for sale or lease? Yes.
936. What are they doing with the land now? Grazing sheep upon it. I have one of the largest stations on my books now for cutting up.
937. Do you think that others would sell? I have often heard them express themselves to that effect. I have been asked if it was advisable to cut up their holdings, and I recommended that they should not be until the railway came.
938. Supposing you had an unlimited demand for wheat and you had a railway from here to Glen Innes, what would be the lowest price you could reduce it to? Three shillings. That is the margin which the farmers allow themselves and it pays well at that.
939. If wheat can be produced in Riverina for 2s. 6d. a bushel, could you produce for the world's market? We grow the largest yield in the Colony.
940. But it does not follow that it will pay the best? Yes, but the land here is easily worked and cleared.
941. How many public schools are there on the Glen Innes Road, and what is the attendance? There are schools at Brodie's Plains, Elsmore, Swanbrook, Waterloo, Swanvale, Swamp Oak, Wellingrove, Beaufort, and Clarevale.
942. *Mr. Wall.*] Is there any means of getting authentic information with regard to the passenger traffic between here and Glen Innes? Yes. We have Coach-proprietor Alcock's evidence that in 1890 he carried 3,150 passengers, and in the first quarter of 1891 890 passengers, which is equal to 3,560 per annum, which is a large increase, and no one travels by coach for pleasure. Then some allowance must be made for the number of people travelling by private vehicles, on horseback, or on foot. In country places like this most of the people travel in their own vehicles.
943. *Mr. Humphery.*] How far from the proposed railway is the property which you have instructions to cut up and sell? I think the railway goes through it. The boundary of King's Plains comes within 5 miles of the proposed line.

Mr. Duncan Sinclair Anderson, grazier, Newstead, sworn, and examined:—

Mr. D. S. Anderson. 30 Nov., 1892.

944. *Chairman.*] What is the area of your property? About 32,000 acres.
945. Is it on the proposed railway line to Glen Innes? Yes. The railway will run through my property for 13 miles.
946. What do you carry upon your property? Sheep, and a few head of cattle.
947. How many bales of wool do you send away? About 270. The property is divided. The whole station would send away about 530 bales. The wool goes to Glen Innes.
948. *Mr. Humphery.*] Do you wish to make any statement in favour of the proposed line from Glen Innes to Inverell? No. I think it is the best route, although, as far as I am concerned, I would not like the railway to come through my run.
949. *Chairman.*] It has been stated that some of the large landowners would be likely to make some other use of their property if the railway were made—is that the case? Certainly. I would rent or sell my land. If the railway does come through this way I would sell part of my property. I would not have 13 miles of railway coming through my run.
950. Are the other large holders inclined to do the same thing? I think so. I would be only too glad to rent the land for anything that would pay better than sheep.
951. Would the railway be likely to increase the selling value of the property? Very little, I think.
952. What selling value do you place upon the land? Two pounds an acre freehold. The best from £2 to £2 10s.
953. *Mr. Neild.*] Do I understand that you would prefer to rent the land rather than to sell it? I would sooner sell it right out.
954. Is Glen Innes your nearest station now? Yes.
955. *Mr. Dawson.*] Have you studied the betterment principle at all? No.
956. If the railway were to go through your land and increased its capital value considerably, would you be inclined to pay the State a part of the unearned increment? It would do me a great deal of damage.
957. Supposing it put 10s. an acre increased value on your land, would you be inclined to pay the State any portion of that? No.
958. Where the State increases the value of the land, should not a portion of that value be paid back to the State? The question is what proportion. My paddocks do not go very far back from the railway line,

line, and the railway for about 6 miles would cut me off from the water; it would really do me an injury. Mr. D. S. Anderson. 30 Nov., 1892.
959. *Mr. Collins.*] How far are you away from Glen Innes? Thirty miles. The nearest portion of my land to Glen Innes is 16 miles.
960. Is it good agricultural land? Yes; some of it.
961. Would you lease it now? Yes, if I could get good tenants.
962. What would you expect for the best agricultural land nearest to Glen Innes? About 10s. an acre.
963. Still you would sell that portion of it for £2 an acre? Yes; if I could sell it. I daresay I would take less rent than 10s. an acre, but I could only lease it in small farms, and then I would have to fence it.
964. Supposing that the people who leased it fenced it in, what would you lease it for near Glen Innes? At about 8s. an acre, at whatever size they liked.
965. Have you ever offered it at that price? No; I never knew anyone who wanted it.
966. Would it not pay to lease it at that price now? People have always been able to take up land.
967. Are there many people wanting land now in that district? Yes.
968. Do you think the railway would increase the value of agricultural land by going from here to Glen Innes? Yes, slightly; but I do not think it would do so very much. I am judging by other places where the railway has gone. Sometime ago I thought it would increase the value very much, but I see that in other places it has not.
969. If the railway went through to Glen Innes, would you lease the land at the same rate as you are willing to take now? Yes; if it were decided to carry out the line I should make no alteration in the price I want for the top part of the run.
970. What is the carrying capability of your run? On the improved and ringbarked land it is about one sheep to the acre. It is not all freehold. There are about 8,000 acres of Crown lands—about half is leasehold.
971. What do you pay per acre for the leasehold? Threepence an acre.
972. Still you want 8s. an acre rent? The leasehold is simply worthless country—not an acre of it is fit for agriculture. If there was an acre of good land it would be taken up long ago.
973. *Mr. Wall.*] What do you estimate is the capital value of your property, taken as a whole? Two pounds an acre.
974. Occupying that land for pastoral pursuits, how much per cent. does it pay on the present capital value? It pays hardly anything.
975. Do you realise 5 per cent. on the invested capital? Yes—more in some seasons.
976. What is a fair average? About 8 per cent.
977. Then if you could lease your land at 8s. per acre, which would be 20 per cent. on the capital value, it would pay you very much better to lease than to hold it for pastoral purposes? I should only be too willing to do so. It would be more profitable. In some years there is actually a loss.

THURSDAY, 1 DECEMBER, 1892.

[*The Sectional Committee met at Manuka, at noon.*]

Present:—

THE HON. WILLIAM HENRY SUTTOR (CHAIRMAN).

WILLIAM CHANDOS WALL, Esq.	CHARLES COLLINS, Esq.
JOHN CASH NEILD, Esq.	HENRY DAWSON, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Alexander Cunningham M'Clymont, farmer and grazier, near Inverell, sworn, and examined:—

978. *Chairman.*] Have you a large area of wheat under cultivation this year? Three hundred and fifty acres in grain, and 12 acres in hay. Mr. A. C. M'Clymont. 1 Dec., 1892.
979. How far is this farm from Inverell? Fifteen or sixteen miles.
980. What have you hitherto done with your wheat? I have sold it locally.
981. Where do you find your market? For the last two or three years at Glen Innes. I sometimes find a market at Bingera, 35 miles from here. I sold about one-third of it at Inverell last year.
982. How many tons of wheat do you expect to get this year? About 220 tons.
983. If a railway were constructed from Inverell to Glen Innes, would you put more land under cultivation? I think I would nearly double the area under cultivation before the railway was constructed one year.
984. What has been the general average of your crop here, taking one year with another? With the exception of 1888, when there was a drought, I have never got under 23½ bushels. My highest yield was 33 bushels to the acre. The average would be 26 and 28 bushels to the acre. For three years I averaged over 30 bushels to the acre, and last year I had 23 bushels.
985. *Mr. Collins.*] Would it be better for you to have a railway from Inverell to Glen Innes than from Inverell to Guyra? It would be better to have it to Glen Innes. We would then be more likely to get a market on the coast.
986. Supposing there is no coastal railway, will it be in your interest to go south to Guyra with your wheat? It would be very little extra expense to go round by Glen Innes.
987. But if you want to send wheat to Sydney and Newcastle, will you not then have to send it 37 miles further? But it would also be necessary to send wheat back to Glen Innes. If the railway were made to Guyra I would have to send my wheat to Inverell in any case. I am directly west of Inverell.
988. Would it not be better to grind your wheat yourself and send flour out west? No; I think it is better to attend to my own business.
989. Have you got teams? Enough for the farm. I generally let the most of the carting into town.
990. What does it cost to send wheat from here to Glen Innes? It cost 10d. a bushel from here last year—it cost 3d. a bushel to Inverell.

Mr. A. C. M'Clymont. 1 Dec., 1892.

991. *Chairman.*] We had evidence the other day from the Under Secretary for Public Works, that the Minister was not likely to refer the question of the construction of a line to the coast to the Cabinet, and that that line was not likely to be constructed for many years;—what market do you expect to get, in view of that statement? If we could get anything like a reasonable rate of freight, I think that we could find a market in the south of Queensland.
992. Do you still hope that the Queensland market will be the principal market here? Yes, for many years, if we do not get a line to the coast. It is like taking coal to Newcastle to send wheat to Sydney, seeing that every part of the Colony looks to Sydney as a market.
993. *Mr. Wall.*] Do you send the greater portion of your wheat to Glen Innes? Yes; I hope to sell most of it there.
994. Unless you could find another market, and if a railway were made to Guyra, would you have to pay a heavier charge in order to get your wheat to Glen Innes than you would have to pay if the railway were taken direct? Yes; it would entail a greater expense to take the wheat to Glen Innes.
995. Are there many other farmers about here? Yes, between here and Inverell.
996. Would they be likely to increase the production of wheat if there was a railway? Yes, most of them would.
997. What is about the average size of the holdings here? About here, 400 or 600 acres. A number have larger areas, and many have from 600 to 800 acres.
998. How long have you been here? Seventeen years.
999. Are there many large holdings in the neighbourhood? There are a few.
1000. Would the owners be likely to cut up these holdings and dispose of them to farmers if there was a railway? Yes, most of them would.
1001. Have many of them sold portions of their holdings at present to the farming community? No; hardly any farmers care to buy because the market is so doubtful.
1002. Can you make any use of your straw at present? No; I always strip here.
1003. Is that a general practice? Yes, at a distance from town. The straw is of little use 7 or 8 miles from town.
1004. Do you think it would pay to cultivate hay for the local market? A number of people near town do so, but I have not. The carriage would be too heavy for my distance, and it takes two days for a team to go into town.
1005. *Mr. Neild.*] Is the local market always more than supplied with wheat? Yes, during the last few years.
1006. Why should millers at Glen Innes get wheat from Cootamundra when there is so much grown about Inverell? I think that was principally in the year 1888, when there was nothing grown here on account of the drought. A miller at Glen Innes can get his wheat cheaper from Cootamundra by rail than we can get our wheat from here to Glen Innes by teams.
1007. Is there much production of wool in this part of the district? Yes; the whole district is devoted to sheep, except where there are a few small settlers.
1008. If no line is constructed to the coast for some years to come, and you depend upon Glen Innes for your market for wheat, do you not think that that market will be more than supplied from here, and that prices will necessarily fall? Yes.
1009. Do you feel confident that the local market at Glen Innes, and a possible market in Queensland in dry years will give you an assured market? Not exactly; but still if we want to go to Glen Innes with our wheat we shall have to pay extra carriage from Guyra if the railway is taken there. I think the chances are all in favour of the Glen Innes line.
1009½. Is there a good deal of land suitable for wheat growing between Inverell and Glen Innes? Yes.
1010. Do you not think there is a good deal of land suitable for wheat growing in the vicinity of the existing line through New England? There is not much about Glen Innes—I do not know the other parts. Glen Innes seems to be very heavy ground, better suited for oats.

THURSDAY, 1 DECEMBER, 1892.

[*The Sectional Committee met at the Court-house, Inverell, at 8 p.m.*]

Present:—

THE HON. WILLIAM HENRY SUTTOR (CHAIRMAN).

WILLIAM CHANDOS WALL, Esq.	CHARLES COLLINS, Esq.
JOHN CASH NEILD, Esq.	HENRY DAWSON, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Peter Allwell, mine-owner, Boro Creek, sworn, and examined:—

Mr. P. Allwell. 1 Dec., 1892.

1011. *Chairman.*] In what direction is your mine? Sixteen miles in a southerly direction from Inverell. It is a silver-lead mine.
1012. Is it likely to give traffic to the railway? If we had a railway connecting with Glen Innes from Inverell we would be at liberty to send our ores north. At Maryborough, in Queensland, there are smelting works, and we might also send our ores to Sydney if we wanted to. At present, if we send our ores direct to Sydney to the buyers, they charge us carriage from Sydney to Maryborough.
1013. *Mr. Wall.*] What is the name of your mine? The Honest Lawyer.
1014. To what extent have you tested it? We sunk on the mine 40 feet, and erected machinery and concentrating plant. We are a private party.
1015. What is the width of your lode at the 40 feet level? Five feet—the full width of the shaft; 100 feet away it is 30 feet wide.
1016. What extent of leasehold land have you? Forty acres.
1017. Has the lode been tested throughout the 40 acres? It is exposed on the surface for three parts of the distance.
1018. Do you propose to treat the ore here and send the concentrates away? Yes.

Mr. P. Allwell. 1 Dec., 1892.

1019. What percentage of concentrates do you obtain from the crude ore? One-fourth of the whole.
1020. What would be your output with your present machinery? Our plant is very small. We propose to enlarge the machinery as we proceed with the opening of the mine.
1021. Is the lode material hard to be crushed? No.
1022. What quantity of ore do you think you would be able to crush and concentrate per week with a 10-stamp battery? Twenty-five tons a week, or 100 tons a month of concentrates.
1023. Would you send that by railway? Yes.
1024. Are you sending it by teams at present? We are preparing our first load now. We have been nine months erecting machinery.
1025. How many ounces to the ton do your concentrates assay? Eighty-four ounces some pennyweights of silver to the ton.
1026. Will your mine be a profitable one with that yield? Highly payable at the present rate of wages.
1027. Are there any other mines situated in the same locality? Yes.
1028. Are they being tested? Yes; the mine adjoining mine has been tested, and the papers state that it yielded over 100 oz. to the ton.
1029. Is there any smelting machinery erected here at present? No.
1030. Will the output of that mine be equal to yours if they do concentrate? It would be much better than mine.
1031. Is the lode wider in their property? I cannot say; but apparently on the surface my body of ore seems to be larger, but theirs is richer. They have a large body. I have been mining for twenty-nine years.
1032. Do you think it will be more profitable to concentrate and send away the concentrates than to erect machinery? If we had a railway to bring coke at a fair price it would be more profitable to smelt on the ground.
1033. If you had coke here and you erected smelters, what quantity of ore could you raise per week? Almost an unlimited quantity if we had a fair amount of capital—that is after the mine was opened up to a reasonable depth, say 200 feet, and two or three levels put in. I could then employ fifty or sixty men easily.
1034. Have you any coal here? I am not aware of any.
1035. Do you not think it would be very expensive to smelt with coke alone? I think we would only have to get coke.
1036. Do you contemplate erecting smelting works at present? No.
1037. *Mr. Dawson.*] Do you send the concentrates *via* Glen Innes now? That will be our route when we send the first load, but I have been engaged for eighteen months in developing the lode. The first load will not be ready until January or February.
1038. If a railway were constructed from Inverell to Glen Innes, would you send the ore by that railway? Yes.
1039. Do you say that you will also be charged for carriage to Queensland? The buyers with whom I am negotiating offered to take delivery of the ore, at Glen Innes. By so doing I shall save the charges from Glen Innes to Sydney and from there to Maryborough. These people have been doing that, and no matter where they send the ore they charge us for the freight on that ore.
1040. How is it that they do not send it to Brisbane by rail? They do send it to Brisbane by rail and then from there to Maryborough.
1041. What do they send it to Sydney for? I say that if a railway were constructed from here to Glen Innes, I would have the privilege of going to Maryborough with my ore and thus save the cost of freight. If I now send it down to Sydney the buyers there charge me for sending it to Maryborough.
1042. What difference does that make if you deliver the ore now at Glen Innes by dray? Because they will charge me what it will cost them.
1043. When you send your ore to Glen Innes now, could you not send it direct to Brisbane? Yes.
1044. Why send it to Sydney and thence by steamer? It has been done by some of our neighbours.
1045. If a railway were constructed to Glen Innes, can you give us the approximate number of tons that would be sent from your mine and others in the district? For the last eighteen months I have been engaged upon works of development. We are a private party and we do all our own labour. The machinery we are now erecting will enable us to develop the mine, and in twelve or eighteen months we will be able to send away 100 tons a month. We will take it in upon bullock teams to Inverell and despatch it to Glen Innes.
1046. When your machinery is erected and the mine developed, how much will yours and the other mines about here send by rail? I cannot speak for the other mines. When my mine is fully developed I cannot say how much there will be, because the quantity is almost unlimited.
1047. *Mr. Wall.*] Had you any correspondence with the parties who are going to purchase your ore? I have a letter from Harrold Brothers, stating that they are willing to purchase any quantity of our ore. It is as follows:—

> Your favour of the 20th inst. came duly to hand yesterday, and we are much obliged for the samples sent, which are sufficient for the purpose. If you have had analyses made by Government Assay Office, will you kindly send us copy; if not we would suggest your sending samples of concentrates to the Mines Department asking them to determine the lead, silver, silica, and quantity of copper pyrites. We have not had time to test the samples, but apparently your system deals only with the one class of gangue, and leaves the silica and copper pyrites in the concentrates, and perhaps the same results could be obtained by an adaptation of the long-tom principle after crushing. Though the concentration does not take out all the gangue, it is quite probable, commercially, your mode is the best, as you may not lose more of the silver by it. We shall be very pleased to deal with you about all your concentrates when ready, and will advise you fully about values after seeing the samples sent.

1048. *Mr. Collins.*] How far is your mine from the proposed Glen Innes railway? Sixteen miles in a southerly direction.
1049. Would Inverell be your nearest point? Yes.
1050. Would you send your concentrates to Harrold Brothers, Sydney? To the nearest market.
1051. Would it not be better to send them *via* Guyra, which would be 32 miles nearer for you? I do not believe in constructing the line that way. I believe that ultimately my ores will go to the sea-board.
1052. Supposing there is no connection with the sea-board? We want a connection there. I may not live to see the mine worked out, and the ore will go to the cheapest carriage.
1053. As a mine-owner, would it not be to your interest, and that of other mine-owners, to send the ore by the nearest route to Sydney? If a line is constructed we will send it there.

Mr. P. Allwell. 1 Dec., 1892.

1054. *Mr. Wall.*] If Harrold Brothers purchased your ore at Glen Innes, do you know whether they would take it on to Sydney or to Brisbane? I do not know for a fact, but I have been informed on good authority that they would be likely to take the ore from here and Mount Galena on to Maryborough.
1055. *Mr. Neild.*] Do you know whether your ores will be sent to Germany or to Maryborough? We do not know where the buyers may send them. Ores have been sent from this part to Maryborough.
1056. If a line were constructed between Inverell and Guyra, would that line be nearer to your mine than a line constructed between Inverell and Glen Innes? I would have to come to Inverell under any circumstances.
1057. Do you favour the construction of the line between Inverell and Glen Innes, because you think that within a reasonable time that line will be extended to the coast at Grafton or Byron Bay? Yes.

Mr. Arthur Menzies, manager of Reedy Creek and Graham's Valley Stations, sworn, and examined:—

Mr. A. Menzies. 1 Dec., 1892.

1058. *Chairman.*] What are your stations used for? Reedy Creek is principally used for sheep, and Graham's Valley principally for cattle and horses. There are about 40,000 sheep on Reedy Creek and about 3,500 large stock on Graham's Valley. Reedy Creek is 20 miles west of Inverell, Graham's Valley is 17 miles south of Glen Innes, and close to the main northern line.
1059. Is it likely that much wool and fat stock will be sent from those properties on the railway? We send our wool to Glen Innes now, and thence to Newcastle and Sydney by railway.
1060. How much do you send away every year? About 100 tons.
1061. Will any fat stock be sent? Yes; we have sent fat stock to Sydney, Grafton, Brisbane, and to the local markets.
1062. Is the production of wool and fat stock likely to be increased? It could be if there was further development.
1063. *Mr. Neild.*] Have you sent fat cattle or sheep to Queensland? Fat sheep.
1064. Is there a market in Queensland for fat cattle? No.
1065. Is there a market for fat stock as a general thing or is it only when there is a failure of rainfall in Queensland? Very often when there is no failure in the rainfall in Queensland, but I would not say that it is a general thing.
1066. How often have you sent fat stock to Queensland? Twice in the last ten years—about 5,000 on the first occasion, and about 3,000 on the second occasion. It is over five years ago since the sheep were sent, as since then we have given up fattening.
1067. Has there been any demand for fat sheep for Queensland during the last five years? Yes; it is almost a yearly thing.
1068. Have other producers of fat sheep sent them to Queensland? Yes.
1069. Are they sent as a regular thing from this district? Very nearly; a considerable number are sent.
1070. Have as many as 5,000 been sent? Yes; last year one station alongside of us sent 12,000.
1071. Are the sheep required in Brisbane for the local market or for meat-preserving? I think they are required for the local market—for butchering.
1072. Are there not a considerable number of sheep in the southern and south-western portions of Queensland? Yes. But there was no drought last year in Queensland, yet 12,000 sheep were taken from the one station I refer to.
1073. Do you send the sheep to Wallangarra and have them trucked there? There is no regular course. If the road is good they are travelled by road to Wallangarra and then trucked.
1074. Are they sometimes trucked at Glen Innes? I do not know. Those I refer to were trucked at Wallangarra.
1075. Would it be worth while to truck sheep for a short distance to the border and then retruck them? As a rule it would. If you wanted to hit the market you would have to train the sheep.
1076. Do you anticipate that this traffic in fat sheep with Queensland is likely to grow? I should not be surprised if it did.
1077. *Mr. Collins.*] How many acres are there in Reedy Creek Station? About 40,000.
1078. Is that all freehold? Nearly all.
1079. At what do you value that land at present? About £2 an acre freehold, as it is improved.
1080. Is there much leasehold? About 5,000 acres.
1081. How much per acre do you pay for that? Sixpence.
1082. Are you managing for a company? For a Sydney bank.
1083. Do you think the bank would be prepared to cut up that estate and sell it? I cannot speak officially, but I should think they would.
1084. What do you think they would want for it? I should think they would be very glad to sell it at £2 an acre.
1085. Although they are only paying 6d. an acre for the lease of part of it? What they lease may be very different from what they own.
1086. Is the leasehold not so good as the freehold? Certainly not; it would not be leasehold if it were.
1087. How far is the other station from Glen Innes? Seventeen miles south of the the railway station.
1088. Would a railway from Glen Innes benefit you much? No; that particular part of the run will be benefited more by a line south from Glen Innes.
1089. Would it be to the interest of a person who might purchase that Reedy Creek land to send to Guyra or to Glen Innes? To Glen Innes, because it is centrally situated for distribution. The distance is shorter and there is a fair local market.
1090. If a railway went from Inverell to Glen Innes, would the run 16 miles south of Glen Innes be much benefited by it? I do not think so.
1091. At what do you value the land there now? Personally, I value it at about 30s. per acre freehold.
1092. Is it as good as Reedy Creek? No.
1093. Is it all freehold? No, about 10,000 acres are leasehold.
1094. What do you pay for that? Fourpence per acre.
1095. Is the bank prepared to sell that freehold at 30s. an acre? Yes.
1096. Is it good for agriculture? Some of it, of a kind. It would be fit for barley, potatoes, oats, and roots, but not for wheat.

Mr. A. Menzies. 1 Dec., 1892.

1097. Is there any land 16 miles from Glen Innes fit for wheat? The land is good enough but not the climate.
1098. Have you come to Inverell or west of Inverell to get land fit for wheat? Yes, towards Inverell.
1099. *Mr. Dawson.*] If a railway were made from Glen Innes to Inverell, would it enhance the value of those properties? I think so.
1100. Have you any knowledge of what is called the betterment principle? I have heard a little of it, and read a little of it; beyond that I cannot say that I have any knowledge of it.
1101. Would the bank be prepared to return a portion to the State of the enhancement of the value of their property by the construction of the railway? I cannot speak positively about that, but I should say not.
1102. Do you say that if the State constructs a railway for which the general taxpayers have to pay for the benefit of a few individuals, that those individuals who actually get that advantage should return nothing to the State? I never said anything of the sort.
1103. *Mr. Collins.*] Were those properties ever offered for sale? Yes; Reedy Creek was.
1104. What price was put on it? Thirty-seven shillings and sixpence per acre.
1105. Was there no offer? Yes; at 37*s.* 6*d.*
1106. Why was it not sold? There was a hitch—it did not come off.
1107. Has the other property ever been offered? No.
1108. *Mr. Wall.*] When do your leases expire? They have already expired—they are yearly leases.
1109. Are they reserves? Some of them.
1110. Have you a general knowledge of the pastoral industry in this district? Yes.
1111. Do you know if the indigo plant, which has become a pest here, is increasing or decreasing? I think it is increasing on sheep runs.
1112. Will not this land, which is infested with indigo plant, ultimately have to be devoted to agriculture in order to exterminate it? I think that is the only way in which it can be dealt with.
1113. What do you estimate is the general loss of stock owing to this plant? Seven to ten per cent. in ordinary seasons.
1114. Is the increase of the plant very marked during the last few years in sheep country? Yes.
1115. If it continues to increase will it be absolutely dangerous to put stock on the land? The land will have to be under-stocked very much to be safe.

Mr. George Thankful Thomas Butler, manager of King's Plains Station, sworn, and examined:—

Mr. G. T. T. Butler. 1 Dec., 1892.

1116. *Chairman.*] Is your station between here and Glen Innes? Yes, the proposed line runs along the boundary of the run for some miles. The run belongs to the estate of the late Mr. Williams Vivers.
1117. It is stated that if a railway were made from here to Glen Innes the run would be devoted to other purposes? Yes, I believe it would.
1118. Do you think that the estate, being administered by the Court, would be dealt with in that way? Yes, if not sold in its entirety. There are 28,000 or 29,000 sheep on the run and 2,000 head of cattle. There are 32,000 acres of purchased land and 11,000 acres in the leasehold area. I do not remember the acreage of resumed area—we do not use much of it.
1119. How much wool is sent away every year? Three hundred and forty bales this year, that is 67 tons of wool.
1120. What do you do with your fat stock? We do not have many. I only sold 1,500 fat sheep last year. Some went to Grafton and some to the freezing works, others were sold locally. The cattle were sold as store bullocks.
1121. Do you simply breed cattle? Yes.
1122. *Mr. Wall.*] How long have you been managing the station? Six years.
1123. Were you managing it when the resumed area was thrown open? Yes, three years ago.
1124. Was much of the resumed area taken up when it was thrown open for agricultural purposes? Some was taken up by selectors—anything that was valuable.
1125. Is that land now occupied for agricultural purposes? Yes; there are several farmers about there, on the lower portion of the run. There were two runs together. Swamp Oak was the best of the King's Plains, and selectors have taken up land there, and they are living on it and cultivating. There are large areas under wheat. It is good soil for wheat.
1126. If a railway were constructed would the owners of the land along the line dispose of many portions of their property for agricultural purposes? I have no doubt they would.
1127. At what price? King's Plains station is now offered for sale, and I think the proprietors would be glad to get 35*s.* an acre. I am an old resident in these parts, having lived in the district since 1868. I have watched the growth of this district and also of Glen Innes. The districts seem to have grown side by side, and there has always been communication between the two places. There has always been a traffic up to Glen Innes as long as I can remember.
1128. Do you speak of passenger traffic? Yes, that existed long before the railway came this side of Tamworth.
1129. If a railway were constructed to Glen Innes, do you think that the people of this district would be likely to avail themselves of it to the same extent as people do in other districts? Yes.
1130. Have you seen Mr. Harper's estimate of the passenger traffic? Yes.
1131. Have you noticed that he has estimated that within the coastal districts every adult will make two trips a year, and every child one a year, while he gives less than one trip a year to the inhabitants of the Inverell district;—do you think there is any reason for such an estimate? No; I think the travelling should be gauged more by the prosperity of the people.
1132. Do you think the people here would avail themselves of the railway to the same extent as the people do in other districts? Yes.
1133. Do you think that Mr. Harper's estimate of 6,000 people to be benefited by this railway is a fair one? I think his estimate is greatly below the proper number. I have seen from 3,500 to 4,000 people on the show-ground on show day; 6,000 is very much below the number that would be served by the railway.
1134. Have you seen the figures compiled by the local residents? Yes.

Mr. G. T. T. Butler. 1 Dec., 1892.

1135. Do you think that that is a fair estimate? Yes; very fair. In most cases I think it is under-estimated.

1136. Were you in any way connected with that compilation? No; but I saw them after they were compiled, and I went through them.

1137–8. Were you consulted? I was just asked to look through the figures, and I thought that it was a fair estimate. It has been said that we cannot send produce to Queensland, and that Queensland does not want it. I have been in the habit of taking one of the Sydney papers, and I have looked through the old files, and examined the lists of produce sent from Sydney to Queensland. I think that a district like this will be able to hold its own in sending produce there with any other district. The returns of the produce exported from Sydney coastwise have been published in the *Sydney Mail* every week, and I presume they are correct. I have not been able to get the returns for one half-year. The returns are as follows:—

Exports from Sydney to Queensland.

		Half-year ending 31st December, 1889.	Half-year ending 30th June, 1890.	Half-year ending 30th June, 1891.	Half-year ending 31st December, 1891.*
Hay	Bales	795	850	1,314	1,287
Chaff	Bags	14,115	8,805	11,383	7,852
Flour	,,	111,813	118,030	118,348	108,382
Bran	,,	6,598	3,263	536	1,022
Pollard	,,	1,301	3,022	533	757
Maize	,,	35,677	4,652	232	20
Oats	,,	4,612	5,374	3,250	1,936
Barley	,,	500	97	825	20
Wheat	,,	8,698	4,210	11,384	11,032
Potatoes	,,	51,381	50,286	47,615	15,254
Onions	,,	2,767	3,756	11,048	4,596
Butter	Packages	1,383	808	699	855
Cheese	Cases	1,568	2,001	2,479	1,672
Bacon	Packages	215	114	162	131
Peas	Bags	137	805	524	234

* For weeks ending 2nd and 9th December, 1891, returns incomplete. For weeks ending 16th, 23rd, and 30th December, 1891, no returns.

1139. *Mr. Wall.*] Was not all that produce water-borne? Yes.

1140. Would not that carriage be much less expensive than railway carriage? Yes; but it shows Queensland wants this produce, and it will be better to send it from here at any price than to let it rot. With regard to sheep going to Queensland, the principal stock route is through King's Plains, and notice has to be given to me with regard to the sheep which are taken through. Every year that I have been on the station a large number of sheep have gone to Queensland. A great many sheep have been trucked at Glen Innes for Wallangarra, and a great number go to Grafton.

1141. *Mr. Collins.*] How far is King's Plains Station from Glen Innes? Twenty-two miles.

1142. Would it benefit the property much if a railway were made from here to Glen Innes? Yes; I presume there would be a station somewhere near the property.

1143. To what extent do you think it would benefit the property? The property is now worth 35s. an acre.

1144. When the railway is made will it be worth £4 an acre? Some of it would be. The open plains would be worth more, because they are already cleared and ready for the plough.

1145. Would the majority of the land be worth more than £4 an acre? No; the majority is timbered country.

1146. Would one-fourth of it be worth £4 an acre? About 1,000 acres would be.

1147. What would those 1,000 acres be worth now without a railway? About £2 an acre.

1148. Then it would be to the interests of the owners of that station that a railway should go from Inverell to Glen Innes? Yes. All the good land in the resumed area has been secured by selectors.

1149. How much leasehold area? Eleven thousand acres.

1150. Is that all open for selection? No; some of it is in reserves; some is open for selection, which is not worth much.

1151. What do you pay for the leasehold? Threepence half-penny per acre. There are some reserves in that. We are paying for the travelling stock reserve. That is included in the leasehold area.

1152. Would the proprietors sell the land or lease it? It is to be sold. It is administered by the Court, and they cannot lease it.

1153. If it were cut up into blocks of 400 or 500 acres, would it be readily sold? The portion close to the railway would be, but the run is rather long. It comes within 12 miles of Inverell. That land would not be benefited so much by the railway.

1154. *Mr. Wall.*] How many selectors within the vicinity of the railway would be benefited by its construction? Sixteen about Swamp Oak. The settlement is increasing there, and they are putting in large areas.

1155. What quantity of land in the vicinity of your station would be brought under cultivation in the hands of *bonâ fide* selectors? I think a great deal would be cultivated. One man who has come there lately has cultivated very largely.

1156. Do you think the cultivation would be increased very much if a railway were constructed? Yes, because the land is good.

1157. *Mr. Neild.*] I suppose you recognise all the produce mentioned in this return which you have submitted is probably not delivered in Brisbane? Yes.

1158. Do you know anything of the location of the population in Queensland? No; only from reading.

1159. Would you be disposed to believe that two-thirds of the people in Queensland live north of Brisbane? I suppose there is a large population on the northern mines.

1160. Therefore, if you send produce from here to Brisbane by rail it would then have to be put on board steamer and sent away north? Yes; I suppose a large part of it would be re-shipped.

1161. Do you think that this district could afford to pay railway freight from here to Brisbane, and then pay steamer freight from Brisbane to the northern portions of Queensland, as against steamer freights between

between Brisbane, and Sydney, and Melbourne? It must be remembered that the produce would have to be sent first from other inland districts to Melbourne and Sydney. Mr. G. T. T. Butler. 1 Dec., 1892.

1162. Are you prepared to deny that the distance by the proposed railway from here to Glen Innes is 53 miles? That is the surveyor's estimate, I believe.

1163. Are you prepared to deny that the distance from Glen Innes to Wallangarra is 68 miles? I do not know the distance.

1164. Are you prepared to deny that the distance from Wallangarra to Brisbane is 233 miles? No.

1165. Are you prepared to admit that those are the distances? I take them to be correct.

1166. If the officers of the Railway Construction Department represent that the distance by rail from Inverell to Brisbane is 354 miles, do you admit that that is tolerably correct? Yes.

1167. Do you know the distance from Sydney to Brisbane by sea? About 1,000 miles.

1168. Do you know that steamers do the distance in thirty-five hours? It depends upon the speed of the steamers.

1169. Are you aware that the distance is only 500 miles? It is 600 miles from Grafton to Sydney.

1170. Are you aware that it is only 360 miles from Grafton to Sydney? I know it is more.

1171. If it is 350 miles by rail from Inverell to Brisbane, do you think that the producers here could afford to pay railway carriage, including changing into other trucks, and then compete with steamers delivering goods at Brisbane from the southern markets? They could compete better by that route than by sending the goods first to Sydney, and then up the coast to Brisbane.

1172. *Mr. Dawson.*] Where is the produce obtained which is sent from Sydney to Brisbane? It is sent to Sydney along the southern and western lines. The people of this district do not want to come into competition with the southern and western districts of the Colony. The unanimous belief of the farmers here is that their produce will eventually go to the coast. If we take the Tweed, Richmond, Clarence, and Manning districts, right down to Port Macquarie, it will be found that in 1891 there were only 340 bushels of wheat grown there, with a population of about 50,000. That is the market for Inverell, and that is where we want to go.

1173. *Mr. Collins.*] If they can send flour from Adelaide to Newcastle for 1s. per ton, do you think you can compete with them if you had a railway to the coast? Yes; because this district produces more to the acre.

1174. Does your flour keep as well as the Adelaide flour? I believe it will now that they have introduced improved machinery.

1175. Has it been tried in a different climate? I cannot say, but they are making very good flour here now.

1176. Does wheat or flour ground in a warm climate stand as well as wheat or flour grown in a cold climate? The drier the climate the better the wheat.

1177. Did flour which is ground at Inverell keep very well in the back country? That was years ago, before they had proper appliances.

1178. How long have you had proper appliances? It is two or three years since rollers were introduced. The flour now keeps well.

1179. Will it keep in a wet climate for twelve months? Yes.

1180. *Mr. Wall.*] If wheat cultivation in this district is developed as well as in all other parts of the Colony, do you recognise that a market must be found outside the Colony? Yes.

1181. Do you anticipate that wheat production will be stationary in Queensland? I do not think it is likely to expand in Queensland.

1182. Is it not a fact that it has expanded there? Yes.

1183. At present in sending wheat to Queensland you have to pay a border duty? Yes.

1184. If there was federation would that duty be abolished? There is no doubt it would.

1185. Is it also proposed that in the event of federation there should be a uniform railway tariff? Yes.

1186. If that were the case, and you had to reach a shipping port for the over-production of this district, do you think it is likely that the wheat would go to Brisbane? Yes, failing a shorter route to Sydney. If a railway were not made to the coast Brisbane would be our nearest shipping port.

1187. Is there a probability of a shorter connection with Brisbane than at present by rail? Yes; part of the line is now made. It will connect about Warwick.

1188. *Mr. Neild.*] Are you aware that the return which you have submitted shows a very considerable falling off in the shipments to Queensland in the majority of the items? In one or two things that is the case.

1189. Are you aware that there is a falling off in chaff, flour, and an enormous falling off in maize, in oats, barley, wheat, potatoes, and cheese, and a heavy falling off in some of the other items? You will see from the return that there is a blank of five weeks. The reason for the falling off in the shipments of maize is that there was a good crop of maize in Queensland. When the railway was constructed from Glen Innes to Tenterfield, Cobb and Co., the contractors, sent here for maize, and a large quantity was sent on to Tenterfield.

1190. Does not a large quantity of Queensland maize come here? Two or three dray-loads came to Inverell. Last year maize was 10d. a bushel on Darling Downs.

1191. Take the half-year ending 1889 and compare it with the half-year ending 1891. Allowing for the blank of five weeks, maize has fallen from 35,677 bags down to 20 bags. Therefore, do you not recognise that the prospect of a trade in maize with Queensland is at an end, according to these figures? No; because next year they may not be able to grow a bushel of maize on Darling Downs. It is very precarious.

1192. Cannot they grow maize on some of the northern rivers of Queensland? It is more profitable to grow sugar there.

1193. Are you not aware that the bulk of the sugar-mills in Queensland have been closed, and that they have been growing something else? No.

1194. Has there not been a steady falling off in the exports of chaff from 14,000 bags down to 7,000 bags, and potatoes from 51,000 down to 15,000? The exports are not always the same each half-year.

1195. Supposing that for the missing five weeks an equal quantity was sent, would there not be a falling off shown of 30,000 as against 51,000? Yes.

1196. Is there any trade from here to Glen Innes in fat cattle or sheep? Yes, a great trade.

1197. Is there a trade between here and Glen Innes in wheat? Yes, a large trade.

1198. In maize? No; Glen Innes can grow all the maize they require.

1199. In oats and potatoes? No.

Mr. G. T. Butler. 1 Dec., 1892.

1200. You do not look to Glen Innes itself as being a market for the consumption of much of your produce, but you look upon it more as a distributing centre? There is a large population about Glen Innes, and there are several mines.
1201. *Mr. Collins.*] The returns you refer to relate to shipments from Sydney? Yes.
1202. Might there also be a number of shipments to Brisbane from New Zealand and Adelaide? Yes.

Mr. Richard Stout, storekeeper, Inverell, sworn, and examined:—

Mr. R. Stout. 1 Dec., 1892.

1203. *Chairman.*] Did you give evidence before the previous Sectional Committee? Yes.
1204. Have you any fresh evidence to offer? I have since had a better opportunity of going into the facts. During the last four months my carriage of goods into Inverell from Glen Innes has been 88 tons. I paid the Railway authorities £206 for the carriage of part of those goods.
1205. Is that trade likely to increase? Certainly; I find that it is increasing every day. It has increased about half as much again since I last gave evidence.
1206. *Mr. Collins.*] Which line do you prefer—from Inverell to Glen Innes or to Guyra? To Glen Innes.
1207. Would it not be to your interests and to the interests of your customers to have your goods brought *via* Guyra, so as to save 37 miles of carriage? The carriage does not amount to much. I deal with Queensland, and 25 tons of the goods I have mentioned represent trade with Queensland.
1208. *Mr. Neild.*] Do you think that if railway communication were extended from Glen Innes to Inverell, not only that the railway would get the benefit of the goods carriage from here to Glen Innes, but that the lower freights that would be paid by producers would induce the production of a larger amount of goods, and a larger number of people would settle in the district who would require stores, so that generally the tonnage represented in your returns would be largely increased? Yes.
1209. *Mr. Collins.*] Do you get any Adelaide flour? No; unfortunately we did get it one year and it was the ruin of us.

Mr. Joseph Wessey Moore, builder, Inverell, sworn, and examined:—

Mr. J. W. Moore. 1 Dec., 1892.

1210. *Chairman.*] Have you done much building in Inverell? Yes; I have built the most of it.
1211. Are you the only builder in town? No; there are several doing a good trade.
1212. Are not most of the houses in Inverell built of wood? Yes; wood is much cheaper and it is not so difficult to find a foundation. We have found that unless brick structures are carried down very deep they are liable to crack. It nearly costs as much to put in a foundation of brick as to build a wooden house.
1213. Is the building trade brisk in Inverell? It was formerly, but not latterly. There is not much trade doing now.
1214. What is the cause of the falling off? General depression in trade. Then the failure of the mines has caused many people to leave the district, and owing to the want of an outlet for farmers' produce the district could not extend.
1215. Has not more land been put under cultivation during the last two or three years? During the last year there has been a great movement in cultivation on account of the operation of the duty on cereals. I wish to give evidence principally with regard to the timber trade. The annual consumption of hardwood timber at Inverell for building purposes is about 1,000,000 feet, which, with the growth of this district, would be an ever-increasing revenue for the railway from Glen Innes to Inverell—I refer to hardwood timber for building. It weighs 5 or 6 lb. to the foot.
1216. Where would it come from? The local scrubs are nearly worked out, and the supply would be drawn principally from the scrubs on the eastern slopes—say, the stretch of country from Armidale to Tenterfield down towards the Clarence.
1217. Do you think there is an opening for a large trade of that kind? Yes; if we had a railway it could be brought here cheaper than the timber could be cut locally.
1218. *Mr. Neild.*] Have you not informed the Committee that the building trade has fallen of very much? Yes.
1219. Do you think that the construction of the railway would increase the amount of building required? Yes.
1220. Do you think that the railway would induce people to come here and live, and that the railway would bring timber to build their houses? Yes.
1221. Do you get timber now from Tingha? From both sides—from Tingha on the east and from Myall Creek and towards Warialda on the west. We get pine principally from Warialda and hardwood from Tingha.
1222. Do you anticipate that there will be much building required unless the railroad induces settlement? We have no prospect of an extension unless we get an opening for trade somewhere. At present the farmers cannot send their produce away.
1223. Are we not told that the farmers can get a very good market at Glen Innes and can compete with the rest of the Colony? You cannot expect them to take any quantity of flour or wheat on such roads as exist between here and Glen Innes. If we had to send 100,000 bushels of wheat to Glen Innes it would require all the teams in the Colony.

Mr. Magnus Calder, grazier and farmer, near Inverell, sworn, and examined:—

Mr. M. Calder. 1 Dec., 1892.

1224. *Chairman.*] Where do you reside? Twelve miles north of Inverell, and 12 miles north of the proposed railway line.
1225. Do you cultivate much land? About 200 acres, principally wheat and corn. I send it to Glen Innes and Inverell. I am cultivating 100 acres of wheat this year, and expect a yield of 25 bushels to the acre.
1226. What do you expect to do with that wheat? That is the difficulty. I do not think we shall be able to sell it this year. Owing to the enormous production the prices will be very low, and we shall almost have to give it away.
1227. *Mr. Wall.*] What price do you usually get here? Since I have been farming here prices have ranged from 4s. to 3s. Of course, in a good year and when a large area is under wheat we might only get 2s. 9d.
1228. Do you think that the construction of the proposed line would bring about a great development of wheat-growing in this district? I am quite sure it would.
1229. Are you aware that there is a larger area under wheat this year than there was previously? I believe so.

Mr. M. Calder. 1 Dec., 1892.

1230. If there is a great development in wheat-growing, would you not have to look for an outside market? Yes.
1231. Which would suit you best—a railway to Guyra or to Glen Innes? Glen Innes, most decidedly, because we would then have an option as to the markets. The bulk of our trade is to the north.
1232. Is there much wheat grown in the vicinity of Glen Innes? No, the climate is not suitable.
1233. Do you prefer to avail yourself of the small advantages that would be derived from the limited market in Inverell, and pay a farthing a bushel extra, instead of sending your wheat to Guyra, assuming that you had to send it to Sydney? I do not think it is possible to send it to Sydney and make it pay. I think it will be possible to open a trade with Queensland.
1234. Without that trade to Queensland would you not have to send the wheat to Sydney? Some, I suppose, would go towards the coast.
1235. Do you think that the development of this district will be very extensive, and that wheat-growing, will be a paying industry? Yes; because this is the finest wheat-growing district in New South Wales, if not in Australia.
1236. If you have to pay an extra price for the haulage of your wheat to Sydney *via* Glen Innes, will not that be an advantage to the railway authorities? Yes.
1237. Do you think that Glen Innes will be a point of distribution? Yes, because it is midway. At certain seasons we should go to the north, and at other seasons to the south.
1238. How long have you been in this district? Four years.
1239. Were you farming before you came here? Yes, in the Winnera district, Victoria.
1240. Which district do you think is the best? There is no comparison—this is by far the best district.
1241. Do you know the Goulburn Valley? Yes, I lived there for years.
1242. Which do you think is the best district? I have no hesitation in saying that there is no comparison between this and any other wheat-growing district I have ever been in, and I have been in most of them.
1243. How many persons engaged in agriculture along the proposed line from Glen Innes to Inverell would be benefited by its construction? It is not a large population, but the land along the line is very valuable for agricultural purposes. When the railway is made, no doubt that land will be cut up for farming. It would be to the advantage of the landowners to cut it up and sell it.
1244. Do you think that the farming community would be prepared to pay a higher price for agricultural land on those holdings if a railway were constructed than they would be at present? Yes.
1245. Do you grow any hay? I am growing it for my own use. There is no market for hay.
1246. What do you do with the straw? As a rule the wheat is stripped. There is no demand for chaff.
1247. Has there been much increase in the settlement in the district in your time? Yes.
1248. *Mr. Neild.*] Do you think it would pay you better to send your surplus wheat to Queensland than to Newcastle or Sydney? I do not say that would be the case every year. In five years out of ten in Queensland the crops are almost a failure. According to the Register, you will find that from 1880 to 1890 that has been the case.
1249. Would it be more advantageous to send your surplus to Queensland in bad years than to send it to Newcastle and Sydney for shipment to the world's markets when the seasons are good in Queensland? Yes.
1250. There is a duty of 4d. a bushel on wheat in Queensland. The present rate of railway freight for wheat to Newcastle is also 4d. a bushel. Supposing wheat were of the same value in Newcastle as in Queensland, would it not be better to send it to Newcastle? It is impossible that it can be the same in Brisbane as in Newcastle. Queensland imports a certain quantity, and New South Wales imports a certain quantity. There is a duty of 6d. per bushel in New South Wales, and then there is the amount of the carriage up to Queensland.
1251. Supposing the prices were the same in Brisbane and Newcastle, would it not pay you better to send to Newcastle than to Brisbane? Yes.
1252. Do you know that there is no article of commerce in which the profits are cut so close as in breadstuffs? Yes.
1253. Are you aware that the price of wheat in London practically regulates the price of wheat all along the coast of Australia? Yes, but up to the present the Victorian supply has practically regulated the price in New South Wales and Queensland.
1254. Do you not mean South Australia? Victoria and South Australia.
1255. Is not the South Australian price practically regulated by the London price? Yes.
1256. So that when you have the district connected by railway with the ports of the world you practically come into competition with the world's rate? Yes, to a certain extent.
1257. With the great fertility of this district, do you think that Inverell can hold its own with any part of Australia? Yes.
1258. *Chairman.*] What is the cost of carriage between Inverell and Glen Innes at present? 9d. per bushel. The average yield here is put down at 18 bushels per acre.

FRIDAY, 2 DECEMBER, 1892.

[The Sectional Committee met at the Court-house, Inverell, at 10 a.m.]

Present:—

THE HON. WILLIAM HENRY SUTTOR (CHAIRMAN).

WILLIAM CHANDOS WALL, Esq.	CHARLES COLLINS, Esq.
JOHN CASH NEILD, Esq.	HENRY DAWSON, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Thomas Mason, hotelkeeper, Goonoran, sworn, and examined:—

Mr. T. Mason. 2 Dec., 1892.

1259. *Chairman.*] Do you wish to give any evidence with reference to the construction of a railway from Glen Innes to Inverell? Yes; I wish to give evidence with reference to wheat-growing. I was growing wheat before I bought my present property. There was no market for wheat, so I left off growing it. I cultivated from 80 to 100 acres of wheat. I have about 30 acres under wheat this year, and I expect a yield of from 23 to 25 bushels an acre. I have sold the wheat generally at Inverell—sometimes down the river and in Queensland. Mr. Utz, of Glen Innes, offered to buy 150 bags from me last year. I did not sell to him, but I had to sell at a reduced price a fortnight ago.

Mr. T. Mason. 2 Dec., 1892.

1260. *Mr. Neild.*] Have you reduced the amount you had under crop in wheat? Yes; on account of not having any way of getting rid of it.

1261. Do the people north and west of Inverell get much of their wheat or flour supplies from this town? They have been getting it principally from here and some from Glen Innes. Mr. Utz buys wheat here and sends flour down the Macintyre River.

1262. Does he pay cartage on the wheat from here to Glen Innes and then cart the flour back? Yes; I believe he has had to pay 9d. per bushel for cartage.

1263. Were not millers about here able to supply the people whom Mr. Utz was dealing with? I daresay he is able to supply the flour at a slight reduction in order to get custom for station supplies, and so on

1264. How near would your place be to the proposed railway? About 6 miles.

1265. Would a line from Glen Innes to Inverell be more useful to you than a line from Guyra to Inverell? Yes.

1266. If the line were built, would you put more land under wheat? Yes; about 120 acres instead of 30 acres.

1267. Would any of your neighbours follow that example? Yes; I know a man who has come here from Victoria and bought land, and he would put in treble his present quantity of wheat.

1268. Do you feel absolutely certain that the construction of the railway to Inverell would induce the people to plant twice as much wheat as they do now? Yes.

1269. Would they put in other crops? It is principally wheat, corn, and oats that we depend upon.

1270. What was the price of wheat last season? Mr. Utz was giving 4s. on the farm.

1271. That would cost 4s. 9d. delivered at Glen Innes? Yes.

1272. How did that price compare with the price of wheat at Sydney? It compared very favourably at the time. It was worth 4s. 5d. and 4s. 6d. in Sydney then.

1273. The carriage from Glen Innes to Sydney being 4d. per bushel, that would mean that Mr. Utz was giving for Inverell wheat almost exactly the same price that he would have to give for southern grown wheat if he got it by rail? I was talking to him in Glen Innes, and he said that he bought wheat at Tamworth and Tenterfield, but he preferred the Inverell wheat because it was better.

1274. Did he tell you he got wheat from as far as Cootamundra? Yes.

1275. Did he tell you that he got any imported wheat? No.

1276. Would it pay him better to get wheat in this district and about here with a view to encouraging trade so as to get back loading? Yes.

1277 Have you had anything to do with cattle? I once held 1,500 acres and then had cattle.

1278. Do you know of any trade conducted between this district and Queensland? I know that there is a trade in cattle and wheat there. They have been sent from here on several occasions.

1279. Has that been due to drought in Queensland? In 1888 there was a drought in Queensland more severe than here.

1280. Did you do any business in Queensland in that year? I was droving that season. I know that fat sheep were trucked from here to Queensland.

1281. If a line were built from Glen Innes to Inverell, do you think that sheep would be trucked from here to Wallangarra and then re-trucked into Queensland, or would the sheep be driven from here to Wallangarra and then be trucked? It would generally depend on the price for driving and the price obtained at the other end.

1282. Would it be the practice to truck to Wallangarra? Yes, considering that there would not be large lots sent. If there were lots of 8,000 or 10,000 they would be driven, but if they were only 2,000 or 3,000 lots, they would be trucked to Wallangarra and then re-trucked.

1283. Have you known of fat sheep being sent from any other part of New England to Brisbane? I have heard of them being sent round from Narrabri, but I do not know it personally. From this locality I think the sheep would be more likely to be travelled up to Wallangarra. It would be a shorter route and it would not knock the stock about.

1284. Does fruit grow well in this district? Yes.

1285. Is there any market in Glen Innes for locally grown fruit? No; all the farmers grow their own fruit.

1286. Is there not a good market for it out west? There will be a market eventually, when the Central Division is thrown open for selection.

1287. Can they grow oats at Glen Innes as well as Inverell? Yes, and a little better.

1288. Have you given up growing maize here? No; I have 20 acres at present.

1289. Has not the growing of maize been given up in this district? Last season the farmers went in for wheat on account of the good prices.

1290. Is there not a good deal of competition in maize with Queensland? There was last season.

1291. Do you expect to see people go back to maize culture here? Yes.

1292. How many bushels of maize to the acre do you get here? From 35 up to 50 bushels to the acre. The average is 23 or 25 bushels.

1293. Do the farmers in this district plough every season for wheat? Yes; two ploughings generally.

1294. Is there a large area of first-class land in this district suitable for wheat growing? Yes; I have helped to settle eight or ten families on the land in this district. They came from Wollombi.

1295. Are those people satisfied with the change they have made? Yes, thoroughly.

1296. Do you think other settlers will come here? Yes; these persons will be the means of bringing others here.

1297. Do you think that the construction of a railway would bring people to the district who would require stores for consumption, and who would supply produce to be carried by the railway to the east? Yes.

1298. *Mr. Wall.*] Have you had any experience in connection with fat stock? Yes, a great deal.

1299. Does your experience lead you to believe that the major portion of the stock would be driven to Wallangarra and trucked there? Yes.

1300. If you got fat stock here, and you got advices that there was a good market in Brisbane, would you travel the stock 110 miles instead of trucking them to reach the market at once? If my agents required the stock within a few days I should truck them.

Mr. T. Mason. 2 Dec., 1892.

1301. Have you ever speculated on the market or have you taken the ordinary precaution of getting advices from your agents before you put the stock on the road? I have had advices from my agents on one or two occasions. At other times I have chanced it.
1302. How long would it take to travel fat sheep 110 miles? The ordinary rate is 5 miles per day.
1303. Then it would take you twenty-two days to reach Wallangarra? Yes; but there is a shorter route from this district.
1304. If there was a likelihood of a good market in Queensland would you not truck your sheep? Yes.

Mr. James Goodyer, hotelkeeper, Inverell, sworn, and examined:—

Mr. J. Goodyer. 2 Dec., 1892.

1305. *Chairman.*] Do you know the character of this district? Yes; I have travelled over it for thirty years. There are a quarter of a million acres here of agricultural land—the best in the Colony—within a distance of 40 miles from Inverell.
1306. *Mr. Wall.*] Which line would tend to the greatest development of the district? From here to Glen Innes, because there is good agricultural land there.
1307. Would the development which would follow railway construction be sufficient in the course of a few years to make a railway pay? Yes; in a very few years.
1308. Would that occur if the railway were constructed from here to Guyra? There is no good land on that line with the exception of a narrow strip. The land on the Guyra line is some of the poorest land in New South Wales. It is granite sandy country. I have travelled it on foot, and known it for years.
1309. Are not the business relations of Glen Innes and Inverell extensive? I cannot say there is a great amount of business between them.
1310. What is the special object of connecting Glen Innes and Inverell? The land between Inverell and Glen Innes and north and north-west of Glen Innes for a considerable distance is splendid country, fit for people to settle upon. Glen Innes is midway between Newcastle and Brisbane. If we ever do get a coast line it will go from Tenterfield, and it will serve two purposes. It will bring us to the Queensland and the Sydney market.
1311. Irrespective of the coast line, in the interests of the country, which do you think would be the line that would best serve the people and be most likely to pay? I think the Glen Innes line would.
1312. If the people of Inverell were trading with Armidale, could they not get their goods by way of Guyra at present with almost equal facilities as they do from Glen Innes? It seems they do not do so. They get everything by way of Glen Innes.
1313. Have they not to pay extra carriage by rail from Guyra to Glen Innes? That is merely a fleabite.
1314. *Mr. Collins.*] Were you living at Glen Innes for some years? Yes.
1315. Have you any interest there? Very little.
1316. Have you some property there? Yes.
1317. Is it to your interest that the railway should go to Glen Innes? I would not go against my conscience in any case; but I cannot see that the railway would improve the value of my property at Glen Innes the least bit, except during the time the railway would be making. Between here and Glen Innes the country is thickly timbered with box and red-gum. Glen Innes, at present, chiefly depends on Deepwater and the country in that direction for firewood. A good deal of business could be done by the railway in carrying firewood, and the land would be cleared at the same time.
1318. Is there any wood for building purposes between here and Glen Innes? It is not very good for that purpose.
1319. *Mr. Neild.*] When you say that there are 250,000 acres of agricultural land in this district, do you take it in a circle? Not in an exact circle. South from here, towards Tingha, it is not good for agriculture, but it is good from Glen Innes down to the Severn and across to Warialda.
1320. How far does the good land extend east? There is good land to the Waterloo Range. Waterloo Station is one of the best in the country. It is about 30 miles from here.
1321. Do they grow any wheat there now? Not a great deal. They can grow it, but the wheat up there does not make good flour.
1322. Then that takes something from your estimate? No; it does not, because they can get other crops.
1323. What proportion of the area you mention would grow wheat? The whole of it; but towards Glen Innes it does not make the best flour. I have seen beautiful crops of wheat at Glen Innes.
1324. How far west and north does the good land extend from Inverell? Nearly 40 miles.
1325. How far would it pay to bring wheat by teams to a railway station at Inverell? As a rule the farmers have their own teams, and they do not count the cost of cartage for 30 or 40 miles.
1326. What do the farmers between here and Glen Innes do with their wheat now? Those nearest to Inverell cart it here, and those who are nearest to Glen Innes cart it there.
1327. Does cartage to Glen Innes stand in the way of wheat-growing? It must. There is a man at my place now who is about to take up wheat-growing land, and every week there are men coming from Victoria to do the same thing.
1328. If it does not pay to cart wheat from Inverell to Glen Innes it will not pay to cart wheat the same distance from Inverell to reach the railway, so that you will have to reduce the distance over which you can profitably cart wheat considerably below your estimate of 250,000 acres? In some parts of that area it might be a little too far to cart wheat.
1329. *Mr. Wall.*] Have you considered the area in mileage which would embrace 250,000 acres? I consider that there are 250,000 acres within 40 miles of this town.
1330. Do you know that 20 miles square would embrace 250,000 acres? Very likely; I only guessed it.
1331. We have been led to infer by the evidence that on this line of 40 miles long an area of 20 or 30 miles on each side is good agricultural land? Yes.
1332. Then it would give more than the area you have mentioned? When I spoke of agricultural land I referred to really first-class land. I travelled 4,000 miles to pick out a district before I came here, and Cowra and Bathurst and other places are not a patch on this place.

Mr. Thomas Mather, wine-grower, Inverell, sworn, and examined:—

Mr. T. Mather. 2 Dec., 1892.

1333. *Chairman.*] Where is your vineyard? About a mile and a half from Inverell. I have had fifteen years' experience in wine-growing in this district. I have 17 acres under vines and a small orchard and orangery. I have 25 acres under wheat and 5 acres under hay.

1334. What are the prospects of the wine-growing industry? They are fair. They will be very much better if we have railway communication, particularly if the connection is made with Glen Innes. We shall then probably be able to avail ourselves of a market in Queensland and on the northern rivers.

1335. How much wine do you make yourself? From 5,000 to 8,000 gallons per year. During the last five years I have had an average of 400 to 500 gallons per acre. At present the market is local and at Glen Innes and Grafton. Some goes south to Armidale and Newcastle.

1336. Do you send much to Grafton? I do not send any myself, but a great deal of wine does go from the district to Grafton. There are 180 acres under vines in the district. Between 140 acres and 150 acres are under vines for wine, and the balance is for table grapes. We produce about 38,000 gallons in the district, and over 60 tons of table grapes. Wyndham, of Bukkulla, has the largest vineyard. Its area is 25 acres. I do not think they grow any table grapes. Then there are Mr. Wyndham, of Kulki, and Mr. Barnett, 6 or 7 miles west of here. They have between 20 and 25 acres. Ross' estate have a large vineyard about a mile and a half from town. There are a number of other vineyards.

1337. Is it likely that the wine industry will be increased by railway communication? Yes; there are thousands of acres of land suitable for wine-growing, and the climate is very suitable.

1338. What is the cost of carriage between here and Glen Innes? About 3d. per gallon.

1339. You look to railway communication to give you much cheaper carriage? Yes, and there would be greater facility in getting casks, and in returning empties.

1340. Unless there was a railway to the coast you would still have to pay a heavy charge to reach the Grafton district? Yes. The reason why we have a prospect of a market on the coast is that they do not produce much wine there. On the Richmond they have only 8 acres under cultivation, and they produce less than 2,000 gallons. On the Clarence they produce no wine at all. In the Grafton district they produce less than 4,000 gallons.

1341. Is not the Upper Richmond suitable for wine-growing? The land might be suitable, but the climate is altogether against it. There is too much moisture, and the oidium is very bad. They cannot grow the finest varieties of grapes, so that they cannot produce the high-class wines that can be produced here. We grow here all the fine varieties that can be grown in the Colony.

1342. In view of the construction of a railway to Glen Innes, would you have the prospect of railway communication at an early date with the coast? Yes.

1343. Would the Richmond River district be quite out of your way without railway communication? Yes.

1344. Do you send much wine south? Not a great deal; we send more about the district itself and Glen Innes, but I know that a great deal more wine goes to Grafton than to Glen Innes.

1345. If you had railway communication with Inverell, Glen Innes, or Guyra, and you produced a largely increased quantity of wine, would you not be compelled to look to the south for a market? No; I think that eventually Queensland must be our market.

1346. Have you any knowledge of the wine-growing industry of Queensland? I know that they have less than 2,000 acres under cultivation, while we have 8,000 acres in New South Wales.

1347. Is the industry growing in Queensland? Very steadily, but not at all rapidly. Apples are largely sent from New England to Brisbane, and nearly the whole of the cherries grown about Armidale find a market in Brisbane. We are just going into the cultivation of cherries, and our cherries ripen just one month earlier than at Armidale. If we had railway communication we would get a fair share of that market. It would pay us better to send to Brisbane than to Sydney.

1348. Is the export of fruit at present to Queensland large enough to require goods trains, or are only a few cases at a time sent in the luggage vans? It is sent in the ordinary trains at present, but there is room for the development of the industry here. We can grow enough fruit in this district to supply the whole Colony if necessary.

1349. You would not expect the construction of a line from here to Glen Innes to place you in a position to close up the fruit-growing industry in the rest of the Colony? No, but a few hundred tons of fruit and wine will help to make a railway pay.

1350. *Mr. Dawson.*] Have you any of the common diseases of the vine in this district, such as oidium or phylloxera? There is some oidium, but no phylloxera.

1351. Do you grow any of the currant grapes? I have one or two vines that were sent to me by the Department of Agriculture last year. They are growing, but that is all I can say at present.

1352. Do you grow any sultanas? I have a few, but they do not do so well here at present. I am going in for raisin vines. I have had a small raisin kiln built, and last year I dried about half a ton of raisins.

1353. Do you think this district will be suitable for curing fruits? Yes, very suitable.

1354. Do you think there would be a certain amount of fruit, both fresh and dry, to give traffic to the railway? Yes; there is an area of 40 acres under oranges in the district. They are doing remarkably well. The raisins which I am drying are not the *Gordo Blanca* variety.

1355. *Mr. Neild.*] Do you suppose that in orange-growing you will be able to compete with the county of Cumberland? Our oranges come in later than they do there, and I think we have an advantage in the market in that way.

1356. Are there not good oranges grown on the Clarence and the Richmond? There are very few acres under cultivation there, but I believe the fruit grows well.

MONDAY,

MONDAY, 5 DECEMBER, 1892.

[*The Sectional Committee met at the Court-house, Glen Innes, at* 10 *a.m.*]

Present:—

The Hon. WILLIAM HENRY SUTTOR (Chairman).

Charles Collins, Esq. | Henry Dawson, Esq.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. Henry Charles Holmes, licensed surveyor, sworn, and examined :—

Mr. H. C. Holmes. 5 Dec., 1892.

1357. *Chairman.*] Do you desire to make a statement with regard to the proposed railway? I have been employed as a surveyor in this district for the last eleven years. I have had to measure land for alienation and also to value leases. I am well acquainted with the country between here and Inverell. As long ago as ten years land was being purchased right out at 25s. an acre. I know that some people were purchasing it and paying as high as 8 and 10 per cent. for the money. Therefore, I reckon it must be a good investment for a man with money to buy the pastoral land at 30s. or £2 an acre.

1358. Do you refer to the land on the proposed line between here and Inverell? Yes; I estimate the present average value of that land at £3 an acre; that is right through. Valuing the land (present value) on an average of £3 per acre, the value within 2 miles on each side of the line would be £7,680 per mile. Private property within that short distance is equal to the proposed cost of the line. I cannot say this of any rival line. Land-holders would subdivide directly a fair price is offered for their lands. Sentiment would pass away as is evidenced by the subdivision of properties in Sydney. A large amount of land in the district is held by conditional purchasers who have selected at different times since the commencement of the Land Act, principally during the decade 1870 to 1880. It takes twenty-seven years for a selection to mature and become freehold. During the next ten years many selections will mature; then will cease a drain upon the district that materially interferes with the welfare of the people, viz., the cessation of payment of interest and instalment. This at present absorbs most of what should be floating capital in the district. Directly the people have the chance of saving their earnings there will be more money locally which will quicken all business and will work up a demand for land, either for purchase or for leasing even if we have no influx of settlers from outside. Within the time stated our own people and their offspring will be engaged in the purchase of land, but I expect an immediate invasion on the construction of the line. I would like to refer to the evidence given by Mr. Harper before the full Committee. He gives the traffic inwards as an ascertained quantity, and I believe the Commissioners framed their report on that estimate. I know from my own experience that on one item alone there would be a large increase of traffic. I refer to timber. On the table-land here we are within reach of the forests on the eastern fall, and we draw largely upon them for timber which they cannot get at Inverell. There are forests of huge trees 18 to 25 miles from here on Crown reserves for the preservation of timber.

1359. Where do you think would be the market for that timber? A great deal of it would be taken to Inverell for building purposes. It consists of woolly-butt gum, and different kinds of hardwood. Then Inverell builders would draw upon the Sydney timber merchants for their best soft woods for doors, window-frames, architraves, &c.

1360. *Mr. Collins.*] Do they not get that from the timber merchants now? Yes; but I think that they manufacture a great deal from cedar obtained on the eastern fall, and pine obtained from Tamworth.

1361. *Chairman.*] Have you any other reference to make to Mr Harper's evidence? No; further than that I think the figures obtained at the railway goods shed are not reliable as a guide to the probable receipts from goods traffic on the railway. I wish to refer to the reports of the Commissioners, also contained as an Appendix to the evidence. Their first report was estimated on Mr. Hogg's line, which was a heavy grade line with a ruling grade of 1 in 40. The estimate of working expenses for that line was £6,296. For economical purposes it has been thought desirable to get a light grade line, and a revised line has been surveyed with a grade of 1 in 60. In the Railway Commissioners' second report the working expenses on the revised line are put down at £7,138, making a difference of £842. The cost of the line is given at £427,400, but in referring to Mr. Deane's late report, he states that he believes a line could be made for £400,000, so that interest would have to be paid on £27,000 less, which would make a yearly difference of £929. Messrs. Scarr and Price's report upon the proposed connection of Glen Innes with the coast was very much relied upon in the previous inquiry, but since a later survey has been made of that line the reports of Messrs Scarr and Price with regard to the Glen Innes and Grafton line are now quite obsolete.

1362. *Mr. Collins.*] Have you been on the proposed Don Dorrigo route to the coast? Yes, for about 12 to 15 miles east of Llangothlin. According to Messrs. Scarr and Price's report, it goes for 50 miles on an altitude of over 4,000 feet, that means that that country will have a winter for eight or nine months of the year. No matter how good that land might be it will not be good for people to make a living upon.

1363. *Mr. Dawson.*] You have stated that the land on 2 miles of each side of the proposed line between here and Inverell is worth £3 an acre. Mr. Anderson says that he will sell every acre he has got at £2 an acre, and Mr. Cruickshank says he will take £3 an acre except for a small lot around the homestead? I simply took an average price right through. The pastoral land was bought ten years ago at 25s. an acre from the Government, and it was also bought on mineral conditional purchase at £2 an acre, with a condition to expend a further £2 per acre in improvements.

1364. What could you buy that land for now? I do not think you could buy Anderson's land for £2 an acre.

1365. What will you say if he swears he will sell the freehold land at £2 an acre? It is worth £3 an acre, and fair interest could be made upon it at that price.

1366. Has the railway to Glen Innes caused any settlement over 8 or 10 miles on each side of the line? Yes, there is settlement right along the northern line within 8 or 10 miles.

1367. Has the land gone up in price? At the present time, for reasons which I have pointed out, there are really no transactions in private land. The rural population have all their savings taken away by paying interest and instalments.

1368. I find that there are 1,800 acres for sale very cheap on the Beardy Plains, how do you account for the want of farming about the district? There is farming right across when you get past that plain for 18 miles

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miles farther. The reason why the Beardy Plains are not farmed is because the land is in the hands of a squatter, and it is used as a sheep run.

1369. At what price can that land be bought? Three pounds or £4 an acre. They have been offered as much as £6 an acre.

1370. Do you not think that the fact of this district being so very far from market would handicap farmers when they have to compete with others who are a shorter distance from market? No; people who are closer to the market have a greater rent to pay.

1371. But there is no rent to pay when a man has a freehold? There is interest on the outlay.

1372. Supposing a man has a 500-acre farm 200 miles from Sydney, and another man has the same area 400 miles away, what is the difference? The man who is near Sydney has to get interest for the larger amount of money which his land costs. Some land about Hawkesbury is leased for about £2 an acre.

1373. How many men have had land on the Hawkesbury for years without paying rent? They very often have to pay interest on mortgages. Of course they are not all mortgaged.

1374. *Mr. Collins.*] Do you know most of the owners of property between here and Inverell? I know the large land holders.

1375. Are there any small holders between here and Inverell? No; except for the first 10 miles out.

1376. What is the value of the land belonging to small owners within 10 miles from here? I have known some of the land on the Furracabad Estate very close to the line to sell at £11 an acre.

1377. Would it be increased in value if a railway were taken from here to Inverell, seeing that farmers would then be brought into competition with the good farming district round Inverell? It ought to be increased in value, because the railway would give an outlet to the products which we can grow better here than they can at Inverell.

1378. Is there much unalienated land between here and Inverell? Very little.

1379. Are there many reserves on the line now, and would they be thrown open for settlement, or are they necessary for the working of the stations? In many cases they are not necessary for the working of the stations. A great many of them were made as water reserves, and directly the land is alienated all around them their use as water reserves ceases.

1380. Is there every probability of that land being thrown open? Yes; and their being made special areas. I would recommend that course where the land is not required for public purposes.

1381. What do they pay on an average for conditional leases between here and Inverell? Threepence to 6d. per acre; they are principally used for pastoral purposes.

1382. Would the construction of the railway be the means of raising these rents? Directly the lease is put up above 6d. it is to the holder's benefit to convert it into a conditional purchase, and I think that would be done.

1383. Is the timber which you have spoken of used here? Yes.

1384. Has any been sent to Inverell? Yes; I believe a great deal of cedar has been sent. It was cut about 25 to 50 miles away, towards Grafton.

1385. Is there much cedar down there now? Some years ago I saw a great deal of cedar down near Copmanhurst.

1386. Is there much cedar about Don Dorrigo? I have not seen any cedar there. I have only been 10 or 15 miles on the Don Dorrigo side of the northern line.

1387. From Guyra to Inverell is there not more settlement than there is on the line from Glen Innes to Inverell? Yes, if the Tingha population is included.

1388. What would you value the land at between here and the Waterloo Range? I would put an average of more than £3 an acre upon it.

1389. Where do you reduce the average value? From Waterloo to within 12 miles of Inverell. That is the land Mr. Anderson spoke of; it is pastoral land.

1390. *Mr. Dawson.*] Have you ever been between here and Inverell? Yes; I value the cheapest pastoral land at from 30s. to £2 an acre.

1391. Do you know Mr. M'Master's land about here? Yes.

1392. And at what do you value that? It was sold at a forced sale for 25s. an acre. Some of it was conditionally purchased. It was worth £2 an acre.

1393. Is that reckoned very good land? Yes.

1394. Was not that land sold at a great deal less than you value it for? Yes; but there is a great deal of the land on Mr. M'Master's run which is worth more than £2 an acre.

1395. Have you any property in this district? Yes.

1396. Would that be increased in value if the railway came here? I do not think so. It is about 6 miles north on the Tenterfield road. I hold about 3,000 acres.

1397. Is it a conditional purchase? I hold a small run out there, with conditional purchases and leases. I have about 4,000 sheep.

1398. Have you any leasehold? Yes; conditional lease, and pastoral lease.

1399. Would not that land be increased in value if a railway went from here to Inverell? I have not anticipated any increase in value. I have railway communication now with the Northern line.

1400. Would not the proposed railway give you communication with Inverell? I have not looked at my own case.

1401. Why do you prefer a line from Glen Innes to Inverell rather than a line from Guyra to Inverell? Because I believe the land between Glen Innes and Inverell is more capable of supporting a population than the land on the other line.

1402. Do you know that there is a great deal of unalienated land between Guyra and Inverell? Yes; there are large reserves there.

1403. Would it not be more in the interests of the country to open up that land for sale by making a line from Guyra to Inverell, than to make a railway from here to Inverell? You can only sell the land once, and the State has already derived a benefit from the sale of the land between here and Inverell.

Mr.

Mr. Morton Hyde Fitzhardinge, solicitor, Glen Innes, sworn, and examined:—

Mr. M. H. Fitzhardinge. 5 Dec., 1892.

1404. *Chairman.*] Can you give us any information with regard to the proposed railway? Yes; I have resided here since 1878. I wish to refer to Mr. Harper's evidence with regard to the passenger traffic between here and Inverell. I am aware that he has altered his evidence very much since the first examination. The population of the Glen Innes district in 1891 was within a few hundreds of 10,000.
1405. What area would that include? The whole district, 70 miles east, 15 miles west, 30 miles north, and about 20 miles south, that is the electoral district. What I want to point out is that Mr. Harper's estimate of the coaching traffic was based apparently only on the Inverell population. The business which exists between the two towns and the population of Glen Innes would very much increase the number of the travelling public. I also think Mr. Harper has left out the population of the districts on the other side of Inverell, and the influence they would have on the traffic. A great many of the people in those districts come here now. I meet them continually.
1406. Are not some of the districts you refer to nearer to Queensland than here? Yes; but a great many of the Moree people would come here.
1407. *Mr. Collins.*] Would they come here if a line were made from Narrabri to Moree? That would take the Moree people, but leaving out Texas, Moree, and Narrabri, a large portion of the population beyond Inverell would come this way. For instance, the people living about Bonshawe.
1408. *Chairman.*] How many people are living there? I am not competent to say, but that population has been left out in Mr. Harper's estimate. The business relations between Glen Innes and Inverell are very extensive and people are continually travelling between the two places. That would be increased very much if a railway were made.
1409. If a railway line were made from here to Inverell would it not have the effect of transferring to Inverell a large amount of traffic which now comes to Glen Innes? Yes; but the traffic would go over the railway line just as it does now.
1410. *Mr. Collins.*] If a line were taken from Guyra to Inverell, do you think that any business would be done by the Glen Innes district with Inverell? It would be very much less, but I daresay some business would be done. Chaff has gone from here to Narrabri in exceptional times and to Moree. Some, no doubt, would go round by Guyra, but only when there would be a drought.
1411. Are the small holders of land about Glen Innes well off? I think they are suffering from depression like the people all over the Colony, otherwise I think they are fairly well off.
1412. Do you think that if a railway were taken from here to Inverell it would improve the value of their holdings? I am sure it would.
1413. Does the railway to Glen Innes now serve the people within 15 miles of Glen Innes? They use it 15 miles from here. Most of the wool goes by railway.

Mr. John Frederick Utz, general merchant and miller, Glen Innes, sworn, and examined:—

Mr. J. F. Utz. 5 Dec., 1892.

1414. *Chairman.*] Do you desire to give any information to the Committee with regard to this railway? Yes, I desire to lay fresh evidence before the Committee. When I gave evidence in 1891 and 1892, I was not so conversant with the general traffic as I am at present. Moreover, I have seen evidence given to the Public Works Committee and the Sectional Committee by Mr. Harper, which places me in a better position to know the actual traffic which exists in the Railway Department. According to the evidence given by the Commissioners, and also by Mr. Harper, the total amount of earnings was brought up to £8,200. That was up to April, 1891. First of all the inwards traffic earnings were supposed to be £1,876 4s. for 1889. The earnings for the outward traffic is given at £1,615 5s., making a total of £3,491 9s. That is according to the evidence given by the Railway Commissioners. To that was added one-fifth for 8½ miles longer line, amounting to £698 6s. The additional length of 8½ miles has been added to the line in order to reduce the grade. That made the total earnings for the goods traffic, inward and outward, £4,189 15s. The estimate for coaching and mails was £3,500, making a total of £7,689 15s. There was a further allowance made by the Commissioners for the natural increase of traffic from 1889 to April, 1891, one-fifteenth of the whole was allowed, amounting to £510 5s. That made the total earnings £8,200. We now find that the traffic between Glen Innes and Inverell from April, 1891, to November, 1892, has increased to such an extent that it will make a material difference in the earnings, if the line were constructed. According to Mr. Harper's evidence 7,000 tons of goods were carried in 1889 to Glen Innes by the railway from Sydney and Newcastle. From October 1st, to September 30th, 1892, the railway has carried here 9,033 tons, being an increase of 933 tons. That is the general traffic from Sydney and Newcastle. Comparatively speaking there is a little carriage from the border of Queensland, which may amount to a few tons. The stationmaster calculates that it will amount to 70 or 100 tons. The greatest portion of that increase of traffic must have gone into the Inverell district. The traffic inwards in 1891, according to the statistics of the Railway Commissioners, was 3,483 tons, and allowing it to have increased one-fifteenth up to April, 1891, the inward traffic was 3,715 tons. It is now one year and eight months further advanced, therefore we must allow an increase on that tonnage, according to the same calculation. The trade in the western, and especially the north-western district, has increased more rapidly during the last twelve months than it did during 1890 and 1891. There is a large local trade done between the two districts. There is a population of about 18,000 people in the two electoral districts of Inverell and Glen Innes. My own trade has doubled itself within the last eighteen months. I refer to the goods I send out to the western and north-western districts.
1415. *Mr. Collins.*] I suppose that is because you sell cheaper? Of course I must sell cheaper or I could not get the trade; but the reason why Mr. Harper does not know anything about the traffic I am going to mention to the Committee, is this: Some years ago the people living in that district, squatters and large selectors, purchased from merchants in Maitland, Newcastle, and Tamworth, and that is the trade I have principally got.
1416. Still all these goods used to come through by railway? Yes; but I merely wish to show the Committee that there was no possibility of Mr. Harper or the Railway Commissioners knowing the extent of this trade, because the Glen Innes Station got the credit of the tonnage. The goods were unloaded at Glen Innes, taken into my own, and other merchant's stores, and afterwards reloaded and sent to the Inverell district. Therefore, allowing the same increase as the Commissioners have allowed, that is, one-fifteenth on the whole since April, 1891, to September 30th, 1892, there must have been 4,200 tons sent through the Railway Department into the Inverell district. An increase of population must have taken place.

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1417. *Mr. Dawson.*] If a district goes back there might be a loss instead of an increase of population? The population has increased, and I notice from my own business that during the period there have been larger purchases in the Inverell district. I have sent myself into the Inverell district 800 tons within the twelve months. It is quite impossible for Mr. Harper or the Railway Commissioners to know anything about that quantity of goods. That brings my estimate up to 5,000 tons. Then there are goods taken from Grafton to Inverell, sugar is the principal item, but there is also general merchandise, cedar, wattle bark, and hardwood for building purposes. Then there are carriers constantly employed carrying goods from here to Inverell who come to the various people, myself, or other large storekeepers, and buy chaff and other produce, wire, galvanized iron, or a few bags of sugar. That goes on for twelve months among thirty or forty carriers. If a railway were constructed those goods would still go into the district, and would naturally add to the traffic. I estimate that from all the sources there were at least 1,000 tons additional traffic, that makes a total, according to my estimate, of inward traffic of 6,000 tons. This question has been thoroughly gone into by myself since I last gave evidence. When I read the Commissioners' report that only 3,400 tons went into a district like Inverell, I was very much surprised. I do not say that the Commissioners were wrong in their figures, but I maintain that, as a business man having lived here for twenty-six years, my experience, as far as the traffic is concerned, should be taken into consideration. It should be placed before Mr. Harper's or the Commissioners' evidence. As far as the departmental work is concerned no doubt they have the correct figures, but they cannot watch every ton that goes into that district as I have. It is my business to know what goods go into that district. For 4,200 tons now carried by rail, taking Mr. Harper's average earnings at 10s. 9d. per ton from Glen Innes to Inverell, the revenue would be £2,257 10s. Then there are 1,800 tons which would be carried at local rates. At the present merchandise rate that would be an average of 17s. 7d per ton. That is a difference of nearly 80 per cent. The officers of the Department have estimated the whole traffic at a through rate of 10s. 9d. per ton. On goods sent from here to Inverell, which I estimated at 1,800 tons, the average earnings would be 17s. 7d. per ton for 53 miles. The rates would be A class, 5s. 8d., B class, 9s. 4d., 1st class, 18s. 10d., 2nd class, 23s., 3rd class, 31s. 2d. The average would be 17s. 7d. per ton. At that rate the earnings on 1,800 tons would be £1,537 10s. That would be for inwards goods traffic at present existing, but a reasonable allowance should be made for an influx of population up to the point when the railway would be constructed. Assuming that the railway would be started within six months, it may not be completed before 1895. That would be two years, and I put it down that the natural increase of population would cause an increase in the inwards goods traffic of 25 per cent. Under these circumstances on the 1st January, 1895, the total tonnage would come to 7,500 tons, and the return for that would be £4,743 15s. It should be considered that there are two large populations in the districts of Inverell and Glen Innes which trade largely with each other. They ought not to be compelled to go to Guyra, Kentucky, or any other point, and if they have a trade existing between them it should be allowed to continue. I now come to the question of passenger traffic. As I was one of the Committee which was appointed to hold a conference, and take these figures into consideration in the Inverell district some time last year, I wish to state that we estimated that traffic to be 10,000 persons who would travel on the line from here to Inverell when it would be constructed. That estimate was sent to Mr. Cruickshank. That passenger traffic would give a return of £5,600 a year. That is not an over estimate when we consider that a small station like Deepwater, where scarcely anyone lives, gives a return for 1891 for passenger traffic of £1,786 18s. Inverell must have more than five times the population. Mr. Harper gives the estimate of earnings from passenger traffic at only £3,650. If the Government would allow me, as a business man, to collect the whole of the revenue for the passenger traffic on the proposed railway I would be very pleased to place £5,600 per annum in their hands at once. For mails and parcels the lowest estimate would be £500. That is Mr. Harper's estimate. I will now summarise the returns from the inward and outward traffic—

	£ s. d.	£ s. d.
Inwards.		
Merchandise inwards, 7,500 tons	4,743 15 0	
Passengers, 10,000	5,600 0 0	
Mails and parcels	500 0 0	
		10,843 15 0
Outwards.		
Wool, 3,300 tons, 3s. 9d.	618 15 0	
Sheep and cattle	763 6 8	
Wheat, 5,000 tons	566 13 0	
Maize, 2,000 tons	283 7 6	
Hay, 2,000 tons	191 6 8	
Tin ore, 1,200 tons	270 0 0	
Miscellaneous, 500 tons	150 12 6	
		2,844 1 4
Grand total...		13,687 16 4

Mr. Harper estimates that only 3,500 tons of wheat and maize would be carried, giving a revenue of £262 10s. at 2s. 6d per ton. I can prove to the Committee that I shall be a purchaser of at least 1,000 tons of wheat this year. For that wheat I would have to pay the railway, if it were in existence, a local rate of 5s. 4d. per ton. Mr. Harper only gives the Inverell district credit at the rate of 1s. 6d. per ton. That is assuming that the whole of the wheat would go to Newcastle and Sydney. If the railway were made, I presume no one would interfere with the Inverell people and tell them that they would not be allowed to sell any wheat or maize at Glen Innes. For the 1,000 tons of wheat which I should buy I would have to pay to the Government, if there were a railway, £260 13s., apart from the balance which would have to go to Sydney. If I bought 40,000 bushels of wheat, and 20,000 bushels went to Sydney, I would have to pay more for my 40,000 bushels of wheat than Mr. Harper gives as his total amount. I would have to pay 5s. 4d. per ton to bring my wheat from Inverell to Glen Innes, while the people taking wheat from Sydney to Inverell would only have to pay 1s. 6d. per ton for conveying that wheat over the line from Inverell to Glen Innes.

1418. *Mr. Collins.*] Might they not have to pay a local rate from Inverell to Glen Innes? Yes, that might be the case. I am defending the trade that exists, therefore the £266 13s. that I would have

to

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to pay, and only allowing as much to go through of wheat and maize as Mr. Harper allows, it would bring up the earnings to £566 13s. The local committee supplied the Commissioners, through Mr. Cruickshank, with an estimate of 2,000 tons of maize. The local committee also supplied an estimate of 2,000 tons of hay per annum to be carried by the railway. Considering that lucerne-hay can be grown in large quantities at Inverell, I do not look upon that as an over estimate.

1419. *Mr. Dawson.*] Where would they send that hay? I consider that Inverell would be able to compete with any part of the Colony.

1420. They cannot grow lucerne there except in choice patches on the river? I have seen splendid lucerne paddocks there. The total revenue which we estimate of £13,687 16s. 4d. is £6,000 more than the total amount of earnings estimated by Mr. Harper and the Railway Commissioners. They estimated that the total amount of earnings would be £7,689 15s. I may further point out that, according to the Government statistics, 11,150 tons of goods per annum are carried to our district. We begin at Ben Lomond and leave off at Deepwater. Three hundred tons at Ben Lomond, 100 at Glencoe, 8,500 at Glen Innes, 250 at Dundee, and 2,000 at Deepwater. It is only reasonable to suppose that half of that tonnage must have gone west considering that they are larger consumers of merchandise than we are. There is five times as much stock in Inverell district as there is here, so that during shearing times they require a great number of hands. Their stock use a lot of salt and they require more fencing than we do. There is a larger tract of country used there for squatting.

1421. Could they not get all that by way of Guyra as well as from here? No doubt they could get a portion of it. I am not defending Glen Innes against Guyra.

1422. If the Inverell people want these goods cannot they get them by way of Guyra as well as from Glen Innes? I admit that, but it has been stated by the Railway Commissioners and by Mr. Harper that the country would lose £14,000 a year if this railway were constructed. I wish to show that the country could not possibly lose that amount considering that at the lowest estimate the earnings of the railway would be nearly £14,000 a year.

1423. *Chairman.*] Can you give us any idea of the probable trade in wheat from Inverell during the coming year? They must have at least 120,000 bushels of wheat to dispose of at Inverell. That wheat must go out of the district eastwards. I should purchase 40,000 bushels at the very least. A portion of the balance may go to Tenterfield, a portion to Armidale, and a portion to Newcastle.

1424. Is there any traffic in hay at present? No, there is a little traffic in chaff sometimes from here towards Inverell, it seldom finds its way as far as Inverell. It goes to the mail stables and squatters.

1425. Is there any traffic in tin ore? Yes, the traffic has been put down by the local committee at 1,200 tons. Mr. Harper only allows 1,000 tons.

1426. Do you think that 1,200 will be carried this year? Yes; inasmuch as there are new finds about Elsmore larger than there have been for several years. They are offering 40 tons now. It is ready to be sent away. That is a new find which did not exist last year.

1427. *Mr. Collins.*] Do you get much goods from Grafton? Seven hundred tons last year, consisting of iron, wire, and general merchandise. The principal item is sugar, about 250 tons.

1428. Does some of that quantity of 700 tons go into the Inverell district? Part of it would be included in the 800 tons which I send to Inverell every year. Other storekeepers also buy sugar, iron, wire, and general merchandise at Grafton.

1429. How is it that they get their goods there now, seeing that there are differential rates? According to the truck rates it costs £24 for a 6-ton truck from Sydney to Glen Innes, that is when the goods consist of sugar, wire, iron, and rice. First and second class goods would be £30 a truck. Goods carried from Sydney to Glen Innes by way of Grafton, all merchandise, costs £3 17s. 6d. per ton. £3 10s. is the charge from Grafton, and 7s. 6d. is the charge from Sydney to Grafton. They charge 10s. a ton; but they allow a rebate of 2s. 6d. per ton, so that goods can be actually carried to Glen Innes by way of Grafton at a lower rate than even by the differential railway rates.

1430. Then you are not patriotic enough to use the railway? It is no use shutting our eyes to the fact that every man has a certain amount of selfishness, and will consider his own interests before anybody else's.

1431. When you were agitating for a railway to Glen Innes, I suppose you tried to show that there would be an immense amount of railway traffic to Glen Innes; but afterwards you brought your goods by way of Grafton? I never urged that there should be a railway made to Glen Innes.

1432. If a line were made from Guyra to Inverell, would you still get your wheat from Inverell? Probably I would get a large portion of it from there; but the profits from wheat and flour are so very small that the small additional charge might prohibit me from getting so large a quantity.

1433. What do you pay now for carting flour from Inverell here? Twenty-five shillings a ton.

1434. Would the carriage from Inverell by way of Guyra to Glen Innes amount to 25s. per ton? No.

1435. Then it would not prevent you from getting your wheat from Inverell? No; but if I could get my wheat by railway from Inverell to Glen Innes, I might buy 80,000 instead of 40,000 bushels. I would be in a position to supply other markets in competition with Adelaide flour. I might send flour by teams to Grafton. I believe I could send flour there for £1 a ton. I have sent tin ore there for 25s. a ton, and I believe that, with a little pressure, I could send it for £1 a ton. The difference in the charge between Guyra and Inverell, although small, might prevent me from doing that successfully.

1436. Would it be more in the interests of the Railway Department to make a railway from Glen Innes to Inverell, as they would have an extra distance to charge for? Yes; and there is also a large local trade between Inverell and Glen Innes.

1437. What is your principal reason for advocating a line from Glen Innes to Inverell rather than a line from Guyra to Inverell? Because it will be in the best interests not only of the two towns but of the Colony at large. From a personal point of view I naturally think that there would be a larger field open for my trade with the western districts if the line started from Glen Innes, but it is also in the best interests of the Colony. In the evidence given by Mr. Lonsdale he led the Committee to believe that there are a larger number of farmers on the Guyra route than on the Glen Innes route. He said the town is larger and the demand for produce would be far more at Guyra than at Glen Innes. I do not know what he meant, but I would point out what he stated.

1438. Are you intimately acquainted with a large number of the farmers about here? Yes.

1439. What is their financial condition? I think that they will bear favourable comparison with all the farmers of New South Wales. I am doing business with fully three-fourths of them.

1440.

Mr. J. F. Ulz. 5 Dec., 1892.

1440. Are they fairly prosperous? Yes. There are certainly a bad lot wherever you go all over the Colony. I mean men who are bad managers, but on the average I consider that they are as fairly well off as the farmers are anywhere.
1441. Is there much wheat grown about here? No.
1442. What is the average yield? About 18 bushels per acre, but the quality is not so good as in the Inverell district.
1443. Is there much hay grown? Yes; we sent away a lot of chaff last year, the average yield was about 2½ tons per acre.
1444. What is the yield of potatoes? There is a large lot of potatoes grown on Ben Lomond. The average yield is about 5 tons to the acre.
1445. Are they a different kind of potatoes to what is grown in Inverell? Yes; the Inverell potatoes will suit for a certain time of the year. They can supply us from October to December with early potatoes. At present we are getting these early potatoes from Singleton and Tamworth. Our potatoes do not mature till about Christmas and then we have a surplus. If a railway were constructed from Inverell I am sure that the amount mentioned by the local committee would be realised.
1446. *Mr. Collins.*] What quantity of flour do you send out of your mill every year? Up to the present the largest quantity of wheat which I have ground is about 50,000 bushels. I could bring my output up to about 90,000 bushels grinding twelve hours per day; I could grind day and night if necessary, as is done in the large centres.
1447. Do you send much flour to Tenterfield and that district? I have supplied two bakers and three stores on and off during the year.
1448. Have they mills there? Yes; but not a complete plant and the flour is not so well liked as roller flour.
1449. If they had roller mills at Tenterfield could they grind as well as you do? Yes; provided that they got other wheat as well as their own. Their own wheat will not make as good flour as Inverell wheat and our wheat. If they got Inverell wheat and their own wheat they could make flour equally as good as I can. I have no doubt that a large quantity of wheat will find its way in that direction. There is a large population from Tenterfield towards the coast, where they do not grow any wheat.
1450. Since you have been obtaining Inverell wheat and you have had a roller plant, have you quite shut out Adelaide and other flour from this district? Very nearly; it is only through jealousy or prejudice that it has not been shut out. I have testimonials from bakers in Armidale. I am supplying one of the largest stores there, and one of the largest bakers who uses 3 tons a week. He has been getting my flour for the last few months. He says my flour is second to none in the Colony. The bakers here gave me a similar testimonial, and also at Emmaville and Tenterfield. I even got a testimonial from a large storekeeper at Guyra. He says "it is even better than the best Adelaide I ever saw."

TUESDAY, 6 DECEMBER, 1892.

[*The Sectional Committee met at the Town Hall, Armidale, at* 11·30 *a.m.*]

Present:—

THE HON. WILLIAM HENRY SUTTOR (CHAIRMAN).

CHARLES COLLINS, ESQ. | HENRY DAWSON, ESQ.

The Sectional Committee further considered the proposed Railway from Glen Innes to Inverell.

Mr. William Drew, Mayor of Armidale, sworn, and examined:—

Mr. W. Drew. 6 Dec., 1892.

1451. *Chairman.*] Did you give evidence before the other Sectional Committee? Yes.
1452. Have you any fresh evidence to bring forward? Yes; I first wish to present a petition from 318 inhabitants of Hillgrove in favour of the railway being made from Guyra to Inverell. Most of those residents formerly lived at Tingha. They still have their families and permanent homes there, and naturally they would like the shortest route to be adopted, so that they may get to Tingha easily.
1453. Where is Hillgrove? Twenty-two miles from Armidale, on the Grafton road. I may that Armidale is interested in any railway extensions in New England, because it is the centre of New England. The Government have made it the centre, because it is the head of the different Departments, such as land, police, and survey. It is also the centre for religious and educational establishments as well as for insurance and banking institutions. If the railways radiate from Armidale as a centre, the lines will be more profitably worked. The population of the Armidale district is 15,000.
1454. What area does that include? Probably it includes Guyra, Hillgrove, Uralla, but one-third of that population resides within a radius of 5 miles of Armidale. We have 10,000 horses, 1,500,000 sheep, and about 80,000 head of cattle within the district of New England. Inverell apparently looks for a market for its produce, and I think a market can be obtained in the south rather than in the north, and Queensland. I have made inquiries at the railway station as to the amount of corn which is received at the Armidale station; I find that for the twelve months ending 13th December, 1892, there were received from Wallangarra, Queensland border, 820 tons, equal to 8,400 bags of corn.
1455. Is that the produce of Queensland? Yes. As Inverell produces corn in abundance, there is certainly a good market for that corn here. I have also made inquiries from the four Armidale bakers as to the quantity of imported flour which they use. With the exception of one baker, who said he obtained a small quantity from Glen Innes, they all import their flour. Although a good deal of wheat is grown in this district our bakers are using imported flour to the extent of 500 tons a year.
1456. Does that state of things still prevail? Yes.
1457. *Mr. Collins.*] Are you in favour of the line from Guyra to Inverell simply because you think Armidale is the centre of the New England district? Yes.
1458. And that Armidale having a large population would consume a large amount of the produce grown at Inverell? Yes.
1459. At the time that the corn was obtained from the Queensland border, do you know whether some of it did not find its way into the Inverell district also? I am not aware of that.

Mr. W. Drew. 6 Dec., 1892.

1460. Do you know anything of the district between Guyra and Inverell? Yes; I travelled through it at the time of the mining mania.
1461. What is that country adapted for? It is very fair country, except for a few miles where there are mineral deposits.
1462. What do you think is the best part of it? From Guyra to Wandsworth it is capital country—that is about 15 miles from Guyra. There is a great deal of settlement there.
1463. What do they usually grow there? Potatoes and oats.
1464. Is it good land for wheat? I think so.
1465. Why do they not grow wheat if it can be used in Armidale? I think it is owing to the very cheap rate at which flour is conveyed here from other places.
1466. Could they not grow wheat within 6 or 7 miles of Guyra? Yes.
1467. Surely it will not pay to make a railway from Inverell to Guyra to convey wheat, if they can grow wheat within 7 miles of the existing railway station, and yet they do not grow it? We actually grow wheat, and we are not using our own flour.
1468. Why? I believe the bakers say that during the last year or so the wheat is not so good. The character of the flour is not up to that imported from Adelaide and elsewhere. I believe the character of Inverell wheat is very good.
1469. Is not the Armidale wheat so good? It has been for years past, but during the last few years it has apparently got a bad name.
1470. In dry seasons could you produce good wheat? Yes. Inverell wheat would have the same market as our own wheat, and it would be brought into competition with our own wheat.
1471. Are there any roller mills in this district? Yes. One of the millers, Mr. Richardson, is buying Inverell wheat now.
1472. How many mills are there in Armidale? There are only two constantly going; there are four mills altogether.
1473. Have they the latest improvements in roller machinery? I think Mr. Richardson's mill has, and Duncan's is about using it.
1474. Do you know if the Glen Innes flour manufactured there is equal to the Adelaide flour? I believe it is not considered to be so by bakers.
1475. Although the Glen Innes millers use the Inverell wheat? One baker told me he got some flour from Glen Innes, but he did not say where the wheat was grown. He said it is good flour, but he only gets a small quantity compared with what he gets from Melbourne and Adelaide.
1476. That only shows that if Inverell wheat were brought into this district the bakers would still use the Adelaide flour, because Inverell wheat is ground at Glen Innes and sent to Armidale, and the bakers here still use Adelaide flour? Of course they may perfect the machinery in the mills in the course of time, so as to be able to produce as good flour here as they do in Adelaide. They ought to be able to do so.
1477. With regard to this petition which you have presented it is based on the principle that if the miners at Hillgrove have their residences at Tingha they would have to travel over 50 miles, are you aware that a line from Glen Innes to Inverell would pass within 10 miles of Tingha, and there would be a station there for the Tingha people to use, consequently they would not have to travel the distance stated? I was not aware that that was the case.

Mr. Patrick Wade, hotelkeeper, Armidale, sworn, and examined:—

Mr. P. Wade. 6 Dec., 1892.

1478. *Chairman.*] Do you desire to make any statement with regard to the proposed railway to Inverell? Yes; I have been a resident of New England since 1863, I was a mail contractor for twelve or fifteen years between Armidale and Inverell, and Guyra and Inverell. I was the first to run a line of coaches from here to Guyra and Inverell. I was appointed in 1883 or 1884 to show Mr. Hogg the line from Guyra to Inverell. He was thoroughly well pleased with it, and did not previously believe that the line was so level.
1479. What is your opinion of the country between Guyra and Inverell? It is a very good agricultural and pastoral district. From Guyra to the other side of Moredun Creek, there are black soil flats and basalt ridges. I am now referring to the way the surveyed railway line runs. From Moredun Creek through New Valley it is a pastoral district, and granite country. It is rich in minerals until you get down to Tingha. After you leave Swinton's Station you get into the good basalt country, and from Gilgai into Inverell it is a very rich wheat-growing district, and also rich in minerals.
1480. Do you know the country about Bundarra? Yes; about Bundarra there are some very good agricultural flats on the creeks, and the rest is very good grazing country. The flats are very extensive; there are some very good patches of land above Bundarra, and below it on the river.
1481. What kind of pastoral country is there about Bundarra? It is very good for breeding, but it is not fattening country.
1482. Are there many people living about Bundarra? Yes; but I do not know the exact number. For a radius of 20 miles there is a very large number of selectors and a good few squatters.
1483. Do you know the character of the country between Glen Innes and Inverell? Yes; I know all the three surveyed routes. I was a mail contractor there. It is a very good agricultural district, a bit stony in places, but on the whole it is very rich country.
1484. What is it like from Waterloo to Inverell? It is very good basalt country. There is very good country along the Macintyre. Brodie's Plains is as rich an agricultural district as there is in the Colony.
1485. Do you know the land on the large estates about Inverell? Yes; I have been through every one of them. It is very rich country—Byron especially, and Inverell Station, including Swanbrook, and part of the frontage of the Macintyre River at Elsmore.
1486. *Mr. Collins.*] Why do most of the passengers go from Glen Innes to Inverell, seeing that there is a coach from Guyra to Inverell? There is no coach from Guyra to Inverell, it stops at Tingha, and it only goes three times a week.
1487. If most of the passengers wished to go that way would there not be a line of coaches? If they called for tenders for carrying the mails six times a week and mended the road, all the passenger traffic would go there. It is only 50 miles from Guyra to Inverell by the main road.
1488. Is the road not so good from Guyra to Inverell as from Glen Innes? No; it was under trustees till eight or ten years ago. It was then made a third-class road. The road from Glen Innes has been a first-class road for 16 years or more.

1489.

Mr. P. Wade. 6 Dec., 1892.

1489. Do you think that is the reason why there is no traffic? Yes, together with differential rates. When I ran a line of coaches from Inverell, I had all the passenger traffic from Armidale. There was no railway from Glen Innes then.
1490. Do you know the value of the land between Guyra and Inverell? Yes, I reckon that the land about Guyra for 15 or 20 miles out is worth £2 or £3 an acre freehold. Through New Valley and for about 15 miles it would not be worth more than £1 or 25s. an acre. I would not take less than £10 an acre for land I own between Inverell and Tingha on the Bundarra Road.
1491. Where does the Bundarra traffic go to now? I believe to Uralla.
1492. Would it not go to Uralla still if a line were made from Guyra to Inverell? No; I believe the traffic would go to Tingha.
1493. What do they grow at Bundarra? Not much—principally hay, potatoes, wheat, and maize, all for their own consumption.
1494. Is it good country for wheat? The flats would be.
1495. Do they grow much wheat between Guyra and Inverell? About Guyra they grow a large quantity Potatoes are mostly grown. They grow splendid wheat, fully equal to the Inverell wheat.
1496. Where do they generally sell it? In Armidale, where it is ground.
1497. Where is the flour sold? Locally, but there is not enough. They used to get wheat from Inverell.
1498. Is there plenty of country between Guyra and Wandsworth to put under wheat? Yes.
1499. Do you consider that 12 to 15 miles is too far to cart wheat to a railway? They find that potatoes and oats pay them better.
1500. Why do you think that a railway should be taken from Guyra to Inverell, rather than from Glen Innes to Inverell? Because it would suit a larger number of people. There are far more people between Guyra and Inverell than there are between Glen Innes and Inverell. The country has been all purchased by squatters and syndicates on the Glen Innes line, and the only population is on Brodie's Plains.
1501. If we have it in evidence that the owners of the land on that line would either lease it or sell it at a reasonable price, do you not think that more people could be put on that land? Certainly.
1502. Would you advocate the line from Glen Innes to Inverell if more people could be put on that land? No. In the first place, Guyra is the nearest place to the centre of New England. At present the country between Guyra and Inverell is more thickly populated than the country between Glen Innes and Inverell. The most of the land along the proposed line from Guyra to Inverell is reserved for railway purposes.
1503. Do you think that that land would be thrown open? It belongs to the Government.
1504. Consequently, the Government would derive some benefit if the line went from Guyra? Yes. Another great advantage is, that if the line goes from Guyra to Inverell, when you get to Inverell you are on the opposite side of the Macintyre, whereas going from Glen Innes to Inverell you will have to cross the Macintyre if you wish to reach the west. A bridge would cost an enormous sum.

Mr. William Elmhirst Potts, forwarding agent, Glen Innes, sworn, and examined :—

Mr. W. E. Potts. 6 Dec., 1892.

1505. *Chairman.*] Do you wish to make a statement? Yes. I have been connected with the northern railway for the last twenty-seven years as a forwarding agent. I favour the Guyra route principally, because I look upon a line from Inverell to Glen Innes as the thin end of the wedge in order to get another railway made to the coast at Grafton. I believe the Guyra to Inverell line would serve a greater number of people.
1506. Where are they situated? In Armidale and in this portion of New England. When the railway first opened from Armidale to Glen Innes the tendency of the traffic was decidedly in favour of Guyra. For a length of time it continued to be so, but the roads were so terribly neglected that the traffic was forced away from Guyra to Glen Innes. I have been in the habit of dealing with the largest tin-buyers at Tingha for a number of years, and their tin was principally all brought to Guyra—until the last two or three years the bulk went that way. It is now diverted to Glen Innes; owing to the differential rates the goods are carried from Sydney to Glen Innes at the rate of £6 per ton, whereas to bring goods to this town alone the charge for the higher class of goods is £8 18s. 6d. per ton. That has been the means of diverting a great amount of traffic to Glen Innes which otherwise would not go that way.
1507. How do the differential rates affect the railway beyond Glen Innes towards the Queensland border? They apply equally from Glen Innes to the Queensland border.
1508. Do they carry from Glen Innes to the Queensland border for next to nothing? Goods are carried from Sydney to Glen Innes, or any station beyond, at the rates I have quoted—that is, £30 per truck.
1509. *Mr. Collins.*] If the differential rates are continued to Glen Innes the traffic must go to Glen Innes? Yes.
1510. Seeing that the differential rates have been fixed to compete with the Grafton steamers, must they not be continued if we want the traffic on the railways? Yes.
1511. If a railway is made from Guyra to Inverell, that would not prevent the differential rates to Glen Innes being continued afterwards? The Commissioners would then have a better opportunity of raising their rates, and they would then be better paid for the reduced work done.
1512. Would the Glen Innes people then get their goods from Grafton? Yes; but the Inverell people would not.
1513. But do not some people say that they would get their goods from Grafton to Inverell if a railway were made, and if the differential rates were taken off and the usual rates charged? Yes; simply because they wish to force the trade to Grafton. That is what the Commissioners are fighting against, and will have to fight for some time.
1514. Do you not think that eventually a line will be taken from the New England district to the coast? It may eventually, but not for a number of years, I hope. There is not sufficient traffic to justify it.
1515. Do you think that a line should be made from Guyra to Inverell, because if the railway were taken from Glen Innes to Inverell the traffic would go to the coast instead of going by rail to Sydney and Newcastle? Yes. If the railway were made from Guyra to Inverell it would command a greater portion of the traffic, if not the whole. It would answer all the purposes required at Inverell, and give a better market.
1516. Seeing that they require the Inverell wheat at Glen Innes and north of it for milling purposes, how would they get that wheat? By way of Guyra, and it would not cost them more than ½d. or 1d. per bushel.
1517. Is not the Inverell wheat required for milling in the whole of the New England country? Yes; but

but last year was the first year that Inverell was in a position to export. This year I am told the crops are much larger than they were last year. I know of my own knowledge that until last year large quantities of flour were supplied to Inverell. Mr. W. E. Potts. 6 Dec., 1892.

1518. The railway from Inverell to Guyra would be of no use if they only wanted it for wheat? As far as Inverell is concerned it would affect them very slightly. If they produce they must find a market somewhere, and they will have to export at Newcastle for years to come after supplying the local markets.

Mr. John Thomas French, Architect and City Engineer, Armidale, sworn, and examined:—

1519. *Chairman.*] Do you desire to make any statement with reference to the proposed railway? Yes I am an old resident of New England, and I have also resided in Queensland for fifteen years. I wish to point out the impossibility of Inverell ever finding a market in Queensland for her produce. The climate of Inverell is as nearly as possible akin to that of the Darling Downs, and the land is very much of the same quality, and the products are very much the same. The Darling Downs have a very much larger area of land fit for cultivation than they have at Inverell. This year on the Darling Downs they have 7,000 acres more land under wheat than they had last year. The following paragraph is a quotation from an article by a special reporter for the *Queenslander*:— Mr. J. T. French. 6 Dec., 1892.

> The total area under wheat is 17,200 acres, and the estimated yield is 422,000 bushels; the average is 24½ bushels to the acre. This was given before the crop was reaped; the result now that it is reaped is 20½ bushels to the acre. On Canning Downs, Mr. M'Ansh has 400 acres of wheat, and he finds wheat-growing more profitable than wool-growing. This year at Roma there is a mill erected for the first time, it having been proved last year that light, loamy, sandy soil is well fitted for the production of wheat, and according to the amount harvested at present the yield is from 18 to 20 bushels to the acre. They can harvest the wheat at Roma, being a dry climate, with a stripper which harvests and bags at 7s. 6d. per acre.

I would like to point out that the Darling Downs district is about an equal distance between New England and Brisbane, and as it produces so much wheat in excess of the consumption, it must follow that if we have no protective tariff on the border with intercolonial freetrade that the price of flour and wheat in Brisbane must rule the market here. The Darling Downs would really compete with Inverell in the production of wheat. Having been a resident for so long in Queensland, I know that they are very eager to have their railway system connected with ours at the Tweed, because they will not only then have the Brisbane market, but they will have our coast market as well. I take the following extract from the *Queenslander*:—

> A good sample of wheat has been submitted as grown on the farm of Mr. John Cook Laidley. From 15 acres the grower has obtained 78 bags of grain, a very creditable yield, the bags containing an average of slightly over 5 bushels each.

That simply shows that in Queensland, on the Darling Downs and at Roma, they have an immense quantity of agricultural land which will prevent the New England farmers from ever being able to come into competition with them. It shows the scale on which they go into farming when one man puts in 400 acres of wheat.

1520. *Mr. Collins.*] Do you oppose the line from Inverell to Glen Innes because the Darling Downs will grow the same agricultural produce as Inverell, and that there will be no market for Inverell produce in Queensland? Yes; I know nothing of the merits of the two routes. In Queensland they invariably grow a crop of maize before they put in wheat. That helps to put the ground into much better condition, and it accounts for the better yield. It also pays the farmer better.

Mr. James Ingram Moore, auctioneer and commission agent, Armidale, sworn, and examined:—

1521. *Chairman.*] Do you wish to make any statement with reference to the railway? Yes. I have lately had letters from constituents between Inverell and Guyra asking about the price of produce. This week I saw one of them in town and asked what produce he had. He said potatoes, poultry, eggs, and all sorts of produce. I asked him why he did not send them here. He said it would take a day to go to Guyra and a day to go back; he said there were numerous other farmers who had a large amount of produce if they could get it to market. I asked him, in the event of a railway being made from Inverell to Guyra, what would be his nearest point to the line. He said 4 miles. I asked if it would suit a large number of people there. He said yes, and that a great number would send their produce to market which they now have to sell at a loss. He sold potatoes at £2 15s. a ton when they were selling at Armidale at £5 and £5 10s. per ton. Mr. J. I. Moore. 6 Dec., 1892.

1522. *Mr. Collins.*] Do you not think it would have paid this man to have brought his produce to Armidale, even if it took him a whole week, rather than sell his potatoes at £2 15s. per ton? Quite so; but this man has other things to do.

1523. If he had to pay a carrier 10s. a ton for a day's journey to Guyra, would it not have paid him to send his potatoes to Guyra and on to Armidale, where he could have got £5 10s. a ton? Yes; but he did not know the price till I quoted it to him the other day. If we had a railway he would have a market in his own district, but it does not pay to bring a few eggs and poultry to Guyra.

1524. How far does he live from Guyra? Seventeen to 20 miles.

1525. Could he not have got carriers at 10s. a ton? Yes.

1526. Have you had a great deal to do with milling? Yes.

1527. Is the wheat in this district very good? Yes.

1528. Is it necessary to get wheat here from Inverell to grind? No.

1529. Is not the wheat here equally as good as at Inverell? It is as good, if not better, as far as milling purposes are concerned, but we have not proper appliances. We have only one roller mill.

1530. Is the wheat better than Inverell wheat? Yes, as far as flour-making goes.

1531. Are you aware that most of the bakers here use Adelaide flour? Yes, some of them; but a baker assured me this week that he was using half Armidale and half Tamworth flour.

1532. If Armidale wheat is better for flour-making than Inverell wheat, would it be any benefit to the Inverell farmers to send their wheat to Armidale? I have seen very good wheat from Inverell, but as a rule the Armidale wheat is better.

1533. Is not Armidale flour as good as Adelaide or Tamworth flour? The flour is not so good, owing to the want of appliances.

Mr. Charles Edwardes, railway surveyor, Department of Public Works, sworn, and examined;—

Mr. C. Edwardes. 6 Dec., 1892.

1534. *Chairman.*] Have you surveyed a line from Guyra to Inverell? Yes; I have surveyed a line 28 miles 50 chains, from Guyra to New Valley Creek. I inspected it beyond Tingha to near Gilgai.
1535. Can you give us any information as to the grade of the line beyond Guyra? I laid out the survey according to instructions from Mr. Whitton, with a grade of 1 in 40; the sharpest curve was 11 chains radius.
1536. Has that grade been since improved upon? Yes; the ruling grade is now 1 in 60.
1537. Does that increase the length of the line? Yes, about 3 miles; that makes the total length of the Guyra to Inverell line, approximately, 58 miles. The original length was 55 miles 10 chains.
1538. Have you any idea of the estimated cost of the line from Guyra to Inverell? With a grade of 1 in 40 the cost would be £7,090 per mile. Now, with an increased distance and a grade of 1 in 60, it is estimated that the extra 3 miles will be built at the same rate per mile, that is £7,090.
1539. Do you know anything of the line from Glen Innes to Inverell? I have not been over it. The last deviation by Mr. Stewart reduces the through distance 47 chains. The route is practically the same as was previously submitted.
1540. Do you know the character of the country between Guyra and Inverell? It is fair average basaltic country. It is very good country from Guyra to Ollera or Tenterden. From there to Limestone Creek it is not so very good. From Moredun Creek to New Valley it is average pastoral land. From there to Tingha it is very poor, being a granite range. It is tin-bearing country.
1541. *Mr. Collins.*] Is there very much population on the land between Guyra and Tingha? There is a scattered population. There are a few settlers for the first 10 miles until you get on to Ollera Run.
1542. What is their occupation? Simply growing crops of oats and potatoes; I did not notice any wheat growing. I was there in the winter time. Most of them had a few sheep.
1543. Do you think that the cost of the line could be reduced? By increasing the length of the line you might get a cheaper rate per mile, but it would not make a material difference in the total estimate. The length would nearly make up the difference.
1544. *Chairman.*] What is the nearest point of the line to Bundarra? Tingha is the nearest point by road.
1545. *Mr. Collins.*] What would be the nearest point on the railway? Tingha. A road could be constructed from Tingha which would bring Bundarra within 18 miles of the line. I have been in the Bundarra district.
1546. Is there much cultivation going on there? On the creeks there are a few settlers.
1547. Do they take produce and wool to Uralla? Most of the wool goes to Uralla.
1548. If the line were brought from Guyra to Inverell, would there be any other traffic besides the Bundarra traffic tending towards that line? The traffic would come into Tingha across from Elsmore; that is on the Glen Innes-Inverell route. The Newstead traffic would also go there.
1549. How far is Newstead from the Guyra-Inverell line? Rather more than 16 miles. Elsmore would be about 16 miles.
1550. Is there any other traffic in the direction of Bundarra that would come on to the line? Not that I am aware of.
1551. What is the nature of the country about Bundarra? There are good patches. Taking it right through it is a fair average pastoral district. It is not a good agricultural district. There are good patches on some of the creeks, and in some places good alluvial flats.
1552. Are most of the farmers between Guyra and Inverell within about 12 miles of Guyra? Yes; those that I saw were about 8 miles from Guyra.
1553. Would not those people be pretty well served already by the railway at Guyra? Undoubtedly they would.

[Plan.]

Sydney: Charles Potter, Government Printer.—1893.

PLAN I.

GLEN INNES TO INVERELL RAILWAY

INDEX MAP SHOWING PROPOSED ROUTES

GLEN INNES To INVERELL & GUYRA To INVERELL

Scale

KING'S PLAINS

KING'S PLAINS

WELLINGROVE

TO TENTERFIELD

GLEN INNES STATION

STONEHENGE

INVERELL

BRODIE'S PLAINS

TINGHA

COLLERA

MOTHER OF DUCKS LAGOON

GUYRA

TO SYDNEY

GREAT NORTHERN RAILWAY

PROPOSED MAIN ROAD

SURVEY

ORIGINAL LINE (SWANBROOK) TRIAL

NOW SURVEY

PERMANENT SURVEY VIA WELLINGROVE

TRIAL SURVEY VIA KING'S PLAINS

MOORE'S EXPLORED ROUTE

TRIAL SURVEY

MAIN ROAD

Frazer's Gully

Apple Tree Gully

Back Plain

Redstone

Wellingrove Creek

White Rock Ck

Falls Ck

Oaky Ck

Furracabad

Maroowan Creek

Mt. Creek

Cope's Creek

Darby's South Branch

Moredun Ck

Clerk's Creek

Limestone Ck

George's Creek

Middle

(Sig 443).

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY FROM INVERELL TO GLEN INNES.

(PETITION FROM CERTAIN RESIDENTS OF GLEN INNES, INVERELL, AND SURROUNDING DISTRICTS, IN FAVOUR OF.)

Received by the Legislative Assembly, 13 *October*, 1892.

To the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned (3,542) residents of Glen Innes, Inverell, and surrounding districts,—

MOST RESPECTFULLY SHOWETH :—

1. That in the year 1884 provision for the construction of a railway from Inverell to Glen Innes was made by Act of Parliament authorising a loan for that purpose.

2. That in the same year a Bill authorising the construction of the said railway was passed by the Legislative Assembly.

3. That the said railway was subsequently submitted to the Public Works Committee, whose Sectional Committee visited the district and reported favourably on the work, which report, owing to the dissolution of Parliament, was not adopted by the full Committee.

4. That the present Government submitted the said railway to the Public Works Committee for report, which report is adverse, having been adopted by a majority of one vote only.

5. That your Petitioners are extremely anxious for the construction of the said railway, inasmuch as, since the favourable report of the Sectional Committee which visited the districts of Inverell and Glen Innes, more than double the area of land has been brought under crop in the Inverell district alone, and it is confidently anticipated that next season there will be a surplus of agricultural produce, amounting to 4,000 tons, available for export.

6. That an exhaustive statistical return was prepared, conclusively showing that even for the first year after the construction of the said railway there would be little or no loss; but, in consequence of the Sectional Committee not having visited the districts, and the full Committee declining to receive that additional valuable information, these important facts were not before the said Committee.

And your Petitioners humbly pray that the foregoing facts may be taken into your favourable consideration, and that the construction of the railway above referred to may be proceeded with as early as practicable.

And your Petitioners will ever pray, &c.

[*Here follow* 3,542 *signatures.*]

[3*d*.] 327—

1892.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY FROM GLEN INNES TO INVERELL.

(PETITION FROM CERTAIN] RESIDENTS OF TINGHA, WANDSWORTH, OLLERA, KANGAROO CAMP, &c., IN FAVOUR OF.)

Received by the Legislative Assembly 27 October, 1892.

To the Honorable the Speaker and Honorable Members of the Legislative Assembly, in Parliament assembled.

The humble Petition of the undersigned residents of Tingha, Wandsworth, Ollera, Kangaroo Camp, Elsmore, and Gilgai,—

SHOWETH:—

1. That the Glen Innes-Inverell Railway Line has been rejected by the Public Works Committee.

2. That the line from Guyra *via* Tingha to Inverell being the alternative one, it is desirable that the claims to railway communication of the residents along, and within easy distance of, that line should be recognised.

3. That the first recognition of those claims would be manifested by a resurvey being ordered of those portions of the line where the grades are greater than 1 in 60.

Therefore your Petitioners humbly pray that your Honorable House will be pleased to take such steps as may seem to it expedient to cause such resurvey to be made as soon as conveniently possible.

And your Petitioners, as in duty bound, will ever pray, &c., &c.

[*Here follow 506 signatures.*]